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EDITED BY
John J. Hoover,
University of Colorado Boulder,
United States

REVIEWED BY
Andrea Honigsfeld,
Molloy College, United States
Claudia Rinaldi,
Lasell University, United States

*CORRESPONDENCE
Tracy Griffin Spies
✉ tracy.spies@unlv.edu

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The forgotten language skill: finding a prominent place for listening in meaningful programming for multilingual learners with learning disabilities

Tracy Griffin Spies*

Department Early Childhood, Multilingual, and Special Education, University of Nevada Las Vegas, Las Vegas, NV, United States

Listening is the primary vehicle through which children learn, is fundamental to all other communication competencies, is a core component of multimodal instruction, and is key to learning language. At the same time, listening comprehension is the least understood language skill and is challenging for teachers in the provision of high quality instruction. For multilingual learners with learning disabilities it also presents certain challenges at the intersection of students' disability and developing language proficiency. This article presents a conceptual analysis of listening comprehension across the perspectives of learning disability and second language acquisition in an effort to link disconnected understandings from the fields to address the intersectional needs of multilingual learners with disabilities. These findings are integrated into a framework of listening comprehension for multilingual learners with learning disabilities highlighting the cognitive and linguistic processes necessary for effective listening. Various examples of how to use the framework to plan multilingual learners with learning disabilities' meaningful access to the general education curriculum are presented including its use in planning students' individualized education plans.

KEYWORDS

listening comprehension, multilingual learners, students with disabilities, multilingual learners with learning disabilities, vocabulary, morphology, syntax, oral language

1. Introduction

During the 2020–2021 school year, approximately 12% of students 5–21 were identified as English learners receiving special education services under IDEA (National Center for Education Statistics, 2022). English learners are students who were not born in the U.S., whose native language is a language other than English, and whose difficulty in speaking, reading, writing or understanding of English significantly impacts their ability to achieve academic success and participate fully in society (U.S. Department of Education, 2016). Although formally classified as English learners, the term multilingual learner (ML) better captures the linguistic repertoire and resources students bring to the classroom and will be used throughout the remainder of this article.

Educational planning for multilingual learners with learning disabilities (MLLDs) calls for a balanced and integrated approach (Kangas, 2014). Plans must address students' cognitive and academic needs while also ensuring instruction purposefully and systematically facilitates

students' language learning. Comprehensive language programming for multilingual learners addresses their developing English proficiency in all four language domains - listening, speaking, reading, and writing. Language instruction and support should align with the language demands of the general education curriculum across all content areas.

With ever-increasing accountability measures, of the four language domains, reading and writing are often prioritized. Yet, listening comprehension plays a critical role in MLLDs' meaningful access to the general education curriculum. Despite pedagogical trends toward more student-centered teaching, students still spend approximately 60% of their instructional time engaged in learning tasks that require listening (Imhof, 2008). Listening comprehension is foundational to all other communication competencies (Nelson and Wigg, 2018) and is an essential part of multimodal instruction and literacy. It is an integral component to language learning for multilingual learners and is frequently used as an accommodation for students with disabilities.

Despite its prevalence in the learning lives of students, listening comprehension is challenging for teachers in terms of quality instruction (Podhajski, 2016) and it is rarely taught (Farrall, 2016). Perhaps its absence from instruction is because listening comprehension is one of the least understood and researched language skill (Podhajski, 2016). It is difficult to define, is multidimensional, and is typically examined through a singular student identity (e.g., at-risk, typical learner, student with a disability, multilingual learner). Yet, for multilingual learners with learning disabilities, listening comprehension presents certain challenges at the intersection of their disability (Nelson and Wiig, 2018; Oefinger and Peverly, 2020) and their developing language proficiency.

Listening comprehension is an avenue to provide MLLDs meaningful participation and access in the general education curriculum through explicit instruction and as a scaffold to literacy (e.g., reading comprehension). Meaningful access, a core principle in the education of students with disabilities, is not about a MLLD's exposure to the general education curriculum, but a student's opportunity to learn the grade-level general education curriculum. Given listening comprehension's central role in MLLDs' academic and language learning, it deserves more prominent attention in the instructional planning process.

The multidimensionality of listening comprehension, coupled with the complexity of addressing the intersectional (disability, developing language) and heterogenous needs of MLLDs is a challenging task for educators. Many of the characteristics of second language acquisition and language and/or learning disabilities are similar (Klingner and Artiles, 2006). Listening comprehension difficulties can be symptomatic of processing disorders associated with learning disabilities or a natural part of the second language acquisition process. For MLLDs, their listening comprehension difficulties may be the result of their developing English proficiency, processing challenges associated with their disability, or both. In the instructional planning for MLLDs, it is important that educators identify the sources of a student's difficulty to provide appropriate support (Klingner and Artiles, 2006). This means identifying the root causes of LC difficulties, whether they be disability related or the result of developing proficiency, and providing intentional and explicit instruction accordingly. This article presents a conceptual analysis of listening comprehension across the perspectives of learning disability and second language acquisition in an effort to link disconnected understandings from the fields to address the intersectional needs of multilingual learners with disabilities.

This conceptual analysis begins broadly to situate listening comprehension within the larger language and literacy framework. An examination of the underlying components of listening comprehension and the challenges students with learning disabilities and multilingual learners demonstrate with those components follow. Then, using Aryadoust's (2019) integrated cognitive theory of comprehension model as a base, a framework mapping the underlying components of listening comprehension on the comprehension model and the implications for MLLDs is presented. To close, the framework is used as a guide to assist IEP teams in planning meaningful participation and access by considering the role of LC in MLLD's learning goals.

2. The role of language in learning

2.1. Language, multilingualism, and disability

Language plays a central role in the identification of multilingual students and students with learning disabilities. Multilingual learners come to school with linguistic and cultural knowledge in multiple languages. They have amassed this knowledge through a variety of community, school, and home experiences (García et al., 2008). Since English is the primary medium of instruction in U.S. public schools, multilingual learners are labeled as English learners because their developing English proficiency is not yet at a level in which they demonstrate academic success in English.

Learning disabilities, particularly reading and writing disabilities, are often associated with language difficulties. Students identified with specific learning disabilities (SLD) and communication impairments represent the largest group if students served under IDEA (U.S. Department of Education, 2015). Approximately 2.3 million students are identified with a SLD in reading and writing. Although students who qualify for services under SLD present with reading and writing difficulties, oral language deficits likely contribute to those difficulties (Koutsoftas and Srivastava, 2020). These students may have been identified early in their schooling with oral language deficits and served under IDEA through speech services. Others may not have been identified until later in their school career when difficulties with written language (reading/writing) emerged and are served for SLD. Regardless of the time of mechanism for identification, these students are considered to have a language-based learning disability (Koutsoftas and Srivastava, 2020).

