



Tools and techniques to teach phonetic transcription online

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Abstract

Despite the global impact of the digital revolution, the use of technological advancements in education remains underexplored. Teachers and students have incorporated technology in the classroom mainly as a secondary support to invigorate learning, and remote teaching has been applied in specific and rather isolated situations. However, the spread of the COVID-19 pandemic around the globe has turned the tables, and nowadays most of the students worldwide are learning online. This situation has forced the adaptation of all types of courses to a virtual setting so that learners could keep studying from home during lockdown. Consequently, the tools and techniques used in face-to-face lectures had to be re-assessed to guarantee their validity when teaching remotely, and new digital resources had to be tested to ensure that learning was not jeopardized.

Pronunciation instruction is not an exception. Despite the wide range of multimedia material available on the internet to practice transcription, not much has been investigated on how to include it in class, especially when teaching it online. This paper aims at examining the tools and methods applied in an undergraduate pronunciation course in order to provide helpful and inspiring ideas for those practitioners who must teach pronunciation remotely.

Keywords: pronunciation teaching, transcription, emergency remote learning, English as a foreign language

1. Introduction

The emergence of the COVID-19 pandemic has boosted the interest and need of pronunciation instructors to find effective phonetic transcription tools and teaching methods that guarantee a successful and smooth learning process in virtual settings. Students worldwide have been challenged to keep studying online, which has not only affected the way they learn, but also the way the different courses have to be taught. Learners have had to get used to attending lessons using online conference softwares, and reinforcing their self-study skills by watching videos, reading texts and doing more exercises on

their own in order to fill the technological gap caused by the imminent transition from face-to-face courses to an online setting, commonly known as emergency remote learning [1].

Learners have had to adapt to virtual education in record time indeed. Among the consequences derived from the adaptation to emergency remote learning, students have had to face several challenges:

- ✧ Despite most of them being digital natives, many students have used technological devices such as laptops, tablets and phones to fully follow their courses for the first time: these tools are no longer a secondary support for their learning to take notes or access some electronic sources, but they have become their classrooms and their only means of communication with teachers and other students. Hence, if their laptop breaks down, or the internet connection fails, their learning process might get interrupted. Moreover, not all students have access to the same digital tools as that strongly depends on the economic and social situation of the learner: a person who lives in the countryside might not have the same quality of bandwidth as a person who lives in the city, so the probability to suffer from connection breakdowns increases, for instance.
- ✧ In many cases, teachers have explored the different possibilities to teach their lectures and adapt their teaching methods to the new setting at the same time that they have been receiving training and surfing the net for resources to use. Consequently, many times there has been a lack of consistency of teaching methods among the different courses that the students have taken, and even within a course itself. Therefore, students have had to adapt to a wide range of teaching methods and tools within a very limited time.
- ✧ Imminent feedback has been harder to obtain: In class, when problems and/or doubts arise during the teacher's explanations, the student can interrupt the teacher to ask a question and all the students can discuss with the teacher on the issue to reach a conclusion/solution. Creating a debate atmosphere online is internet-dependent and generally more time-consuming:

videoconferences do not allow “constructive” interruptions. Taking turns is essential to follow the conversation and sometimes the speaker has to repeat their point of view several times because of an internet flaw. On the other hand, discussion forums or email writing are asynchronous methods for problem solving, so the discussion might extend in time. As a consequence, feedback gets damaged and students need to rely more on self-study.

This unprecedented situation has caused many of them unease, anxiety and, in many unfortunate cases, depression. Teachers have also suffered from extra pressure to adapt their lessons to a virtual setting [1, 2, 3, 4, 5] while trying to offer the same quality teaching to their students; many of them did not have the knowledge and experience to teach remotely before the pandemic and had to take several training courses and do some independent research on online tools to use in their lessons. Instructors have had to make many decisions and changes to their sessions on the go, inevitably adopting heuristic teaching methods.

