

ICT and its uses in the English Phonetics and Phonology II Subject of an Undergraduate Programme: Implementation of Voice Pitch Recognition Software and YouTube Videos

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Abstract

Title: ICT and its uses in the English Phonetics and Phonology II Subject of an Undergraduate

Programme: Implementation of Voice Pitch Recognition Software and YouTube Videos*

Author: Juan Sebastián Guzmán Vélez**

Key Words: ICT, YouTube, VPR Software, Phonetics and Phonology

Description: In an academic programme that revolves around the English Language, it is of great importance to count on good quality instruction in English Phonetics and Phonology so that higher education students of this programme can acquire all the relevant abilities of this era in this linguistic dimension and wield them effectively as professionals in the field. Scholars like Peter Roach suggest that the analysis of natural connected speech is the end goal for people studying his course so that new discoveries can be made. Therefore, this pedagogical intervention approaches this suggestion by implementing ICT tools, such as YouTube videos and VPR mobile apps, in the learning process of students of the Foreign Languages with an Emphasis on English programme as these tools are readily accessible to students at Universidad Industrial de Santander. The results of this intervention indicate that ICT tools play a crucial role in facilitating the learning process of Phonetics and Phonology; tools like YouTube samples of natural connected speech help students see the theory turn into reality and VPR mobile apps help them keep track of their progress in terms of production. Lastly, this implementation shows that there is a necessity for a better integration of ICT tools and training for educators in how to use them, so the quality of English Phonetics and Phonology instruction can advance even further.

* Degree Work

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Resumen

Título: Las TIC y sus Usos en la Asignatura Fonética y Fonología Inglesas II de un Programa de Pregrado: La implementación de Software de Reconocimiento del Tono de la Voz y Videos de YouTube*

Autor: Juan Sebastián Guzmán Vélez**

Palabras Clave: TIC, YouTube, Software de RTV, Fonética y Fonología

Descripción: En un programa académico que gira alrededor del idioma inglés, es de gran importancia contar con instrucción de calidad en la Fonética y la Fonología inglesas para que los estudiantes de educación superior de este programa puedan adquirir todas las habilidades relevantes de esta era en esta dimensión lingüística y las empuñen efectivamente como profesionales en el campo. Académicos como Peter Roach sugieren que el análisis del habla natural conectada es el objetivo final de las personas que estudian su curso para que así nuevos descubrimientos puedan ser hechos. Por lo tanto, esta intervención pedagógica aborda esta sugerencia implementando herramientas TIC, tales como los videos de YouTube y aplicaciones móviles de RTV, en los procesos de aprendizaje de los estudiantes del programa Lenguas Extranjeras con Énfasis en Inglés ya que esta herramientas son fácilmente accesibles para los estudiantes en la Universidad Industrial de Santander. Los resultados de esta intervención indican que las herramientas TIC juegan un papel crucial en facilitar el proceso de aprendizaje de la Fonética y Fonología inglesas; herramientas como las muestras de YouTube de habla natural conectada pueden ayudar a los estudiantes a ver la teoría tornarse realidad y las aplicaciones móviles de RTV les ayudan a llevar registro de su progreso en lo que a la producción se refiere. Por último, esta implementación muestra que hay una necesidad de una mejor integración de las herramientas TIC y de capacitación para los educadores sobre cómo usarlas, y así la calidad de la instrucción de la Fonética y Fonología inglesas pueda avanzar allende.

* Trabajo de Grado

** Facultad de Ciencias Humanas. Escuela de Idiomas. Licenciatura en Lenguas Extranjeras con Énfasis en Inglés. Director: Ernesto Gallardo Vera. Licenciado en Idiomas.

Introduction

Teaching Subject

This classroom project is implemented within the context of the subject English Phonetics and Phonology II as part of the third semester of the professional training curriculum in the Bachelor of Foreign Languages with an Emphasis on English programme at Universidad Industrial de Santander.

The metalinguistic and didactic orientation of this project is developed upon the core basis of the subject, which refers to the relationship of phonemes and their suprasegmental implications with their grammatical and sociopragmatic structural environment.

The deployment is carried out in the following way: Lecture sessions on the topics contained in the class curriculum that involve the use of Information and Communication Technologies (ICT) (particularly multimedia content platforms and mobile application software for voice pitch recognition) under a Task-Based Learning (TBL) methodological framework for auditory discrimination, phonetic transcription, and oral production, as suggested by Roach (2009) and Brazil (1994).

The assessment of the process is done mainly in a summative manner. On the one hand, the formative component is related to class work, class participation, mainly, and some homework, whilst the summative component is generally applied through quizzes, partial and final exams. In this regard, although there is a distinction between both components from a theoretical-practical educational point of view, it is worth mentioning that both are closely intertwined by the implementation of ICT tools.

Description and Justification

In his work *English Phonetics and Phonology a Practical Course* (2009), Peter Roach makes several assertions regarding natural speech:

He suggests we should acknowledge the fact that “there will always be a substantial residue of cases which appear to follow no regular rules” (p. 79) when trying to analyse native speakers’ placement of stress in their natural conversations. He also says that “a significant difference in natural connected speech is the way that sounds belonging to one word can cause changes in sounds belonging to neighbouring words” (p. 110). Furthermore, when addressing tone-units differentiation, he adds that “one regularly finds, in analysing natural speech, cases where it remains difficult or impossible to make a clear decision” (p. 142)

So far, all these statements suggest the idea that “natural speech” presents particular features that fall off the general patterns he has studied and compiled in his work and that one can find in controlled environments, but he does not stop here. Some other remarks regarding the exceptional characteristics of “natural speech” include:

“Natural speech” sentences being anomalous/incomplete without hindering the sentence structure as “normal” (p. 142). Furthermore, in the last chapters of his *English Phonetics and Phonology* textbook, he gives us a couple of extracts that could be perceived as conclusions regarding the matter. He says that “new discoveries about intonation (...) will be (...) a result of studying what people really say rather than inventing examples of what they might say.” (Roach, 2009, p. 149) and that “recorded exercises are designed to lead the student towards the study of comparatively natural and fluent speech by the end of the course.” (Roach, 2009, p. 169)

In short, “connected natural speech” is the end goal of the study in Phonetics and Phonology according to the author, one could argue. However, there are many known difficulties

and challenges that arise when trying to address the study of Phonetics and Phonology from this angle; Peter Roach himself had the courtesy of mentioning some of these and their respective potential solutions in the ‘Notes on problems and future reading’ (Roach, 2009) sections found in each chapter of his fourth edition textbook from 2009. Nevertheless, fourteen years later, in 2023, the overview of English learning has flourished and expanded through the various technological advances in recent years, such as the smartphone; these advances have transformed the English as a Foreign Language context (EFL), necessitating new solutions for current issues. For example, Roach (2009) says that in regards to the juncture phenomenon in connected speech, an important question to ask is if it can be heard or not, but if we were to address this question today in 2023, it would not be unreasonable to approach it from an angle that involves ICT and derived technological tools, like captioning in social media videos, that would mend the issue at hand considerably (discriminating on the speaker’s utterances on whether they say ‘great take’ or ‘great ache’), and although this does not resolve the posed question within its purely phonetical essence, at least it does in practical terms.

In this paper, it is mainly considered what Peter Roach (2009) recognises as an important asset in Phonetics and Phonology, which is the role that connected natural speech plays in the learning process of the spoken aspect of the English language. For this reason, in the context in which this Phonetics and Phonology subject exists within the undergraduate programme at Universidad Industrial de Santander, I intend to help future English teachers achieve something somewhat closer to what Roach (2009) had in mind when he said that we ought to study (speaking of intonation) what is naturally said in actuality instead of making up examples of what others might say, making sure to take advantage of the accessibility that we have to samples

of natural connected speech on social media and the usefulness of technological tools that might help us analyse certain aspects of speech.

In several instances, though, Roach (2009) expresses that there are some limitations that exist in the analysis of the attitudinal function of intonation, such as “subjectivity of interpretation, and the fact that artificial performance has little resemblance to conversational speech”. (p. 148) However, although some issues might remain, he still suggests studying “recordings of different speakers’ natural, spontaneous speech” (p. 148) because it is more realistic and more useful. In this regard, Al-Jarf (2022) states that the use of multimedia platforms such as YouTube as a source of native speaker’s samples of the use of the target language in an EFL learning environment is “pedagogically meaningful” (p. 50) if it is approached in an “active, constructive, individual, collaborative, conversational, contextual, guided, motivating, and engaging” (p. 50) manner.

Lastly, there is an immense gap that needs to be addressed. It refers to the one existing between research and actual implementation of ICT on pedagogy in L2 classrooms, which has also been the experience of Olson (2014) when approaching the use of speech analysis software in second-language pronunciation instruction.

For these reasons, it is imperative to attempt to address the previously mentioned concerns and the convenience that the use of ICT offers in its implementation, reasonably considering the particular context of the subject English Phonetics and Phonology II and the role that this subject plays as part of a professional training programme in Foreign Languages with an Emphasis on English. Finally, it is worth remembering the relevance of properly acquiring this linguistic competence and all the sociopragmatic implications that they represent for pre-service teachers at Universidad Industrial de Santander.

General Objective

To carry out the implementation of ICT tools in the English Phonetics and Phonology II classroom of third-semester students of the Foreign Languages undergraduate programme at Universidad Industrial de Santander.

Specific Objectives

To implement a needs analysis for the Phonetics and Phonology II class to inquire about the population's profile and their experience with the subject and identify potential areas of opportunity where ICT tools could help.

To design an appropriate classroom project that improves Phonetics and Phonology II students' learning process with interventions that take advantage of ICT tools.

Report Layout

This final report is presented in four different sections: The first one includes the general introduction to the paper and the objectives, as well as the conceptual bases that support the implementation of this project. The second section describes the actual object of the teaching intervention and how it is to be carried out. The third part provides an account of the resulting data from the intervention. Lastly, the fourth one comprises a set of integral analyses and reflections on the theoretical-practical events that take place throughout the implementation of this project, as well as the implications that they have in the academic context in which they occur.

1. Theoretical Framework

1.1 Background

1.1.1 *YouTube*

One first aspect to review is the online multimedia platform YouTube. In an academic context, there exist many insights about its usefulness for English language learning. Watkins & Wilkins (2011), for example, point to several potential applications of this tool: They assert that because it is through video and audio that this platform mainly works, it is possible for students to do “conversation analysis”, which is an activity where the teacher has previously selected videos or extracts from which students can review conversational techniques, helping them compare effective vs. ineffective techniques, or better understand concepts taught in class through YouTube illustrations, all through critical immersive analysis, as they describe it (p. 115).

These authors also mention a couple more potential applications for the Listening/Speaking realm of English language learning: “Movie trailer voiceovers”, where the teacher has students attempt do voiceovers for movie trailers so their focus is on the “cadence, intonation, and pronunciation” (p.115); “Famous movie scene reenactments”, in which students do as the activity name suggests so they can focus on their speaking abilities (similar to the movie trailer voiceovers) such as “sentence stress” (p. 115, 116); “Vlogging”, where the authors give a general description of the activity as “an online diary in video form” (p. 116) and recommend it for “overall student pronunciation, level of vocabulary, use of grammar, and general communicativeness.” (p. 116); Watkins & Wilkins (2011) make other suggestions (Note-taking and summarising, and “How-to” writing) but they are applicable in the Reading/Writing aspects of English language learning. Lastly, they propose another very interesting application

for the utilisation of YouTube following the immersion-like trait that the online platform offers, as a means of exposure for students to “World Englishes”, and two activities (Current events and media study, and Entertainment study) are considered so that learners can experience and acknowledge to certain degree the different characteristics and uses of the English language in both native and non-native countries around the world.

Coming to explore the usefulness of YouTube for English learning purposes from a different angle, Nofrika (2019) categorised the videos watched by EFL learners on YouTube in a case study and mentioned the aspects of English language competence that she considers improved as a consequence of students taking advantage of YouTube’s multimedia (p. 58). Through this descriptive qualitative research, Nofrika (2019) found that, by their own means, the students’ watched videos could be classified into three categories: Art and Humanities, Social Sciences, and Vlog; according to the author, Art and Humanities refer to “film, talk show, sitcoms, talks, music video, and lyric video” (p. 65), whilst Social Science include “simulation and educational videos” (p. 56), and finally Vlog, that comprises “food vlog, review video, beauty vlog, haul vlog, and DIY videos” (p. 56). Moreover, the reported improved competence from watching Art and Humanities videos include listening and speaking skills, as well as pronunciation and grammar, Social Science videos helped students with their pronunciation and grammar abilities, whilst Vlog contributed to better reported listening, pronunciation, and vocabulary skills (p. 69). Interestingly, Nofrika’s (2019) research was conducted in order to dive into perceived gaps from previous research, namely June et al.’s (2014), and Zaldi et al.’s (2018) quantitative investigations regarding students’ perception towards the utilisation of YouTube as an English language learning tool. Their results indicate improvement in motivation, pronunciation skills, and awareness (June et al., 2014, and Zaldi et al., 2018), and Nofrika’s

(2019) complements these results by stating the three types of videos watched by students and the corresponding language micro- and macro-skills reportedly improved by the use of YouTube as a learning tool, and in the end the author also encourages teachers to use the online platform because in it they have a “variety of videos to use in the classroom, depending on which skills the students would like to improve” (p. 70).

Other researchers have also inquired into the matter from students’ perspectives.

Purnamasari (2018), for example, conducted mixed methods research through questionnaires and interviews that led to very insightful findings, such as the fact that overall 86% of the students involved in this research see value in terms of practicality in learning pronunciation through YouTube videos and that 82,4% of students found YouTube useful at improving pronunciation; some other findings relate to students’ interest (scoring more than 80% in a positive way), and accessibility (with an overall score of 78%) within their own context in a university in Indonesia. By the end of this investigation, Purnamasari (2018) states four conclusions: (1) “participants were so familiar with YouTube that they encountered no difficulty to access and use it” (p. 213); (2) “a majority of the participants found YouTube interesting and fun, so that they liked learning and practicing pronunciation using them” (p. 213); (3) “learning with YouTube is advantageous to the participants because the instructional materials are presented in letters, sounds, and pictures at once” (p. 213); and (4) “most participants found YouTube interesting and motivating, and thus it improved their pronunciation skills” (p. 213). The author also briefly mentions that this research can complement Zaldi et al.’ (2018) research regarding students’ motivation in learning through the utilisation of the YouTube platform.

Now, because in the end this is a practical matter, we also need some type of guidance in order to implement it in a real EFL classroom, such as Al-Jarf’s (2022). In her article, she points

out several advantages for teachers regarding the integration of YouTube in the EFL learning environment: (1) It is free, (2) “variety of pronunciation subskills, difficulty level, video instructors, and speeds, and video instructors accents, and video length” (p. 46), (3) videos are “easily downloaded to the laptop or mobile phone” (p.46), (4) students can watch the videos “anywhere, anytime and as many times as (they) wish” (p. 46), (5) YouTube videos can be used in a supplementary manner, and (6) students find them interesting. Then, Al-Jarf (2022) gives us an instructional strategy for implementation:

First, she says, we need to browse and select 3-5 videos and then introduce students to the video through the title and summary. After that, students are given pre-questions and examples to help them focus and understand the pronunciation component that is being taught. Second, students are instructed to watch the videos at home at predetermined times during the day, making sure to take notes, note down examples of specific pronunciation traits and repeat after, so that they can discuss the videos and answer questions on their own or in small groups, to then have a revision of it all along with the teacher. Third, students summarise the video content orally explaining the characteristics of pronunciation that were to be analysed from the video even using examples of their own; here, the teacher should provide clear and careful instruction throughout the entirety of the activity and motivate students by giving them credit and using these videos in tests. Fourth, students assess themselves and each other before the teacher sets up another video or set of videos to be watched, analysed, and reviewed, taking into account their needs, suggestions, and feedback.

The same author also includes in the same article a series of examples of YouTube videos about pronunciation (conversation skills, shadowing techniques, common pronunciation mistakes, eBooks, IPA, etc), and gives some criteria tips for other instructors to select their own

videos: (1) Videos ought to be related to listening and speaking “subskills assigned in the textbooks and taught in class” (p. 47) considering relatively known common student mistakes. (2) Videos “should target a specific pronunciation subskill” (p. 47). (3) Several different videos targeting one single pronunciation subskill can be used to “accommodate the students’ different proficiency levels, interests, needs and learning styles” (p. 47), considering the “difficulty level of video(s) selected, length, degree of familiarity, content complexity and speed of the speaker, his/her accent (American, British, or non-native) and whether it contains enough examples” (p. 47). (4) Include as many videos with proper closed captions and as interactive as possible.

Undoubtedly, Al-Jarf (2022) has produced with her article a profound and complete guide on the implementation of YouTube in the EFL classroom for pronunciation learning, she even included the type of videos regarding the subskills that can be found on the platform, ranging from simple vowels, consonants, and diphthongs to more complex topics such as stress, intonation, elision, assimilation, intrusion, and linking.

In conclusion, the data does support the utilisation of the online YouTube platform as a facilitator of English language pronunciation learning. Quantitative-experimental studies such as Rachmawati & Cahyani’s (2020) state that a “YouTube video as learning media is considered quite effective and efficient to use” (p. 92), specifically regarding pronunciation skills. We need, however, to consider the limitations that this platform has, such as the ones mentioned by Watkins and Wilkins (2011), which refer to copyright restrictions, the appropriate selection of videos as learning materials for the subject, being careful with nudity, swearing and other inappropriate portrayals of content that represent these type of risks in an academic/educational environment, and access-by-country restrictions; despite these limitations, the authors reaffirm the validity of YouTube as a valuable second language acquisition resource and encourage

further research on it. Furthermore, Al-Jarf (2022) also declares that the use of this platform ought to be “pedagogically meaningful” (p. 50) and encouraged to have as well a “self-regulated pronunciation practice by being active, constructive, individual, collaborative, conversational, contextual, guided, motivating, and engaging” (p. 50). She also compiles and gives very specific recommendations (citing her own work and others’ as well to make sure the implementation is as holistic as possible): (1) Fossilization ought to be prevented since early learning stages by addressing learners’ pronunciation problems (Keshavarz, 2017), (2) teachers can highlight differences between the English language and the students’ native language (Al-Jarf, 2021a; Al-Jarf, 2003; Al-Jarf, 1994; Al-Jarf, 1992; Al-Jarf, 1990), (3) task-based activities are encouraged to be used for pronunciation learning (Al-Jarf, 2007), (4) the type of content known as “TED Talks” could be used as part of the listening component (Al-Jarf, 2021f; Al-Jarf, 2020a), (5) in a learning environments with “Distance Learning”-like characteristics, mobile apps can be used to foster listening and pronunciation (Al-Jarf, 2020b; Al-Jarf, 2012), (6) also in “Distance Learning”- related learning environments students can make use of audiobooks to improve listening and pronunciation skills (Al-Jarf, 2021e), (7) listening to and creating podcasts is encouraged (Al-Jarf, 2021b; Al-Jarf, 2021c), (8) other social media platforms can also be included to look for instruction on pronunciation, such as Facebook and Twitter (now X) (Fouz-González, 2017; Al-Jarf, 2021d).

Lastly, regarding YouTube, Rachmawati & Cahyani assert that since “English learning pronunciation does require direct practice with the right model, like the original speakers or English native speakers” (p. 93), their findings imply that “English pronunciation learning becomes very easy (by using) learning videos on YouTube with native speakers” (p. 93).

1.1.2 Voice Pitch Recognition Software

The second ICT component integration seems to be a bit more complex at first sight, but the potential benefits for learners of English Phonetics and Phonology at Universidad Industrial de Santander require us to take on the challenges ahead. Such component refers to the utilisation of one kind of phonetic (speech) analysis software within the English Phonetics and Phonology classroom.

First, we need to understand that there is a necessity for ICT tools of this kind within the immediate particular academic context previously mentioned: An issue to be addressed is the generalised fact that research on the benefits of phonetic instruction is normally left for the uppermost levels of higher education (Olson, 2014b), when lots of learners' difficulties about English pronunciation (Phonetics and Phonology) could be prevented if dealt with early on, these difficulties could potentially lead to fossilisation-related problems (Keshavarz, 2017). For that reason, Olson (2014b) proposes to start incorporating phonetic (speech) analysis software in earlier stages of English language instruction; he categorises the first four semesters as the lower levels of language classroom at university, then, he implements one ICT tool of phonetic (speech) analysis software called Praat (Boersma and Weenink, 2011), and assesses its application in the English language learning classroom whilst addressing some concerns raised by authors such as Setter & Jenkins (2005) who claim practicality issues. Olson's (2014b) study does contribute to closing the gap between research on the matter and the implementation of actual pedagogy regarding English phonetic (pronunciation) instruction. He concludes that "with appropriate guidance, students have minimal technological difficulties using such speech technology" (p. 63) and that "although largely lacking from lower-level language instruction,

speech analysis tools, such as Praat, have the potential to be successfully incorporated into the L2 classroom” (p. 63), proving to be beneficial to students.

Before we proceed, we need to mention that Olson’s work is related to an academic background that involves both English and Spanish but being Spanish the L2 from an English native speaker point of view, whilst this study deals with EFL, being English the L2 from a Spanish native speaker’s perspective, therefore, it is expected to have promising results, comparatively speaking.

The same year, Olson (2014a) published a study that responds to the need for research on the effects of a visual feedback paradigm (VFP) at a segmental level, and the necessity for evidence of VFP’s pedagogical effectiveness (related to practicality) in L2 classrooms. His results demonstrate positive effects on students’ phonetic and phonological production, and although he focuses on a segmental level, he also mentions that it applies to suprasegmental levels (e.g., intonation) too. In conclusion, with this study, he points to the benefits that this type of phonetic (pronunciation) instruction has, which involves the advantages of ICT tools like Praat (Boersma and Weenink, 2011), within the lower-level instruction L2 classrooms at university. Later, Offerman & Olson (2016) extended his 2014 (a & b) research on the matter evaluating the generalisability of pronunciation gains through the VFP and segmental production of the L2, showing once again that “the visual feedback paradigm may be both successful and practical” (p. 27) and that in terms of generalisability, there exists implications to it using the VFP to a certain degree, which can also reach phoneme levels, and that there were observed beneficial effects on connected speech, even. Lastly, Olson and Offerman (2021) found that in order to maximise the effects of VFP on pronunciation instruction, interventions should have a

longer and sequential approach, and in this way, we can recognise more value found in its implementation.

There exists another similar approach in terms of implementing ICT tools in the EFL classroom with phonetic (pronunciation) purposes, and despite these being related to Automatic Speech Recognition (ASR) software (Elimat, 2014; Liu et al., 2019; Gottardi, 2023; Li, 2023), they also point to the many benefits for students when it comes to improving their pronunciation skills in comparison to those who do not make use of such technological tools.

In their work, Sanker et al. (2021) present an extensive analysis of the possible effects of remote recording using different devices (as opposed to in-person standard fieldwork recording equipment) on acoustic measurements, particularly duration, intensity, and frequency. They observed the different variations from the different devices (Zoom H4n, iPad, MacBook Pro-internal, MacBook Pro-external, Android phone, and iPhone) with their own relevant software-algorithmic traits in particular recording conditions, and found that “duration measurements seem to be affected by the compression algorithms used in m4a formats” (p. 14) (this includes both the Android phone and the iPhone), also, that “changes in noise and intensity also have indirect effects in identification of segment boundaries” (p. 15) and other measurements that depend on successful isolation of the characteristic to be analysed, and finally, they found as well that there are changes in the frequency measurements “likely the result of lossy compression” (p. 15), although, they clarify later on that “Android (..) (was) recorded with compressed audio, while the iPhone condition was not” (p. 18), and that “it is unlikely that compression algorithms alone are responsible for the differences” (p. 18) (in this last assertion the authors were talking about duration measurements, but this does not necessarily mean that the same observation cannot appoint relevancy on the other two types of measurements because it is all interconnected

- for example, see how changes in noise and intensity affect multiple aspects that depend on isolating target traits of recorded speech). Furthermore, Sanker et al. (2021) do mention that the differences between software programs were larger in significance than the differences between devices when compared (except when talking about signal to noise - for example, the Android phones was 10.2, whilst iPhone's uncompressed was -15.5). Finally, the authors state that, in most cases, they were "able to recover evidence for the phonemic distinctions which were tracked (such as stressed versus unstressed vowels, voicing differences, and vowel space measurements to capture vowel differences)" (p. 15, 16), but that still "raw measurements of the distinctions varied, in some cases substantially" (p. 16); in short, "all options distort the signal in some fashion" (p. 31), but they still provide some recommendations like maintaining recording set-up consistency and documenting all aspects (including hardware and software) of the setup, so that one can attempt to mitigate the presented shortcomings when interpreting the data.

1.2 Theoretical Bases

1.2.1 *Task-based Learning*

Richards & Rodgers (2001) define Task-based Learning (TBL) as an "approach based on the use of tasks as the core unit of planning and instruction in language teaching" (p. 223). They define the roles that students have within this approach, such as being a group participant, but also outline the teacher's roles: Being the selector and sequencer of the tasks, preparing the learners for the tasks, and raising students' consciousness regarding all possible features of language learning. Moreover, the authors include two similar procedures for TBL classes. The first one consists of pretask activities, which prepare the students for the successful execution of the task, then the task activity, and finally the posttask activity, which encourages students to analyse their performance and compare. Then, the second procedure involves the **pretask**

activity, as well, where the topic and the task are introduced, after that, the task cycle starts, in which students first perform the **task**, whilst being monitored and guided by the teacher, then comes the **planning** stage where students make absolute use of resources to prepare to report about their performance of the task, even by peer reviewing one another, later, students briefly **report** to the class whilst comparing findings and providing feedback, and finally, they can do the **posttask** activity, having them listen to a model of a performance of the task at hand so that they can later engage in the **language focus** stage, comprising **analysis** and **practice** components as needed.