2.2. Language and literacy

Oral language is a system of coordinated language skills through which spoken words convey knowledge, thoughts, and expressions (Foorman et al., 2015). Phonology, syntax, morphology, semantics, and pragmatics work in unison to convey a speaker's message and guide a listener's understanding of the spoken word. Table 1 defines each component of oral language. Working together as a unified process, oral language is the foundation for how students comprehend, accurately read, and write (Worthington and Fitch-Hauser, 2018).

Four coordinated language domains support literacy development and learning: listening, speaking, reading, and writing. These skills are not identical, however, they are more similar than different (Carreker, 2016; Nelson and Wiig, 2018) and share a common goal - comprehension. For example, in listening and reading, receptive language skills, the goal is *language understanding*. In listening and reading ideas are constructed by listeners and readers through the *analysis* of vocabulary and sentences. In listening and reading, words are *recognized* and *perceived* (Nelson and Wigg, 2018). Similarly, in speaking and writing, expressive language skills, the goal is *language formulation*. In speaking and writing ideas are constructed by speakers and writers through the *selection* of vocabulary and *formulation* of sentences. In speaking and writing words are *synthesized* and *produced* (Nelson and Wigg, 2018). Whether receiving language through listening and reading or producing language through speaking and writing, the aim is understanding. With shared goals and similar processes, listening comprehension can serve as a scaffold to other literacy skills, particularly reading comprehension. Figure 1 illustrates the comparison of receptive and expressive language skills.

Listening comprehension not only serves as a scaffold to other literacy skills, but is a crucial component of multimodal instruction. Multimodality, the use of multiple means of communication, is embedded throughout current curriculum standards. The Common Core State standards outlines the role of listening in multimodal instruction noting that "students must learn to work together, express and *listen* carefully to ideas, *integrate information from oral*, visual, quantitative, and *media* sources, *evaluate what they hear*, use media and visual displays strategically to help communicative purposes, and adapt speech to context and task" (National Governors Association Center for Best Practices, 2010, p. 8). Mathematical standards require students to respond to the arguments of others, distinguish correct logic or reasoning and identify flaws in reasoning. The Next Generation Science Standards call for students to use argumentation to "listen to, compare, and evaluate competing ideas and methods based on their merits" (NGSS Lead States, 2013, p. 13). Further, they call for students to be a critical consumer of information. Specifically for multilingual learners, WIDA, the consortium providing English language development standards and resources across 41 states, recognizes multimodality as essential for students to access and engage in content areas. In response to increased focus on multimodal instruction across content areas, WIDA merges the language domains into two inclusive modes of communication: interpretive and expressive. Interpretive communication includes listening and reading and has expanded to include viewing. Likewise, expressive includes speaking, writing, and representing (WIDA, 2020).

2.3. Listening and learning

Although listening, speaking, reading, and writing create a coordinated literacy system, listening is fundamental to the other communication competencies (Worthington and Fitch-Hauser, 2018).

TABLE 1 Components of oral language.

Oral language component	Definition
Phonology	The sounds of the language
Morphology	The grammatical structure of words and their associated categories
Semantics	The meaning of language
Syntax	The grammatical relation between words and other units within the sentence
Pragmatics	The meaning the speaker/author wants to convey

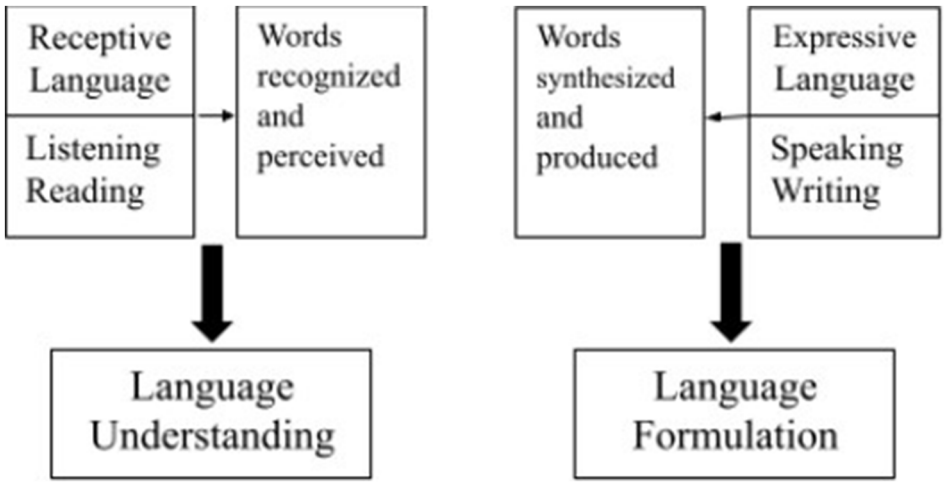

FIGURE 1
Comparison of receptive and expressive language skills. Note: Adapted from Nelson and Wiig (2018).

Particularly, listening comprehension skills are associated with reading comprehension skills (Spies et al., 2018; Silverman et al., 2020; Gunnerud et al., 2022). Gough and Tunmer's (1986) longstanding Simple View of Reading illustrates reading comprehension as a product of word reading efficiency (i.e., decoding) and language comprehension. Even though the Simple View of Reading has been criticized for failing to capture the complexity of the reading process, it is well established that proficient reading occurs only if both decoding and language comprehension abilities are strong. Evidence also shows that listening comprehension plays a role in word reading ability (Wise et al., 2007; Babayiğit and Shapiro, 2020).

Beyond listening comprehension's association with reading, it is also the primary vehicle through which children learn (Farrall, 2016). Students spend approximately 60% of their instructional time engaged in learning which requires listening (Imhof, 2008). Learning which requires listening is not isolated to only students listening to the teacher. Students listen to learn in a variety of ways during their instructional time including cooperative learning, viewing instructional media, discussion groups, and presentation. Listening is prominent in early instruction as most class activities are mediated through oral communication (Hwang and Cabell, 2021).