Despite the fact that nowadays there are several digital tools to teach pronunciation [6, 7, 8, 9], such as *Word* [10] dictionaries, and that there are websites that offer interactive transcription charts and text phonetic transcription services, students might not know how to use them properly, especially when they are starting to learn phonetics. Besides, some of them are not intuitive and learning how to use them might take some time. On the other hand, not only does choosing the most effective tools depend on students, but also on the setting [11], so knowing which are the most suitable resources and methods to teach pronunciation virtually is not always an easy task.

Two years have gone by since the abrupt emergence of the pandemic. Teachers have had time to investigate, experience and assess the measures taken in their sessions, so they can now offer more reliable advice to improve online teaching and guarantee a smoother learning process while coping with students’ needs. This paper aims at examining a series of teaching tools and techniques that were used to adapt a face-to-face introductory phonetics course at Rovira i Virgili University to a virtual setting. Phonetic transcription being one of the main items to teach, the four transcription tools used to transcribe online will be presented in the following lines, together with the teaching techniques used to work on transcription.

2. Digital transcription tools

As mentioned before, assessing our students’ needs and our setting is essential to decide which are the resources that can meet our learning goals best: the type of resources students have (not every learner has the same laptop, for instance), or the potential problems that might arise due to an internet cut should be studied thoroughly to provide the right tools to ensure a continuous and effective learning process. Besides, two additional parameters were followed to select the tools for this course: first, the tools should be accessible and user-friendly so as to avoid adding more load to the already complex process of learning transcription; second, these should be usable in interactive sessions as well as for individual study.

Taking everything into account, four main transcription tools were presented to the students of the course: the *IPA Palette* [12], the *TypeIt Online Keyboard* [13], the *Online IPA Chart Keyboard* [14] and the *Sounds of English Keyboard*. Each of them was chosen to meet different needs, as specified in the lines below:

- ✧ The *IPA Palette* is a free downloadable software that consists of an IPA chart for both vowel and consonant sounds, and it also includes some suprasegmental symbols, such as intonation units (see Figure 1). The palette works as a supplementary keyboard to the computers’, so the user has to click on the corresponding symbol to type it; however, keyboard shortcuts are also presented. If the phonetic symbol is represented by the same grapheme as a letter, the user can decide to use the computer keyboard or the palette to write it down.

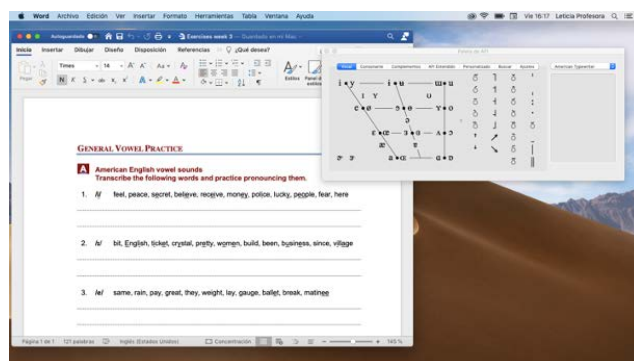


Figure 1: The *IPA Palette* as a support to transcribe in a document.

Furthermore, it offers users the opportunity to create their own palette of symbols: the software includes a tab where they can customize their own palette. They can introduce just the symbols they commonly use in the order that best suits

them, which will help increase their speed when transcribing. This option is especially useful for teachers, as they can download their customized palette and send it to their students so that they have the same palette as their teachers do, only with the symbols that need to be learned in the course. On the other hand, as its software must be downloaded to the computer, the palette can be used online and offline, so it is not internet-dependent. However, this software is just available for MAC [15] users; therefore, only those students who have a MAC computer will benefit from it.

- ✧ The *TypeIt Online Keyboard* was the most widely chosen tool. *TypeIt* is a website that provides different interactive phonetic keyboards according to the language of study. Therefore, the English phonetic keyboard only includes symbols that represent English sounds.