Oxford (2006) wrote a complete overview of the main aspects that are found within the TBL scope. First, the author reviews some of the many definitions that the concept of ‘task’ has been given over time and says that, in short, “in L2 teaching and learning, *task* is now often viewed as an outcome-oriented instructional segment or as a behavioral framework for research or classroom learning” (p. 97). Subsequently, Oxford (2006) makes an analysis of tasks for TBL (and teaching) from various dimensions: Task goals, whether within a communicative approach they focused on form or meaning; task types, amongst the multitude of types found within the communicative perspective, the ones that can be highlighted for this particular study’s context are problem solving (Nunan, 1989; Pica et al., 1993; Willis, 1996), decision making (Foster & Skehan, 1996; Nunan, 1989; Pica et al., 1993), comparing or matching (Nunan, 1989; Willis, 1998), language analysis (Willis, 1996, 1998, 2021), structured and semi-structured dialogues (Nunan, 1989), role-plays and simulations (Crookall & Oxford, 1990; Richards & Rodgers, 2001); high versus low stakes, pointing out to the fact that there are different ways in which students can approach a task, whether a task is necessary for graduation or entrance or if it is a more relaxed one (there could also be a time factor when there is a sense of urgency); input genre

and modality, which has a lot to do with accessibility because it deals with input sources like TV shows, articles, lectures, etc, and how it is presented (written or spoken and their derivations in form) linguistic complexity, that involves “number of words (...), amount of redundancy, degree of use of dependent clauses and other complexity-creating structures, discourse style, sequence (...), technicality of vocabulary, concreteness or abstractness, sectioning” (p. 103, 104), etc, not to be confused with difficulty; cognitive load and cognitive complexity, including both the person’s processing capacity and familiarity with the task, and the task’s structure itself; interaction and output demands, depending on the expected task outcome this may be relevant or not, but when the interaction involved requires exchange, provision and demand of information between students, and when there is a single common goal, then it is relevant to the task at hand; amount of planning allowed or encouraged, the author notes that giving a lot of time for students to plan could make it easier for them, but that it may send a message implying that the task is of high difficulty; timing, referring to the allotted time that is spent on actually doing the task, considering that if it is being assigned a specific duration of time it could pressure students whilst untimed tasks could take that pressure off them, but at the same time, unfinished tasks that could not be completed within the expected assigned duration could be completed as homework, the author notes; teacher and learner factors, such as teacher’s background, planning, versatility in teaching styles and experience, and students’ classroom roles, agency, learning styles and strategies; overall task difficulty, the compound mix of all the previously mentioned factors.

In the end, Oxford (2006) concludes the analysis by stating that regarding L2 tasks “some major factors are complexity (linguistic and cognitive), overall difficulty (...), and roles of learners and teachers” (p. 109).

1.3 Legal Statement

One of the main action lines set by the Ministry of National Education (MEN) in Colombia pertains to the strengthening of undergraduate bachelor of languages/English programmes; the objective that they have is promoting higher education institutions' improvement in their undergraduate programmes related to languages or English (Ministerio de Educación Nacional, 2017).

Another relevant participant who is concerned with these processes is the university itself. Being a public university, the Industrial University of Santander (UIS) in Santander within its legal-academic operations has stipulated through the High Council's (Consejo Superior in Spanish) accord number 051 from 2009 that "(t)he Industrial University of Santander must incorporate the ICT to the formation processes as a strategy to improve its quality, to favour innovation and the application of a student-centred learning model." (Universidad Industrial de Santander, 2009, p. 1) Furthermore, the university specifies in the set of purposes to achieve that they want to "(c)ount with a technological infrastructure that is standing, sufficient and with high levels of availability to support the strategy of the use of ICT in formation processes." (Universidad Industrial de Santander, 2009, p. 1). In the same document, they delegate and set out the responsibilities to take on so that this project can be carried out successfully, including the principles and framework that are to serve as guidance all throughout.

2. Methodology Design

2.1 Course Profile

This pedagogical project is carried out at Universidad Industrial de Santander's main campus, within the bachelor's academic programme of Foreign Languages with Emphasis on English with third-semester students taking the English Phonetics and Phonology II subject, involving one group where the implementation of the ICT tools takes place.

2.2 Resources and Didactic Procedures

The implementation of this pedagogical intervention involves two specific ICT tools: YouTube and Voice Pitch Recognition (VPR) software from the mobile apps 'Nail the Pitch' (Jiang, 2019) for iPhone, and Vocal Pitch Monitor (TadaoYamaoka, 2015) and other similar apk's for Android. The pedagogical interventions take place at Universidad Industrial de Santander, inside the language-lab rooms in the Faculty of Humanities.

The procedures consist of careful insertions of the ICT tools in students' Phonetics and Phonology lectures, activities and exercises in all the subject-assessed components: Discrimination, Production, Transcription, and Theory, regarding all topics covered during the term, which include but are not limited to Peter Roach's (2009) *Intonation and Functions of Intonation*, as well as Brazil's (1994) Units 1 - 6, focusing on the implementation of YouTube's utilisation at every step of the way possible during the third semester of the academic programme for the selected group; also when learning about Intonation and its functions, students make use of the voice pitch recognition mobile (VPR) apps to aid their learning experience of the topic.

The pre-service teacher carries out the pedagogical interventions with the ICT tools in the group classes. Later, in the final stages of the term, an analysis of the data is performed, taking into account all the reviewed factors involved. On the other hand, the director of this project and

English Phonetics and Phonology II professor is in command of realising the assessment in general for the group of students along with the input of the pre-service teacher doing the interventions as to coordinate reviewed topics using the ICT tools and the assessed components.

2.3 Assessment Strategies

A mainly summative framework of assessment is performed at the end of units or term, following the instruction of the English Phonetics and Phonology II professor in charge in order “to determine whether students have achieved the goals of the program [or not]” (Areiza Restrepo, 2013, as cited in Rojas Serrano, 2017, p. 75), following the examination of the Discrimination, Production, Transcription, and Theory components that the subject usually involves, as well as actively using the language-lab rooms for some of these evaluations. In the Phonetics and Phonology II classroom, the assessment materials will be provided by the English Phonetics and Phonology II professor in charge of the development of the course.

Now, in a primarily formative assessment framework, the pre-service teacher takes the lead within each of the interventions that take place. These formative assessment events include but are not limited to live multiple-choice polls, mid-lecture open-ended questions, live performances of self-scripted dialogues, quick scales, video analyses, survey activities, and deduction-type questioning. All these previous activities are closely monitored by the professor of the subject so that feedback can be provided in terms of content, implementation type, time management, engagement strategies, and feedback for students. The proposed adjustments are considered for each event of this nature.

2.4 Activities

The development of this project requires an organised form of action and therefore the activities that were carried out within it were categorised into three different stages that cover the

entire unfolding of this pedagogic project in both terms: 2023-1 and 2023-2, from the proposal stages to the wrap-up stages. The first stage involves the planning of this project through a needs analysis questionnaire with students' participation and an interview with the professor so that the results of an assessment of the immediate field could be used as the basis for the upcoming stages. The second part consists of the structuring and designing aspects of the syllabus and the consideration of the materials needed throughout the process according to the assertions that were made possible from the previous analysis of needs, including the professor's input on it from experience. Last, the third and final stage explores in detail the actual implementation of everything that had been made provision of; it includes all the activities that were realised during the sessions and even the feedback on them provided by the students. The entire process unfolds as follows:

2.4.1 Stage 1: Preparing and Planning

2.4.1.1 Into the teaching role. The first step in the development of this project was to establish the working dynamics that would eventually dictate the boundaries and framework that the entire process would abide by. For this reason, considering the initial drive to contribute to the academic instruction in Phonetics and Phonology at Universidad Industrial de Santander, I reached out to Professor Ernesto Gallardo on 30th March of 2023 to propose the idea that I had in mind of integrating technological tools in the Phonetics and Phonology classroom so that learning processes could be aided and pedagogical processes improved from a technological point of view and he accepted the proposal on 20th April 2023, after a couple of weeks of careful consideration and down to earth modifications suggested by the professor Ernesto Gallardo on the initial idea. But first, we decided on the upcoming meetings held in the School of Languages office at the Faculty of Humanities building on 21st April 2023 that I needed first to integrate myself with the subject at hand so that I could eventually perform the interventions smoothly on my way ahead. So, we started planning lessons on 24th April 2023 for the Phonetics and Phonology II subject where I would involve myself in the teacher's role to get used to the environment, topics, and procedural dynamics of this particular subject.

A series of these first immersion-into-the-role interventions were carried out for a span of time of about one month:

Starting 03rd May 2023, I was assigned the task of starting to cover Unit 3 from David Brazil's textbook: *Pronunciation for Advanced Learners of English*, so the lesson (see appendix A) was planned beforehand and carried out after an initial introduction from the Professor Ernesto Gallardo of myself, the pre-service teacher, to the students in group B1.

First, I introduced myself again to the group of students and briefly established a connection between the latest topic they had reviewed with the new one we were about to dive in; previously, they had been studying intonation traits that had a lot to do with the tone-unit structure, so I mentioned to them how this structure had an actual impact in regular conversations in the English language and then I invited them to listen to a conversation that two people were about to have from a recording extract taken from Brazil's materials.

Then, we read the context in which the conversation takes place, as indicated in the textbook and I clarified the new vocabulary and expressions that were being exposed there: "to be in the know", "to be set in one's ways", "nasty", "oh, dear", "to be in touch with somebody", "rather", "head office", "incidentally", "there is no point (in) -ing". I attempted to make them guess the meaning of these words and expressions first and then I gave them the definition or usage of them, one by one, along with lots of examples, so that they could be encouraged to create examples of their own and share them with their classmates.

After that, I asked students to work in pairs completing the table in the textbook with the information provided in the conversation from the recording, we went back and forth answering several questions that came up during the analysis of the recorded conversation and so we repeated small sections several times to ensure meaningful engagement and understanding of the material. Coming to an end, I asked the pairs of students to discuss with one another and give final answers to the questions posed in the textbook, we then listened to the recording one last time but this time looking at the transcription of the audio file that I had prepared (see appendix B) to make final adjustments and finally, I asked them to compare their answers between groups of students so that we could listen and correct each other afterwards. I took final questions from them and closed the topic for the day by reviewing what we had just done and reflecting on how

the knowledge that they had acquired related to intonation so far could be important in their own day-to-day conversations. The class was dismissed, and Professor Ernesto Gallardo gave me feedback on the whole procedure and in a particular manner he encouraged me to improve time management, primarily.

Later, on 08th May 2023, we continued reviewing and completing Unit 3 from Brazil's textbook and this day the lesson (see appendix C) was about re-enacting an already provided scripted dialogue making sure to use the different types of tones reviewed so far, which included fall, rise, fall-rise, so that students could get a practical exercise of the different uses that each one of them had according to the theory. They worked in pairs throughout the whole class to prepare for the re-enactment and after some minutes they performed the dialogue for the whole class and immediate feedback/related examples were provided. They also changed roles within the dialogue and then reflected on the purpose of the utilisation of each one of the tones that they had just used. After that, lecturing on the fall-rise tone-unit structure was provided along with several examples and then some repetition exercises were performed both at an individual level and as a group, making sure to go back to the recording in case listening to it again was necessary for the right modelling from Brazil's material, and to clear any doubts students might have had. I finished the lesson for the day by walking them through everything we had reviewed in that day's lesson and how it related to their own intonation when they communicate in English and at last, I dismissed the class. Professor Ernesto Gallardo provided me with important feedback on the way the repetition exercises are to be done more effectively.

A couple of days ahead, on 10th May 2023 I held again the 2-hour lesson for the B1 group finishing the third unit of Brazil's textbook we had been covering so far. We started reviewing last class's dialogue activity and did a recalling exercise around it so that we could embark on the

new activity for the day: We dived into the lesson for the day (see appendix D) and went back to the audio exercise in Unit 1 and listened to it a couple of times before I gave them the instruction of working with a partner to reconstruct the story of the steps that the character in the audio took to get from one place to another in the form of a dialogue; because students were already familiar with the material, I made sure to enforce the idea behind the uses of the fall-rise tone in this recalling conversations. So, students took their time to script their sentences in the dialogue and I went around the classroom answering students' questions, clarifying any doubts, and providing any feedback necessary for the successful completion of the task at hand. At the end, all the students' groups went to the front of the class to present their dialogues (see appendix E) to the rest of the class and both peer and teacher feedback were provided at the end of each of their interventions. I made sure to answer any questions they had about the unit and ended the class by reminding them of the importance that intonation has in human communication and the ways in which they can take advantage of the knowledge they acquire through the English Phonetics and Phonology II course. Professor Ernesto Gallardo provided me with some useful feedback on the timing of my own feedback on students' performances.

Sometime after, on 15th May 2023, I introduced the topic: Unit 18 *Functions of Intonation* / from Roach's English Phonetics and Phonology a Practical Course textbook. I started the lesson (see appendix F) by reading the material and asking deduction-type questions regarding the different types of functions of intonation (attitudinal, accentual, grammatical, discourse), they gave out their responses voluntarily and I provided feedback on their answers and gave them the final definitions from the textbook. I then started going deeper into the attitudinal function of intonation particularly through a presentation I had prepared for the class (see appendix G), so we reviewed some examples of the tones and their uses through this function of intonation and

asked a couple of volunteers to come up with their own examples. Subsequently, we covered what Roach's material says about the ways it is possible to analyse this attitudinal function; we went one by one of the proposed methods of analysis, and I provided a couple of brief examples for each one of them to make sure students were following. Later, we engaged in two different activities: the first one was an activity where I would perform each method of analysis using my own sentences and students participated with their responses and their own performances of the analyses for which I also conducted a couple of quick scales of a different range of emotions, and the second activity was one where I would show students a YouTube video of an interview on a talk show and people in it were using different types of tones to express an attitude accordingly. So, students gave their opinions about what emotions were being expressed from the type of tone the speakers were using. Lastly, I showed them a YouTube video explaining the concept of pitch range (see appendix G). With this lesson, I finished by explaining how everything was interconnected and the relevance that their own speech intonation had in their communication in English, I also answered a couple of questions and dismissed the class. Professor Ernesto Gallardo inquired about the video sources.

Afterwards, on 22nd May 2023, I did an observation of Professor Ernesto Gallardo's lecture in order to focus on the improvements I needed to make on the procedural front and class management strategies so that time was used as efficiently as possible if I wanted to be able to cover all the material that needed to be covered within the allotted time for each topic and the related activities.

2.4.1.2 **Creating the needs analysis.** We continued having strategic meetings with Professor Ernesto Gallardo to determine the best course of action after completing the immersion-into-the-role phase. On 26th May 2023, it was determined that the needs analysis needed to be done through a questionnaire that would collect the students' demographic information and their views on the content of the subject, their cognitive relation with the essence of the subject, the methodology that had been implemented so far, their interests within the subject, and the accessibility to learning tools and materials. Also, it was decided that the needs analysis would be best balanced by hearing from the professor's perspective on the subject as well, inquiring about the professor's teaching profile and experience, teaching procedural practices (teaching preparation, execution, methodology, assessment, ethics, etc), his view on students' engagement, the achievement of the goals for the subject, and challenges.

For the next couple of days, from 29th May 2023 to 09th June 2023, I started creating the actual questionnaire (see appendix H) and interview (see appendix I) structure considering all the required data that would render this project successful. The questionnaire first displayed the disclaimer information of it not being a test so there would not be right or wrong answers, and that what was important was that students gave true answers. Secondly, I covered the demographic information of the students related to gender, age, and semester level, so a proper profile of the group of students could be made. Third, I inquired about their views on the subject of English Phonetics and Phonology II from three different angles: (1) if they perceived their own overall performance as good or bad in relation to the subject academic unfolding, (2) if they perceived the level of difficulty as overall easy or hard in understanding the subject's contents, and (3) whether or not they found overall usefulness in learning about the subject for their own particular case. Fourth, they were asked if certain particular topics were easy or difficult for

them; a list of the covered topics was provided by Professor Ernesto Gallardo from his own experience, so students would not be asked about something they were not familiar with. The topics were:

- Form and function of intonation
- Tone and tone languages
- Complex tones and pitch height
- Some functions of English tones
- Tones on other words
- The tone-unit
- The structure of the tone-unit
- Pitch possibilities in the simple tone-unit
- Fall-rise and rise-fall tones followed by a tail
- High and low heads
- The discourse function of intonation
- The attitudinal function of intonation
- Expressing attitudes
- The accentual function of intonation
- The grammatical function of intonation

Fifth, the students answered general questions with limited options, but with an “other” alternative, on what they liked about the subject, the options included:

- Tasks and classwork
- The material
- Discrimination and transcription

- Discrimination and production

Also, they were asked about the way they like to learn, the options included:

- Reading the material
- Listening to audio recordings
- Working alone
- Working in groups
- Studying using outside sources
- Creating my own dialogues
- Using computers and technology
- Doing tasks
- Solving problems

Further, I asked students about the topics that they were interested in, and the options were:

- Intonation form and function
- Falling, rising, fall-rise, rise-fall tones
- Tone-unit
- Functions of intonation (e.g., attitudinal)
- Varieties of English

Sixth, they were asked one question about the accessibility to learning tools and materials that they had in their immediate learning environment, they could select amongst the following:

- Video beam
- Television set
- Sound system

- English Phonetics and Phonology materials
- Infrastructure and space layout
- Other

Seventh, the students were exposed to the following statements, and they had to either agree or disagree:

- The theoretic material is better understood through the written textbook
- The theoretic material is better understood with visual/audible multimedia
- I understand better with the prerecorded audios that accompany the textbook
- I understand better with real-life recording examples
- The professor's immediate feedback is enough for me to correct and learn oral production
- I think if I had more tools I would have more room to correct and learn oral production

Lastly, the seventh section included two questions. One inquired about a particular topic that the students found easy to understand and why, and the other one inquired about a particular topic that the students found difficult to understand and why, they could respond openly without any limitations.

The interview on its own was semistructured because, although it required specific data in a predetermined order, it also was flexible for more input depending on the answers provided to some of the questions. I set up the document containing the questions and prepared a recording device that would be later used in the transcription phase of this area of the needs analysis for further processing.

2.4.1.3 **Administering the needs analysis.** When the needs analysis instruments were ready, I took them to Professor Ernesto Gallardo for a final revision and then I was on my way.

On 14th June 2023, I met with Professor Ernesto Gallardo at his office in the School of Languages and I went through every question of the interview, starting with name, teaching experience and previous workplaces. Then, I moved on to questions about his teaching practices at the current university, including his work here during the pandemic and learning experiences from it regarding technological tools. After, I inquired about his views on his specific schedule and if he thought it was enough to cover all the topics; I also inquired about his planning for the lessons and the materials. Later, I questioned him about his views on fulfilling teaching/learning goals within the established timeframe and the assessment he does of students' performance as well as the teaching methodology he uses. The last set of questions was regarding the characteristics that a good teacher of Phonetics and Phonology should have, both human and professional, and the challenges that he has encountered so far that I should be aware of.

All the questions asked inquired about background/demographic information, experiences and behaviour, opinions, and values, which would eventually help me shape my teaching persona to carry out an effective intervention project, that is why I asked a couple of follow-up questions about his teaching strategies to improve engagement, and students' response to his applied methodologies so far.

Next, on 16th June 2023, I arrived at the English Phonetics and Phonology II classroom and handed out hard copies of the questionnaire to all attending students that day, I instructed them on the purpose of the questionnaire and briefly walked them through all of the questions contained in it, so that there would not be any misunderstandings with what was being asked and still reminded them once again that there were no right or wrong answers and that it was

important for them to respond truthfully. The students then took several minutes to complete the questionnaire and I walked around the room to make sure they were all doing it properly in case one of them had any questions, and when they all were done, I thanked them for their participation and waved them goodbye.

2.4.1.4 Analysing the needs analysis. A total of 12 responses were collected out of the 17 students that were registered in the course at the time and the data were processed as follows.

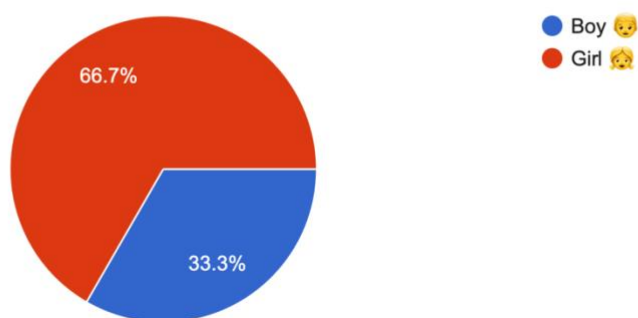
2.4.1.4.1 The questionnaire. Students who completed the questionnaire answered a total of 16 questions of different kinds that were classified into the following categories:

2.4.1.4.1.1 Demographics

Figure 1

Gender 2023-1

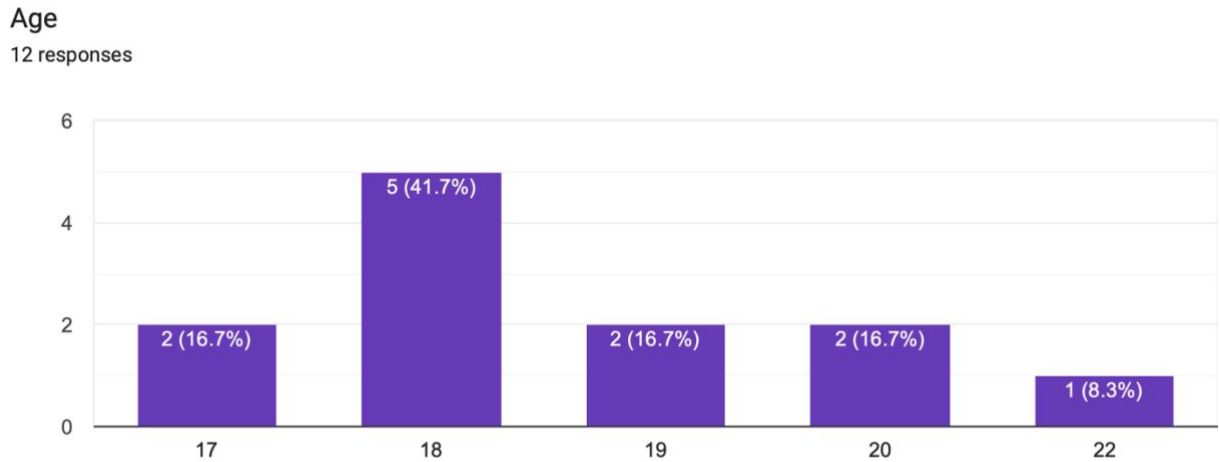
Gender
12 responses



We can see in the first figure that 66.7% of students are female and that 33.3% of them are male.

Figure 2

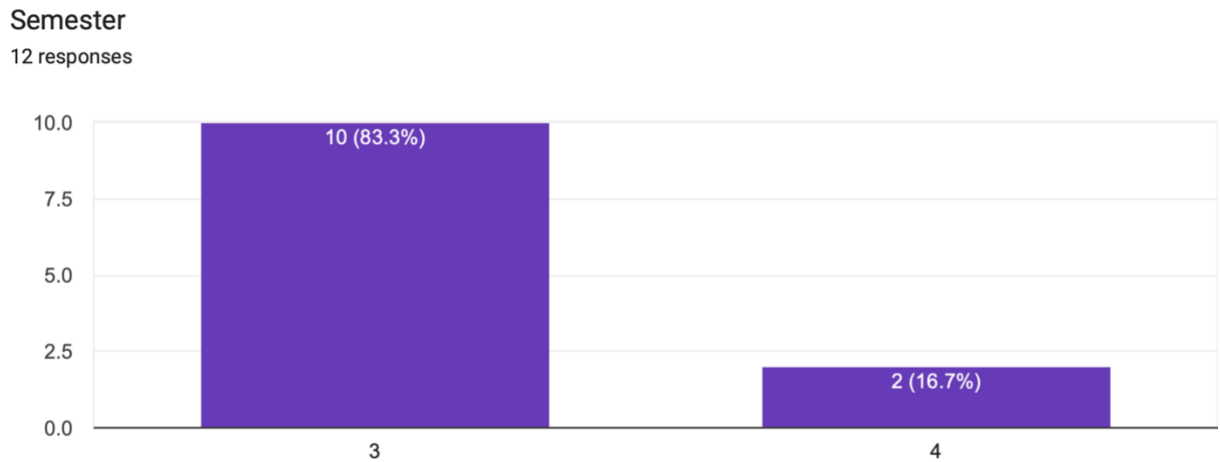
Age 2023-1



Surprisingly in Figure 2, for such a small sample of students, the age range is significant, the results show that out of the 12 respondents, 2 of them are minors of the age of 17 (16.7%), 5 of them are 18 years old (41.7%), 2 of them are 19 years old (16.7%), 2 of them are 20 years old (16.7%), and 1 of them is 22 years old (8.3%).

Figure 3

Semester 2023-1



From Figure 3 we can see that students' level of instruction within the programme was either the third semester (83.3%) or the fourth semester (16.7%).

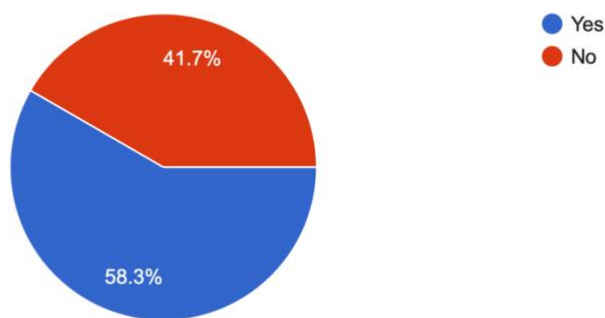
2.4.1.4.1.2 Students' general views on the subject

As mentioned earlier in the report, students were asked about their views on English Phonetics and Phonology II from three different angles: The first one was an overall self-assessment, the second one was an overall self-evaluation of their cognitive competence in relation to the subject's complexity, and the third one inquired about one important aspect of motivation for learning.

Figure 4

How Students Feel about their Performance in the Subject 2023-1

Do you feel you perform well in the English Phonetics and Phonology subject?
12 responses



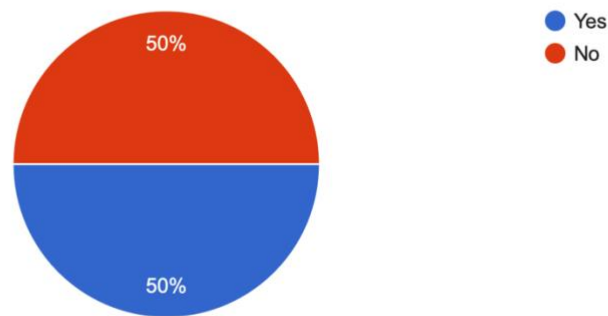
In Figure 4, we can see that 58.3% of students feel like they perform well in the subject and that 41.7% of them do not feel like they perform well. It is important to recognise here that these results of the needs analysis do not reflect the actual performance levels of students according to the university's standards of assessment. This just reflects how students perceive their own performance in the matter, and the results do not seem to indicate any type of

outstanding majority or minority, but this could be amongst other reasons due to the size of the sample.

Figure 5

Whether or not Students Find the Subject Easy to Understand 2023-1

Do you find the English Phonetics and Phonology subject to be easy to understand?
12 responses



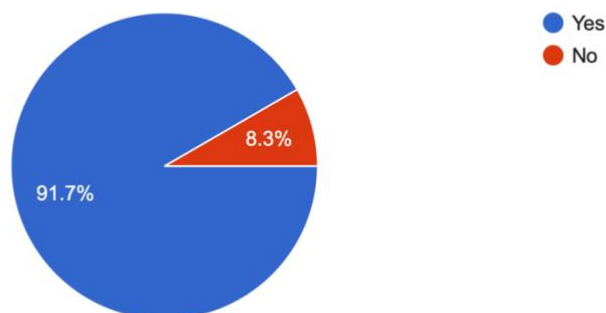
In Figure 5, we see that there was an even distribution of the selected answers. When being asked, however, about the level of difficulty understanding something we need to consider that students might be providing an answer from two different places (Oxford, 2006): (1) Their own faculties, resources and experience, and (2) the subject of study's level of complexity in terms of content, learning strategies, quality of instruction, and even assessment methodologies; so, with this question, we are just addressing their final judgement on their perceived level (not to any degree, but either easy or not) of difficulty when understanding the subject, and again, the results do not seem to indicate any type of majority or minority at all, but this could be, once again, amongst other reasons due to the size of the sample.