Listening plays a central role in language acquisition, including second language acquisition. Through listening, language is learned (Worthington and Fitch-Hauser, 2018). Given the time and exposure to multiple languages, MLs have not had the time and access to English that their monolingual native English-speaking peers have. Quality listening helps MLs internalize the pronunciation, rhythm, and intonation of the language (Renukadevi, 2014) that native English speakers developed naturally through language exposure and experiences. Multilingual learners' developing English proficiency includes a developing English vocabulary and knowledge of grammatical structures. Listening develops both planned and incidental vocabulary learning (Pavia et al., 2019) and the acquisition of the target language's grammatical structures. Like native English speakers, listening is a foundational skill for multilingual learners' development across speaking, reading and writing (Cárdenas-Hagan, 2016).

3. Fundamentals of listening comprehension

Like reading comprehension, the aim of listening comprehension is the construction of a mental model of words' meaning (Kintsch, 1998; Gottardo et al., 2018). The key difference being the mode of input. In listening, input is oral whereas in reading, it is written. This mental model represents the listener's interpretation of the spoken word's meaning rather than a verbatim record (Zwaan and Radvansky, 1998) highlighting the role of the cognitive, linguistic, and personal resources in the listening process.

Using key theoretical principles between listening comprehension and reading comprehension, Aryadoust (2019) developed an integrated theory of comprehension promoting the common underlying mechanisms of comprehension. Aryadoust's model comprises four stages: perception, recognition, selection, and integration. Perception refers to the identification, coordination, and interpretation of input. Recognition involves word recognition that leads to meaning activation. Recognition also includes the notation of stress and intonation. Perception and recognition are pre-comprehension processes. Selection begins the comprehension process. During the selection stage, meaning is attached to words and phrases. During this stage, a rudimentary model of understanding is created. The integration stage bridges information through inferring and elaborating. Inferring occurs through connections to personal experiences, mapping known scenarios, and relating world knowledge. Each stage of the comprehension process requires the coordination of both linguistic and cognitive skills. Figure 2 displays Aryadoust's model of comprehension.

3.1. Linguistic skills in listening comprehension

Linguistic skills are fundamental to the listening process. Listening comprehension requires linguistic abilities and processes at the word, sentence, and discourse levels (Carreker, 2016). Vocabulary, morphology, and syntax are independent yet interrelated linguistic components of listening.

3.1.1. Vocabulary

With the aim of listening to be the construction of a mental model of the messenger's spoken word, vocabulary plays a critical role in developing that mental model. In the listening process, vocabulary knowledge helps listeners represent ideas from spoken words and phrases (Kim, 2016). Depth of vocabulary knowledge is more influential on listening comprehension than the breadth of the listener's vocabulary (Valentini and Serratrice, 2023). The better a listener's vocabulary, and their deep understanding of the meaning of words, the better and more accurate their inferences from spoken text will be (Kim, 2020).

Students with learning disabilities and multilingual learners often need additional support to improve their vocabulary knowledge. Students with learning disabilities often have fragmented knowledge of words, narrow understandings of word features, and ineffective word learning strategies (Pany et al., 1982; Swanson, 1986). Students who struggle with reading also miss the benefit of word learning from wide reading (Klingner, 2015). For MLs, vocabulary knowledge is further compounded by less time exposed to vocabulary and inconsistent access to high-quality language environments (Gamez et al., 2017). Multilingual learners may know the common meanings for words but lack depth of word knowledge or more abstract meanings (Klingner, 2015).

3.1.2. Morphological awareness

Morphological awareness, or the understanding of how words can be broken down into smaller units (i.e., roots, prefixes, suffixes), works with vocabulary to support comprehension. Morphological awareness facilitates the understanding and manipulation of morphemes to comprehend morphologically complex words (Ramirez et al., 2013). Morphological awareness enables listeners to understand the different grammatical forms of words (i.e., inflection), the combining of words (i.e., compounding), and the creation of new words (i.e., derivational; Ramirez et al., 2013). When listeners can attend to the structure of words, they can recognize units of meaning within words and apply that knowledge to understand a word's overall meaning (Moats, 2010). Listeners can interpret unknown words if they understand the

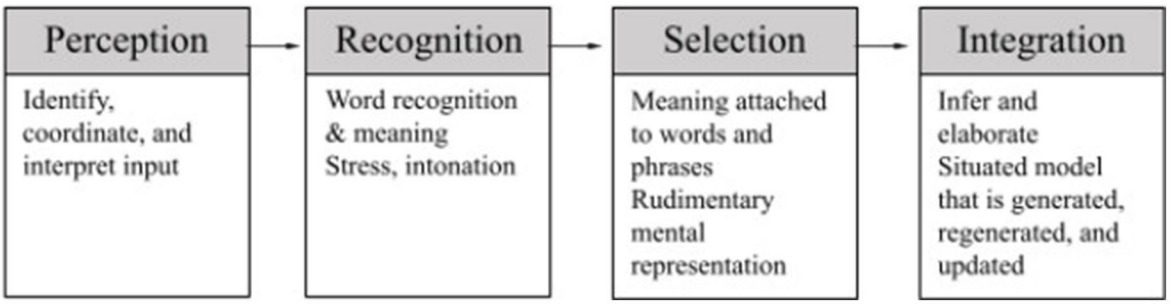

FIGURE 2
Integrated theory of comprehension. Note: Adapted from Aryadoust (2019).

relationship between base words or root words, and their inflectional and derived forms (Apel and Lawrence, 2011). Morphological awareness likely plays a key role in the development of higher order skills (Denston et al., 2018) and can be used as a tool to make connections generating inferences (Valentini and Serratrice, 2023).

Students with underdeveloped reading skills, as often the case of students with learning disabilities, often lack sensitivity to word structures (Tong et al., 2014) and cannot identify and manipulate morphemic units of words. Multilingual learners who struggle with comprehension, demonstrate persistent difficulties with morphological awareness (Li et al., 2021). This is often related to still developing vocabulary (Li et al., 2021).

3.1.3. Syntax

Vocabulary and morphological awareness must also work with syntactical knowledge in constructing a mental model of spoken messages. Syntax refers to how words and phrases are arranged to create sentences. It guides the understanding of the structure of sentences (Denston et al., 2018) and the integration of text representation and semantic relationships to facilitate comprehension (Ramirez et al., 2013). Syntactical knowledge helps listeners to identify critical components of the sentence (e.g., subject, verb, object elements) enabling listeners to extract the topic and general meaning of the sentence. An understanding of syntax aids listeners in relating ideas across sentences (Gottardo et al., 2018) to refine the mental model they are creating as they listen to incoming messages.

Students with learning disabilities who show difficulties with syntax, often struggle with inflectional verb endings. They tend to be less accurate in their use of tense marking morphemes (Fumero and Wood, 2022). They may also struggle with other inflectional endings and word order. Multilingual learners may also apply syntactical structures of their native language to English.