The website has both a reduced and a full version of the English transcription keyboard (see Figures 2 and 3 respectively). In the full version, all the symbols to represent allophonic variations of consonant sounds or suprasegmental features are included, while in the reduced version they are not. This can be especially useful to scaffold teaching. For example, the course examined in this paper was divided into two parts: in the first semester students learned how to transcribe phonemes, focusing mainly on distinguishing vowel sounds, while in the second one students studied how to transcribe consonant allophones and suprasegmental features. Hence, thanks to the reduced version of the transcription keyboard, students could focus on phonemic transcription first without getting disturbed by a big quantity of symbols. Once they had to start transcribing allophones and rhythmic or intonational features, they used the full version, concentrating better on distinguishing the different allophonic variations as they were already familiar with phonemes.

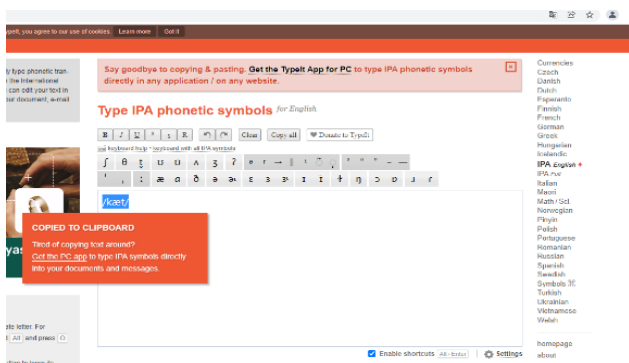


Figure 2: *TypeIt* English phonetic keyboard (reduced version).

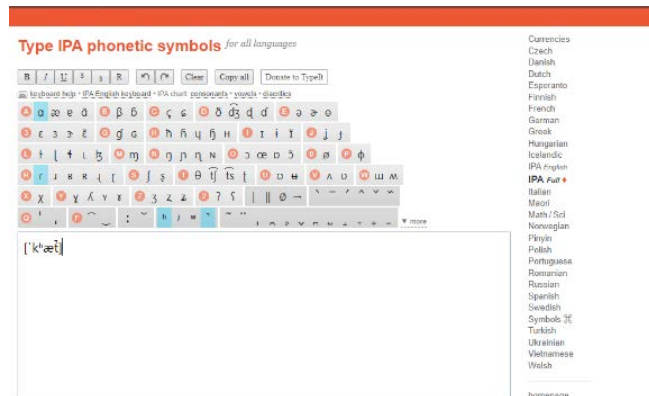


Figure 3: *TypeIt* full phonetic keyboard.

Nevertheless, the *TypeIt Online Keyboard* does not allow typing phonetics symbols directly on a document as it is done with the *IPA Palette*; users have to type their transcriptions within the textbox on the website and then copy-paste them to their document. Another disadvantage is the fact that it can only be used online, so if there is a power cut and there is no internet available, it cannot be employed.

- ✧ The *Online IPA Chart Keyboard* works very similarly to the *TypeIt Online Keyboard*. It is also an online website whose users can type their phonetic transcriptions and then copy and paste them where needed. As displayed in Figure 4, the only difference is the layout, as the *Online IPA Chart Keyboard* does not look like a keyboard, but as an interactive version of the International Phonetic Alphabet chart. However, it is also an internet-dependent tool that cannot be used for offline practice.

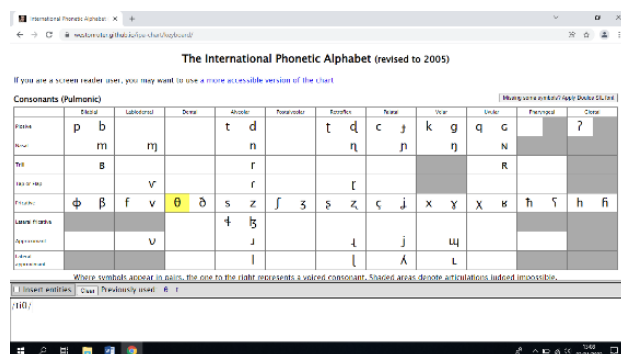


Figure 4: The *Online IPA Chart Keyboard*. IPA Chart,

<http://www.internationalphoneticassociation.org/content/ipa-chart>, available under a Creative Commons Attribution-Sharealike 3.0 Unported License. Copyright © 2018 International Phonetic Association.

