

10 Ways to Practice L2 Listening with EdTech

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Considering a global shift to online education due to the COVID-19 pandemic, the aim of this paper is to highlight educational technologies (EdTech) that can help facilitate developments with the second-language (L2) skill of listening. With listening activities often neglected or misused in the classroom, improvements to the skill remain elusive for many L2 learners. To improve the approach that both students and educators take to develop listening, the authors identify and describe 10 categories of EdTech listening, accompanied by online resources, which can enable L2 learners to improve their listening abilities, both inside and outside the classroom. The discussed resources are not just auditory in nature, but often involve visual, communicative, and interactive elements. These resources can be used individually or combined to meet listening goals that extend beyond the overused comprehension approach. Resources are classified under the 10 categories of (1) synchronous online communication, (2) audio-only media, (3) video, (4) MALL, (5) sound and transcribing websites, (6) gaming, (7) digital stories, (8) authoring and producing materials, (9) tracking learners' listening, and (10) recordings.

Educational technologies (EdTech) are considered as “any application of information and communication technologies in education,” which can be particularly useful in the communicative field of second-language (L2) acquisition (Rodriguez-Segura, 2021, p. 2). Since 2019, the COVID-19 pandemic has forced educational institutions to cease face-to-face instruction, resulting in 1.6 billion learners losing access to physical classrooms in favor of online equivalents (Haßler et al., 2020). Fortunately, platforms for online education, such as Google Classroom ([google.com](https://www.google.com/classroom/)) and Blackboard ([blackboard.com](https://www.blackboard.com/)), were already well established, allowing for a feasible transition for many educators (Raza et al., 2021). The more recent emergence of Zoom ([zoom.us](https://www.zoom.us/)) has seen this virtual classroom platform become the most popular globally, with a 49% market share in its category (McHugh, 2021). This mass transition to the online classroom has challenged learners and educators to become more familiar with not only the virtual classroom itself, but other peripheral EdTech tools which would have perhaps not been utilized in the

traditional face-to-face classroom (Dhawan, 2020). Many of these tools are particularly useful for those learning and teaching an L2.

EdTech can be used to facilitate L2 learning, either alone or in a classroom or group setting. Although it has been noted that technology cannot improve learners' language skills without effective teaching to complement it (Godwin-Jones, 2019), a vast majority of learners possess and frequently use devices, such as smartphones and tablets, that can be used for L2 developments (Hubbard, 2017; Thomas et al., 2013).

Of the four L2 skills (i.e., speaking, listening, reading, and writing), it is listening that is considered the least researched (Burns & Siegel, 2018; Cárdenas-Claros et al., 2021) and most neglected in the classroom (Siegel, 2014). For this reason, the authors further explore the challenges of learning and teaching listening before proposing 10 categories of EdTech that can facilitate developments with listening.

EDTECH AND LISTENING SKILLS

Learning a language is a complicated task, and listening is often considered as the most difficult of the four language skills to both learn and teach (Field, 2008; Siegel, 2014). Ideally, listening activities are designed to not only help learners improve their aural comprehension, but also to use that comprehension to gain sociocultural and pragmatic understanding of how to appropriately utilize the language in discourse (Hubbard, 2017). However, the reality is that educators often ignore the teaching of listening or rely heavily on a comprehension approach, which involves the process of listening, answering comprehension questions, then revealing answers to the questions (Field, 2008; Siegel, 2014). While this can be an effective method to test existing listening ability, it is a dated approach that is uncondusive to developing one's listening abilities (Siegel, 2018).

The world of EdTech is always expanding and now includes, among many other features, programs for listening which are interactive and sophisticated (Dhawan, 2020; Godwin-Jones, 2019; Hubbard, 2017). However, some educators have questioned whether EdTech can really help to develop listening skills, and some prefer to keep listening practice face-to-face, as in a traditional classroom setting (Blake, 2016). Whether this is due to educators who lack technological training, or a preference for traditional approaches to teaching, this paper aims to provide listening resources that can be easily adopted into one's language development repertoire. The authors believe that if educators and learners can become more familiar with the following 10 categories of EdTech for listening, then hesitation to integrate more diverse listening activities in the classroom may diminish.