3.1.4. Meaningful access to learning: focusing on linguistic skills during listening

Current practices require students to listen in a variety of ways to learn academic content (e.g., instructional videos, read alouds, podcasts, interactive digital resources, lecture, collaboration, presentations). Instructional materials used to do this can also be used to provide explicit instruction in linguistic skills to facilitate listening comprehension. For example, the use of instructional videos is a common practice to explain complex disciplinary processes, but they also present a great opportunity to highlight embedded linguistic skills that aide in comprehension. To embed, rather than isolate listening comprehension requires the simultaneous analysis of materials from the standpoint of not only addressing the academic standard, but also creating the academic context for language learning through listening. Conversely, the linguistic skills prioritized in the academic context then support the learning of content.

To highlight the linguistic skills embedded in instructional materials, the transcript of an instructional video, *How Wolves Change Rivers* (Sustainable Human, 2022) is used to illustrate the vocabulary, morphology, and syntax teachers could prioritize to support students' listening comprehension. *How Wolves Change Rivers*, a closed caption video, details the changes to the ecosystem within the Yellowstone National Park as a result of the reintroduction of the wolf. This video is often referenced in late elementary and middle school science units on ecosystems. Figure 3 displays the transcript of the video.

This video offers many possibilities for teachers to address vocabulary, morphology, and syntax within the context of learning about the interactions within ecosystems. Besides the academic vocabulary used throughout the video (bolded text), the spoken language is such that students can practice word learning strategies. For example, in the excerpt below, students can use the context of the speech to determine what the speaker means by *ecosystem engineer*.

> The number of beavers started to increase because beavers like to eat the trees. And beavers, like wolves, are *ecosystem engineers*. They create niches for other species. And the dams they built in the rivers created habitats for otters and muskrats, and ducks and fish and reptiles and amphibians.

This video also provides for students to work with morphologically complex words as words with the prefix re- are spoken throughout the video. Further, teachers can also promote syntax development, particularly working with the past tense. Students can distinguish the ending sounds, /t/, /d/, or /ed./ of past tense words ending in -ed. Various discourse markers are also used such as cohesion devices (i.e., pronouns) and connectors to establish the cause-and-effect relationship highlighted in the text. Each of these linguistic skills can be potentially challenging for MLLDs. Table 2 provides additional examples of the embedded linguistic skills within this video. By amplifying the language in this video selected to meet content standards, MLLDs can develop content and language concurrently. The academic content within the video serves as a context for language learning and the language as a vehicle for learning the academic

One of the most exciting scientific findings in the last past century has been the discovery of wide spread **tropic cascades**. Tropic cascades are an ecological process that starts at the top of the **food chain** and tumbles all the way down to the bottom. And the classic example is that which happened in the Yellowstone National Park in the United States when wolves were **reintroduced** in 1995.

Now we all know that wolves kill various species of animals but perhaps you are slightly less aware that they give life to many others. Before wolves turned up they had been absent for 70 years. That the number of deer, because there was nothing to hunt them, had built up and built up in the Yellowstone Park and despite efforts by humans to control them, they had managed to reduce much of the **vegetation** there to almost nothing. They had almost **grazed** it away.

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But as soon as the wolves arrived, although they were few in number, they started to have the most remarkable effects. First, of course, they killed some of the deer, but that wasn't the major thing. Much more significantly, they radically changed the behavior of the deer.

The deer started avoiding certain parts of the park. The places they could be trapped most easily, particularly the **valleys** and the **gorges**. And immediately, those places started to **regenerate**. In some areas, the height of the trees **quintupled** in just 6 years. Bare valleys quickly became forests of aspens and willows and cottonwood. And as soon as that happened, the birds started moving in. The number of song birds and migratory birds started to increase greatly.

The number of beavers started to increase because beavers like to eat the trees. And beavers, like wolves, are **ecosystem engineers**. They create **niches** for other species. And the dams they built in the rivers created **habitats** for otters and muskrats, and ducks and fish and reptiles and amphibians.

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The wolves killed coyotes and a result of that the number of mice and rabbits increased which meant more hawks more weasels, more foxes, more badgers. Ravens and bald eagles came down to feed on the **carrion** the wolves had left. Bears fed on it too and their population began to rise as well partly because there were more berries growing on the trees and **regenerating** shrubs. And the bears **reinforced** the impact of wolves by killing some of the calves of the deer.

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But here is where it gets really interesting. The wolves changed the behavior of the rivers. They began to **meander** less. There was less **erosion**. The channels **narrowed**. More pools formed. More **riffle** sections, all of which were great for wildlife habitats. The rivers changed in response to the wolves. And the reason was that the **regenerating** forests **stabilized** the banks so they collapsed less often, so that the rivers became more fixed in their course. Similarly, by driving the deer out of some places and the vegetation **recovering** on the valley sides, there was less soil erosion because the vegetation stabilized that as well. So the wolves, small in number, **transformed** not just the ecosystem of the Yellowstone National Park, this huge area of land. But also its physical geography.

FIGURE 3
Transcript: How wolves change rivers (Sustainable Human, 2022).

content (WIDA, 2020). The examples provided are not an exhaustive list and can be customized to the specific needs of students.

3.2. Cognitive skills and processes in listening comprehension

To comprehend, listeners must coordinate these linguistic processes with the cognitive processes associated with listening. Working memory, attention, higher order reasoning, and activation of background knowledge are cognitive components of listening comprehension (Gottardo et al., 2018). These cognitive skills help listeners process the cycle of input during the listening process.

3.2.1. Working memory

Working memory is integral to listening comprehension. Working memory, a limited capacity system, provides for the temporary storage and processing of information (Baddeley, 2003). Working memory is critical to the listening process as the information flow is constant and listeners typically have to work with select information over a time period.

For students with working memory deficits, listening comprehension may be impacted as students may struggle to remember and process what is heard (Carreker, 2016), understand and process complex, lengthy, or dense content (Baddeley, 2003; Carreker, 2016), or maintain attention on what is heard (Carreker, 2016). For multilingual learners learning language, information must

TABLE 2 Example linguistic skills in how wolves change rivers.