Figure 6

Whether or not Students Think the Subject is Useful 2023-1

Do you think English Phonetics and Phonology is a useful subject?

12 responses



In Figure 6, we can see that the results are more telling when asking about the usefulness aspect of motivation for learning. Out of the 12 students, 91.7% of them find the subject useful and 8.3% find the subject to be not useful. This is just a general assessment of students' perceptions, as there was no specificity in terms of to which end they would find Phonetics and Phonology II useful, but it could be implied that they provided these answers from a dimension mostly related to their training in Academia as language professionals and their own goals derived from that.

2.4.1.4.1.3 Students' views on easy and difficult topics

This next section provides a specific-to-case account of the students' understanding of the compiled and covered topics throughout the term so that I could pay close attention to the ones that students found more challenging. We can find the list of topics ahead.

Figure 7

Whether Students Find Topics Related to Tones Easy or Hard 2023-1

This topic is _____ to understand.

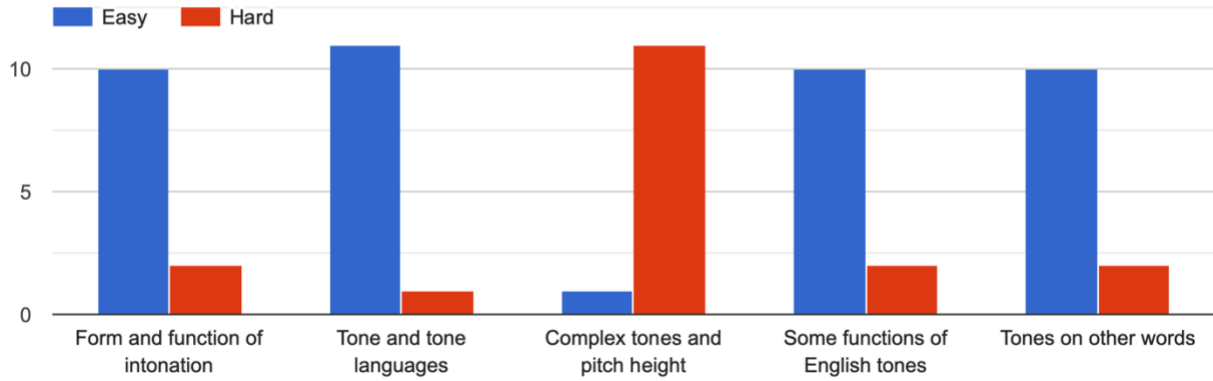


Figure 8

Whether Students Find Topics Related to Tone-Units Easy or Hard 2023-1

This topic is _____ to understand.

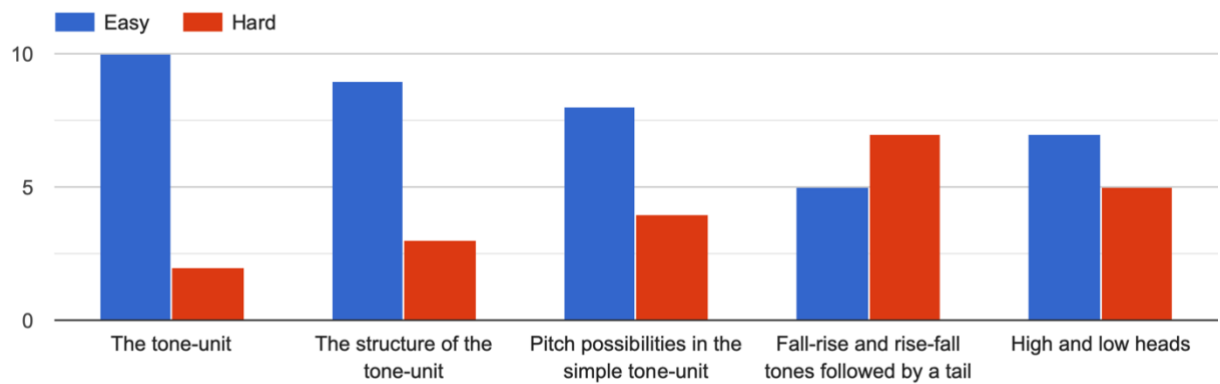
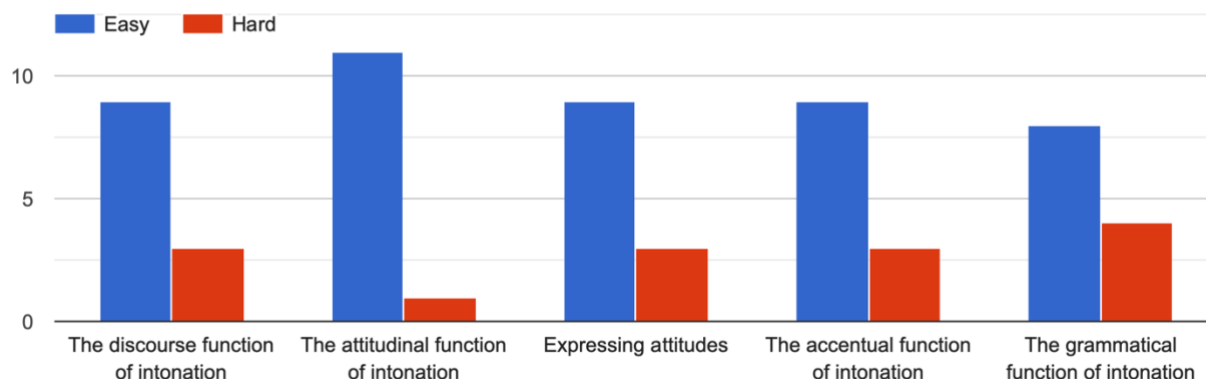


Figure 9

Whether Students Find Topics Related to Functions of Intonation Easy or Hard 2023-1

This topic is _____ to understand.



From Figures 7 (tones), 8 (tone-units) and 9 (functions of intonation), I will first outline the results that were extreme value outliers, and then I will go through the rest of the results. First, we see in Figure 7 that a majority of students found “complex tones and pitch height” difficult to understand, and only 1 person out of 12 reported finding the topic easy to understand. This could be due to the inclusion of the word “complex” in the name and therefore students might have related the term to long and fast-paced listening and discrimination exercises with lots of variability in the uses of the tones. Furthermore, in Figure 8, we can find a divided sample of students in terms of how easy/hard they find both “fall-rise and rise-fall tones followed by a tail” and “high and low heads”; whilst 5 students find “fall-rise and rise-fall tones followed by a tail” easy, 7 of them find it hard, and whilst 5 students find “high and low heads” hard, 7 of them find it easy. In either case, it is not easy to attribute any reason whatsoever for each of these particular results at this point, but it is possible to see that both topics are closely related in what the complete structure of a fall-rise and/or rise-fall tone-unit represents for students at this point, both of which make up the bases of the complexity and variability in intonation.

As for the rest of the results, at least two-thirds of students found the topics easy to understand, the data are presented as follows:

In Figure 7, we see that 10 out of 12 students found the topics “form and function of intonation”, “tone and tone languages”, “some functions of English tones”, and “tones on other words” easy to understand. This can be contrasted with the results explored earlier with “complex tones and pitch height”. Next, in Figure 8, we see that 10 out of 12 students see “the tone-unit” as easy to understand, 9 out of 12 see “the structure of the tone-unit” easy too, and 8 out of 10 find “pitch possibilities in the simple tone-unit” easy as well. This could also be contrasted with the results explored earlier regarding “fall-rise and rise-fall tones followed by a tail” and “high and low heads”. Lastly, Figure 9 allows us to see that 9 out of 12 students see the topics “the discourse function of intonation”, “expressing attitudes”, and “the accentual function of intonation” as easy to understand; interestingly, 11 out of 12 students found “the attitudinal function of intonation” easy, and 8 out of 12 students found “the grammatical function of intonation” as easy to understand, which could be because of the intuitive familiarity that students have with emotional nature of the attitudinal function and the lack of it regarding the formal (in an academic context) nature of the grammatical function.

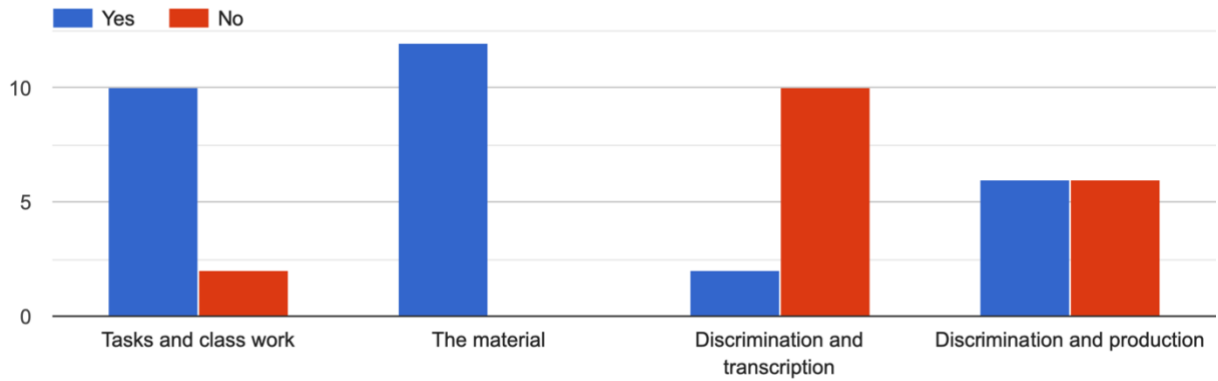
2.4.1.4.1.4 Students' likes and interests

Here, students provide answers related to their positive or negative views towards general aspects of the subject, learning strategies, and topics of interest. We can see the results ahead:

Figure 10

What Students Like about the Subject 2023-1

What do you like from English Phonetics and Phonology?

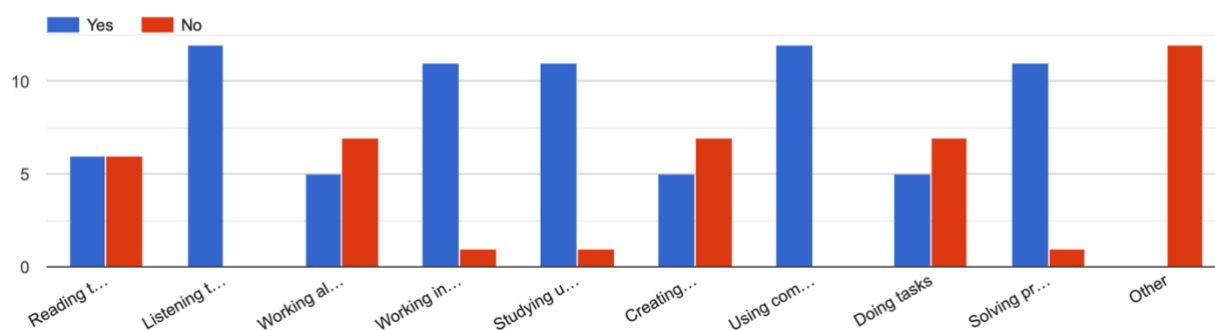


From Figure 10 we can tell that the students like the material being used in Phonetics and Phonology II unanimously, also, on the one hand, most of them (10 students) enjoy the tasks and classwork that has been done so far, but on the other hand, most of them (10 students) have not enjoyed the discrimination-transcription component (purely listening competence), and interestingly, their opinions on discrimination-production (listening and speaking) are evenly divided, which could be attributed to the interactive nature that speaking activities have and solely listening activities do not.

Figure 11

Learning Strategies 2023-1

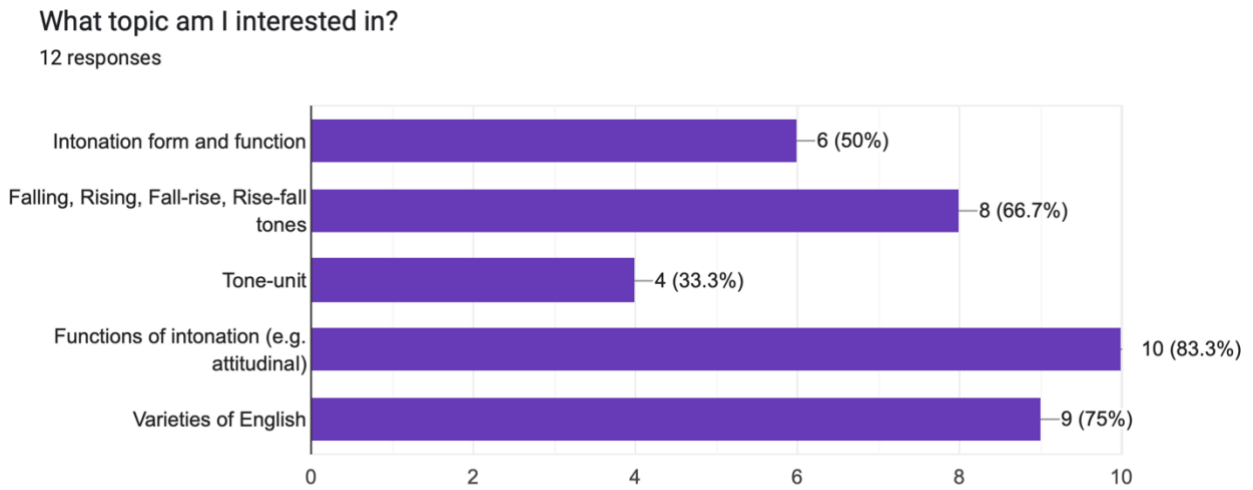
How do you like to learn?



In Figure 11, we see represented the outstanding inclination that all the students have towards learning by “listening to audio recordings” and by “using computers and technology”. Moreover, 11 out of 12 students like learning by “working in groups”, “solving problems” and “studying using outside sources”. Further, 7 out of 12 students say they do not like the following learning strategies, whilst 5 say they do: “working alone”, “creating my own dialogues”, and “doing tasks”. Interestingly, their opinions were evenly divided between the group of 12 students regarding learning by “reading the material”. Lastly, none of the students suggested any other type of learning strategy outside the ones proposed in the questionnaire. From these results, we can deduce that the students like learning with technological tools and socially interactive and proactive activities, and that some of them do not like working by themselves or doing tasks like scripting dialogues, maybe because they do not perceive them as proactive as the aforementioned strategies, whilst some few others claim to enjoy doing it, which could also be applied to the reading learning strategy.

Figure 12

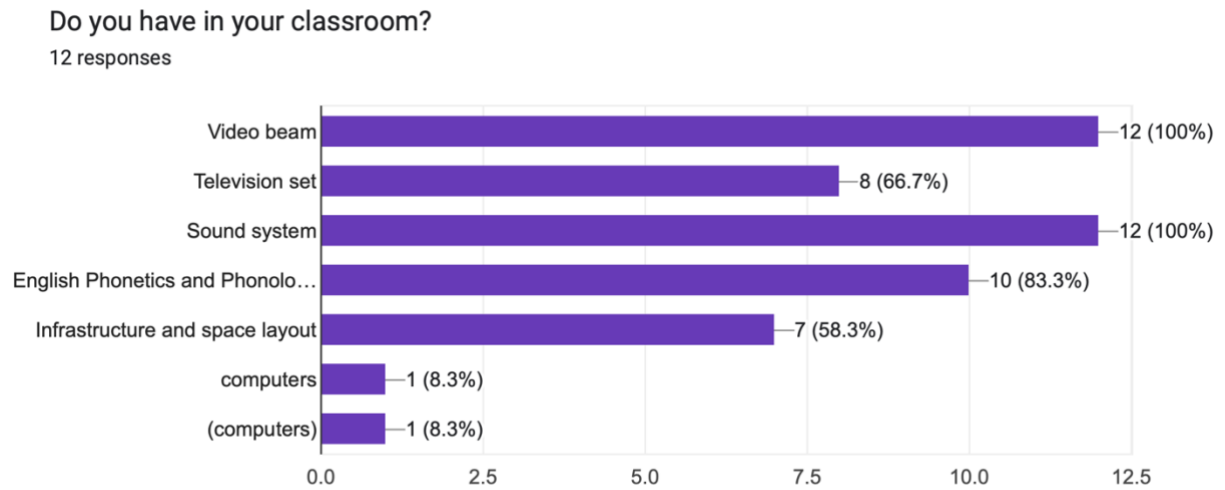
Students' Topics of Interest 2023-1



The responses from students in Figure 12 indicate that 83.3% of them find “functions of intonation” interesting, also 75% of them find “varieties of English” interesting. The rest of the topics are not as appealing, apparently: 66.7% of students are interested in “falling, rising, fall-rise, rise-fall tones”, which is higher than I expected, next, half the students are interested in “intonation form and function”, and only 33.3%, one-third of students, find “tone-unit” interesting.

Figure 13

Accessibility to Learning Tools 2023-1

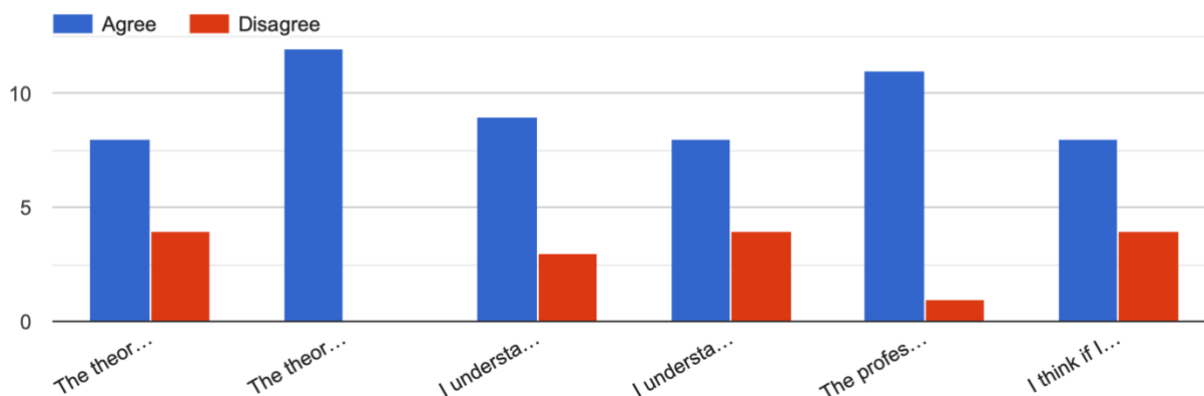


Here, all students claim to have a video projector and a sound system in their Phonetics and Phonology classroom. Next, 83.3% say they have English Phonetics and Phonology materials. Subsequently, 66.7% of them say they have a television set. Further, 58.3% of them claim to have the necessary infrastructure and space layout in the classroom. Lastly, two students added that they had computers as well. From these results, we can say that the majority of students have access to advantageous learning tools in their learning environment.

Figure 14

Students' Views on Teaching Strategies 2023-1

Mark AGREE or DISAGREE



In Figure 14, we are faced with the fact that all students say they understand the theoretical material with video and/or audio multimedia (second from left to right) versus two-thirds, 8 students, asserting that it is better with the textbook (first from left to right). Next, students were almost evenly distributed on their beliefs about understanding better with pre-recorded audio files (from the materials that include the textbook) and understanding better with real-life recorded samples of speech. The difference was only by 1 point, having 9 students favouring pre-recorded textbook audio files and 8 students in favour of real-life recorded samples, so it is almost inconclusive, but maybe the fact that the pre-recorded files were created to be used in learning environments has a certain appeal that real-life samples may not have sometimes. Last, the results show that most students (11 out of 12) feel like the immediate feedback provided by the professor is sufficient to aid their oral production, whilst two-thirds believe that more tools would add up to their learning process of oral production. Now, it is worth mentioning that none of the options in this section were presented for students to choose as mutually exclusive, so, they did understand that two options in each proposal could hypothetically be integrated with one another to a certain degree.

2.4.1.4.1.5 Students' specific views on topics

The last two questions were the two sides of a coin:

First, students were asked about a topic that was easy for them to understand and why: Four of them referred to the tone-unit, claiming good quality of instruction and simplicity in identifying its parts, then, derived from tone-unit, 3 students specifically talked about high and low heads, stating they were clearly and easily identifiable, later, other 3 students referred to the functions of intonation and when explaining themselves, 2 students out the 3 of them mentioned the attitudinal function, specifically, claiming it was very well explained and easy to infer, and the other one, just said function of intonation is “very intuitive because it is linked to a natural process that we do”. The other 2 students talked in a general way mentioning “tones” and “intonation” as being already acquainted and it not being “too complex”, respectively.

Second, students were asked about a topic that was difficult for them to understand and why: Four of them referred to the tone-unit, claiming difficulty in identifying its parts and telling apart the tones, then, related to this previous topic, 4 other students talked about the fall-rise tone or “falling, rising”, stating they sometimes overlap in function with other tones, or that they were sometimes difficult to produce orally, then, other 2 students referred back (from tone-units) to high and low heads, specifically, claiming that the difference between the two was barely noticeable sometimes. One student talked in a general way mentioning “functions of intonation”, saying they were difficult to interpret, and one last student mentioned “weak forms”, by stating that too much theory is confusing and that the “sounds of weak forms are difficult to recognize”.

2.4.1.4.2 *The interview.* As data pertaining to Professor Ernesto Gallardo was valuable from my point of view, as the right model to follow, to carry out fruitful learning experiences for students, I asked him about his teaching experience of 34 years: He stated he had been working for most of those years at Universidad Industrial de Santander, so I rested assured even more knowing I was in good hands. He said he had been teaching English and Advanced English as subjects and Phonetics and Phonology, consistently for more than 20 years, so I asked him to describe his teaching practices before, during and after the pandemic, and he responded by saying that he “learnt very (...) important things related to technology and how to apply technology in how to teach classes remotely” and although he found some shortcomings in this remote-learning context in terms of students’ attitudes, assessment techniques, and overall students’ performance, he says he “was able to learn different things related to technology” and that it was very positive for him. Then, after the pandemic, he said he is in direct contact with the students and that it is as positive to him as the new technological infrastructure that is now installed in the classrooms making things easier for him, despite some limitations that exist like the synchronisation of the sound produced by the speakers in the classroom.

After that, I asked him about the scheduled hours that they had during the week for English Phonetics and Phonology II and he said they had 6 hours in total per week, so I followed up by asking him if he felt it was enough to cover all the designated topics and activities for the term and he responded positively.

Then, I questioned him regarding his methodology for teaching and he said that they “use a book and then (they) read the contents of the book but then (he) expand(s) all (the) theory, and (he) present(s) them lots of examples on the board, and (they) do practical exercises and pronunciation”, I also asked him about the planning and execution of the classes and he

mentioned he prepares the materials for the class like “sentences and the direct application of the concept, theoretical concepts, (...) and paragraphs, and (...) all the kinds of analyses”, and regarding the execution, he said that students “do the exercises according to (his) directions and the exercise it’s basically do analysis and apply the theoretical aspects to the sentences, and then (they) analyse the sentences one by one, and (they) also listen to some brief recorded sentences on different books, and then (they) do some practical exercises in class”, which relate mainly to the task-based learning methodology. I later followed up by asking him about the students’ response to his methodology and he confidently said that he sees it as something positive because they all pay attention, despite some expected difficulties with mobile phone distractions. In terms of assessment, he claimed he did not focus on homework and that grades are only for quizzes and exams, although he does not “give them too many quizzes, just a few quizzes, (...) some discrimination quizzes and the production quizzes” like giving students a few words and they have to record them and send them to him or he sends recordings and students “mark the answers in the quiz”.

I followed by asking him if he thought they were going to achieve the learning and activity goals designated for the term and he responded by saying it was complicated: “Yes and no” because at the time of him giving lectures and doing practice activities, he perceives students have got a hold of the “production of some specific terms”, but “when they do the production exam they confuse the tones and they just seem to forget the things after practising, after having practised everything in the class”, he then added that “it depends on the complexity of the of the sentences and texts that they have to analyse”.

Further, I asked Professor Ernesto Gallardo about the aspects, both professional and human, that an effective professor should have when performing the teaching of English

Phonetics and Phonology. He answered by saying that, professionally speaking, “the number one requisite is to know exactly what he’s going to teach, (...) to have a good command of the concepts that he has to teach”, the other aspects he considers important are having a “good methodology”, having a “big ability to improvise examples”, to teach “little by little” otherwise it could be overwhelming for students, and being “ready to interpret students’ needs”; then, speaking as a human being, he said the “teacher should establish a good relationship with the students” and “establish a good (...) positive atmosphere in the classroom” for learning.

My next question was about the strategies he used for “class, giving orders, discipline, attention, and engagement”, and he replied that he tries “to get them involved in all the activities and sometimes (...) put them to work in groups or in pairs, which is better than in groups, so they can help each other”, he continued saying that “there might be filling some gaps when one student doesn't understand the other one can help, (...) work in a very collaborative way” and he also goes around the classroom “if they have a question or just listening to them when they're interacting with classmates and providing some additional information when they are (...) saying wrong things” so he can “immediately come and clarify things”.

Next, I asked him about topics students find challenging and he mentioned “the practical aspects of the production of tones and (...) identification of tones” he elaborated on it saying that students confuse “the fall-rise with the falling tone, and sometimes also confuse the fall-rise with the rising tone”.

I finished the interview by asking him for a piece of advice during the process of teaching his class. He answered: “Have a good preparation of the theoretical aspects and practical aspects of the subject; the other one, to establish a good connection with them, (...) be ready to detect all

the deficiencies that they might have and be ready to make all the necessary, (...) I guess that's the most important thing".

2.4.2 Stage 2: Designing and Making Arrangements

After the completion of the needs analysis stage, it was time to start creating the materials needed to make effective the interventions in a conventional manner, so I made some adjustments to the syllabus (see appendix J) for the class including all the technological applications required but maintained the same teaching standards and practices as to not disrupt the proper and already established by the professor course of the different basic activities that students needed to complete to learn and perform as smoothly as the other groups under Professor Ernesto Gallardo's instruction on Phonetics and Phonology.

On 07th September 2023, we met along with the professor to start developing and coordinating in advance the lessons that would take place. We discussed all considerations regarding the set-up of time and place, the selected group for the implementations, the textbook and audio materials, the range of activities that I would use, the type of feedback that I would use for students, the arrangement of future meetings with the professor during the implementation stage, the new materials, and technological tools that I would bring to the class and the teaching strategies.