10 EDTECH APPROACHES TO LISTENING PRACTICE

The following is a list of 10 categories of EdTech that can be used to improve listening skills. The resources can be used by individual students looking to improve their listening abilities outside the classroom or by educators who want to integrate an eclectic mix of listening activities in their listening-specific or four-skills classes. It is assumed that even if students do not have access to a compatible device (e.g., tablet, computer, smartphone) in the classroom, they would have access to the technology, whether at home, at their respective learning institutions, or at other locations, such as a public library. These categories and resources can be used in isolation or in combination as a multi-pronged approach to developing listening skills.

1. Synchronous online communication

As discussed, video conferencing (e.g., Zoom) may be the most familiar form of synchronous online communication today due to its prominence in academia during the COVID-19 pandemic. This platform allows for virtual private conferencing rooms called “breakout rooms” and video and screen sharing that can be executed by both educator and learner (Kohnke & Moorhouse, 2020). Such features have allowed for real-time student-teacher consultations and the ability to record and listen to sessions for later review (McClendon et al., 2017). Zoom and similar programs can increase the opportunities for learners to get exposure to both native and non-native speakers of the target language in real time. Amongst other platforms, Levak (2016) found that Skype (skype.com) was useful for helping learners with their listening comprehension and that the synchronous virtual environment of Second Life (secondlife.com) had a positive impact on the user’s comprehension skills. Additionally, online messaging apps such as WhatsApp (whatsapp.com) and Line (line.me) provide audio/video calls, and allow users to send audio files as messages. The affordances these platforms offer can be advantageous for learners, as interlocutors can see each other’s facial expressions and verbal cues, which can enhance listening comprehension skills.

2. Audio-only media

Alongside enhancements to computers, audio hardware (e.g., speakers and headphones) has improved noticeably over recent decades. High-quality audio can facilitate input while allowing learners to effectively model the target language (Meskill, 2009). Technology has enabled users to hear authentic spoken discourse, rather than relying on listening to scripted dialogues where features such as pronunciation, inflection, and accent may be inaccurate (Godwin-Jones, 2019; Robin, 2007).

Audio for language learning can include radio and podcasts. Compared to outdated analog television or over-the-air radio broadcasts, a key feature of using most forms of audio, such as podcasts, to practice listening, is that content can be repeated (Godwin-Jones, 2019; Lai et al., 2018; Robin, 2007). Also, a challenging aspect of listening in the L2 is the speed at which information is

often delivered, but another key feature of most digital audio is that it can be slowed down for ease of comprehension (Robin, 2007). The benefits of scaffolding listening by changing the speed of audio have been noted by East and King (2012). They found that slowing down audio, without reducing its pitch, can result in both improved performance in and perception of listening comprehension exams. Likewise, audio can also be sped up to challenge a listener further.

Websites that feature listening clips include *Breaking News English* (breakingnewsenglish.com), *Listen a Minute* (listenaminute.com), and *Randall's ESL Cyber Listening Lab* (esl-lab.com). One website that offers on-demand audio for the purpose of improving listening is *English Listening Lesson Library Online (ELLLO)*, which includes over 1400 free listening lessons (ello.org).

3. On-demand video

Another major area where technology can help learners with L2 listening is the ability to watch on-demand video. This includes popular services such as *Netflix* (netflix.com) or *YouTube* (youtube.com), where learners can access films, shows, music videos, and other variations of video clips. Trinder (2017) found that film was the most popular medium among learners for improving listening. Chik and Ho (2017) corroborate this by concluding that most learners already feel they have the tools, through websites such as Netflix and YouTube, to effectively practice their target language outside the classroom. While such websites often provide free-of-charge listening and viewing input across a limitless range of topics with a diverse range of English speakers, they represent just one form of listening input, and content is usually at a native-level of English, which might be too advanced for the learner (Blake, 2016; Jones, 2008). Alternatively, lesser-known websites exist that provide video specifically for L2 learners of all levels. For instance, the aforementioned website, *ELLLO*, also has over 700 on-demand videos that can be viewed for listening input with a visual component.