Linguistic component	Linguistic skill	Examples in text
Vocabulary	Tier III vocabulary Tier II vocabulary Word learning strategies: using context to determine word meaning	tropic cascades, food chain, vegetation, erosion, carrion, riffle grazed, meander, stabilized, transformed, quintupled, niche, narrowed Ravens and bald eagles came down to feed on the carrion the wolves had left.
Morphological awareness	Prefix	Regenerating, reinforced, Recovering, reintroduced
Syntax	Past tense: /t/, /d/ or /ed./ ending sounds	Happened, managed, grazed, started, killed, changed, trapped, narrowed, collapsed
Discourse	Use of pronouns as a cohesion device to reference animals across the text Connectors to establish cause/effect relationship	That the number of deer, because there was nothing to hunt them, had built up and built up in the Yellowstone Park and despite efforts by humans to control them, they had managed to reduce much of the vegetation there to almost nothing. They had almost grazed it away Because, but as soon as, and immediately, as soon as that happened, and as a result of that, and the reason was that

be maintained in working memory while engaging in various cognitive tasks (Kormos and Sáfár, 2008). Working memory is vital for multilingual learners in word learning, the development of the understanding of syntax and their oral language production.

3.2.2. Attention

Attention is paramount in listening comprehension as attending is part of the active listening process (Flowerdew and Miller, 2005). Attention can be defined as "the set of evolved brain processes that lead to adaptive and effective behavioral selection" (Krauzlis et al., 2023, p. 1). Attention is pivotal in the listening process as the environment contains more perceptual information that can be processed (Chun et al., 2011). The allocation of attentional resources influences the quality of the mental model created during listening (Kendeou et al., 2014).

Attention is focused both externally and internally. External attention refers to the selection and processing of sensory information as it initially comes in whereas internal attention is the selection and processing of internally generated information (Chun et al., 2011). Internal attention facilitates the linking of new material to prior learning (Keller et al., 2020). This internally generated information comes from the contents of working memory, long-term memory, tasks students are working on.

Students with learning disabilities may show attentional deficits (National Center for Learning Disabilities, 2017). Children who struggle with attention problems may have fewer cognitive resources to allocate to integrating ideas and creating a mental model (Jiang and Farquharson, 2018). They often need longer time to process complex sentences (Smith et al., 2021). Multilingual learners may demonstrate attentional difficulties as external distractions (e.g., noise) may be difficult to overcome because they may not be able to compensate for the disturbance with linguistic interference or cultural background knowledge (Flowerdew and Miller, 2005).

3.2.3. Background knowledge

Background knowledge assists listeners in making coherent connections across idea units (Hwang and Cabell, 2021). Background knowledge holds all the world knowledge (Smith et al., 2021) a student brings to the listening situation. One's background knowledge comprises declarative facts, procedural knowledge, life experiences, and vocabulary (Kintsch, 1998). Knowledge of specific and defined fields is a subset of background knowledge and referred to as domain knowledge (Alexander and Jetton, 2000).

As listeners are building their mental model of understanding, background knowledge provides meaning to words and phrases. It serves to help listeners determine the relative importance of ideas and direct their focus as they listen (Hwang and Cabell, 2021). Further, a strong domain knowledge facilitates inference to "gap fill" details missing from the spoken text (Hwang and Cabell, 2021).

There are a multitude of reasons students with disabilities and multilingual learners may lack or not efficiently use background knowledge. First, students with learning disabilities and MLs may have different experiences than those presented in the classroom. Activities may be presented in ways that are counter to their cultural experiences. Students may also have limited experiences with the content due to limited experiences in school. Second, students may have background experiences they can draw from, but fail to do so. This could be from a lack of awareness of how to make such connections or the use of cognitive energy on other parts of the listening activity.

3.2.4. Meaningful access to learning: focusing on cognitive skills and processes during listening

The instructional video, *How Wolves Change Rivers*, also presents opportunities to support and develop the cognitive skills called upon during listening comprehension. It is easy to overlook the working memory load in a listening activity, particularly using video as it provides natural built in supports. However, instructional videos often used to present abstract ideas which are generally presented with complex and dense information. To support working memory load, this video has natural sections that enable the teacher to "chunk" the video into parts (Martinussen and Major, 2011) giving listeners the opportunity to pause and process information. In Figure 3, the transcript is divided into stopping points associated with the keys ideas. By pausing in these areas, listeners can add to and refine their mental representation of the text. The video also presents excellent opportunities to provide explicit learning strategies and instructional supports (Martinussen and Major, 2011) to examine the

cause-and-effect relationship. As previously noted, the video contains multiple connectors that give guidance to the listener of this relationship. as well as instructional supports to listen for relations amongst key ideas.

3.3. A framework for listening comprehension with MLLDs

Using the integrated theory of comprehension (see Figure 2; Aryadoust, 2019) as the foundation, the listening comprehension framework highlights the linguistic and cognitive processes critical to creating a mental representation of spoken language with the aim to highlight how educators might identify, support, and teach to students' disability and developing language needs. The framework was designed to provide a beginning model for educators to use and reference as they analyze student need and plan for MLLDs' meaningful access to the general education curriculum by simultaneously addressing students' disability and developing language needs. Therefore, the framework is not comprehensive nor does the one dimensional nature of the framework capture the integrated, cyclical, continuity of the listening process. Figure 4 displays the Framework for Listening Comprehension with MLLDs.

3.3.1. Perception

During the perception stage, input is identified, coordinated, and interpreted. From the perspective of listening comprehension, this is where listeners hear and focus on the sounds of input. Phonological skills are activated at this stage. During this stage, for MLs the speed of speech is critical. For students listening in a new or second language, the sounds in speech may be difficult to decipher. External noise may be problematic in this stage as these sounds may make distinguishing and deciphering sounds in a new language difficult. External attention guides how listeners suppress irrelevant and/or distracting input.