- ✧ The *Sounds of English Keyboard* was developed by the teacher to offer an alternative to those

students who did not have a *MAC* computer and, hence, could not benefit from the offline practice that the *IPA Palette* allows. As shown in Figure 5, it is a simple table that contains the symbols students had to learn for the course, and learners just had to copy and paste the symbol from the table. Although it is a more time-consuming way of transcribing, students could use it as a backup tool to keep practicing when their internet connection failed.

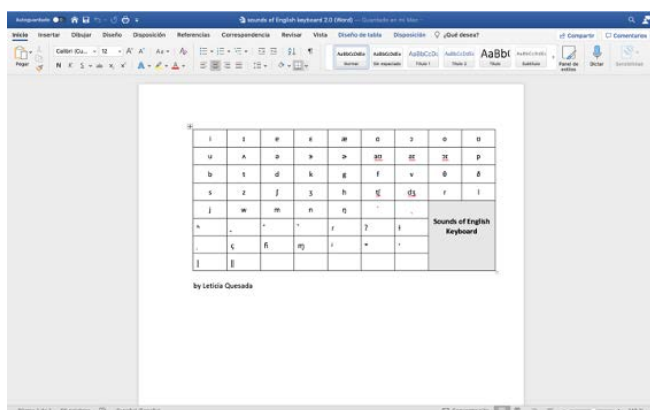


Figure 5: The *Sounds of English Keyboard*

Each tool has its advantages and disadvantages, but instruction was guaranteed for every student: learners could choose the one that best suited their needs according to their situation and resources, and they always had an alternative to cope with the potential problems caused by an internet flaw. Moreover, these tools could be used for both synchronous sessions and individual practice. However, how to include the usage of these tools within the course was essential to provide feedback and properly follow students' learning process. For this reason, it is also important to analyze the teaching methods adopted to teach transcription in this course.

3. Adaptation of teaching methods to a virtual setting

Learning transcription is similar to learning a new language: when a Spanish student starts learning Arabic, one of the first things that this person needs to learn is the alphabet, as Arabic speakers employ different symbols when writing. Besides, these graphemes do not always correspond to the same sounds in Spanish, since there are some sounds that exist in both languages, but there are others that only exist in one of them. Hence, the Spanish student has to reprogram their letter codes for the sounds that are shared, and learn some new graphemes for new sounds that they are about to acquire. This procedure

also tends to be followed when studying transcription: students have to familiarize themselves with a new symbol coding where there are sounds that they already know, and others that they will be acquiring as they learn the corresponding phonetic symbol.

Additionally, teaching should be scaffolded: once the alphabet of the second language is acquired, learners start working with words in isolation, and little by little they begin to build sentences until, finally, they are able to produce full texts and speeches. Transcription learning should also be divided into different stages: first, students need to practice associating the different phonetic symbols to the corresponding existing sounds; second, they will continue transcribing individual words; then, learners will transcribe words within sentences until they feel comfortable enough to transcribe full texts; and finally, they will be able to link words and sentences with rhythm and intonation features to provide a full picture of how speech works.

How to do that using technology is the challenge that arises due to remote emergency learning. As mentioned in the introduction, learners have access to a wide range of digital phonetic tools that can help them transcribe on a computer both on and offline. The teacher's mission, however, is to apply those in virtual settings following standard language acquisition steps to guarantee an effective and progressive instruction.

To this end, one of the measures taken to adapt the teaching methodology of the course to a virtual setting was to set up synchronous transcription practice sessions via videoconferences. In face-to-face sessions, students practiced transcribing with the teacher in class. Some words, sentences, or texts were provided (depending on the learning stage in which they found themselves) and students had some time to transcribe those on their own using a sheet of paper and a pen. Either while they were transcribing, or once they had finished, a volunteer transcribed on the blackboard the item under study, and both the teacher and the students corrected the mistakes of the blackboard sample and reflected on the reasons why these were wrong. Students could then compare that sample with their individual transcriptions and ask the teacher for explanations on the mistakes they committed.