Subtitles can be a popular option to help learners comprehend what they hear in videos (Blake, 2016; Grgurovic & Hegelheimer, 2007). Captioning includes the skill of reading, but it has been found that simultaneous captioning leads to improved aural comprehension as well (Blake, 2016). A study by Chen et al. (2020) has shown that a video-annotated learning and reviewing system with a vocabulary learning mechanism (VALRS-VLM) can have a huge impact on learners' abilities to improve their listening comprehension. The effect on listening, learning, and retention was particularly notable. Chen and Chen's (2021) follow-up study also revealed that listening comprehension performance improved when learners used a video-annotated listening review mechanism (VALRM).

4. MALL

It is becoming more common to use smartphones for language learning, and de la Fuente (2014) noted that Mobile-Assisted Language Learning

(MALL) can have a positive effect on learners' listening skills. In particular, the benefits of enhanced autonomy and individualized aural input processing can be offered through mobile technology (de la Fuente, 2014; Hu & Hsu, 2021). Duolingo is an example of a language learning application/website where learners can practice listening to their target language anywhere by accessing it through their mobile devices (Teske, 2017). When using Duolingo, learners receive critical feedback on their listening skills until they can improve enough to proceed to the next level (Teske, 2017). Jiang et al. (2022) found that using Duolingo (duolingo.com) had a positive impact on language learners' listening proficiency test scores.

5. Sound and transcribing websites

Using technology for listening can help learners discover the accurate pronunciation of unfamiliar words. Using synthesized sound, some applications can convert any text into audio. ToPhonetics (tophonetics.com) is an example of a website where learners can copy written text, get it transcribed into phonemic script, and listen to an audio version of the text. The audio provided by online platforms, such as ToPhonetics, does not always sound natural, however. More common in today's world is the use of digitized sound, where actual speech is recorded and saved as an audio file. These files can either be streamed or downloaded then played. Repetition is a key feature that can be utilized with such audio files (Godwin-Jones, 2019; Lai et al., 2018; Chapelle, 2003). FreeTTS (freetts.com) is a website which provides modern high-quality sound where learners can practice listening.

6. Gaming

Studies have found that learners who are frequent gamers have performed better than others in many areas of English, including listening comprehension (Sundqvist & Sylvén, 2014). In one instance, a language student significantly improved their aural comprehension by playing a baseball video game (Jones, 2008). By learning through context, and having autonomous control over their learning, the student was able to perform better in a follow-up listening test (Jones, 2008). To an extent, L2 learning websites and apps, such as Busuu (busuu.com) and Duolingo, have contributed to the gamification of listening in language learning. With these apps, users need to achieve a certain number of points before progressing onto the next level. Research has indicated that using such gamified English listening apps and websites resulted in improvements, not only in L2 listening, but also in terms of engagement and motivation to practice listening. (Boudadi & Gutiérrez-Colón, 2020; Hwang et al., 2017)

7. Digital stories

Digital stories use multimedia tools, such as audio, video, and images to tell a narrative. They can be interactive and require learners to follow simple commands to continue with the story. Book Creator (bookcreator.com), Stop Motion Studio (cateater.com), and iMovie (apple.com) are all apps which can be

used to access or create digital stories (Undheim & Jernes, 2020). Movie Maker (microsoft.com) and Photo Story (microsoft.com) are popular desktop applications (Quah & Ng, 2021). Studies have shown that learners working with digital storytelling outperformed those using only textbooks, including on listening comprehension tests and the ability to provide reflective analysis (Gunbas & Gozukucuk, 2020; Ramirez & Alonso, 2007). Godwin-Jones (2019) noted that repetition is a key feature of technology for L2 listening practice, and with digital stories having this quality, it has resulted in significant listening improvements amongst users (Sundqvist & Sylvén, 2014).