- Time and place: Humanities Faculty, room 408 from 07:00 to 10:00 on Thursdays.
- Student Group: A1
- Textbook and audio materials: Roach's English Phonetics and Phonology a Practical Course, units 16 – 19, & Brazil's Pronunciation for Advanced Learners of English, unit 3.

- Activities: Open-ended questions, example prompting, dialogues, YouTube video analysis, listening and repetition, live polling, quick scales, survey activities, deduction-type questioning, and assessment of production through the VPR software mobile apps.
- Types of feedback: Constructive immediate feedback, after-the-case feedback, individual feedback, group feedback, student peer feedback, and student self-feedback.
- Arrangement of meetings: On the go.
- New materials and technological tools: YouTube carefully selected videos and VPR apps (Nail the Pitch & Vocal Pitch Monitor).

On 11th September I did one last quick observation of the lesson given by Professor Ernesto Gallardo so that I could be ready, considering again students' attitudes and behaviour as well as the professor's techniques for teaching, engaging, providing feedback, assessing, and discipline.

2.4.3 Stage 3: Implementing

2.4.3.1 **Session 1.** I started preparing the lesson plan (see appendix K) according to the instruction provided by the professor on 11th September 2023 and on 14th September 2023 I carried out the first intervention.

I read from the textbook Roach Unit 16 Intonation 2 and explained the concept of the tone-unit by giving them lots of examples (of one or more syllables), and showing them a YouTube video about tone-units and their tonic syllables (it explained how there are several layers of units that compose our final forms of communication) and asked some questions regarding what they were able to learn from the video explanation. Next, I continued reading about the structure of the tone-unit: I explained the head with examples on the board and said them out loud for students to identify, the pre-head, and the tail as well; again, some students

participated with their own quick examples. Later, I moved on to the pitch possibilities in the simple tone-unit and we used the Voice Pitch Recognition Software on the mobile phones of students so they could better understand the movement of their pitch; first, I showed them how it worked and the advantages that the apps provide, and students spent several minutes exploring the app and then doing some speaking exercises. After that, we did several exercises on the board coming up with new tone-unit structures and pitch possibilities, one student at a time and the classmates provided feedback just as I kept the class going the right way for students to learn.

2.4.3.2 Session 2. On 03rd October 2023, the professor and I discussed the topics that had been reviewed and the topics that needed to be covered ahead, as well as the activities.

I prepared the lesson plan (see appendix L) taking into account the previous class's topic and on 05th October 2023 I performed the activities for the second intervention.

I resumed the class from where Professor Ernesto Gallardo had left off last by giving the lecture, talking about High and Low Heads from Roach's Unit 17 Intonation 3, and the problems in analysing the form of intonation. I drew several graphic representations of the pitch of the utterances that we were using, so students could better understand from those examples. Sometimes, I would ask them to guide me as I drew the graphic representation of the pitch according to their own discrimination exercise on the oral examples I had given them. Then, students did several exercises on the board for several minutes following the steps I had demonstrated earlier; peer and teacher feedback was provided. We finished by watching a YouTube video of an interview of strangers on the streets of London and applied everything we had learnt with long utterances from the video, so everyone understood the potential of complexity that this type of speech analysis had.

2.4.3.3 **Session 3.** On 11th October 2023, the professor and I discussed the topics that had been reviewed and the topics that needed to be covered ahead, as well as the activities.

We knew there would be some issues completing this session due to the *Semana del Idioma* activities done by the School of Languages at a Faculty level, but on 12th October 2023 students ended up voting to stay for half the time they would normally spend on the lesson that I had prepared (see appendix M).

I started by covering part of Roach's Unit 17 Intonation 3 about how to identify the tonic syllable and the tone-unit boundaries and reviewed the theory on anomalous tone-units. I asked several open-ended and deduction-type questions as we read through the examples provided in the textbook. Then, we watched a YouTube video of an interview with a celebrity that contained several noticeable movements of pitch, which made it easy to identify tonic syllables, we analysed her speech, by transcribing her utterances on the board and going through the tone-unit parts of each utterance, first the tonic syllable, and then the rest of the structure parts. We finished the lesson by doing the written exercises from the textbook and going further by transforming the provided utterances into new possibilities of high and low heads, different tones, and ranges of pitch. The students paid close attention and participated one by one, and they also contributed by giving feedback to their peers as well as I did.

2.4.3.4 **Session 4.** On 18th October 2023, the professor and I discussed the topics that had been reviewed and the topics that needed to be covered ahead, as well as the activities.

Then, on 19th October 2023, I carried out the fourth lesson (see appendix N) by covering one part of Brazil's third unit talking about the uses of the fall-rise tone. We did several speaking exercises with sentences on the board from the textbook and analysed the intonation with the VPR apps (see appendix O), I provided feedback on the utilisation of the app so the exercise

could be completed as properly as possible. I then asked students to do the re-enactment activity of the dialogue. First, they listened to it and then practised it in their own way, making sure to use the fall-rise tone as the situation required it. Next, they presented the dialogue for the whole class and sometimes changed roles; I provided feedback accordingly. I moved on after, showing them a video where people were using the types of tones that we had just reviewed, we selected a couple of utterances to analyse, and then I asked them to attempt and imitate the uses of intonations that the people on the video were making and I provided feedback accordingly. We continued with the next exercise by listening and repeating but speaking into the VPR apps on their mobile phones this time. Finally, I finished the lesson by showing them a video (see appendix P) about interviewing strangers in London, for which I had previously selected long sentences to analyse the intonation of the speakers on the board, students were very engaged, and in the end, they tried to imitate the speakers from the video as a group.

2.4.3.5 Session 5. On 25th October 2023, the professor and I discussed the topics that had been reviewed and the topics that needed to be covered ahead, as well as the activities.

Later, on 26th October I held the next lesson (see appendix Q), in which I covered a part of Roach's Unit 18 Functions of Intonation 1, more specifically we covered the attitudinal function of intonation, we read through the textbook and I gave students lots of examples both written on the board and spoken (see appendix R), then I introduced a YouTube video of an actor doing different impressions of emotions, we skipped through it, to exemplify the intonation changes attributed to each emotion and I repeated the patterns of intonation myself to make them more evident for students, and with that, we finished the lesson because some strange person came into the classroom demanding students leave immediately and block all entrances to the classrooms for some political reasons.

2.4.3.6 **Session 6.** Due to the unexpected interruption of regular academic processes, we decided on 26th October 2023 that I would resume the lesson the following week, so the professor and I discussed the topics that needed to be covered ahead, as well as the activities.

I started the lesson (see appendix S) on 02nd November 2023 by doing a practical activity that consisted of students performing the suggested types of analysis of the attitudinal function of intonation proposed by Roach in Unit 18 Functions of Intonation 1, for which students voted on the different options and then I asked them, one by one, to express a prompt sentence and attitude attached to it, they had some time to prepare and then did it. Next, I showed them the YouTube videos from which the sentences and attitudes were originally taken (see appendix T), so students could compare their answers with the content from a native speaker's production, we again re-evaluated the different outcomes we could get from the different types of analysis, and I asked them about their preferences according to their previous experience, they all gave their opinion and the reasons for their choices. We then resumed and finished the reading by going through the suprasegmental variable in intonation, which includes sequential, prosodic, and paralinguistic (and carefully made sure students understood the author's perspective on the latter one), so I gave them examples for each one of them. We also read about expressing attitudes, and some issues that may arise when understanding the purpose of English intonation. I thanked the students for their participation and waved them goodbye.

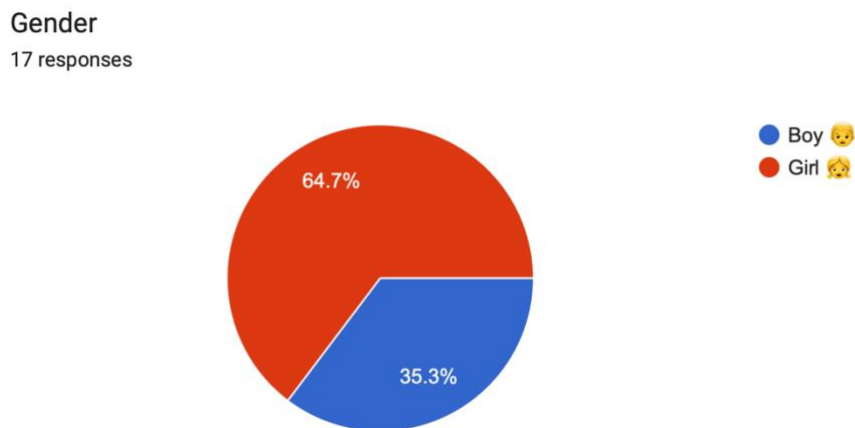
3. Results

After having completed the implementation of the pedagogical project, I applied a questionnaire on 09th November 2023 (see appendix V) that was similar to the one that was administered in the needs analysis phase during the previous term, so the comparison was fairly the same in some key aspects to maintain consistency, but at the end of it, I included more questions required to collect data in the post-implementation phase of the project, such as students' views on the integration of the utilised ICT tool in the Phonetics and Phonology II class and other questions that inquired about the pre-service teacher's performance from the students' perspectives. The results are presented in the following sections:

3.1 Demographics

Figure 15

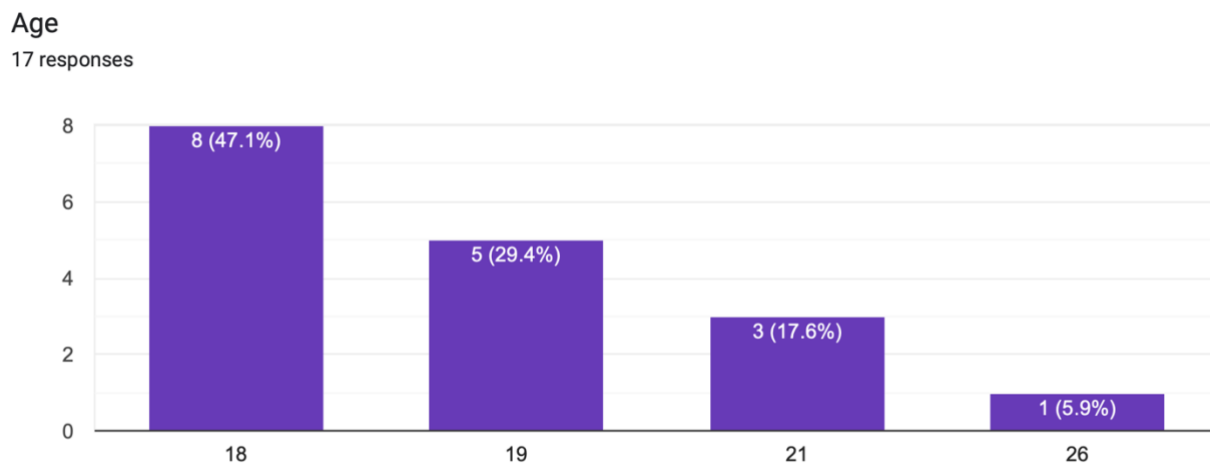
Gender 2023-2



We can see in Figure 15 that 64.7% of students are female and that 35.3% of them are male.

Figure 16

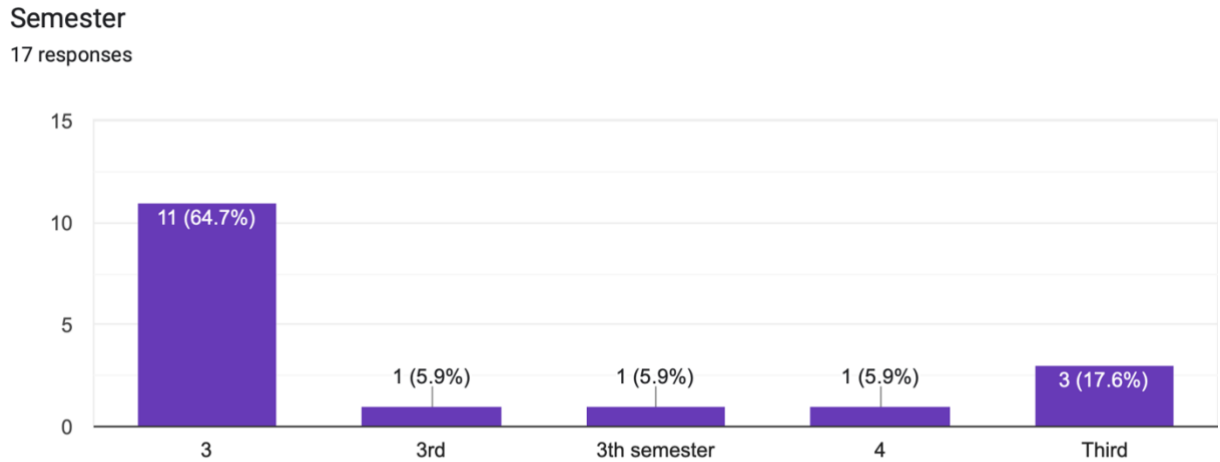
Age 2023-2



Then, in Figure 16, we can see that about half of the sample (47.1%) are 18 years old, 29.4% of them are 19 years old, 17.6% are 21 years old, and, interestingly, one single student representing 5.9% of the population is 26 years old.

Figure 17

Semester 2023-2



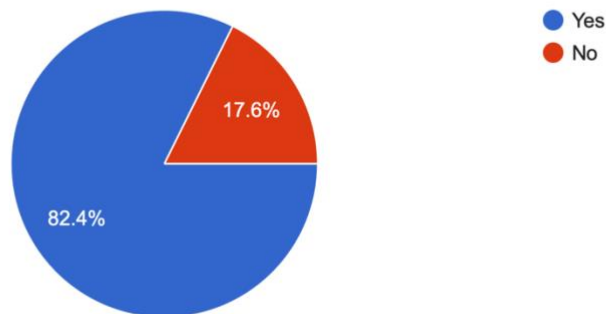
From Figure 17 we see that 94.1% of the students are in the third semester and that 5.9%, meaning one of them, is in the fourth semester.

3.2 Students’ general views on the subject

Figure 18

How Students Feel about their Performance in the Subject 2023-2

Do you feel you perform well in the English Phonetics and Phonology subject?
17 responses

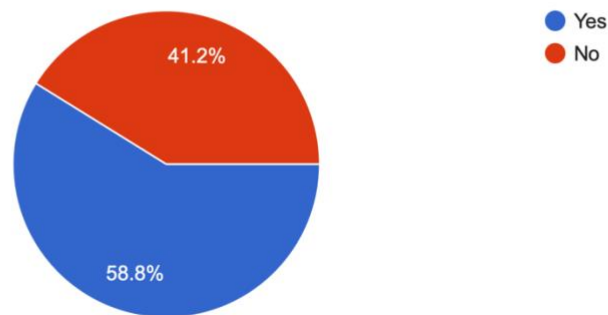


In Figure 18, we can see that 82.4% of students feel like they perform well in the subject and that 17.6% of them do not feel like they perform well. Once again, it is important to recognise here that these results of the needs analysis do not reflect the actual performance levels of students according to the university's standards of assessment. This just reflects how students perceive their own performance in the matter.

Figure 19

Whether or not Students Find the Subject Easy to Understand 2023-2

Do you find the English Phonetics and Phonology subject to be easy to understand?
17 responses

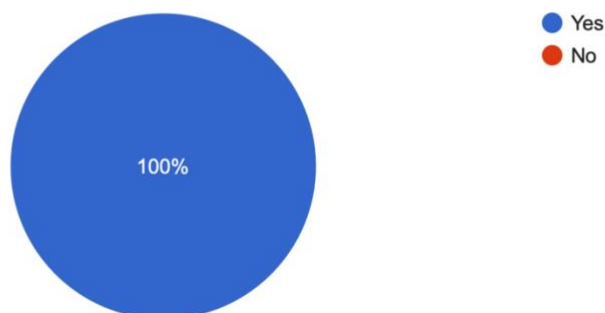


In Figure 19, we see that 58.8% of students find the subject easy to understand whilst 41.2% of them do not. It is worth remembering that when asked about the level of difficulty understanding something we need to consider that students might be providing an answer from two different places (Oxford, 2006): (1) Their own faculties, resources and experience, and (2) the subject of study's level of complexity in terms of content, learning strategies, quality of instruction, and even assessment methodologies; so, with this question, we are just addressing their final judgement on their perceived level (not to any degree, but either easy or not) of difficulty when understanding the subject.

Figure 20

Whether or not Students Think the Subject is Useful 2023-2

Do you think English Phonetics and Phonology is a useful subject?
17 responses



We can tell from Figure 20 that all students agree, finding the subject of Phonetics and Phonology useful. Also, we need to remember that this is just a general assessment of students' perceptions, as there was no specificity in terms of to which end they would find Phonetics and Phonology II useful, but it could be implied that they provided these answers from a dimension mostly related to their training in Academia as language professionals and their own goals derived from that.

3.3 Students' views on easy and difficult topics

Figure 21

Whether Students Find Topics Related to Tones Easy or Hard 2023-2

This topic is _____ to understand.

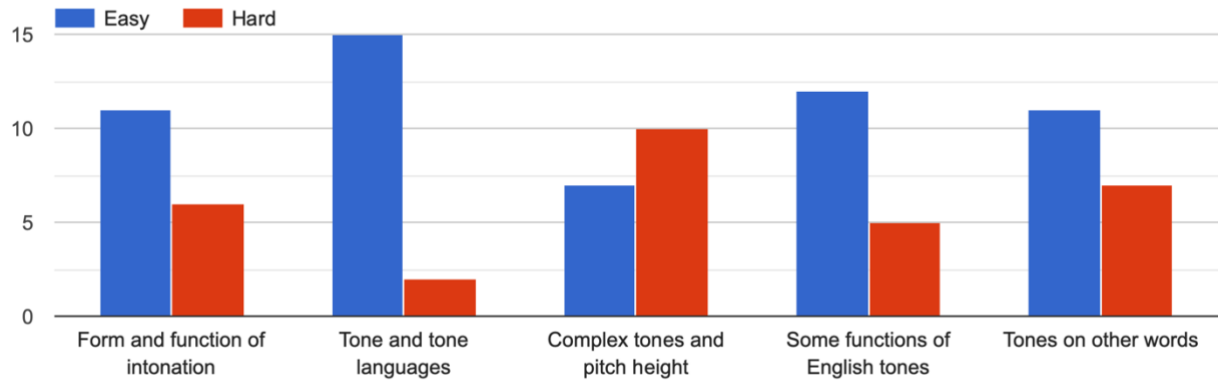


Figure 22

Whether Students Find Topics Related to Tone-Units Easy or Hard 2023-2

This topic is _____ to understand.

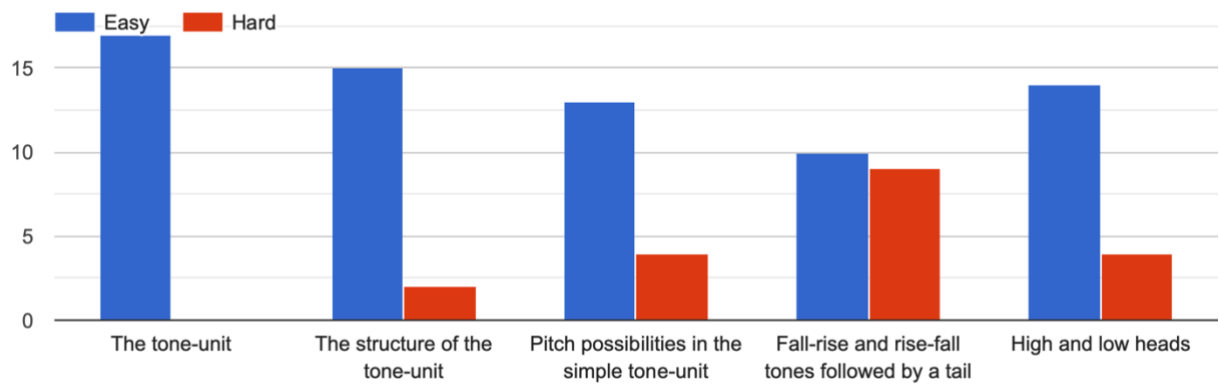
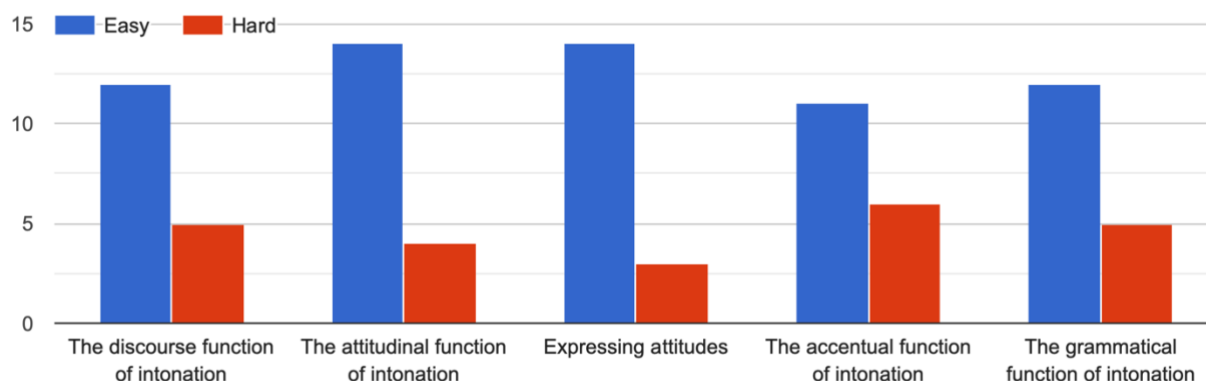


Figure 23

Whether Students Find Topics Related to Functions of Intonation Easy or Hard 2023-2

This topic is _____ to understand.



From Figures 21 (tones), 22 (tone-units) and 23 (functions of intonation), I will first outline the results that were extreme value outliers, and then I will go through the rest of the results. First, we see in Figure 21 that most students found “tone and tone languages” easy to understand, and only 2 people out of 17 reported finding the topic difficult to understand. Furthermore, in Figure 22 we see that a good part of students finds “the structure of the tone-unit” easy and only 2 people say they find it difficult to understand, also, 100% of the students find “the tone-unit” as easy to understand. Moving on, we can find a divided sample of students in terms of how easy/hard they find “fall-rise and rise-fall tones followed by a tail”; whilst 9 students find “fall-rise and rise-fall tones followed by a tail” easy, 8 of them find it hard. We can say it is not easy to attribute any reason whatsoever for this particular result, but it is possible to say that fall-rise and rise-fall tones make up the basis of the complexity and variability in intonation.

As for the rest of the results, in Figure 21, we see that 11 out of 17 students found the topics “form and function of intonation” and “tones on other words” easy to understand, then, 12 said “some functions of English tones” is easy and 5 say it is hard, and that “complex tones and

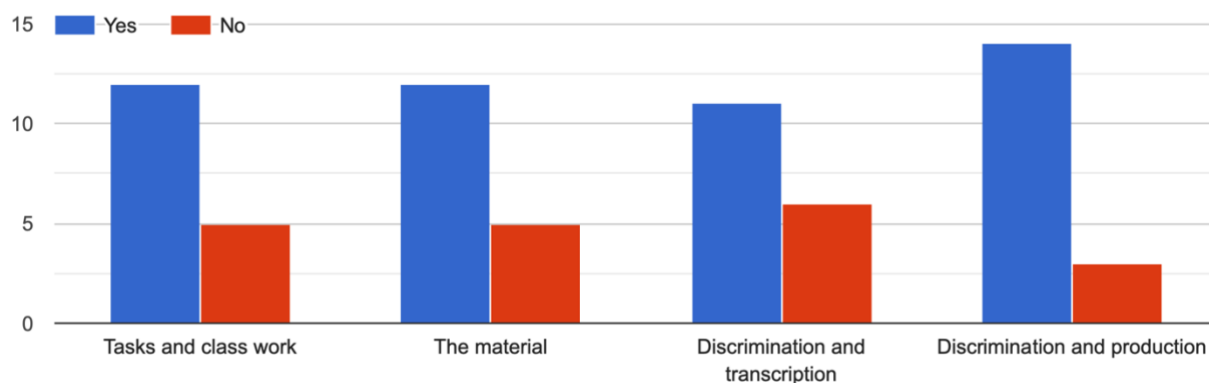
pitch height” was mostly seen in a negative light, but not by a large margin: 10 students found it hard and 7 say they find it easy to understand. Next, in Figure 22, we see similar results where 13 out of 17 students see “pitch possibilities in the simple tone-unit” as easy to understand, and 14 out of 17 see “high and low heads” as easy too. Lastly, Figure 23 allows us to see that “the discourse function of intonation” and “the grammatical function of intonation” share equal values according to the students: 12 out of 17 students set them as easy, and there is a similar case for “expressing attitudes” and “the attitudinal function of intonation” where 14 students out of 17 see them as easy to understand, and last but not least, regarding “the accentual function of intonation” 11 out of 17 students say it is easy and 6 say it is hard.

3.4 Students’ likes and interests

Figure 24

What Students Like about the Subject 2023-2

What do you like from English Phonetics and Phonology?



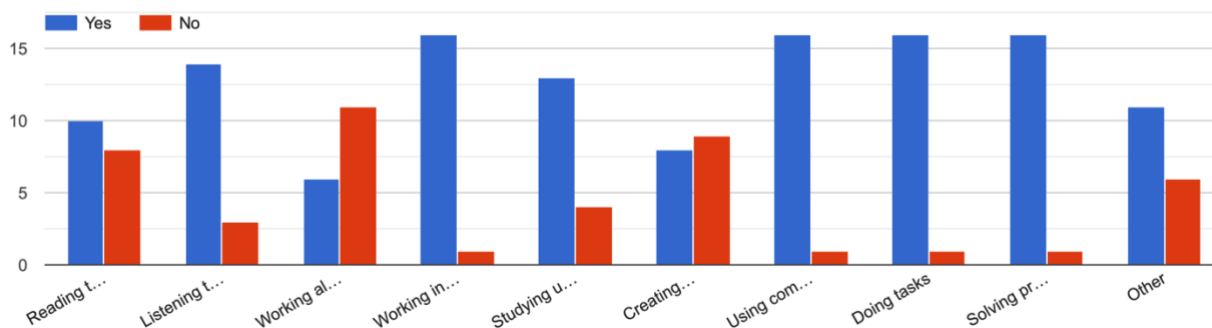
In Figure 24 we can see that most students like the “discrimination and production” component, 14 students like it and 3 students do not, then, the values are equal for “tasks and

classwork” and “the material”, which are closely related, according to the students’ perspectives and finally, 11 out of 17 students like the “discrimination and transcription” component and 6 students do not seem to agree.

Figure 25

Learning Strategies 2023-2

How do you like to learn?