3.3.2. Recognition

As listeners move from perception to recognition, they begin to recognize individual words and derive meaning from words. Listeners pick up on the stress and intonation of spoken language. This is where listeners segment speech into individual words. During this stage of the listening process, the speed of speech and enunciation of the speaker plays a critical role for listeners, particularly ML listeners. Speech, particularly by native speakers is often continuous,

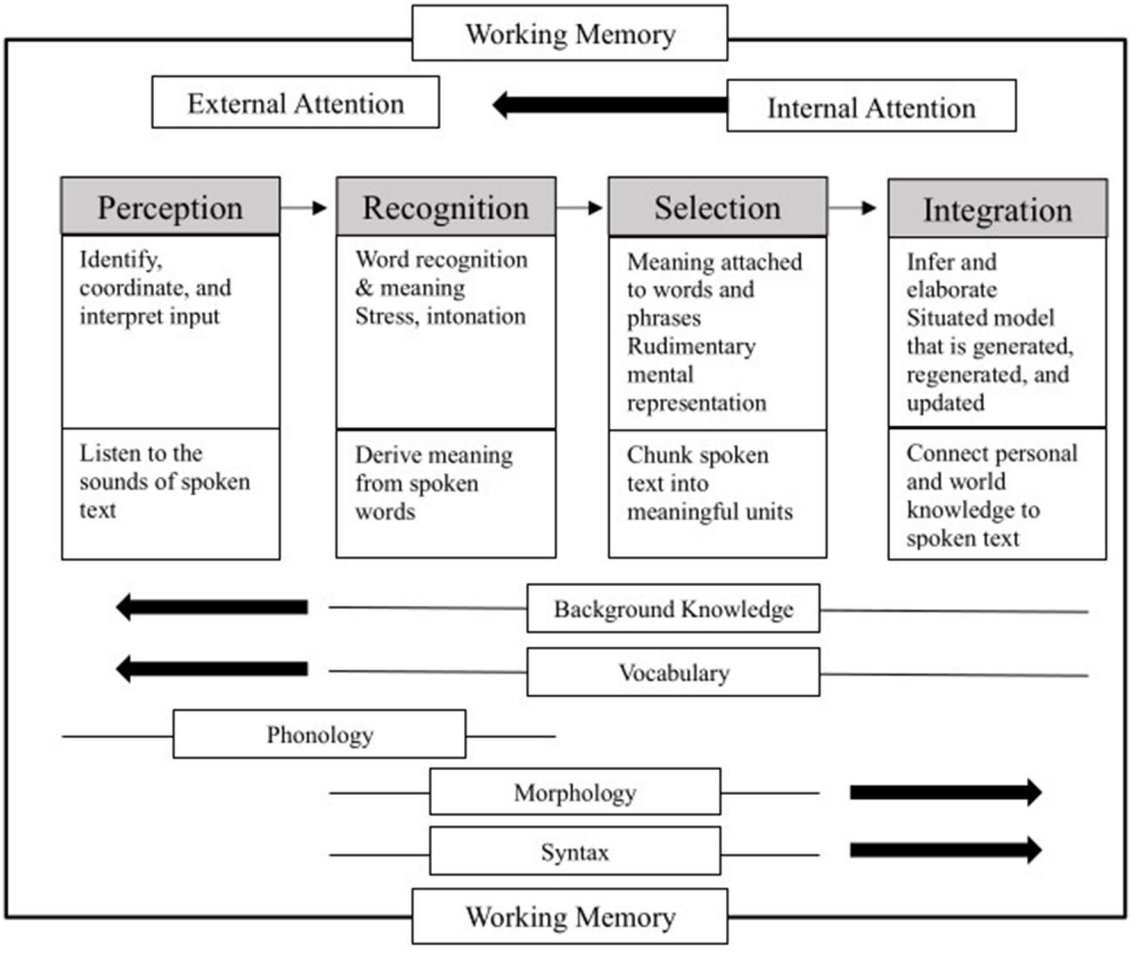

FIGURE 4
A framework for listening comprehension with MLLDs.

lacking pauses and space between words. Speakers rarely produce the distinct sounds of all spoken words. For students listening in a nonnative language, it is challenging for them to distinguish individual words given the continuity of spoken language coupled by the shortening of spoken words. Phonology, morphology, vocabulary, and syntax all play a role at varying degrees during recognition. These work together to facilitate the recognition of words. Vocabulary and morphology work together to give meaning to identified words. Background knowledge may also promote the identification of words and their associated meanings as listeners connect spoken language to their schema. External attention and internal attention may be activated here. Listeners continue to contend with sensory input, yet as listeners begin to attach meaning, internal attention may be exercised.

3.3.3. Selection

The selection stages begins the building of a mental representation of spoken language. During selection, irrelevant information is marginalized and meaning is attached to select words and phrases. In the listening process, listeners chunk information into meaningful units and connecting the units to build a basic representation of what is heard. Vocabulary, morphology, and syntax work collectively to chunk text into meaningful units and begin building a representation of spoken language. Vocabulary and morphology skills help the listener extract ideas from the spoken language while syntax facilitates seeing how the ideas relate. Background knowledge is called upon to help listeners identify meaningful units of information as it sorts through relevant and irrelevant information. Internal attention aids in the beginning processes of accessing known information (e.g., working memory, long-term memory) to build a basic representation of spoken language.

3.3.4. Integration

As listeners move from selection to integration, they begin to integrate their personal experiences and world knowledge into what they have heard to bridge input. During integration, listeners make inferences and elaborate upon the selected input. The initial mental representations created during the selection stage are refined as listeners generate, tweak and update these representations as input is consistently taken in. Vocabulary skills play a critical role at this stage in facilitating inferencing and refining the mental model of spoken language. Morphology and syntax will continue to work in the background as information comes in and the model is regenerated. Background knowledge and internal attention play an essential role as listeners draw on their personal and world knowledge to regenerate and refine the mental representation. During this stage, background knowledge facilitates inferring and elaboration by filling on the gaps of details missing from spoken text (Hwang and Cabell, 2021). Internal attention guides the selection and processing of internally generated information. Internally generated information may come from areas such as working memory centers, interactions with long-term memory, and tasks.

In the framework, the listening process is situated with working memory in the background. Working memory provides the temporary storage and processing of information. The ongoing input associated with listening makes it a critical "background" component of the process.

To "simplify" the listening comprehension process into a useful framework, two important aspects are not reflected in its visual: (1) Components of the listening comprehension process were placed in the framework where they may primarily function, however, given the context of the listening conditions, components may shift to other areas of the framework and become active in the listening process; and (2) Although the stages are presented linearly, it is important to remember that listening comprehension involves a variety of *real-time* cognitive and linguistic processes. The input is continuously received and updated necessitating an ongoing rather than a static application of these stages.

4. Listening as meaningful access to the general education curriculum

Listening comprehension plays an integral role in supporting a MLLDs' meaningful participation and access to the general education curriculum. Listening is the underlying foundation for not only learning, but for language learning. It is the primary vehicle for learning (e.g., teacher lecture, read aloud, video instruction, collaborative learning) and often an instructional and assessment accommodation for students with disabilities. Through explicit instruction and/or as a scaffold to other literacy skills, listening comprehension is one way to support MLLDs' opportunity to learn grade level content.