Following this methodology, both individual and group feedback and practice was ensured, so the same method was applied in virtual classes. Synchronous sessions at Rovira i Virgili University were carried out with the videoconference platform *Microsoft Teams* [16]. The professor and the students met at a chatroom twice a week to practice transcription together using a *Word* document as a blackboard: a practice document for the session was created,

containing the words, sentences or texts to transcribe, and students could download it from the virtual campus. At the same time, the document was shared with them online via *Outlook* [17]. All the students were given permission to see and edit this document, so the teacher shared her screen with the class and asked a volunteer to transcribe live (see Figure 6), while the rest of them had to try on their own in the downloaded version. Once everybody finished transcribing, the learners and the teacher corrected together the shared document providing explanations to the mistakes, and then students asked any further doubts they had by comparing it with their own transcription. Thanks to this digital adaptation, students could collaborate in interactive sessions where discussion and feedback remained at the core of the instruction.

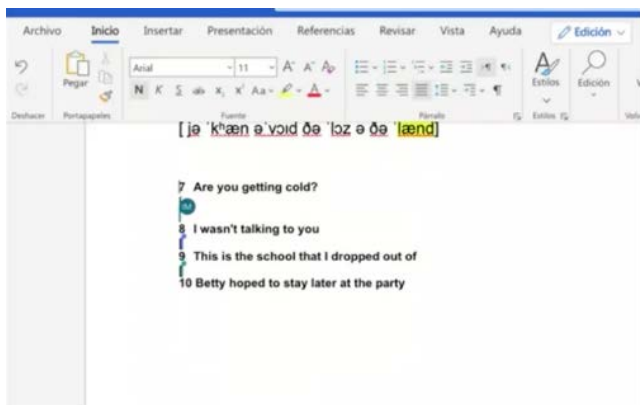


Figure 6: Screenshot of a synchronous transcription practice session.

Transcription was also studied when performing production exercises. PowerPoint presentations were designed and showed during synchronous sessions to help students improve their speaking skills by practicing uttering the sounds worked on in class. In on-site sessions, learners read aloud words and sentences either as a group or individually in order to improve how they pronounced the sounds in English. Unfortunately, group practice could not be carried out virtually because all the students could not speak at the same time (if they did, their contributions would have not been understandable due to time delay, internet cuts, or voice quality, among other tech-related issues). However, students could be asked to produce certain utterances individually.

As displayed in Figure 7, learners were shown the transcription of words and sentences and they were requested to read them aloud. Colors were applied to highlight and distinguish the items under study. Sometimes students had the sentence/word written next to the transcription and sometimes they did not. The teacher asked them to focus on the transcription and try to read it before reading the sentence without the transcription support. This way, students could

internalize phonetic symbols better, as their skills to separate and distinguish spelling from pronunciation were reinforced.



Figure 7: Screenshot of a production exercise based on transcription.

Phonetic symbols represent the sound we produce and hear. Hence, not only can transcription be enhanced by production practice, but also doing listening discrimination exercises can help. Figure 8 shows an exercise uploaded on the course's virtual campus where students had to transcribe the words they listened to:

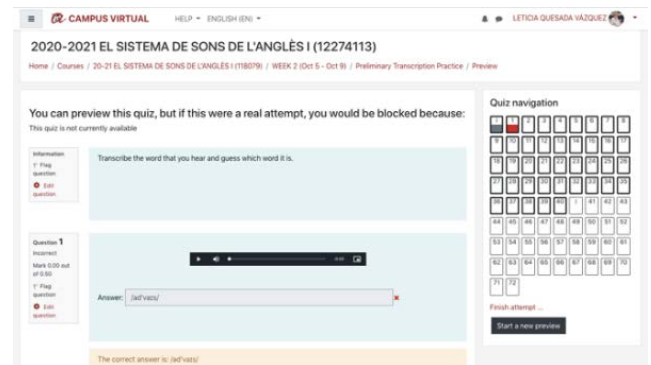


Figure 8: Screenshot of a listening discrimination exercise to practice transcription.