8. Authoring and producing materials

Technology can be used to produce materials for listening practice. Software such as The Listening Tool and Libra were important early additions to EdTech in the past, as they allowed educators and learners to be more creative by publishing their own content (Jones, 2008). Additionally, Quizlet (quizlet.com), Kahoot! (kahoot.com), and Hot Potatoes (hotpot.uvic.ca) are user-friendly resources that can be used to create listening activities, such as quizzes. Hot Potatoes is an especially useful tool for educators, as it can provide scaffolding for more dynamic listening materials (Otto & Pusack, 2009). Kahoot! has support for video, music, and a competition-style scoring and ranking system that can engage learners (Wang & Tahir, 2020).

9. Tracking learners' listening

There is benefit in discovering exactly what learners do when they listen to their target language. Roussel's (2011) study showed that technology can be used to track learners' listening strategies. Roussel used Camstudio (camstudio.org) to record video of learners' computer screens to observe their behavior while they were listening to an MP3 track in their target language. Not only were the learners using technology to do the listening itself, but Roussel was using technology to analyze the listening strategies being used by the learners. Roussel concluded that the opportunity to have control over input leads to improvements in information processing. Both Liu et al. (2018) and Grgurovic and Heigelheimer (2007) used Camtasia (techsmith.com) to record similar listening activities, and Heigelheimer and Chapelle (2000) documented several studies where learners' requests for modifications displayed problems with comprehension when listening to each other during oral discourse.

10. Recordings

One major challenge for language learners can be accessing listening resources that provide appropriate material in their target language (Godwin-Jones, 2019). Another way technology can help provide material that learners can use to practice listening is for learners to record themselves speaking their target language using an app such as Smart Recorder (apple.com). Listening back to these recordings provides listening practice, as well as an opportunity to reflect on the speaking output, which is a secondary benefit. Entire classes and lectures can be recorded for learners to listen back to or to use for shadowing,

where learners aurally repeat the discourse they hear. Therefore, technology can provide extra listening practice and the repetition often needed to help develop listening skills (Godwin-Jones, 2019).

CONCLUSION

The COVID-19 pandemic has resulted in a general shift from face-to-face to online learning, and advancements in EdTech have facilitated this transition, especially in the field of L2 acquisition. Due to the nature of L2 listening, which relies on linguistic input, learners may be in a historically beneficial position to expose themselves to diverse forms of input. While the leisure activities of many learners already involve listening, such as watching movies or listening to music and podcasts, the resources presented in this paper can contribute to a more diverse range of listening activities, including exposure to different varieties of aural English. Educators, on the other hand, can utilize the 10 categories of EdTech listening to build on the L2 input that learners may be receiving outside of the classroom. Conducting classes via learning platforms, such as Zoom, allows instructors to present their listening resources while getting real-time feedback from the learners. If educators can become more familiar with the resources provided in this paper, an improved listening curriculum can be delivered that extends beyond the comprehension approach.