As interdisciplinary teams meet to plan instruction for MLLDs, there are multiple areas within the IEP planning process educators can consider listening comprehension. In the paragraphs that follow, ways in which IEP team members can consider the influence of listening comprehension on MLLDs' academic learning and ways to embed explicit LC instruction to support their academic and linguistic development are outlined. The aim is not to isolate LC as a targeted area of need (unless the IEP team deems necessary) but to highlight its role in the student's learning and the opportunities to embed supports/instruction for it as avenue to scaffold other areas of academic need (i.e., reading, writing, math). As a reminder, LC challenges may result from a student's learning disability or their developing proficiency and instructional plans should be made accordingly. Appendix A lists a variety of resources that may help teams distinguish the root causes of a student' difficulties.

4.1. Present levels of academic achievement and functional performance

Listening comprehension skills should be included in the evaluation and discussion of a multilingual student's present levels of academic achievement and functional performance (PLAAFP). PLAAFP statements summarize the student's academic and/or functional abilities and note how a student's disability affects their involvement and progress in the general education curriculum. First, teams can highlight the student's areas of strength in their native language (L1). As a team, consider how the student's skills in their L1 can be leveraged to support their learning in English. How might L1 skills be used to support LC in English? IEP teams could include a PLAFF statement as to how a student's L1 will positively contribute to their learning.

Teams could also highlight scores related to a student's listening comprehension as collected through formal assessments including the student's annual English proficiency test (i.e., WIDA). Compare and contrast how students performed across listening measures. Pay particular attention to how the student performed on tasks of

TABLE 3 Examining MLLD's LC in present levels of academic achievement and functional performance.

Component purpose	Listening comprehension considerations	Possible listening comprehension features to include in the IEP
These statements summarize the student's abilities in both academic and/or functional areas	What are the student's areas of strength in the L1?	Statements as to how student's strengths in L1 can be used to support listening comprehension
These statements include how the student's disability affects her involvement and progress in the general education curriculum	How did the student score on the listening portions of assessments within the evaluation procedures?	Statements as to how listening comprehension strengths and/or challenges (at the word, sentence, discourse levels) may contribute to student learning
	How did the student score in listening on their English proficiency assessment (e.g., WIDA)?	Statements as to how receptive vocabulary strengths and/or challenges contribute to LC and student learning
	What are the student's strengths and/or difficulties in terms of listening at the word, sentence, and discourse levels?	Statements as to how a student's strengths and/or challenges related to working memory and attention may influence their LC and learning
	How did the student score on receptive and expressive vocabulary portions of assessments within the evaluation procedures?	Overall statement as to how a student's LC strengths and/or challenges frame their engagement (e.g., success, necessary support) with the general education curriculum
	Does the student have challenges in working memory or attention? What are the student's strengths and/or challenges in terms of listening to peers to obtain academic information (i.e., collaboration)	Statements as to how a student's strengths and/or challenges will influence their collaboration and learning from peers

vocabulary and syntax in both receptive and expressive measures. IEP teams could include PLAFF statements as to how a student's strengths and/or challenges at the word, sentence, and discourse levels contribute to learning. Sample PLAFF statements aligned to a student's interpretive proficiency levels are included in Appendix B. Statements regarding how receptive vocabulary strengths and/or challenges impact LC may also be included.

Teams could also examine other assessments and evaluations that show how a student is performing in terms of working memory and attention. Review teacher information and other observation data through the lens of a student's listening. Statements as to how a student's strengths and/or challenges related to working memory and attention may include their LC and learning can also be included. The PLAFP should include an overall statement as to how a student's LC strengths and/or challenges frame engagement with the general education curriculum. This includes how a student's current listening comprehension skills influence their successful collaboration with and learning from peers. Table 3 outlines how IEP teams may reflect on a MLLD's listening comprehension and how it might be included in PLAAP statements.

4.2. Measurable annual goals

The impact of a student's listening comprehension skills should be included in the discussion in the creation of challenging, ambitious, and measurable goals. Measurable annual goals are designed to meet the needs of the student that result from their disability. These goals ensure students are able to be involved and make progress in the general education curriculum. A MLLD's academic needs cannot be fully addressed without considering their developing languages–including their listening comprehension.

The team should discuss how a students' strengths in listening can be leveraged to support them in attaining their goal. Conversely, the team should also discuss how a student's challenges in listening can be supported to facilitate goal attainment. In addressing the student's other educational needs, the student may benefit from a goal to support foundational listening skills (e.g., sustained attention, receptive vocabulary). Annual goal statements could include the listening conditions under which the student learns best. Examples may include:

- With the support of an English/Spanish graphic organizer…
- After first listening to the text read aloud…
- After discussing the text's topic in their L1…
- With accompanying sensory supports (e.g., realia, manipulatives, illustrations, diagrams; WIDA, 2020)…
- After listening to the text in their L1…
- With the support of an outline of the text…

Finally, the team should consider if benchmarks explicitly support or require listening comprehension skills. Perhaps the student would benefit from a listening comprehension benchmark directly aligned to the annual goal. The listening comprehension framework could be used to develop benchmarks toward the annual goal. Table 4 lists questions the IEP team can use to think about a student's listening comprehension in relation to their annual goals and features they may choose to include in the IEP.

4.3. Services and program modifications/supports

Utilization of students' strengths in listening and/or their needed support for listening comprehension should be part of the team's

TABLE 4 Examining the role of LC in MLLD's annual goals.

Component purpose	Listening comprehension considerations	Possible listening comprehension features to include in the IEP
Goals are designed to meet the student's needs that result from their child's disability	How can the student's strengths in listening support their goal attainment?	Frame annual goal statements to include the listening conditions in which the student learns best (Hoover et al., 2018)
Goals enable the student to be involved in and make progress in the general education curriculum	How might the student's challenges with listening impact their goal attainment?	If applicable, benchmarks toward annual goal include listening
Meet each of the student's other educational needs that result from the child's disability	Would goals related to receptive vocabulary benefit the student in accessing and progressing in the general education curriculum?	
	Would goals related to sustaining attention benefit the student in accessing and progressing in the general education curriculum?	
	Do benchmarks explicitly support/require listening comprehension skills?	
	Can the framework for LC scaffold benchmarks toward annual goal?	

discussion of special, related, and supplementary services. During this discussion, the interdisciplinary team is focused on support for both the student and the educators who teach them that assist the student in progressing toward their goals. Here, the team can engage in very specific discussions about what a student needs for successful listening not only to the teacher, but to their peers. The listening comprehension framework can serve as a great starting point for this discussion as the team can focus on various parts of the model. Table 5 provides a list to serve as a starting point in identifying potential challenges for MLLDs aligned with the listening comprehension framework and corresponding instructional supports.