In Figure 25 we see that there are several learning strategies that share equally the spotlight amongst students. For example, “working in groups”, “using computers and technology”, “doing tasks” and “solving problems” had outstanding favourability from students: 16 out of 17 liked them. Next, “reading the material” and “creating my own dialogue” could be considered close calls where 10 like reading the material and 7 do not, and 8 like creating their own dialogues but 9 students do not, respectively. The rest of the results were: students do not like “working alone”, only 6 say they do, 14 out of 17 students like learning by “listening to audio recordings”, and 13 out of 17 like “studying using outside sources”. Lastly, 11 students selected the option “Other” but the formatting did not allow open responses in this section. From these results, we can deduct as well that students like learning with technological tools and

socially interactive and proactive activities, and that several of them do not like working by themselves.

Figure 26

Students' Topics of Interest 2023-2

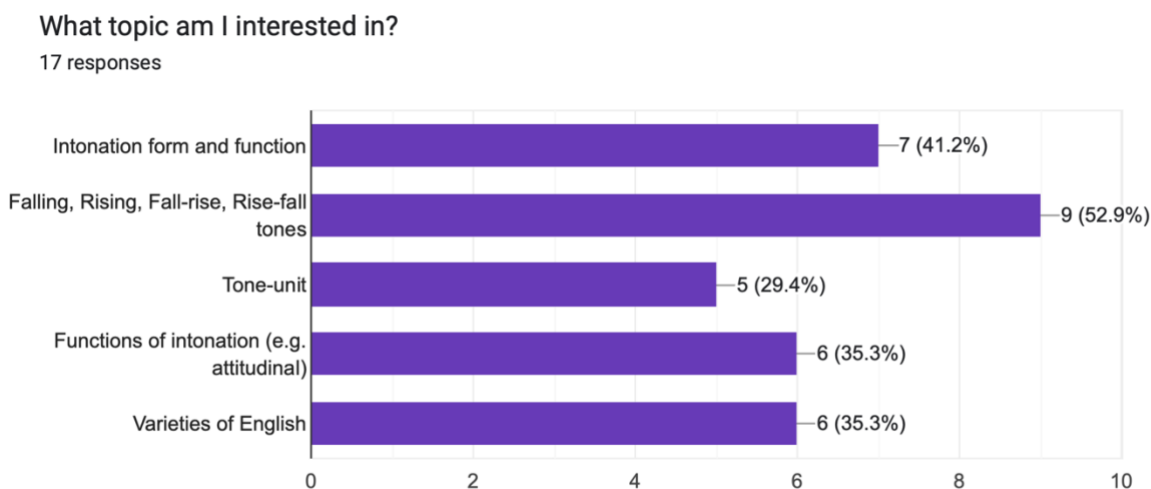
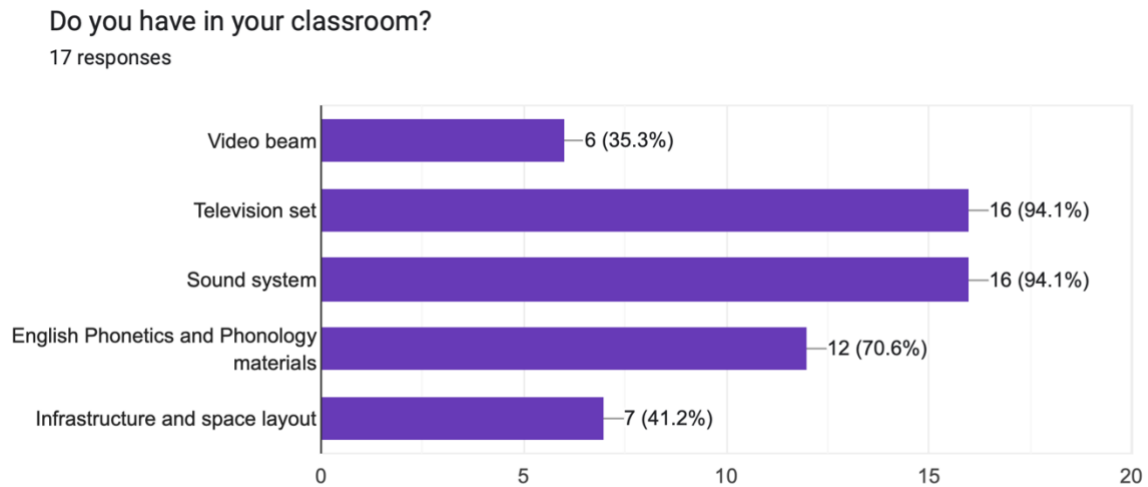


Figure 26 tells us that 52.9% of students are interested in “falling, rising, fall-rise, rise-fall tones”, 41.2% of them are interested in “intonation form and function”, and 35.3% of the students find interest in both “functions of intonation (e.g. attitudinal) and “varieties of English” respectively”. Lastly, only 29.4% say they are interested in “tone-unit”. Now, regarding this figure, we need to remember that 100% of students said they found “the tone-unit” as an “easy” topic to understand in Figure 22, so we should make careful considerations when analysing the data, for example, in this particular case, students might say they are not interested in “tone-unit” because it is “easy” to understand, so we could say that they find interest in “hard”(er) topics that are more challenging.

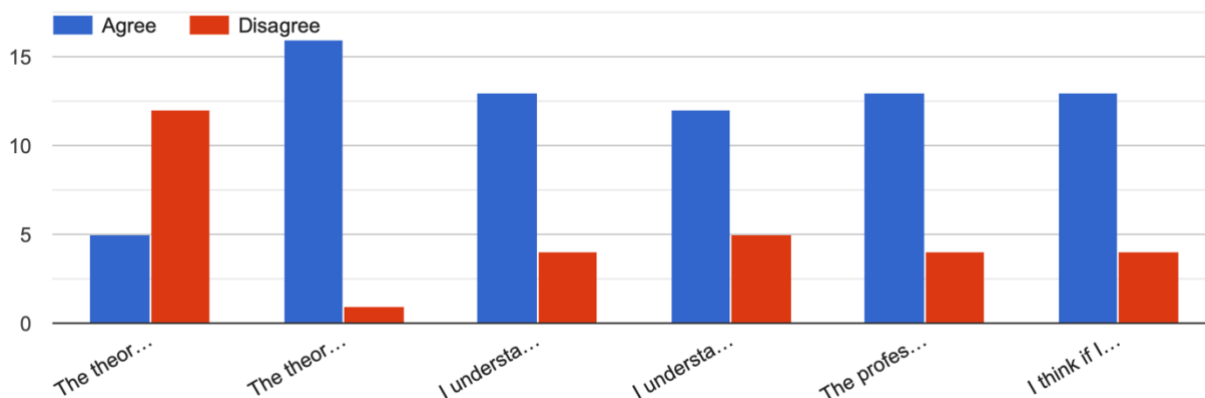
Figure 27

Accessibility to Learning Tools 2023-2

In Figure 27 we see the students' report regarding accessibility: 35.3% say they have a "video beam", 94.1% say they have a "television set" and a "sound system", respectively, 70.6% say they have "English phonetics and phonology materials", and 41.2% say they can count with the "infrastructure and layout". From these results, we can say that the majority of students have access to advantageous learning tools in their learning environment.

Figure 28*Students' Views on Teaching Strategies 2023-2*

Mark AGREE or DISAGREE



We can say from Figure 28 that most students agree on most things: 16 out of 17 students agree with the statement “the theoretical material is better understood with visual/audible multimedia” (second from left to right) versus almost two-thirds, 12 students, disagreeing with the statement that says that it is better with the textbook (first from left to right). Next, students were almost evenly distributed on their beliefs about understanding better with pre-recorded audio files (from the materials that include the textbook) and understanding better with real-life recorded samples of speech. The difference was only by 1 point, having 13 students favouring pre-recorded textbook audio files and 12 students in favour of real-life recorded samples, so it is almost inconclusive, comparatively speaking (being isolated), but maybe the fact that the pre-recorded files were created to be used in learning environments has a certain appeal that real-life samples may not sometimes have. Last, the results show that most students (13 out of 17) feel the same regarding both the immediate feedback provided by the professor and more tools being sufficient to aid their oral production, respectively. Now, it is worth mentioning again that none of the options in this section were presented for students to choose as mutually exclusive, so,

they did seem to understand that two options in each proposal could hypothetically be integrated with one another to a certain degree.

3.5 Students' specific views on topics

First, students were asked about a topic that was easy for them to understand and why: Nine of them referred to the tone-unit, claiming theory was easy to memorise making it simple to identify its parts, then, derived from the tone-unit, 1 student specifically talked about high and low heads, stating it “is easy to identify the key in which the person is talking”, later, 1 other student referred to “expressing attitudes” because the “topic is not something atypical from (their) daily life”. The rest of the students did not mention any specific topic, some of them even left the field blank, and the ones that wrote something just gave vague descriptions about the English Phonetics and Phonology II subject, saying things like “I am used to this topic more than I was in 1st semester, so (it) is easier to learn phonetics now”, or “I found easier (to) comprehend the theoretical part”, or “We can practice how the native(s) use intonation”.

Second, students were asked about a topic that was difficult for them to understand and why: 2 of them referred to the tone-unit, claiming difficulty in identifying its parts and the emphasis, then, related to this previous topic, 1 student mentioned high and low heads, specifically, because “transcription is (...) confusing”. Later, 4 other students talked about the fall-rise and rise-fall tones, stating they were sometimes difficult to produce orally or “show”, then, other 2 students referred to the attitudinal function of intonation claiming that “(it) is hard to do every emotion” and that “it’s different from each person”. One student talked about tones followed by a tail because he/she didn’t always remember the rules. Other 2 students mentioned tones, generally; one of them said “It is difficult to produce the tones, I usually mixed them” and the other one just wrote “Complex tones and pitch height”, with no elaboration on his/her

answer, and one last student mentioned “possibilities of pitch, because we had multiple and different examples and practice”, whose description of the topic makes it difficult to determine if the student sees it in a positive light or a negative one, and there was even one student that wrote “The diagram of speech, was easy to understand after seeing all the theory and doing some examples on the board”, making it seem like he/she entered this answer in the wrong field. The rest of the students again just gave vague answers or did not reply to the intended inquiry, saying things like: “Any discrimination exercise, the listening part has been the most difficult part for me since always”, “(It) Is difficult because it has many variations and we have to develop a lot of listening and production skills”, and “We use intonation different to the English speakers”.

Table 1

Comparative Analysis of Dual-Type Responses Between Samples of Students in 2023-1 and 2023-2

Category	Value	Term		Difference
		2023-1	2023-2	
Gender	Female	66.7%	64.7%	2
	Male	33.3%	35.3%	-2
Age	17	16.7%	0%	16,7
	18	41.7%	47.1%	-5,4
	19	16.7%	29.4%	-12,7
	20	16.7%	0%	16,7
	21	0%	17.6%	-17,6
	22	8.3%	0%	8,3

	26		0%	5.9%	-5,9
Semester	3rd		83.3%	94.1%	-10,8
	4th		16.7%	5.9%	10,8
Self-perceived performance	Good		58.3%	82.4%	-24,1
	Not good		41.7%	17.6%	24,1
Self-perceived difficulty	Easy		50%	58.8%	-8,8
	Not easy		50%	41.2%	8,8
Self-perceived usefulness	Useful		91.7%	100%	-8,3
	Not useful		8.3%	0%	8,3
Topics that are either easy or hard	Form and function of intonation	Easy	83.3%	64.7%	18,6
		Hard	16.7%	35.3%	-18,6
	Tone and tone languages	Easy	91.7%	88.2%	3,5
		Hard	8.3%	11.8%	-3,5
	Complex tones and pitch height	Easy	8.3%	41.2%	-32,9
		Hard	91.7%	58.8%	32,9
	Some functions of English tones	Easy	83.3%	70.6%	12,7
		Hard	16.7%	29.4%	-12,7
	Tone on other words	Easy	83.3%	64.7%	18,6
		Hard	16.7%	35.3%	-18,6
	The tone-unit	Easy	83.3%	100%	-16,7

	Hard	16.7%	0%	16,7
The structure	Easy	75%	88.2%	-13,2
of the tone-	Hard	25%	11.8%	
unit				13,2
Pitch	Easy	66.7%	76.5%	-9,8
possibilities in	Hard	33.3%	23.5%	
the simple				
tone-unit				9,8
Fall-rise and	Easy	41.7%	52.9%	-11,2
rise-fall tones	Hard	58.3%	47.1%	
followed by a				
tail				11,2
High and low	Easy	58.3%	82.4%	-24,1
heads	Hard	41.7%	17.6%	24,1
The discourse	Easy	75%	70.6%	4,4
function of	Hard	25%	29.4%	
intonation				-4,4
The attitudinal	Easy	91.7%	82.4%	9,3
function of	Hard	8.3%	17.6%	
intonation				-9,3
Expressing	Easy	75%	82.4%	-7,4
attitudes	Hard	25%	17.6%	7,4

	The accentual function of intonation	Easy	75%	64.7%	10,3
		Hard	25%	35.3%	-10,3
	The grammatical function of intonation	Easy	66.7%	70.6%	-3,9
		Hard	33.3%	29.4%	3,9
What Ss like about the subject	Tasks and classwork	Like	83.3%	70.6%	12,7
		Dislike	16.7%	29.4%	-12,7
	The material	Like	100%	70.6%	29,4
		Dislike	0%	29.4%	-29,4
	Discrimination and transcription	Like	16.7%	64.7%	-48
		Dislike	83.3%	35.3%	48
	Discrimination and production	Like	50%	82.4%	-32,4
		Dislike	50%	17.6%	32,4
How Ss like to learn	Reading the material	Like	50%	58.8%	-8,8
		Dislike	50%	41.2%	8,8
	Listening to audio recordings	Like	100%	82.4%	17,6
		Dislike	0%	17.6%	-17,6
	Working alone	Like	41.7%	35.3%	6,4

	Dislike	58.3%	64.7%	-6,4
Working in groups	Like	91.7%	94.1%	-2,4
	Dislike	8.3%	5.9%	2,4
Studying using outside sources	Like	91.7%	76.5%	15,2
	Dislike	8.3%	23.5%	-15,2
Creating my own dialogues	Like	41.7%	47.1%	-5,4
	Dislike	58.3%	52.9%	5,4
Using computers and technology	Like	100%	94.1%	5,9
	Dislike	0%	5.9%	-5,9
Doing tasks	Like	41.7%	94.1%	-52,4
	Dislike	58.3%	5.9%	52,4
Solving problems	Like	91.7%	94.1%	-2,4
	Dislike	8.3%	5.9%	2,4
Topics Ss are interested in	Intonation form and function	50%	41.2%	8,8
	Falling, rising, fall-rise, rise-fall tones	66.7%	52.9%	13,8
	Tone-unit	33.3%	29.4%	3,9
	Functions of intonation (e.g., attitudinal)	83.3%	35.3%	48
	Varieties of English	75%	35.3%	39,7

Accessibility	Video beam		100%	35.3%	64,7
	Television set		66.7%	94.1%	-27,4
	Sound system		100%	94.1%	5,9
	English Phonetics and Phonology materials		83.3%	70.6%	12,7
	Infrastructure and space layout		58.3%	41.2%	17,1
	Attitudes	The theoretic material is better understood through the written textbook	Agree	66.7%	29.4%
		Disagree	33.3%	70.6%	-37,3
	The theoretic material is better understood with visual/audible multimedia	Agree	100%	94.1%	5,9
		Disagree	0%	5.9%	-5,9

I understand	Agree	75%	76.5%	
better with the				-1,5
prerecorded				
audios that	Disagree	25%	23.5%	
accompany				
the textbook				1,5
I understand	Agree	66.7%	70.6%	
better with				-3,9
real-life				
recording	Disagree	33.3%	29.4%	
examples				3,9
The	Agree	91.7%	76.5%	
professor's				15,2
immediate				
feedback is	Disagree	8.3%	23.5%	
enough for me				
to correct and				
learn oral				
production				-15,2
I think if I had	Agree	66.7%	76.5%	
more tools I				
would have				-9,8
more room to	Disagree	33.3%	23.5%	9,8

correct and

learn oral

production

Note. The table presents the data that was collected in the form of duality in students' options to respond (therefore, not all questions and answers from the sources are included) as to be able to present the data as a summary and enable better interpretation. Whole-number results were transformed into percentages to maintain consistency in the presentation of data.

For the following reading of the data, a greater or equal difference of $\pm 24,1$ is considered as significant.

The distribution remained mostly the same for gender, age, and semester. The good self-perceived performance was higher in 2023-2, despite the self-perceived difficulty remaining almost the same between both groups of students (as divided opinion on the matter: 50% - 50% in 2023-1 and 58.8% - 41.2% in 2023-2), and the self-perceived usefulness was almost the same as well. There were not any significant differences between the two samples regarding the topics that they find easy/hard, except for: Complex tones and pitch height (the 2023-2 sample had a divided opinion of easy 41.2% - 58.8% hard, whilst the 2023-1 sample mostly agreed on hard 91.7%) and High and low heads (the 2023-1 sample had a divided opinion of easy 58.3% - 41.7% hard, whilst the 2023-2 sample mostly agreed on easy 82.4%). Then, we can see that the two groups were very divided regarding what they like about the subject (except for Tasks and classwork): The material (All 2023-1 students liked it, but only 70.6% of 2023-2 students said that they also liked it), Discrimination and transcription (only 16.7% of 2023-1 students liked it, but 64.7% of 2023-2 students also liked it), and Discrimination and production (2023-1 was 50%

- 50% divided, but 2023-2 82.4% liked it). Moving forward, there were no significant differences between students in 2023-1 and 2023-2 regarding their preferences for learning strategies, except for Doing tasks (94.1% of 2023-2 see it favourably whilst only 41.7% of 2023-1 see it the same way). Moreover, regarding topics that students are interested in, the two groups did not see eye to eye when talking about Functions of intonation (e.g., attitudinal) (83.3% of 2023-1 find interest in it, whilst only 35.3% of 2023-2 students do as well) and Varieties of English (75% of 2023-1 find interest in it, whilst only 35.3% of 2023-2 agree with them). Finally, students' attitudes regarding technology integration in learning were mostly homogeneous, save the statement "The theoretic material is better understood through the written textbook" (66.7% of 2023-1 students agree, but only 29.4% of 2023-2 do too, and 33.3% of 2023-1 disagree whilst a majority of 70.6% of 2023-2 do as well). Lastly, the data from the accessibility section are excluded from this results interpretation as they do not reflect truthfully the reality that I as the pre-service teacher observed in their English Phonetics and Phonology II classes when doing the interventions and observations, but still, I expand on this matter in the conclusions.

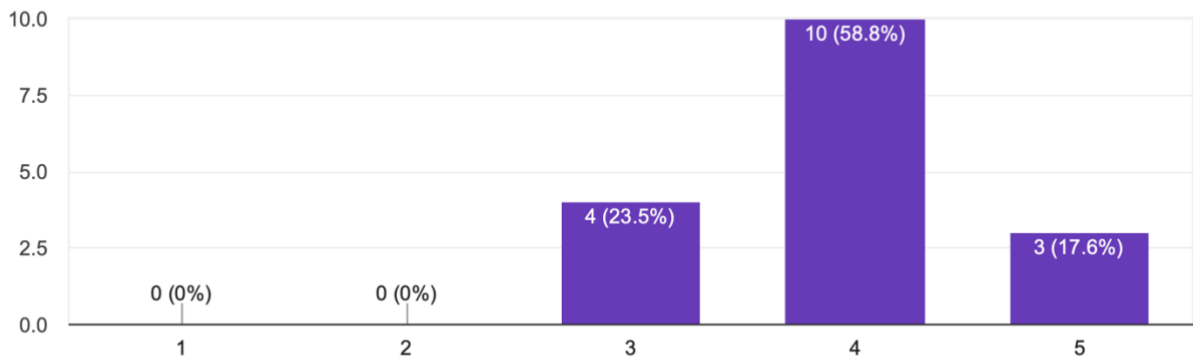
3.6 Students' general views on the pre-service teacher's performance

Figure 29

The Pre-Service Teacher's Performance According to Students

Overall, I think the pre-service teacher (Sebastián) did a job that is:

17 responses



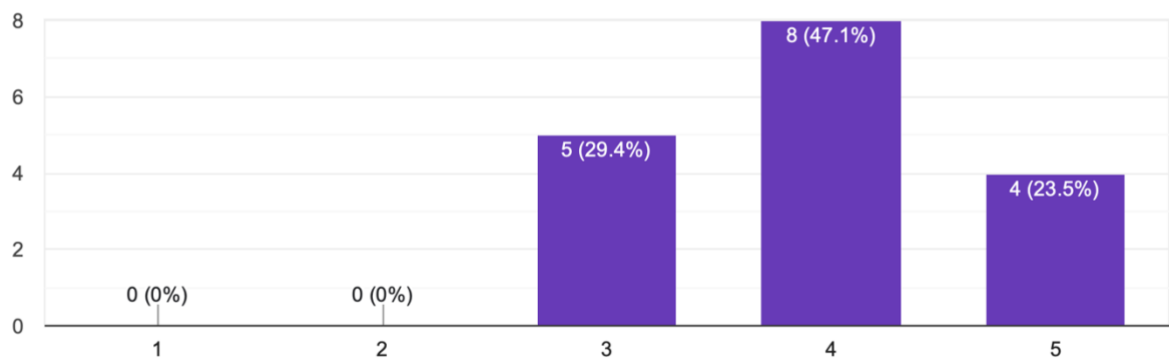
The majority of students (76.5%) approved of the pre-service teacher's overall job in Figure 29, whilst 23.5% of them remained neutral in response to the question posed. The left extreme was labelled as "poor" and the right extreme was labelled as "excellent".

Figure 30

The Pre-Service Teacher's Clarity According to Students

Overall, I think the pre-service teacher's (Sebastián) classes were:

17 responses



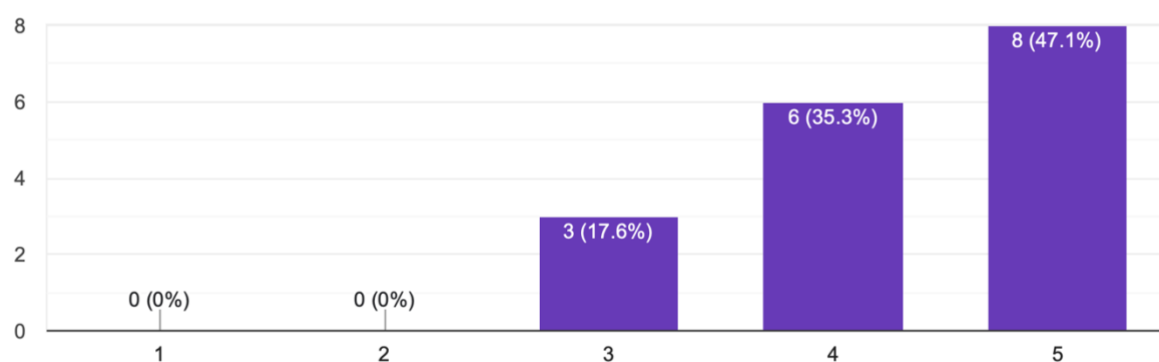
The majority of students (70.6%) found the pre-service teacher's overall classes clear in Figure 30, whilst 29.4% of them remained neutral in response to the question posed. The left extreme was labelled as "very unclear" and the right extreme was labelled as "very clear".

Figure 31

The Pre-Service Teacher's Organisation According to Students

Overall, I think the pre-service teacher's (Sebastián) classes were:

17 responses



In Figure 31, most students (82.4%) thought the pre-service teacher's overall classes were organised, whilst 17.6% of them remained neutral in response to the question posed. The left extreme was labelled as "very unorganised" and the right extreme was labelled as "very organised".

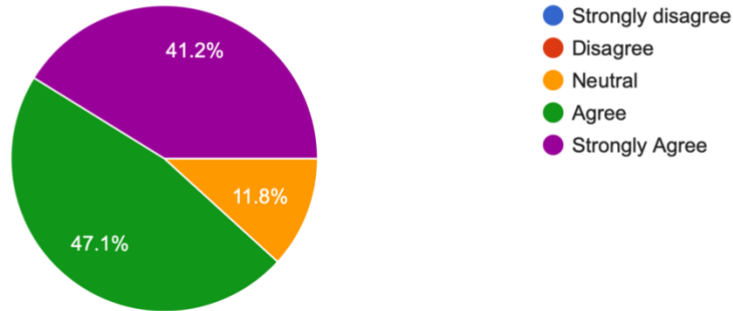
3.7 Students' views on the integration of ICT tools in their P&PII learning process

Figure 32

Students' Overall Views on the Impact that the Implementation of ICT has on their P&PII Learning Processes

Overall, I think Information and Communication Technologies (ICT) can have a meaningful impact on my learning process of Phonetics and Phonology II.

17 responses



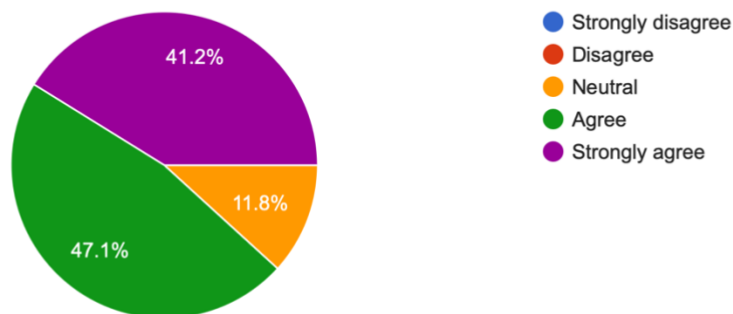
From Figure 32 we can tell that students either agree or strongly agree (88.3%) with the statement of ICT having a meaningful impact on their learning processes of the subject in question, versus the rest of the sample remaining neutral about it.

Figure 33

Students' Views on the Impact YouTube Videos have on their P&PII Learning Processes

I think the use of YouTube videos can have a meaningful impact on my learning process of Phonetics and Phonology II.

17 responses



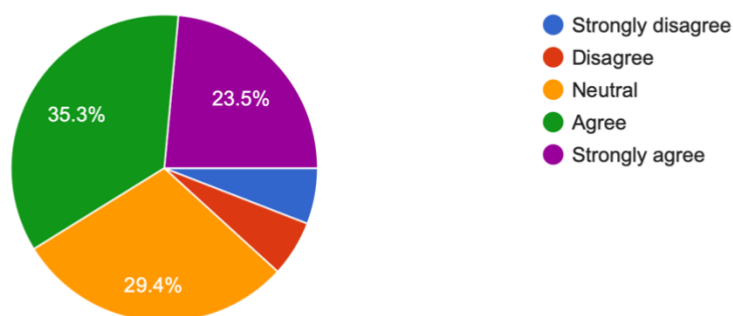
In Figure 33 we see that students either agree or strongly agree (88.3%) with the statement that YouTube videos have a meaningful impact on their learning processes of Phonetics and Phonology II, saying things like it was a good and interesting learning strategy and that it was necessary to use external sources apart from the book, versus the rest of the sample remaining neutral about it.