REFERENCES

- Blake, R. (2016). Technology and the four skills. *Language Learning & Technology*, 20(2), 129-142.
<http://llt.msu.edu/issues/june2016/blake.pdf>
- Boudadi, N. A., & Gutiérrez-Colón, M. (2020). Effect of Gamification on students' motivation and learning achievement in Second Language Acquisition within higher education: a literature review 2011-2019. *The EuroCALL Review*, 28(1), 57-69.
<https://doi.org/10.4995/eurocall.2020.12974>
- Burns A., Siegel J. (2018) Teaching the Four Language Skills: Themes and Issues. In Burns A., Siegel J. (Eds.) International Perspectives on Teaching the Four Skills in ELT. International Perspectives on English Language Teaching. Palgrave Macmillan. https://doi.org/10.1007/978-3-319-63444-9_1
- Chapelle, C. A. (2003). *English language learning and technology*. John Benjamins.
- Chen, C., Li, M., & Lin, M. (2020). The effects of video-annotated learning and reviewing system with vocabulary learning mechanism on English listening comprehension and technology acceptance. *Computer Assisted Language Learning*. <https://doi.org/10.1080/09588221.2020.1825093>
- Chen, C. & Chen, I. (2021). The effects of video-annotated listening review mechanism on promoting EFL listening comprehension. *Interactive Learning Environments*, 29(1), 83-97.
<https://doi.org/10.1080/10494820.2019.1579232>
- Chik, A., & Ho, J. (2017). Learn a language for free: Recreational learning amongst adults. *System* 69, 162-171.
<https://doi.org/10.1016/j.system.2017.07.017>
- de la Fuente, M. J. (2014). Learners' attention to input during focus on form listening tasks: The role of mobile technology in the second language classroom. *Computer Assisted Language Learning*, 27(3), 261-276.
<https://doi.org/10.1080/09588221.2012.733710>
- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, 49(1), 5-22.
<https://doi.org/10.1177/0047239520934018>
- East, M., & King, C. (2012). L2 learners' engagement with high stakes listening tests: Does technology have a beneficial role to play? *CALICO Journal*, 29(2), 208-223. <https://www.jstor.org/stable/calicojournal.29.2.208>
- Field, J. (2008). *Listening in the language classroom*. Cambridge University Press.
- Godwin-Jones, R. (2019). Riding the digital wilds: Learner autonomy and informal language learning. *Language Learning & Technology*, 23(1), 8-25. <https://doi.org/10.125/44667>
- Grgurovic, M., & Hegelheimer, V. (2007). Help options and multimedia

- listening: Students' use of subtitles and transcripts. *Language Learning & Technology*, 11(1), 45-66.
- Gunbas, N., & Gozukucuk, M. (2020). Digital listening texts versus traditional listening texts: Fourth graders' listening comprehension. *Issues in Educational Research*, 30(1), 97-114.
- Haßler, B., Nicolai, S., McBurnie, C., Jordan, K., Wilson, S., Kreimeia, A., & Bortsie, E. (2020). EdTech and COVID-19 response. <https://doi.org/10.5281/zenodo.3983877>
- Hegelheimer, V., & Chapelle, C. A. (2000). Methodological issues in research on learner-computer interactions in CALL. *Language Learning & Technology*, 4(1), 39-55. <https://dr.lib.iastate.edu/handle/20.500.12876/23629>
- Hu, W., & Hsu, S. (2021). Beyond technocentrism: Improving lower-achievers' English listening performance by using Mobile-Assisted Language Learning on University of Technology students. *ICICM*, 98-102. <https://doi-org.exproxy.auckland.ac.nz/10.1145/3484399.3484413>
- Hubbard, P. (2017). Technologies for teaching and learning L2 listening. In C. Chapelle, & S. Sauro (Eds.), *The handbook of technology and second language teaching and learning* (pp. 93-107). John Wiley & Sons.
- Hwang, G., Hsu, T., Lai, C., & Hsueh, C. (2017). Interaction of problem-based gaming and learning anxiety in language students' English listening performance and progressive behavioral patterns. *Computers & Education*, 106, 26-42. <https://doi.org/10.1016/j.compedu.2016.11.010>
- Jiang, X., Rollinson, J., Plonsky, L., Gustafson, E., & Pajak, B. (2022). Evaluating the reading and listening outcomes of beginning-level Duolingo courses. *Foreign Language Annals*, 1-29. <https://doi-org.exproxy.auckland.ac.nz/10.1111/flan.12600>
- Jones, L. C. (2008). Listening comprehension technology: Building the bridge from analog to digital. *CALICO Journal*, 25(3), 400-419. <https://www.jstor.org/stable/calicojournal.25.3.400>
- Kohnke, L., & Moorhouse, B. L. (2020). Facilitating synchronous online language learning through Zoom. *RELC Journal*, 1-6. <https://doi.org/10.1177/0033688220937235>
- Lai, C., Hu, X., & Lyu, B. (2018). Understanding the nature of learners' out-of-class language learning experience with technology. *Computer Assisted Language Learning* 31(1-2), 114-143. <https://doi:10.1080/09588221.2017.1391293>
- Levak, N., & Son, J. (2016). Facilitating second language learners' listening comprehension with Second Life and Skype. *ReCALL*, 29(2), 200-218. <https://doi.org10.1017/S0958344016000215>
- Liu, Y., Jang, B. G., & Roy-Campbell, Z. (2018). Optimum input mode in the modality and redundancy principles for university ESL students'