No spelling support was given, so first learners had to identify the word that was uttered, and then provide the corresponding transcription. By doing so, students worked on distinguishing different sounds, which could help them articulate these better, while also improving their understanding of the corresponding sound-phonetic symbol association.

Listening discrimination practice was also used to teach suprasegmental features in transcription. For instance, learners had to listen to a speech and delimit the intonation/rhythmic units within its transcription. This type of exercises brought the opportunity to work with authentic excerpts of different speakers, which is very important when trying to speak and

understand a second language, especially in English as a foreign language (EFL) contexts, where the exposure to the language under study tends to be very limited.

4. Discussion

As for any other type of course, knowing which are the most appropriate resources and teaching techniques to teach pronunciation online in order to obtain successful results requires a deep analysis of the tools available and the existing methods. However, this is not enough: the suitability of the resources and methods will strongly depend on the target group and the setting of the instruction, in the same way that it is different to teach English to a reduced number of immigrant children in the USA than to teach English in overcrowded classes at high schools in Spain. Carefully examining these factors will help the teacher to foresee potential obstacles during the instruction.

The fast spread of emergency remote learning due to the COVID-19 pandemic has obliged instructors to reconsider how their students can learn in a virtual setting. However, the introduction of new technologies in the pronunciation classroom has long been welcomed and encouraged by both researchers and teachers: students have now more access to native-speaker samples, they can self-monitor their own progress, and they can enjoy new entertaining activities that revitalize the learning process, among other advantages [8]. For example, listening discrimination activities using recordings of native speakers bring students closer to how English sounds are pronounced: it is not just the teacher stating that American speakers tend to flap the /t/ between vowels when unstressed, they could actually listen to it, so its association with its transcription becomes easier. In addition, if the exercise is presented as a guessing game or a quiz, it is most likely that students get engaged, and if, on top of that, it is an activity that learners can take several times to practice before the exam as a review exercise, it becomes helpful for them to self-assess their progress. As seen throughout this paper, this type of exercises can also be applied within a complete digital context, but there are more possibilities such as collaborative online transcription which can be further explored, enriching the learning process.

It is true, though, that too much multimedia can be overwhelming. Therefore, it is very important to select just the required mechanisms to guarantee successful learning. That is why not every transcription tool available online has been presented in this paper, but just those which were used to make sure that students could transcribe virtually. It is also essential to understand that the practitioner has to

teach how to employ the tools: students might get lost or stressed when learning how to use them because they are taken out from their comfort zone, so the teacher needs to guide them in the process to avoid students feeling discouraged, which is especially crucial during a pandemic [18]. This is the reason why trying to keep the virtual sessions as similar as possible to face-to-face lectures creating synchronous transcription practice was so important: students needed to believe that they were learning as much as in class and that the change of setting was not jeopardizing their learning; the measures taken were adopted to master and assimilate the same notions as they were supposed to learn on site.

Overall, remote teaching brings new possibilities without having to completely detach from traditional methodologies. However, it also causes different problems, such as the dependence on *being connected*. Although synchronous sessions have allowed instructors to create a classroom atmosphere, which has been shown to be very important to provide feedback and guarantee group discussion, students should not rely just on immediate interaction because the internet can fail. Hence, finding the balance between synchronous and asynchronous activities will help students keep learning offline so that their learning process does not get interrupted and they do not feel defenseless and, consequently, stressed [18]. For this reason, finding tools that could be used without being connected to the net was necessary, and designing new ones if none existed became crucial.

5. Conclusion

Digital learning opens up a new world of multiple possibilities in every field, and pronunciation teaching can benefit from a wide range of resources and innovative ideas that can improve students' knowledge no matter the setting. In spite of the fact that teaching pronunciation online might be new to many practitioners and it can be seen as an arduous duty, it is not an impossible task. The tools and techniques in this paper are just a small compilation of the many options that technology offers. Hence, it is essential to keep exploring effective tools and methods that can be applied in this new approach to pronunciation teaching, bridging the gap between research and instruction.

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