Figure 34

Students' Views on the Impact that VPR Mobile Apps have on their P&PII Learning Processes

I think the use of Voice Pitch Recognition mobile apps can have a meaningful impact on my learning process of Phonetics and Phonology II.

17 responses

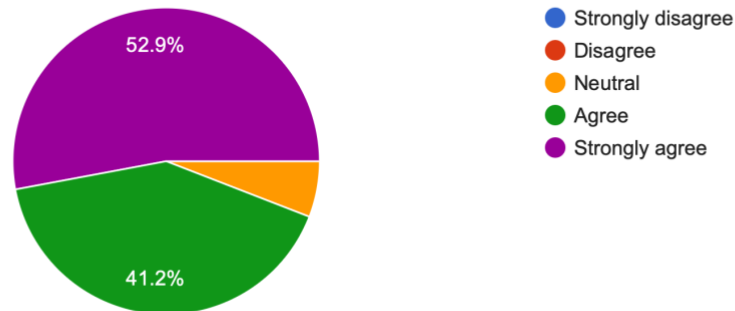


Students had diverse opinions about VPR apps having a meaningful impact on their learning process of the subject in question in Figure 34: 35.3% agree and 23.5% strongly agree, whilst 29.4% are neutral, and 5.9% disagree plus another 5.9% strongly disagree. In short, 58.8% agree, 29.4% are neutral, and 11.8% disagree. The ones agreeing said it helped them keep track of their progress and identify the changes in pitch, amongst other reasons, and the ones disagreeing said the VPR apps require a very quiet place and that it did not work properly all the time or that it was hard to use, amongst other reasons.

Figure 35

Students' Opinions about Natural Connected Speech Real-Life Samples helping them make the Connection between the Theoretical and Practical Components of P&PII

I think that watching real life samples of natural connected speech has helped me make the connection between the theory and the practicality ...e that I've acquired in Phonetics and Phonology II.
17 responses



In Figure 35, 94.1% of students agree that watching real-life samples of natural connected speech helps them connect theory with practice regarding Phonetics and Phonology II, with the majority of them strongly agreeing (52.9%), claiming it was how English natives actually spoke in real life and that it brings “theory to life”, amongst other reasons. Only one student was neutral about it.

Figure 36

Students' Opinions about Natural Connected Speech Real-Life Samples helping them to Understand the Impact that P&PII has on their Own Speech

I think that watching real life samples of natural connected speech has helped me better understand the impact that English Phonetics and Phonology has on my own speech.

17 responses

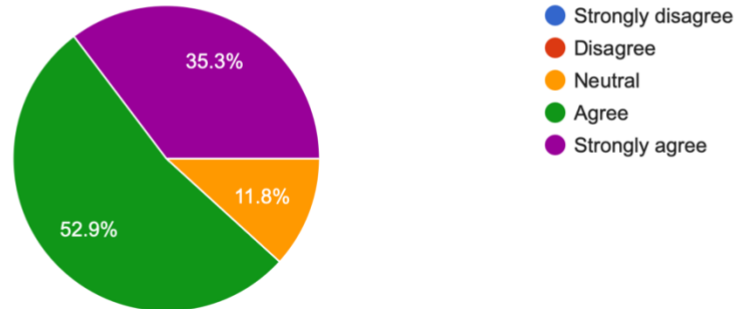


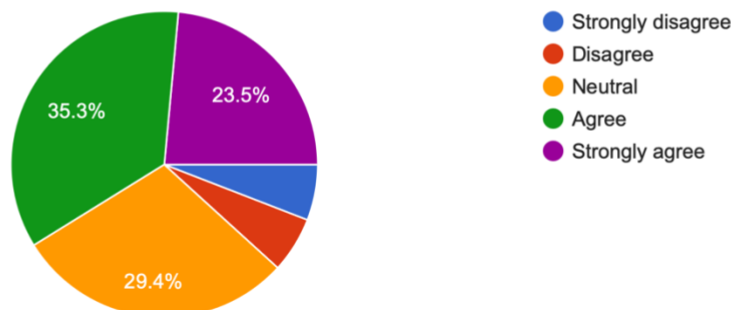
Figure 36 shows us that most students (88.2%) agree that watching real-life samples of natural connected speech helps them better understand the impact that English Phonetics and Phonology II has on their own speech, and some of them explained it is useful for identifying “how people actually talk”. Only 2 students remained neutral about it.

Figure 37

Students' Opinions about the Visual Feedback Representation produced by the VPR Mobile Apps helping them make the Connection between the Theoretical and Practical Components of P&PII

I think that seeing the visual feedback representation of my own speech through the Voice Pitch Recognition mobile app has helped me make the con...hat I've acquired in Phonetics and Phonology II.

17 responses



From Figure 37 we get the same varied proportions we got in Figure 34, which was also regarding VPR apps. Here, the statement was about the visual feedback representation of students' speech helping them connect the theory with the practice of Phonetics and Phonology II. 35.3% agree and 23.5% strongly agree, whilst 29.4% are neutral, and 5.9% disagree plus another 5.9% strongly disagree. In short, 58.8% agree, 29.4% are neutral, and 11.8% disagree. The ones that agreed said it "has a better track of the tones used" so it helps them "make corrections", amongst other reasons, whilst the disagreeing ones mentioned several reasons like it not being accurate, not being necessary but that it can work if used properly, and the app not being "that good", or that the student just preferred the professor's feedback.

Figure 38

Students' Opinions about the Visual Feedback Representation produced by the VPR Mobile Apps helping them to Understand the Impact that P&PII has on their Own Speech

I think that seeing the visual feedback representation of my own speech through the Voice Pitch Recognition mobile app has helped me better und... Phonetics and Phonology has on my own speech.

17 responses

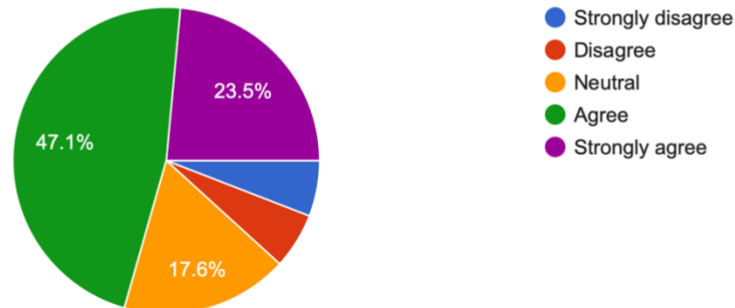


Figure 38 tells us that most students agree (70.6%) with the visual feedback representation provided by VPR apps helping them better understand the impact that the Phonetics and Phonology II subject has on their own speech. Then, 17.6% of them are neutral and 11.8% disagree. The students that agree said it helps them recognise/identify the changes in sound pitch, whilst the ones that disagree said that it is not accurate.

3.8 Students' general views on the implemented teaching content and methodology

Figure 39

Students' Opinions about the Methodology of the Pre-Service Teacher in terms of Innovation

I think that the way in which the material was explained by the pre-service teacher (Sebastián) was innovative.

17 responses

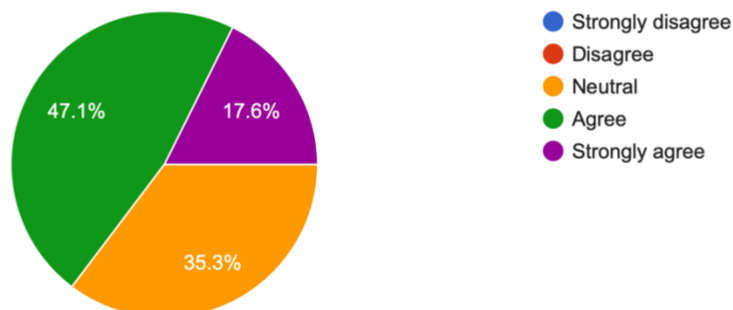


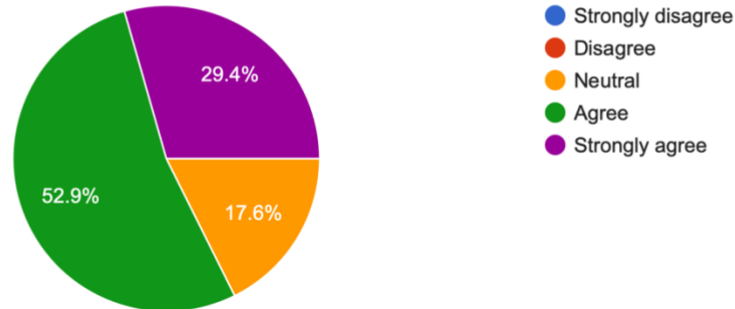
Figure 39 allows us to see that most students (64.7%) think that the way the material was explained was innovative, whilst 35.3% of them remained neutral about it; however, the ones agreeing said “sometimes boring but great”, “haven’t seen it before”, “Mr Guzmán approach through YouTube videos of movies, real speech, etc were useful an innovative”, “never seen someone used a music app to explain phonetics, good job”, “interesting and funny material of real life to connect the topic we were studying, so I didn’t find boring the material (..), Youtube videos for example”, and “we didn’t use those resources before”.

Figure 40

Students’ Opinions about the Methodology that the Pre-Service Teacher used when delivering the Class Material in terms of Usefulness

I think that the way in which the material was explained by the pre-service teacher (Sebastián) was useful.

17 responses



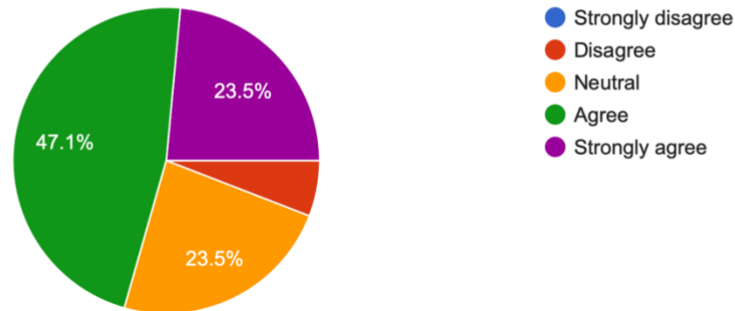
In Figure 40 we see that most students (81.3%) think that the way the material was explained was useful, whilst the rest of them remained neutral about it; however, the ones agreeing said “I could recognise and understand much better the content when I noticed the real uses through the videos he showed” and “The resources that he used were accurate”, amongst other reasons.

Figure 41

Students' Opinions about the Activities Provided by the Pre-Service Teacher in terms of Utility when facilitating their Learning Processes

I think that the activities in class provided by the pre-service teacher (Sebastián) helped me learn and clear my doubts.

17 responses



From Figure 41 we can take that, on the one hand, 70.6% of students think the class activities helped them learn and clear their doubts, whilst 23.5% of them were neutral, and on the other hand, one student disagreed with the statement.

3.9 Do students want more ICT tools integration in their P&PII learning process?

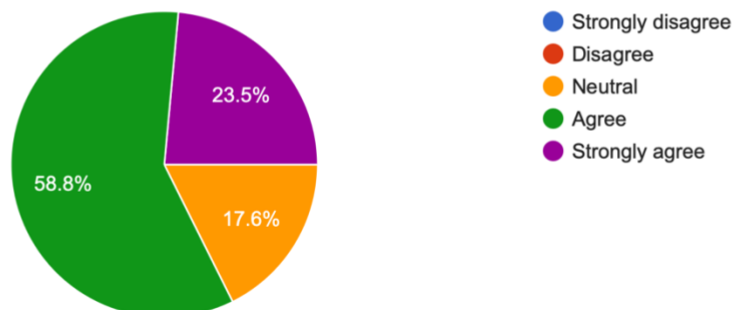
Figure 42

Students' Attitudes towards the Initiative of integrating more ICT tools in their P&PII

Learning Process

I wish more technological tools were implemented in my Phonetics and Phonology learning process.

17 responses



Finally, Figure 42 tells us that most students (82.3%) wish more ICT tools were implemented in their Phonetics and Phonology learning processes, whilst the rest of them were neutral about it.

4. Conclusions

Considering the importance that good quality instruction/acquirement of English Phonetics and Phonology has for higher education students of the English Language, I can conclude that ICT tools play a fundamental role in facilitating the learning process of all the linguistic and metalinguistic dynamics between phonemes and their suprasegmental implications within their sociopragmatic and grammatical contexts.; namely, the use of YouTube videos and the VPR mobile apps. It is true that, at Universidad Industrial de Santander the tools are already present; from what I could observe, the students have in their classrooms computers (one per student), video projectors, big TV screens, and good-quality sound systems. So, despite the limitations that these may implicate in a specific case (operationally speaking), the use of specific software tools, like YouTube or Speech Analysis, allows us to take full advantage of ICT. For this to occur, however, proper training of English Phonetics and Phonology professors in the utilisation of said software tools ought to be considered a priority.

In the first place, the original intention for this pedagogical intervention was to bring students closer to what Roach had himself designated as the purpose of his practical course's recorded exercises, which was "to lead the student towards the study of comparatively natural and fluent speech by the end of the course" (Roach, 2009. P. 169), and by integrating YouTube video samples of natural connected speech I believe we have advanced in this regard, at least, that is what most students seemed to agree on during this pedagogical intervention.

Next, the analysis of speech is not by any means a simple task. This was evidenced in the many challenges that VPR mobile apps posed in the English Phonetics and Phonology II classroom. However, despite its limitations, speech analysis software like these mobile apps catch students' attention and interest, at the very least, and if implemented more thoroughly in

language labs, particularly, software tools like Praat (Boersma and Weenink, 2011) could prove advantageous for Phonetics and Phonology instruction/learning in so many ways, accompanied by the utilisation of VPR mobile apps at a more individual level and on-the-road fashion.

Moreover, if we were to compare the group of students that in 2023-1 had no intervention of ICT tools like YouTube and VPR mobile apps with the 2023-2 group who did, we could say that the higher good self-perceived performance of 2023-2 students could have been influenced by the ICT tools implementation, but further analysis would need to be made. Also, there was an improvement in students' favourable perception regarding complex tones and pitch height, and high and low heads, along with the attached discrimination and transcription, and discrimination and production components of the subject, generally speaking (comparing 2023-2 and 2023-1 students' views). In addition, there was an increase in students' favourability towards doing tasks in 2023-2. Finally, students' attitudes regarding ICT integration in learning Phonetics and Phonology were almost always supported by both groups in 2023-1 and 2023-2.

In short, ICT tools in the Phonetics and Phonology classroom can be pedagogically meaningful if implemented properly, especially, from the early stages of English language instruction. It will benefit not only the professors' and students' immediate interests but also the long-term ambitions that the Foreign Languages with an Emphasis on English academic programme and the School of Languages might have in terms of their quality of instruction at a local, regional, and national level, at the very least.

Finally, I believe that if we were to respond to students' reported needs regarding gaps in their English language proficiency and knowledge, we should pay more attention to the reinforcement of their listening discrimination and oral production abilities, and a suitable place to start would be the English Phonetics and Phonology classroom. So, with this pedagogical

intervention, I hope I have contributed to the improvement of the teaching of English Phonetics and Phonology at Universidad Industrial de Santander.

Primary Sources

The interview and questionnaires used as primary sources in this pedagogical intervention can be found in the Appendices section at the end of this paper.

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Appendices

Appendix A Lesson Plan 1

Lesson Plan		Juan Sebastián Guzmán Vélez	
Subject area:		Topic: Fall - rise tones	
Phonetics & phonology II		Number in class: 17	
Class Description:			
<p>Students will review the topic of "fall-rise" tones in intonation in English. A brief distinction from the "fall" time in tone units will be made and several listening and repetition activities will take place.</p>			
<ul style="list-style-type: none"> • Greetings and introduction • Attendance • Brief review of the latest topic they have covered., • Introduction to new topic through listening and lecturing • Vocabulary review: "to be in the know" "to be set in one's ways" "nasty" "oh, dear" "to be in touch with somebody" "rather" "head office" "incidentally" "there's no point (in) -ing" • Students work in pairs to complete the chart activity • Listening and repetition activity 3. 1 • Lecturing • Listening and answering • Listening and repetition activity 3. 2 • Students discuss in pairs and answer • Listening • Answering and comparing 3. 3 • Listening and correcting • Answering students questions. 			
Lesson Learning Outcomes		By the end of this lesson, students will be able to:	
		Students will expand their knowledge about the use of the "fall-rise" tone in several tone units.	
Refer to unit 3	Through listening exercises, repetition exercises, and creation of their own examples students will better understand the meaning behind the use of the	Students will be able to identify it when someone else makes use of it and add meaning to their understanding of utterances	Students will be able to use it themselves to convey meaning in their own natural speech.

Appendix B Transcription of Audio Exercise

- Cheers, thanks!
- Cheers, Sue.
- Well, what's the news then? How is everybody?
- Oh
- I suppose old Arthur is still there.
- Hmm
- Still trying to keep everyone in order?
- Oh, yea. He'll go on forever.
- Hahaha
- Nothing changes for Arthur, or if it does he doesn't notice.
- You remember that friend of his, though? The guy who came from Liverpool.
- Uh
- He always came on Fridays and nobody quite knew why.
- Oh! That tall guy, yea.
- Yea
- I don't know, Bentley or something, didn't he?
- Hmm
- We used to say he wasn't sup-
- Yes. Well, Nobody knows what happened, but he had a nasty accident of some sort.
- An accident?
- In his car! But you know Arthur, he never tells you much, so we don't really know what it was.
- Oh, dear!
- Anyway, he suddenly stopped coming! Rather sad, really.
- Hmm. What about Jane and Ted upstairs?
- Oh! Well, Ted's still there.
- Uh huh
- He's not very happy about it, though. He'd like a move if he can get one, but he sort of seems to be stuck.
- Hmm
- And Jane! Oh, she went - buckle up - years ago!
- Really?
- I haven't seen her for ages, so I don't know what she's doing. Nobody seems to be in touch with her. Had Mary come before you left?
- Mary who?
- Mary in Accounts, she's Irish.
- I don't think so, no.
- No?
- I knew Sarah, I remember she was in Accounts.
- Hmm
- And then, there was that other Jane - Uh - Jane Harrison.
- Oh, yea yea.
- And then, there was Angela, of course, the - uh - rather serious one.
- Hmm
- But I don't recall a Mary.
- Well, she must've been after you left, then.
- Did she replace that man who got moved to head office? Oh, what was his name now? He left around the same time as I did; there was a bit of a fuss about it because a lot of people thought that he-
- Oh, you mean John Fellows! Oh, they say he's doing very well, incidentally. No, no, no, no, this was much later. Uh, it was some time after John went. No you wouldn't have known their aspect. Oh, well there's no much point telling you about it, is there?
- Hahaha
- Only, there was quite a storm about it at the time.

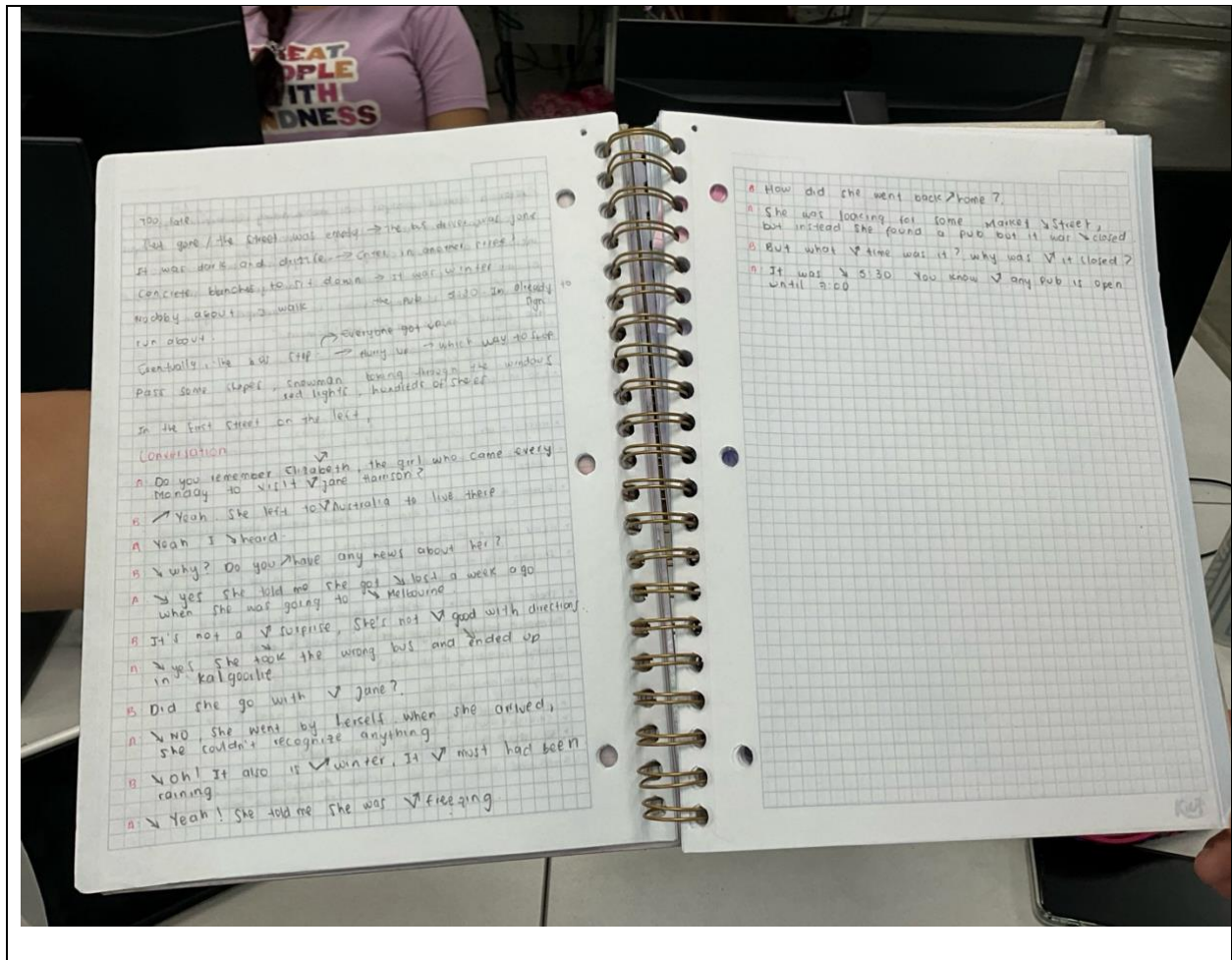
Appendix C Lesson Plan 2

LESSON PLAN		Juan Sebastián Guzmán Vélez	
Subject area:		Topic: Fall-rise tone	
English Phonetics and Phonology II		Number in class: 17	
Class description: Students will review the topic of "fall-rise" tones in intonation in English. A dialogue activity will take place so students can make the distinction between the uses of the "fall" "rise" and "fall-rise" tones in tone units. Also, several listening and repetition activities will take place.			
<ul style="list-style-type: none"> • Greetings • Attendance • Brief review of the latest topic • Introduction to new topic through open-ended questions and lecturing • Vocabulary review: "pastilles" "to face something or someone" "tin" "shelf" "to borrow" "to lend" "cupboard" • Students work in pairs to enact the dialogue activity • Listening and repetition activity 3. 7 • Lecturing • Changing roles and re-enacting • Listening and repetition activity 3. 7 • Students discuss in pairs and answer • Lecturing • Listening and repetition activity 3.8 • Listening and correcting • Answering students questions. 			
Lesson learning outcomes:		By the end of this lesson students will be able to: Put into practice the actual uses of the different types of tones, especially the fall-rise tone.	
Refer to Brazil's Unit 3: What's new?	Through listening exercises, repetition exercises, and creation of their own examples students will better understand the meaning behind the use of the "fall-rise" tone.	Students will be able to identify it when someone else makes use of it and add meaning to their understanding of utterances.	Students will be able to use <u>it</u> themselves to convey meaning in their own natural speech.
Length of lesson: 2hrs			

Appendix D Lesson Plan 3

LESSON PLAN		Juan Sebastián Guzmán Vélez	
Subject area:		Topic: Fall-rise tone	
English Phonetics and Phonology II		Number in class: 17	
<p>Class description: Students will review the topic of "fall-rise" tones in intonation in English. A dialogue activity will take place so students create their own scenario where uses of the "fall" "rise" and "fall-rise" tones would be needed.</p>			
<ul style="list-style-type: none"> • Greetings • Attendance • Brief review of the latest topic • Introduction to new topic through listening and lecturing • Vocabulary review: "commercial district" "shopping zone" "shop assistant" "terminal" "pub" "intriguing" "to freak out" • Students work in pairs to script their own dialogues activity 3.9 • Lecturing • Presentation of the dialogues • Students discuss in pairs and provide feedback • Reflection on the uses of the tones • Lecturing • Providing general feedback • Answering students questions. 			
Lesson learning outcomes:		By the end of this lesson students will be able to: Put into practice the actual uses of the different types of tones, especially the fall-rise tone.	
Refer to Brazil's Unit 3: What's new?	Through speaking exercises and the creation of their own dialogues, students will better understand the meaning behind the use of the "fall-rise" tone.	Students will be able to identify it when someone else makes use of it and add meaning to their understanding of utterances.	Students will be able to use <u>it</u> themselves to convey meaning in their own natural speech.
Length of lesson: 2hrs			

Appendix E Students' Dialogues



DD MM AA

S: You remember your friend from B/mang, the girl who got lost in the commercial district.

T: Which friend? v Martha?

S: No, Elizabeth

T: of course Elizabeth... but she didn't tell me the whole story

S: You know everyone had gone when she arrived.

T: Yes

S: She had to walk until the shopping zone. // You know that everything was dark at that time

T: Everything was dark, was it so late?

S: Yes, because was winter

S: But you know Elizabeth, she's so brave, she started walking around the commercial district

T: That actually what she does.. what she was actually looking for was market street.

S: Yes, you know everything is changed now, and she didn't recognize the street.

T: Yes she ran across across with a shop assistant, and she guide her to the pub, next to market street.

D M A May 10th Scribe

Sue: ↑ Tony, do you remember what happened to Elizabeth when she moved here?

Tony: ↓ I do. ↓ It was ^{such} a funny story

Sue: ↓ Kind of. ↓ She was so lost

Tony: ↓ Poor of her. ↓ I remember what she told us:

↓ She got to the terminus and when she wanted to ask for directions everyone had already left.

Sue: ↓ Yeah. ↓ She also couldn't recognize anything

Tony: Remember that it was winter. ↓ So everything was wet

Sue: ↑ Then she found a girl closing the store

Tony: ↓ Yeah! ↓ That was my cousin!

Sue: ↑ Really?

Tony: ↓ Absolutely! ↓ She was the shop assistant, for her holiday job

Sue: ↓ Wow, ↑ it was her? ↓ I didn't know that.