- multimedia learning. *Computers & Education*, 127, 190-200.
<https://doi.org/10.1016/j.compedu.2018.08.025>
- McClendon, C., Neugebauer, R. M., & King, A. (2017). Grit, Growth Mindset, and Deliberate Practice in Online Learning. *Journal of Instructional Research*, 8, 8-17.
- McHugh, M. (2021). *What Is The Most Popular Video Platform In The World?* UC Today. <https://www.uctoday.com/unified-communications/what-is-the-most-popular-video-platform-in-the-world/>
- Meskill, C. (2009). *Teaching and learning in real time: Media, technologies and language acquisition*. Athelstan.
- Otto, S. E. K., & Pusack, J. P. (2009). Computer-assisted language learning authoring issues. *The Modern Language Learning Journal*, 93, 784-801.
<https://doi.org/10.1111/j.1540-4781.2009.00973.x>
- Quah, C. Y., & Ng, K. H. (2021). A Systematic Literature Review on Digital Storytelling Authoring Tool in Education: January 2010 to January 2020, *International Journal of Human-Computer Interaction*.
<https://doi.org/10.1080/10447318.2021.1972608>
- Ramirez, D. & Alonso, I. (2007). Using digital stories to improve listening comprehension with Spanish young learners of English. *Language Learning & Technology*, 11(1), 87-101.
- Raza, S. A., Qazi, Z., Qazi, W., & Ahmed, M. (2021). E-learning in higher education during COVID-19: evidence from blackboard learning system. *Journal of Applied Research in Higher Education*.
<https://doi.org/10.1108/JARHE-02-2021-0054>
- Robin, R. (2007). Commentary: Learner-based listening and technology authenticity. *Language Learning & Technology* 11(1), 109-115.
- Rodriguez-Segura, D. (2021). EdTech in developing countries: A review of the evidence. *The World Bank Research Observer*.
<https://doi.org/10.1093/wbro/lkab011>
- Roussel, S. (2011). A computer assisted method to track listening strategies in second language learning. *ReCALL*, 23(2), 98-126.
<https://doi:10.1017/S0958344011000036>
- Siegel, J. (2014). Exploring L2 listening instruction: Examinations of practice. *ELT Journal*, 68(1), 22-30. <https://doi.org/10.1093/elt/cct058>
- Siegel, J. (2018). Researching listening through action research. In Liantas, J. (Ed.), *The TESOL encyclopedia of English language teaching*. John Wiley & Sons. <https://doi.org/10.1002/9781118784235.eelt0591>
- Sundqvist, P., and L. K. Sylvén. (2014). Language-related computer use: Focus on young L2 English learners in Sweden. *ReCALL*, 26(1), 3-20.
<https://doi:10.1017/S0958344013000232>
- Teske, K. (2017). Duolingo. *CALICO Journal*, 34(3), 393-401.
<https://www.jstor.org/stable/10.2307/90014704>
- Thomas, M., Reinders, H., & Warschauer, M. (2013). *Contemporary computer-*

assisted Language learning. Bloomsbury.

Trinder, R. (2017). Informal and deliberate learning with new technologies. *ELT Journal* 71(4), 401-412. <https://doi.org/10.1093/elt/ccw117>

Undheim, M., & Jernes, M. (2020). Teachers' pedagogical strategies when creating digital stories with young children. *European Early Childhood Education Research Journal*, 28(2), 256-271. <https://doi.org/10.1080/1350293X.2020.1735743>

Wang, A. I., & Tahir, R. (2020). The effect of using Kahoot! for learning – A literature review. *Computers & Education*, 149, 1-22. <https://doi.org/10.1016/j.compedu.2020.103818>