Tony: ↓ She told me about a lost girl sometime

Sue: ↓ Interesting. Hmm, ↑ and do you remember the pub?

Tony: ↓ You won't believe it: It was my family's, so my grandma told me that she opened the door and helped a confused girl that knocked at 5:30.

Sue: ↓ That's a huge coincidence. ↑ That's why you're close friends now.

Tony: ↓ Of course, but now she knows the commercial district.

Sue: ↓ That's true

DD MM AA

Nasty → Terrible, Serious
 → Nasty accident → Terrible accident

father → Bastard
 → Expression ✓

In the terminals all had gone
 didn't recognize anything
 to late

the benches were wet
 it was winter
 pass some cheap

Snowman
 Student for a holiday job
 Go to Pub
 rang a bell

A: ✓ you remember Elizabeth, ✓ my friend.
 B: ✓ Elizabeth your classmate
 A: ✓ yeah, ✓ you remember I told you that she got lost
 B: ✓ yeah ✓ how she's doing now.
 A: ✓ she got lost again, ✓ can you believe it?
 B: ✓ Really. ✓ I thought it won't happen again.
 A: ✓ that was near to the market street
 B: ✓ Oh ✓ near the pub we usually go
 A: ✓ yes ✓ she actually were there looking for directions.
 B: ✓ I believed John helped her ...
 A: ✓ - Hmm ✓ maybe.

Documento1 - Word

Condencia Revisar Vista Ayuda ¿Qué desea hacer?

SmartArt Gráfico Captura Obtener complementos Mis complementos Video en línea Vínculo Marcador Referencia cruzada Comentario Encabezado Pie de página Número de página Cuadro de Elementos W texto rápidos

Complementos Multimedia Vínculos Comentarios Encabezado y pie de página

A: Did you hear what happened to (/)Elizabeth? v?

B: I heard (V) some of it

C: (V)No, not (\)really. What happened to (\)her?

B: (V)All I know, is that she was on her way to meet (V)Tony and got quite lost, but that's pretty much all I (\)know

A: That's just the beginning of (\)it /?

C: What do you mean just the beginning of (\)it? Something horrible (/)happened?

B: I don't think something (/)horrible happened, (/)right?

A: It wasn't that (\)horrible, but it could've been (\)worse

C: You gotta be more specific (\)please

B: You are driving me (\)crazy, please tell us what (\)happened

A: (V)Well, what Angie said its (V)true, she arrived in (/)Chester and it was practically (\)desolate, she made her way to the (V)shops in hopes of finding someone, when she got (/)there she (\)noticed that there were (\)dead plants, and it was (V)beginning to snow, so she got freaked (\)out by how creepy it (/)looked and began to (\)run

B: I heard she encountered a student that was about to (\)close a shop, is it (/)true? ↓?

C: Angie please stay (\)quiet, let Santiago finish the (\)story, I'm way too (\)intrigued

A: Yes (\)Angie, please let me (\)finish, so as I was (/)saying, she began to (\)run, when all of a (V)sudden, she came across an (\)employee and begged her for (/)directions, but (\)unfortunately, she was a (V)student that came from another region, so she didn't know the (\)village that well

B: I'm not gonna stay (\)quiet, Santiago is missing (\)important information, I clearly (V)remember that it all finished when she made it to a (\)pub

A: I was about to say (—)that...

C: Angie you gotta learn to be (\)patient

B: Im (\)sorry.

Appendix F Lesson Plan 4

LESSON PLAN		Juan Sebastián Guzmán Vélez	
Subject area:		Topic: Functions of Intonation 1	
English Phonetics and Phonology II		Number in class: 17	
<p>Class description: Students will review the topic Functions of intonation in English Phonetics and Phonology, the attitudinal function in particular. An analysis activity will take place so students can do practical analysis exercises of intonation in speech. Also, we'll review the properties of sound: pitch and quality.</p>			
<ul style="list-style-type: none"> • Greetings • Attendance • Brief review of the latest topic • Introduction to new topic through deduction-type questions and lecturing • The presentation is introduced with examples of tones and uses of attitude • Students give their own examples • Feedback • Lecturing • Methods of analysis of the attitudinal intonation review • Methods of analysis of the attitudinal intonation practice with teacher-performed exercises • Methods of analysis of the attitudinal intonation practice with student-performed exercises • Methods of analysis of the attitudinal intonation practice with YouTube video exercises • Lecturing and YouTube video about Pitch • Answering students questions. 			
Lesson learning outcomes:		By the end of this lesson students will be able to: Methodically analyse in different ways the attitudinal function of intonation from several sources of sampled speech.	
Refer to Roach's Unit 18: Functions of intonation 1	Through analysis exercises and repetition exercises, students will better understand the attitudinal function of intonation using the different tones.	Students will be able to discriminate the different attitudes when someone else makes use of them and add meaning to their understanding of utterances.	Students will be able to use them themselves to convey meaning in their own natural speech.
Length of lesson: 2hrs			

Appendix G Presentation for Class

The attitudinal function of intonation

Functions of Intonation

Phonetics and Phonology

	TO NE	USES	EXAMPLES
1	Fall	Finality, definiteness	That is the end of the 'news I'm absolutely \ certain Stop talking
2	Rise	General Questions Listing "More to follow" Encouraging	Can you / help me to it /over Red /brown / yellow or blue (a fall is usual on the last item) I phoned them right away (and they agreed to come) You must write it ai gain (and this time, get it right) It won't / hurt!
3	Fall-rise	Uncertainty, doubt Assuming Requesting	You V may be right It's V possible Can I V buy it Will you V lend it to me
4	Rise-fall	Surprise, being impressed	You were ^first ^All of them

Methods

Analysing the Attitudinal Function of Intonation

- Read and say.
- Listen and describe in your own words.
- Listen and choose.
- Read, say, and listen.
- Listen to natural speech and describe.

Pleading

Sad

Angry

“I want to buy a new car.”

Happy

Proud

- Pitch Range
 - * High key
 - * Mid key
 - * Low key

SOUND WAVES

LOUDNESS = AMPLITUDE

PITCH = f



QUALITY = COMPLEXITY

RAZEFACIUN ↑
COMPRESSION ↓



<https://www.youtube.com/watch?v=mevjV5pcITc&t=97s>



Appendix H Needs Analysis Questionnaire








Licenciatura en Lenguas Extranjeras con Énfasis en Inglés
Escuela de Idiomas



QUESTIONNAIRE

This is a questionnaire, not a test. There are no correct or incorrect answers. It is important that you give **true** answers.



Gender: Boy  Girl  Age: _____ Semester: _____



Do you feel you perform well in the English Phonetics and Phonology subject? Yes  No 



Do you find the English Phonetics and Phonology subject to be easy to understand? Yes  No 

Do you think English Phonetics and Phonology is a useful subject? Yes  No 

(Put an X in the answer that is true for you)



This topic is _____ to understand.	EASY 	HARD 
Form and function of intonation		
Tone and tone languages		
Complex tones and pitch height		
Some functions of English tones		
Tones on other words		

This topic is _____ to understand.	EASY 	HARD 
The tone-unit		
The structure of the tone-unit		
Pitch possibilities in the simple tone-unit		
Fall-rise and rise-fall tones followed by a tail		
High and low heads		



This topic is _____ to understand.	EASY 	HARD 
The discourse function of intonation		
The attitudinal function of intonation		
Expressing attitudes		
The accentual function of intonation		
The grammatical function of intonation		
Other:		

Licenciatura en Lenguas Extranjeras con Énfasis en Inglés
Escuela de Idiomas



What do you like from English Phonetics and Phonology?	YES 	NO 
Tasks and class work		
The material		
Discrimination and transcription		
Discrimination and production		

Other:



How do you like to learn?	YES 	NO 
Reading the material		
Listening to audio recordings		
Working alone		
Working in groups		
Studying using outside sources		
Creating my own dialogues		
Using computers and technology		
Doing tasks		
Solving problems		
Other:		

What topic am I interested in?	Tick ✓ (More than one)
Intonation form and function	
Falling, Rising, Fall-rise, Rise-fall tones	
Tone-unit	
Functions of intonation (e.g. attitudinal)	
Varieties of English	
Other:	



--	--

Do you have in your classroom..?	Tick ✓ (More than one)
Video beam	
Television set	
Sound system	
English Phonetics and Phonology materials	
Infrastructure and space layout	
Other:	

Mark AGREE or DISAGREE with an X.	AGREE 	DISAGREE 
The theoretic material is better understood through the written textbook		
The theoretic material is better understood with visual/audible multimedia		
I understand better with the prerecorded audios that accompany the textbook		
I understand better with real-life recording examples		
The professor's immediate feedback is enough for me to correct and learn oral production		
I think if I had more tools I would have more room to correct and learn oral production		

The main reason for which _____ (topic) is easy to understand is because:

The main reason for which _____ (topic) is difficult to understand is because:

*Appendix I Needs Analysis Interview***Interview**

- What's your full name?
- How many years have you been practising as an English-related professor?
- How do you start working as a professor here at Universidad Industrial de Santander?
- How was the process for you teaching here in Universidad Industrial de Santander and which topics have you taught?
- How would you describe your teaching during the pandemic in comparison to prior to the pandemic and after the pandemic?
- Do you have the technological resources necessary to give your classes in an effective manner?
- How many hours a week do you have to give your lectures, and do you think it is enough to cover everything that needs to be covered?
- In what moment do you feel like you need to follow the material as a guidance for planning your classes and how do you go about that process?
- Do you think students fulfil the tasks in class as you intend them to be within the timeframe?
- How do you tend to assess the students' work and their performance taking into account the four skills in communication?
- Is there any activity or methodology that is your favourite one when teaching Phonetics and Phonology?
- How has been the students' response to the methodologies, resources, and activities that you have implemented so far in this class?
- Considering the objectives set by the school and the academic programme for the third semester in the subject of Phonetics and Phonology, do you think the objectives and activities are reached by the end of the term?
- What aspects, professional and human, do you think an effective professor should have when performing the teaching of English Phonetics and Phonology?
- What strategies do you use to make sure there's a good class management in your methodology of teaching, giving orders, discipline, attention, and engagement?
- Is there any particular topic or topics that you see students have most difficulties with or have you noticed any challenges?
- What piece of advice would you like to give me during this process of teaching in your class?

Appendix J Adjusted Syllabus

**UNIVERSIDAD INDUSTRIAL DE SANTANDER
FACULTAD DE CIENCIAS HUMANAS
ESCUELA DE IDIOMAS
LICENCIATURA EN LENGUAS EXTRANJERAS CON ÉNFASIS EN
INGLÉS
PHONETICS AND PHONOLOGY II
SECOND SEMESTRE 2023**

COURSE NAME	PHONETICS AND PHONOLOGY II					
CODE	28555					
GROUPS	A1					
WEEKLY HOURS	6 (TAD: 6; TI: 9)					
SCHEDULE	GROUP	MON	TUE	WED	THU	FRI
PLACE	A1		7:00 – 10:00 C.H. 174		7:00 – 10:00 C.H. 408	
CREDITS	5					
PROFESSOR	ERNESTO GALLARDO VERA and JUAN GUZMÁN V.					
E-MAIL	egallardovera555@gmail.com					
OFFICE HOURS	According to students' needs and teacher's availability					

As agreed by Brown (1999), Celce-Murcia (1999), Dalton and Seidhofer (1994), Dziubalska- Kolaczyk and Przedlacka (2005), Jenkins (2000), Murphy (1997), Penington (1996), Ross (1992), Underhill (1994), knowledge of the phonology of L2 (and even, perhaps, of the broader field of phonetics, covering the sound systems of human languages in general) is necessary for foreign language teachers. The underlying assumption behind the curriculum design reflects the belief that teachers need a well-rounded concept of the phonology of the language they are going to teach. They should be respectably solvent in both segmental and suprasegmental features of the target language and they should have a solid grounding in "theory and knowledge about how the sound system of the target language works" (Burgess and Spencer, 2000). Thus the phonological training of student teachers involves learning about the sounds of English as well as learning how to produce them. It is expected that this interplay of theoretical and practical aspects will be highly beneficial in helping students to become both proficient speakers of English and effective teachers of the language. As observed by Dziubalska-Kolaczyk (2002) "Making the learner metalinguistically aware of phonetics, phonology, morphology, syntax as well as socio-pragmatics will facilitate his/her acquisition of a second language, i.e. the development of second language competence." It is our belief that our students' future teaching practice will demand precisely this: heightened quality of competence originated by metalinguistic awareness. Trainees will become linguistic models for their pupils and as stated by Gimson (2001) one of their major responsibilities will be centred around providing as close approximation to a chosen model of pronunciation as possible. The core construct of the model suggested is phonological metacompetence, which is understood as conscious knowledge of and about the grammar of the language and which may be developed by making the learner metalinguistically aware of L2 phonetics and

phonology. The notion of metacompetence alludes to the distinction in cognitive psychology between 'declarative knowledge' and 'procedural knowledge' that has been recently applied to SLA. Broadly speaking, declarative linguistic knowledge refers to speaker's knowledge of linguistic facts, whereas procedural knowledge refers to know-how in using the language.

Phonological metacompetence is postulated as a major facilitating device capable of enhancing the process of acquisition in a threefold manner as: 1) facilitator of intake — operating at the level of perception and helping input to become conscious intake through formal explicit instruction and guided ear training, 2) acquisition facilitator — forming adequate representations and preventing the mapping into L1 system owing to the conscious analysis of the underlying process, 3) monitoring device — providing reflective feedback on the production by equipping L2 learners with necessary tools for self-monitoring and self-correction as well as promoting conscious awareness of the influencing potential of sociological and psychological factors.

SUBJECT PURPOSE

This course is intended for students who have successfully completed the Introduction to Articulatory Phonetics of English and English Phonetics and Phonology I. It aims to introduce students to the nature of intonation in general and possible functions of intonation in English indicating how these features contribute to meaning.

COMPETENCES

COGNITIVE COMPETENCES

- State and analyse the nature of intonation
- State the main functions of intonation
- Describe the structure of a tone-unit: pre-head – head – nucleus – tail
- Identify contrastive nuclear tones: fall, low rise, high rise, fall-rise and rise-fall
- Describe and give examples of attitudinal function of intonation
- Describe and give examples of grammatical function of intonation
- Describe and give examples of focusing/accental/informational function of intonation

OPERATIONAL COMPETENCES

- Read, understand and discuss the literature on prosody of English
- Transcribe and produce nuclear tones
- Transcribe and produce examples of attitudinal function of intonation
- Transcribe and produce grammatical function of intonation
- Transcribe and produce examples of focusing/accental/informational function of intonation
- Read form phonetic script producing various types of intonation.
- Produce a closer approximation to the sound of the chosen model of a native English speech at phonemic and sub-phonemic level
- Demonstrate awareness of the relation between the sound and spelling of English avoiding orthoepic errors
- Analyse personal diagnostic speech samples in consultation with the instructor
- Develop a personal plan for improvement targeting specific areas of difficulty

ATTITUDINAL COMPETENCES

- Acknowledge the importance of conscious knowledge of phonetics and phonology training as an essential aspect of linguistic development.
- Understand the necessity of theoretical underpinning of good practice in pronunciation teaching, enabling the competent teacher to compare the phonologies of L1 and L2 and thereby anticipate the problems learners are likely to experience.
- Evidence a positive attitude towards improvement in English pronunciation on the three levels: physiological (I can change), psychological (I need to change) and sociological (I think it's good to change).

CONTENTS

- What is intonation?
- Prosodic features
- The three T's: tone, tonicity, tonality
- Functions of intonation
- Tones: fall, rise, fall-rise and rise-fall
- Tonicity: where does the nucleus go?
- Tonality: division into tone-units
- The structure of a tone-unit

TEACHING AND LEARNING STRATEGIES

Teaching will consist of lectures with back-up laboratory sessions based on practical work involving auditory discrimination, transcription and sound production. In addition, the following framework of techniques is suggested with varying degrees of explicitness, on the one hand, and elaboration, on the other.

A. BASIC AWARENESS-RAISING

Relaxation, breathing visualization

Sensitisation:

Perceptual tuning-in

Awareness raising activities:

Discussions

Questionnaires

Metaphonetic trivia

Concern for pronunciation

Pronunciation and identity

B. ARTICULATORY CONTROL

Articulatory warm-up exercises

Drama voice techniques:

Voice quality

Imitation and oral mimicry

Mnemonic devices

Anchoring sound patterns

C. INFORMED TEACHING TECHNIQUES

Theoretical foundations (rules)

Contrastive information

Articulatory descriptions

Sound classification tables, vowel charts
 Charts of the vocal apparatus
 Snapshots of lips position
 Pitch-contour notation
 Guided ear-training – analytic listening
 Transcription practice
 Elaborate phonemic charts

D. MULTIMEDIA LEARNING AIDS

Animated views of the articulators
 Online YouTube samples of natural connected speech
 Voice Pitch Recognition Software mobile apps
 Video close-ups of the mouth
 Computerised displays of speech
 Palatograms
 Spectrograms
 Self-monitoring techniques

EVALUATION SYSTEM

ACHIEVEMENT INDICATORS

It will be considered that the student has successfully learnt the subjects if he/she

- States and analyses the nature of intonation.
- Describes and analyses prosodic features of English.
- Lists the major indicators of stress in English words.
- States the function of intonation in English.
- Describes the structure of a tone-unit: pre-head – head – nucleus – tail
- Gives examples of variability within tone-units. • Identifies and produces required pitch change to indicate a nucleus within a tone-unit.
- Identifies contrastive nuclear tones in transcription: fall, low rise, high rise, fall-rise and rise-fall.
- Produces required pitch changes to indicate fall, low rise, high rise, fall-rise and rise-fall tones.
- Transcribes and produces of phenomena of connected speech.
- Produces a closer approximation to the sound of the chosen model of native English. speech at phonemic and sub-phonemic level.
- Analyses personal diagnostic speech samples in consultation with the instructor.
- Develops a personal plan for improvement targeting specific areas of difficulty.
- Self-evaluates and self-monitors performance.
- Participates actively in class activities.

QUANTITATIVE ASSESSMENT

Not graded but used as indicators of students' progress in learning, the formative assessment activities include but are not limited to: live multiple-choice polls, mid-lecture open-ended questions, live performances of self-scripted dialogues, quick scales, video analyses, survey activities, and deduction-type questioning.

QUANTITATIVE ASSESSMENT

Exams will always consist of three equally weighted parts: theoretical foundations, transcription based on auditory discrimination and sound production. Oral exams will be recorded or video-taped. A section of the oral exam will always involve reading aloud phonetically weighted textual material and/or phonetically transcribed texts.

Exam I: 20% (Date: 18 – 22 September 2023)

Exam II: 30% (Date: 23 – 27 October 2023)

Exam III: 40% (Date: 4 – 7 December 2023)

Quizzes: 10% (During the semester)

Dates are subject to change, especially if the class requires more/or less time than that allotted to understand a particular topic.

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Appendix K Session 1 Lesson Plan



UNIVERSIDAD INDUSTRIAL DE SANTANDER
ESCUELA DE IDIOMAS
LICENCIATURA EN LENGUAS EXTRANJERAS
TRABAJO DE GRADO

<p>Lesson Title: Intonation 2</p>	<p>Number of lesson: 1</p>				
<p>Language objective(s):</p> <ul style="list-style-type: none"> • Students will be able to identify the different parts of the tone-unit • Ss will be able to describe the different possibilities for pitch in the simple tone-unit • Ss will be able to come up with their own examples of tone-unit structures 	<p>Semester: 3</p> <p>Length: 180 minutes</p>				
<p>Language content (structures and vocabulary):</p> <p>The tone-unit/utterances/the pre-head/the head/stressed syllable/the tonic syllable/tones/tone-unit boundaries/the tail/patterns of pitch movement</p>	<p>Skills</p>	<p>L</p> <p>X</p>	<p>S</p> <p>X</p>	<p>R</p>	<p>W</p>

Stages	ACTIVITY	MATERIALS	TIME
Introduction	<ul style="list-style-type: none"> • The teacher will introduce himself and the reason for which he is doing the interventions. • The teacher provides an overview of the project implications in lessons to come. 	<ul style="list-style-type: none"> • Markers • Board 	8 to 10 Minutes
Warm-up	<ul style="list-style-type: none"> • The teacher will show the students a video that talks about the topic we are about to review of tone-units. • Students will state the knowledge that have so far on the topic, prior to the lecture. 	<ul style="list-style-type: none"> • Video • TV or projector • Sound system or speakers 	10 to 15 minutes
Topic Expansion	<ul style="list-style-type: none"> • The teacher will explain the concept of the tone-unit by using examples. • Students will propose their own examples. • The teacher will provide feedback. • The teacher will explain the structure of the tone-unit by using examples. • Students will propose their own examples. • The teacher will provide feedback. • The teacher will explain the pitch possibilities in the simple tone-unit by 	<ul style="list-style-type: none"> • Textbook • Markers • Board • VPR mobile app 	60 minutes

	<p>giving examples.</p> <ul style="list-style-type: none"> • Students will propose their own examples by using the VPR apps on their phones. • The teacher will provide feedback. 		
Closure	<ul style="list-style-type: none"> • Students will do practical structure analyses on the board. • Students will provide feedback to their peers. • The teacher will provide feedback. 	<ul style="list-style-type: none"> • Markers • Board 	40 minutes
Evaluation	<ul style="list-style-type: none"> • Students write and say their examples of structures of tone-units and pitch possibilities. <p>The teacher will check the examples on the board and provide feedback.</p>	<ul style="list-style-type: none"> • Students' notebook • Pen/Pencil • Markers • Board 	30 minutes
Framework	<p>This lesson plan is based on the book <i>English Phonetics and Phonology a practical course</i>, for reference on the videos and apps used visit: https://www.youtube.com/watch?v=nmyo3Nzi9L0 https://play.google.com/store/apps/details?id=com.tadaoyamaoka.vocalpitchmonitor&hl=en&gl=US&pli=1 https://apps.apple.com/us/app/nail-the-pitch-vocal-monitor/id1486640549</p>		

Appendix L Session 2 Lesson Plan





UNIVERSIDAD INDUSTRIAL DE SANTANDER
ESCUELA DE IDIOMAS
LICENCIATURA EN LENGUAS EXTRANJERAS
TRABAJO DE GRADO

Lesson Title: Intonation 3		Number of lesson: 1				
Language objective(s): <ul style="list-style-type: none"> • Students will be able to identify the different parts of the tone-unit • Students will be able to identify whether a head is high or low, and their uses. • Ss will be able to discriminate auditorily whether a head is high or low. • Ss will be able to come up with their own examples of tone-unit structures with high and low heads. 		Semester: 3 Length: 180 minutes				
Language content (structures and vocabulary): The tone-unit/utterances/the head/high head/low head/stressed syllable/pitch range/tones/falling tone/rising tone/declination		Skills	L	S	R	W
			X	X		
Stages	ACTIVITY	MATERIALS		TIME		



Introduction	<ul style="list-style-type: none"> • The teacher will introduce himself. • The teacher provides an overview of the importance of the topic students are about to review. 	<ul style="list-style-type: none"> • Markers • Board 	8 to 10 Minutes
Warm-up	<ul style="list-style-type: none"> • The teacher will explain how people speak differently depending on the uses that they attribute to the tonic syllable and how it affects the tone-unit. 	<ul style="list-style-type: none"> • Markers • Board 	10 to 15 minutes
Topic Expansion	<ul style="list-style-type: none"> • The teacher will explain the concept of the high and low heads by using examples. • Students will propose their own examples. • The teacher will provide feedback. • The teacher will explain the structure of the high and low heads by using examples. • Students will propose their own examples. • The teacher will provide feedback. 	<ul style="list-style-type: none"> • Textbook • Students' notebook • Pen/Pencil • Markers • Board 	60 minutes
Closure	<ul style="list-style-type: none"> • The teacher will show a video of people using high and low heads in their utterances. • Students will analyse their tone-unit structures on the board. • The teacher will provide feedback. 	<ul style="list-style-type: none"> • Video • TV or projector • Sound system or speakers • Markers • Board 	40 minutes
Evaluation	<ul style="list-style-type: none"> • Students will do practical structure analyses using high and low heads on the board. • Students will provide feedback to their peers. <p>The teacher will check the examples on the board and provide feedback.</p>	<ul style="list-style-type: none"> • Students' notebook • Pen/Pencil • Markers • Board 	30 minutes
Framework	<p>This lesson plan is based on the book <i>English Phonetics and Phonology a practical course</i>, for reference on the videos and apps used visit: https://www.youtube.com/watch?v=RkxhmOeCyuw&t=40s https://play.google.com/store/apps/details?id=com.tadaoyamaoka.vocalpitchmonitor&hl=en&gl=US&pli=1 https://apps.apple.com/us/app/nail-the-pitch-vocal-monitor/id1486640549</p>		

Appendix M Session 3 Lesson Plan

  UNIVERSIDAD INDUSTRIAL DE SANTANDER ESCUELA DE IDIOMAS LICENCIATURA EN LENGUAS EXTRANJERAS TRABAJO DE GRADO						
Lesson Title: Intonation 3		Number of lesson: 2				
Language objective(s): <ul style="list-style-type: none"> • Students will be able to identify the different parts of the tone-unit. • Students will be able to identify the tonic syllable. • Ss will be able to follow specific steps to discriminate auditorily the different parts of a tone-unit, especially the tonic syllable. 		Semester: 3 Length: 90 minutes				
Language content (structures and vocabulary): The tone-unit/utterances/prominent syllable/stressed syllable/pitch range/tones/tonic syllable/		Skills	L	S	R	W
			X	X		
Stages	ACTIVITY	MATERIALS		TIME		
Introduction	<ul style="list-style-type: none"> • The teacher will introduce himself. • Students will vote on the matter of academic flexibility provided by the Faculty. 	<ul style="list-style-type: none"> • Markers • Board 		10 Minutes		

Warm-up	<ul style="list-style-type: none"> The teacher will explain how people speak differently depending on the uses that they attribute to the tonic syllable and how it affects the tone-unit. 	<ul style="list-style-type: none"> Markers Board 	10 minutes
Topic Expansion	<ul style="list-style-type: none"> The teacher will explain how to identify the tonic syllable by using examples. Students will propose their own examples. The teacher will provide feedback. The teacher will expand on the topic of tone-unit boundaries using examples. The teacher will explain the author's view on anomalous tone-units and the reasons for which they occur using examples. Students will propose their own examples of situations in which anomalous tone-units could happen. The teacher will provide feedback. 	<ul style="list-style-type: none"> Textbook Students' notebook Pen/Pencil Markers Board 	30 minutes
Closure	<ul style="list-style-type: none"> The teacher will reflect on how the construction of students' own speech allows them to perform freedom through communication and how other people do as well when communicating with them. 		10 minutes
Evaluation	<ul style="list-style-type: none"> Students will do practical structure analyses from a video sample, identifying the tonic syllable and other parts of the tone-unit. Students will provide feedback to their peers. <p>The teacher will check the examples on the board and provide feedback.</p>	<ul style="list-style-type: none"> Video TV or projector Sound system or speakers Markers Board 	30 minutes
Framework	<p>This lesson plan is based on the book <i>English Phonetics and Phonology a practical course</i>, for reference on the videos and apps used visit: https://www.youtube.com/watch?v=TTUbuJ5XnCA https://play.google.com/store/apps/details?id=com.tadaoyamaoka.vocalpitchmonitor&hl=en&gl=US&pli=1 https://apps.apple.com/us/app/nail-the-pitch-vocal-monitor/id1486640549</p>		

Appendix N Session 4 Lesson Plan

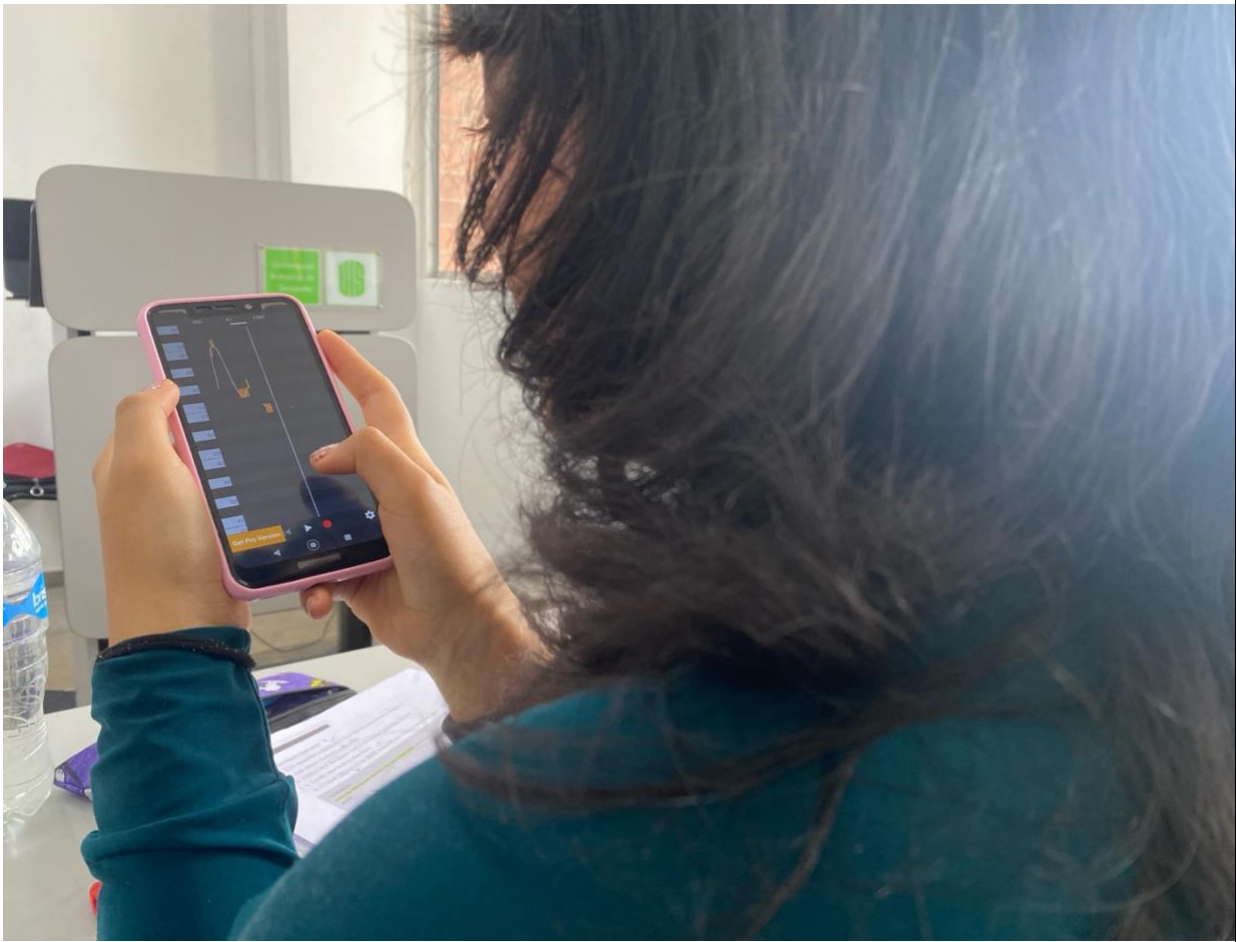
  UNIVERSIDAD INDUSTRIAL DE SANTANDER ESCUELA DE IDIOMAS LICENCIATURA EN LENGUAS EXTRANJERAS TRABAJO DE GRADO						
Lesson Title: What's new?		Number of lesson: 1				
Language objective(s): <ul style="list-style-type: none"> • Students will be able to identify the different uses of the tones, especially the fall-rise tone. • Ss will be able to produce their own dialogues when the fall-rise would be required. 		Semester: 3 Length: 180 minutes				
Language content (structures and vocabulary): Tones/falling tone/rising tone/fall-rise tone/tone-unit/intonation/recalling/		Skills	L	S	R	W
			X	X		
Stages	ACTIVITY	MATERIALS		TIME		
Introduction	<ul style="list-style-type: none"> • The teacher will introduce himself. • Students will do a recall activity on the uses of fall-rise tones. 	<ul style="list-style-type: none"> • Markers • Board 		8 to 10 Minutes		
Warm-up	<ul style="list-style-type: none"> • The teacher will explain how people use different tones depending on the uses that they give to their 	<ul style="list-style-type: none"> • Markers • Board 		10 minutes		

	communicative devices in terms of intonation.		
Topic Expansion	<ul style="list-style-type: none"> ● The teacher will explain activity 3.6 and do the listening and repetition exercises. ● The teacher will provide feedback. ● Students will use the VPR apps to correct their production of the tones. ● The teacher will provide feedback. ● The teacher will explain activity 3.7 and do the listening and repetition exercises. ● The teacher will provide feedback. ● Students will use the VPR apps to correct their production of the tones. ● The teacher will provide feedback. ● The teacher will explain activity 3.8 and do the listening and repetition exercises. ● The teacher will provide feedback. ● Students will use the VPR apps to correct their production of the tones. ● The teacher will provide feedback. ● Students will propose their own dialogues in activity 3.9 from Unit 1's story re-enacting it by making use of the fall-rise tones and others. ● The teacher will provide feedback. 	<ul style="list-style-type: none"> ● Textbook ● Students' notebook ● Pen/Pencil ● Markers ● Board 	70 minutes

<p>Closure</p>	<ul style="list-style-type: none"> • Students will do practical structure analyses from a video sample, identifying the tones and graphing the utterances. • Students will provide feedback to their peers. • Students will imitate the speakers' natural use of the different tones. 		<p>45 minutes</p>
<p>Evaluation</p>	<ul style="list-style-type: none"> • Students will do practical structure analyses from a video sample, identifying the tones and graphing the utterances. • Students will provide feedback to their peers. <p>The teacher will check the examples on the board and provide feedback.</p>	<ul style="list-style-type: none"> • Video • TV or projector • Sound system or speakers • Markers • Board 	<p>45 minutes</p>
<p>Framework</p>	<p>This lesson plan is based on the book <i>Pronunciation for Advanced Learners of English</i>, for reference on the videos and apps used visit: https://www.youtube.com/watch?v=reKNRVU6l-M https://www.youtube.com/watch?v=8ReCH0mLkLk https://play.google.com/store/apps/details?id=com.tadaoyamaoka.vocalpitchmonitor&hl=en&gl=US&pli=1 https://apps.apple.com/us/app/nail-the-pitch-vocal-monitor/id1486640549</p>		

Appendix O Students Using VPR Mobile Apps

Student 1



Student 1 says: Arthur's room - fall-rise tone
with tonic syllable being /'ɑ:/



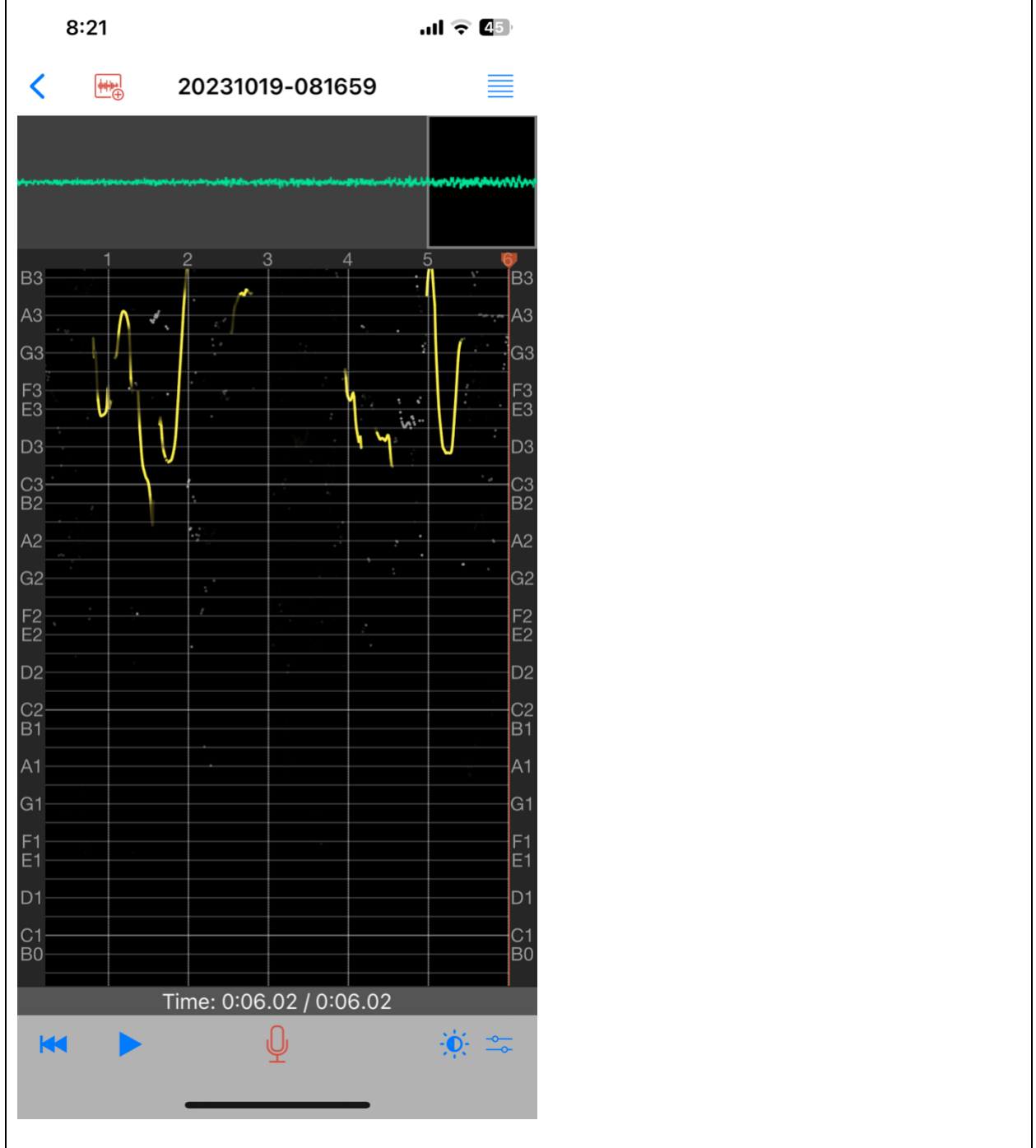
Student 1 says: Arthur's room - fall-rise tone
with tonic syllable being /ru:m/



Student 2





Student 3 says: where's Arthur's room - fall-rise tone with tonic syllable being /'ɑ:/ on the left and with tonic syllable being /ru:m/ on the right



Appendix P Students Watching a YouTube Video and Analysis on the Board



Appendix Q Session 5 Lesson Plan

  UNIVERSIDAD INDUSTRIAL DE SANTANDER ESCUELA DE IDIOMAS LICENCIATURA EN LENGUAS EXTRANJERAS TRABAJO DE GRADO						
Lesson Title: Functions of Intonation 1		Number of lesson: 1				
Language objective(s): <ul style="list-style-type: none"> • Students will be able to identify the different functions of intonation. • Ss will be able to identify the attitudinal function of intonation. • Students will be able to perform different types of analysis on the attitudinal function of intonation. • Students will be able to identify the suprasegmental variable in intonation. 		Semester: 3 Length: 180 minutes				
Language content (structures and vocabulary): attitudinal function of intonation/focus/accentual function of intonation/grammatical function of intonation/discourse function of intonation /suprasegmental variable in intonation/sequential/prosodic/paralinguistic		Skills	L	S	R	W
			X	X		

Stages	ACTIVITY	MATERIALS	TIME
Introduction	<ul style="list-style-type: none"> ● The teacher will introduce himself. ● The teacher will explain how you can express different emotions with changes in intonation. 	<ul style="list-style-type: none"> ● Markers ● Board 	5 to 10 Minutes
Warm-up	<ul style="list-style-type: none"> ● Students will express different emotions with the same sentence. 		10 minutes
Topic Expansion	<ul style="list-style-type: none"> ● The teacher will explain the concept of functions of intonation. ● The teacher will explain the concept of the attitudinal function of intonation briefly. ● The teacher will explain the concept of the accentual function of intonation briefly. ● The teacher will explain the concept of the grammatical function of intonation briefly. ● The teacher will explain the concept of the discourse function of intonation briefly. ● The teacher will explain the concept of the attitudinal function of intonation in depth, with examples according to the 	<ul style="list-style-type: none"> ● Textbook ● Students' notebook ● Pen/Pencil ● Video ● TV or projector ● Sound system or speakers ● Markers ● Board 	135 minutes



	<p>tones.</p> <ul style="list-style-type: none">• The teacher will show students a video of how intonation can be used to express different attitudes.• The teacher will start the analysis of the attitudinal function of intonation activity by giving student choices of emotions they can choose from.• First, the teacher will say the phrases expressing different attitudes.• Students will decide which attitude belongs to each phrase.• The teacher will provide feedback.• Second, the teacher will ask students to say specific phrases with specific attitudes.• Students comply.• The teacher will show a video of a native speaker saying those same phrases with those same attitudes.• Students compare their answers.• The teacher will provide feedback.• The teacher will explain the concept of the suprasegmental variable in intonation and will review briefly the sequential, <u>prosodic</u> and paralinguistic		
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	variables with examples accordingly.		
Closure	<ul style="list-style-type: none"> The teacher will thank students for their efforts and participation. 		5 minutes
Evaluation	<ul style="list-style-type: none"> Students provide their opinions on the different types of analysis on the attitudinal function of intonation and their reasons. <p>The teacher will check on each of the students' motives and provide feedback.</p>		20 minutes
Framework	<p>This lesson plan is based on the book <i>English Phonetics and Phonology a practical course</i>, for reference on the videos and apps used visit: https://www.youtube.com/watch?v=dLZ_8Y7a4bl https://www.youtube.com/watch?v=WYMZzz-od7s https://play.google.com/store/apps/details?id=com.tadaoyamaoka.vocalpitchmonitor&hl=en&gl=US&pli=1 https://apps.apple.com/us/app/nail-the-pitch-vocal-monitor/id1486640549</p>		
<p>Annex 1</p> <ol style="list-style-type: none"> 1 Could you cancel that lunch with her (pleading) 2 She might be a bit curious (apprehensive) 3 I love it when the planning comes together (excited) 4 I'm terrified (terrified) 5 Unless it was a ghost (ironic) 6 We actually conducted a deposition (asserting) 7 Therefore my client has zero culpability (convincing) 8 What // a scratch (confused) 9 he was provoking me (defensive) 10 I look really nice (complimenting) 			

Appendix R Pre-Service Teacher and Students Reading through the Material



Appendix S Session 6 Lesson Plan

  UNIVERSIDAD INDUSTRIAL DE SANTANDER ESCUELA DE IDIOMAS LICENCIATURA EN LENGUAS EXTRANJERAS TRABAJO DE GRADO						
Lesson Title: Functions of Intonation 1		Number of lesson: 2				
Language objective(s): <ul style="list-style-type: none"> • Students will be able to identify the different functions of intonation. • Ss will be able to identify the attitudinal function of intonation. • Students will be able to perform different types of analysis on the attitudinal function of intonation. • Students will be able to identify the suprasegmental variable in intonation. 		Semester: 3 Length: 180 minutes				
Language content (structures and vocabulary): attitudinal function of intonation/focus/accentual function of intonation/grammatical function of intonation/discourse function of intonation /suprasegmental variable in intonation/sequential/prosodic/paralinguistic		Skills	L	S	R	W
			X	X		

Stages	ACTIVITY	MATERIALS	TIME
Introduction	<ul style="list-style-type: none"> ● The teacher will introduce himself. ● The teacher will explain how you can express different emotions with changes in intonation. 	<ul style="list-style-type: none"> ● Markers ● Board 	5 to10 Minutes
Warm-up	<ul style="list-style-type: none"> ● Students will express different emotions with the same sentence. 		10 minutes
Topic Expansion	<ul style="list-style-type: none"> ● The teacher will explain the concept of functions of intonation. ● The teacher will explain the concept of the attitudinal function of intonation briefly. ● The teacher will explain the concept of the accentual function of intonation briefly. ● The teacher will explain the concept of the grammatical function of intonation briefly. ● The teacher will explain the concept of the discourse function of intonation briefly. ● The teacher will explain the concept of the attitudinal function of intonation in depth, with examples according to the 	<ul style="list-style-type: none"> ● Textbook ● Students' notebook ● Pen/Pencil ● Video ● TV or projector ● Sound system or speakers ● Markers ● Board 	135 minutes

	<p>tones.</p> <ul style="list-style-type: none">• The teacher will show students a video of how intonation can be used to express different attitudes.• The teacher will start the analysis of the attitudinal function of intonation activity by giving student choices of emotions they can choose from.• First, the teacher will say the phrases expressing different attitudes.• Students will decide which attitude belongs to each phrase.• The teacher will provide feedback.• Second, the teacher will ask students to say specific phrases with specific attitudes.• Students comply.• The teacher will show a video of a native speaker saying those same phrases with those same attitudes.• Students compare their answers.• The teacher will provide feedback.• The teacher will explain the concept of the suprasegmental variable in intonation and will review briefly the sequential, <u>prosodic</u> and paralinguistic		
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

	variables with examples accordingly.		
Closure	<ul style="list-style-type: none"> The teacher will thank students for their efforts and participation. 		5 minutes
Evaluation	<ul style="list-style-type: none"> Students provide their opinions on the different types of analysis on the attitudinal function of intonation and their reasons. <p>The teacher will check on each of the students' motives and provide feedback.</p>		20 minutes
Framework	<p>This lesson plan is based on the book <i>English Phonetics and Phonology a practical course</i>, for reference on the videos and apps used visit: https://www.youtube.com/watch?v=dLZ_8Y7a4bl https://www.youtube.com/watch?v=WYMZzz-od7s https://play.google.com/store/apps/details?id=com.tadaoyamaoka.vocalpitchmonitor&hl=en&gl=US&pli=1 https://apps.apple.com/us/app/nail-the-pitch-vocal-monitor/id1486640549</p>		
<p>Annex 1</p> <ol style="list-style-type: none"> 1 Could you cancel that lunch with her (pleading) 2 She might be a bit curious (apprehensive) 3 I love it when the planning comes together (excited) 4 I'm terrified (terrified) 5 Unless it was a ghost (ironic) 6 We actually conducted a deposition (asserting) 7 Therefore my client has zero culpability (convincing) 8 What // a scratch (confused) 9 he was provoking me (defensive) 10 I look really nice (complimenting) 			

Appendix T Students Comparing Answers with Original Source Video Content



*Appendix U Consent Form***CONSENTIMIENTO INFORMADO PARA LA GRABACIÓN DE IMÁGENES Y VÍDEOS DURANTE EL PROYECTO DE TECNOLOGÍA EN LA FONÉTICA Y LA FONOLOGÍA INGLESA**

Por medio de este consentimiento doy mi autorización para la captura de imágenes de mi persona en fotografía o video durante la realización del proyecto en las clases dentro de la Universidad Industrial de Santander. Así mismo, permito utilizar este tipo de material para divulgación como evidencia de realización del proyecto y también como material publicitario para próximos proyectos en el sitio web, redes sociales y demás, para la Universidad Industrial de Santander.

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Nombre: _____

Firma: _____

Fecha y lugar: _____

Appendix V Post-Intervention Questionnaire

Universidad Industrial de Santander



Universidad Industrial de Santander

Licenciatura en Lenguas Extranjeras con Énfasis en Inglés | Escuela de Idiomas

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* Indica que la pregunta es obligatoria

Questionnaire

This is a questionnaire, not a test. There are no correct or incorrect answers. It is important that you give **true** answers.

Gender *

Boy 🧑

Girl 🧒

Age *

Tu respuesta _____

Semester *

Tu respuesta _____

Do you feel you perform well in the English Phonetics and Phonology subject? *

Yes

No

Do you find the English Phonetics and Phonology subject to be easy to understand? *

Yes

No

Do you think English Phonetics and Phonology is a useful subject? *

Yes

No

This topic is _____ to understand. *

	Easy	Hard
Form and function of intonation	<input type="checkbox"/>	<input type="checkbox"/>
Tone and tone languages	<input type="checkbox"/>	<input type="checkbox"/>
Complex tones and pitch height	<input type="checkbox"/>	<input type="checkbox"/>
Some functions of English tones	<input type="checkbox"/>	<input type="checkbox"/>
Tones on other words	<input type="checkbox"/>	<input type="checkbox"/>

This topic is _____ to understand. *

	Easy	Hard
The tone-unit	<input type="checkbox"/>	<input type="checkbox"/>
The structure of the tone-unit	<input type="checkbox"/>	<input type="checkbox"/>
Pitch possibilities in the simple tone-unit	<input type="checkbox"/>	<input type="checkbox"/>
Fall-rise and rise-fall tones followed by a tail	<input type="checkbox"/>	<input type="checkbox"/>
High and low heads	<input type="checkbox"/>	<input type="checkbox"/>

This topic is _____ to understand. *

	Easy	Hard
The discourse function of intonation	<input type="checkbox"/>	<input type="checkbox"/>
The attitudinal function of intonation	<input type="checkbox"/>	<input type="checkbox"/>
Expressing attitudes	<input type="checkbox"/>	<input type="checkbox"/>
The accentual function of intonation	<input type="checkbox"/>	<input type="checkbox"/>
The grammatical function of intonation	<input type="checkbox"/>	<input type="checkbox"/>

*

What do you like from English Phonetics and Phonology?

	Yes	No
Tasks and class work	<input type="checkbox"/>	<input type="checkbox"/>
The material	<input type="checkbox"/>	<input type="checkbox"/>
Discrimination and transcription	<input type="checkbox"/>	<input type="checkbox"/>
Discrimination and production	<input type="checkbox"/>	<input type="checkbox"/>

*

How do you like to learn?

	Yes	No
Reading the material	<input type="checkbox"/>	<input type="checkbox"/>
Listening to audio recordings	<input type="checkbox"/>	<input type="checkbox"/>
Working alone	<input type="checkbox"/>	<input type="checkbox"/>
Working in groups	<input type="checkbox"/>	<input type="checkbox"/>
Studying using outside sources	<input type="checkbox"/>	<input type="checkbox"/>
Creating my own dialogues	<input type="checkbox"/>	<input type="checkbox"/>
Using computers and technology	<input type="checkbox"/>	<input type="checkbox"/>
Doing tasks	<input type="checkbox"/>	<input type="checkbox"/>
Solving problems	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>

What topic am I interested in? *

- Intonation form and function
- Falling, Rising, Fall-rise, Rise-fall tones
- Tone-unit
- Functions of intonation (e.g. attitudinal)
- Varieties of English
- Otros: _____

Do you have in your classroom? *

- Video beam
- Television set
- Sound system
- English Phonetics and Phonology materials
- Infrastructure and space layout
- Otros: _____

*

Mark AGREE or DISAGREE

	Agree	Disagree
The theoretic material is better understood through the written textbook	<input type="checkbox"/>	<input type="checkbox"/>
The theoretic material is better understood with visual/audible multimedia	<input type="checkbox"/>	<input type="checkbox"/>
I understand better with the prerecorded audios that accompany the textbook	<input type="checkbox"/>	<input type="checkbox"/>
I understand better with real-life recording examples	<input type="checkbox"/>	<input type="checkbox"/>
The professor's immediate feedback is enough for me to correct and learn oral production	<input type="checkbox"/>	<input type="checkbox"/>
I think if I had more tools I would have more room to correct and learn oral production	<input type="checkbox"/>	<input type="checkbox"/>

The main reason for which _____ (topic) is easy to understand is because: *

Tu respuesta

The main reason for which _____ (topic) is difficult to understand is because: *

Tu respuesta

Overall, I think the pre-service teacher (Sebastián) did a job that is: *

	1	2	3	4	5	
Poor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Excellent

Overall, I think the pre-service teacher's (Sebastián) classes were: *

	1	2	3	4	5	
Very unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very clear

Overall, I think the pre-service teacher's (Sebastián) classes were: *

	1	2	3	4	5	
Very unorganized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very organized

Overall, I think Information and Communication Technologies (ICT) can have a meaningful impact on my learning process of Phonetics and Phonology II. *

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I think the use of YouTube videos can have a meaningful impact on my learning process of Phonetics and Phonology II. *

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Why?

Tu respuesta _____

I think the use of Voice Pitch Recognition mobile apps can have a meaningful impact on my learning process of Phonetics and Phonology II. *

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Why?

Tu respuesta _____

I think that watching real life samples of natural connected speech has helped me *
make the connection between the theory and the practicality of the knowledge
that I've acquired in Phonetics and Phonology II.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Why

Tu respuesta

I think that watching real life samples of natural connected speech has helped me * better understand the impact that English Phonetics and Phonology has on my own speech.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Why?

Tu respuesta _____

I think that seeing the visual feedback representation of my own speech through the Voice Pitch Recognition mobile app has helped me make the connection between the theory and the practicality of the knowledge that I've acquired in Phonetics and Phonology II. *

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Why

Tu respuesta _____

I think that seeing the visual feedback representation of my own speech through the Voice Pitch Recognition mobile app has helped me better understand the impact that English Phonetics and Phonology has on my own speech. *

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Why

Tu respuesta

I think that the way in which the material was explained by the pre-service teacher *
(Sebastián) was innovative.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Why?

Tu respuesta _____

I think that the way in which the material was explained by the pre-service teacher *
(Sebastián) was useful.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Why

Tu respuesta _____

I think that the activities in class provided by the pre-service teacher (Sebastián) *
helped me learn and clear my doubts.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Why

Tu respuesta _____

I wish more technological tools were implemented in my Phonetics and Phonology learning process. *

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

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