During this portion of the team meeting, discussions related to the professional development needs of the educators to meet the instructional needs of the student can take place. Few teacher preparation programs are specifically designed to prepare teachers to work with multilingual students with disabilities (Martinez-Alvarez and Chiang, 2020). Identify the support teachers need to be successful in the provision of services outlined in the IEP. Table 6 provides an initial list of guiding questions to assist IEP teams in identifying services, modifications, and supports for the MLLD's meaningful opportunity to learn the general education curriculum.

4.4. From IEP to the classroom

Bringing prominence to listening comprehension must move beyond the words on a MLLD's IEP and must come to life in the classroom. The Framework for Listening Comprehension is a detailed look at the process and how a student's disability and developing English proficiency may influence their listening. There are general steps that all educators can take to create quality listening opportunities for MLLDs using current instructional materials.

4.4.1. Teacher preparation

Every teacher, whether they be the general education teacher, the special education teacher, or the student's specials teacher (e.g., art, music, PE), can contribute to supporting listening comprehension. Each teacher of a MLLD must understand the student's learner profile and be clear on their role in implementing the IEP. Teachers must understand the student's strengths and difficulties in listening from a cognitive, academic, and linguistic perspective.

Teachers should also have a general understanding of second language acquisition. For educators just beginning to learn about second language acquisition, three beginning areas of foci are recommended: (a) attention to the rate of speech; (b) frequent pauses and repetition of key information to allow learners to "catch up" and facilitate the identification of relevant information and the suppression of irrelevant information; and (c) basic understanding of effective vocabulary instruction.

4.4.2. Classroom environment

In order for listening comprehension to be prioritized, each classroom should have well-established expectations for active listening. Active listeners "give complete attention to what they hear, actively process the information, make pertinent comments, and ask relevant questions" (Jalongo, 1995, p. 13). These expectations should be taught and reinforced. Expectations for classroom listening should include a signal to show when active listening is required. They should also include prompts for students to use to indicate that their listening comprehension has broken down (e.g., can you please repeat that; I do not understand).

Each teacher should ensure that their classroom environment is conducive to listening for the MLLD. Classroom seating arrangements should support effective listening in regards to the classroom expectations for listening as well as the learning tasks that take place during instruction. For example, an expectation for active listening is looking at the speaker. Seating arrangements should support students' ability to access a speaker's face. Ambient noise should be minimized as best as possible.

Some MLLDS will need additional support and resources to prepare them for effective listening. For students who have difficulty hearing the distinct sounds in words may benefit if the teacher wears

TABLE 5 Using the LC framework to identify supports for MLLDs.

Perception	
Potential challenges for MLLD	**Instructional supports**
Speech sounds are new and different from their L1	Provide multiple opportunities to listen to the same input
	Have students identify unknown sounds
	Phonological awareness activities
Attention	Limit distractors
Recognition	
Speech rate may exceed student's ability to keep up, identify individual words	Slow rate of speech
	Pause to allow listeners to catch up
	Repeat critical information
Speakers do not always produce sounds distinctly	Enunciate Teach students to ask speakers to repeat themselves
Limited vocabulary skills	Pre-teach vocabulary
	Vocabulary, morphology interventions
	Teach word learning strategies
Lack of understanding of colloquial expression	Preteach colloquial expressions
Lack experience with nonverbal communication	Teach nonverbal communication
Attention	Teach MLLDs to monitor their listening comprehension, ask for information to be repeated/clarified
Selection	
Limited background knowledge	Experiences to build background knowledge
Difficulties with syntax	Explicit instruction in syntax
Difficulty understanding discourse markers	Highlight and teach discourse markers (e.g., first of all, in summary, finally)
Difficulty distinguishing relevant/irrelevant information	Repeat critical information
	Use graphic organizers
	Chunk listening activities
Integration	
Unfamiliar with the pragmatics of the language	Help listeners make connections between the spoken word and the context within the speech act
Accessing background knowledge to refine mental representation of spoken language	Provide explicit instruction
	Use graphic organizers
Limited academic vocabulary	Provide explicit instruction in vocabulary aligned with higher level comprehension demands (e.g., infer, analyze)

a microphone. Students may need specific seating assignments or frequent reminders of active listening.

4.4.3. Analysis and selection of listening materials

In every classroom, in every lesson, MLLDs will be required to listen. Whether it is listening to a story read aloud in reading, watching an informational video in science, or listening to the PE teacher's explanation of the rules of soccer, MLLDs will have to listen and comprehend a variety of information across their day. As teachers analyze and select the listening materials and activities MLLDs will engage with, three key principles should be considered: (a) the inclusion of a variety of listening materials; (b) students' background knowledge as it relates to the listening activity; and (c) how the materials support the learner's instructional goals or listening needs. The aim is not to teach listening comprehension in isolation, but rather focus students on linguistic and cognitive skills during typical listening opportunities to enhance students' comprehension and mastery of the content learning target.

4.4.4. Implementing a listening routine

Implementing listening comprehension instruction can take many forms based on the individual needs of MLLDs. Given that listening requires abilities and processes at the word, sentence, and discourse levels, it is important that listening activities provide MLLDs' the opportunities to listen at all three levels. Bottom-up, top-down, and interactive listening models have guided L2 listening (Flowerdew and Miller, 2005). Bottom-up models approach listening from the smallest units of the acoustic message (i.e., phonemes) and build to larger units of language (i.e., sentences) to create ideas. Top-down models of

TABLE 6 Examining Services, Modifications, and Accommodations to Support LC.

Component purpose	Listening comprehension considerations	Possible listening comprehension features to include in the IEP
These statements enable students to advance appropriately toward attaining annual goals	Would segmenting listening activities support student's LC?	Inclusion of aids to support LC provided in all educational settings to enable student's meaningful and maximum participation in the general education curriculum (e.g., captions, visuals)
To be involved in and make progress in the general education curriculum	Would multimodal supports (e.g., captions) support student's LC?	Inclusion of services to support LC provided in all educational settings to enable student's meaningful and maximum participation in the general education curriculum (e.g., supplementary intervention)
To be educated and participate with other children with and without disabilities	Would explicit instruction in connecting information across listening support the student?	Inclusion of other supports to support LC provided in all educational settings to enable student's meaningful and maximum participation in the general education curriculum (e.g., seating, segmenting listening, multiple opportunities to listen)
	What supplementary aids and services might help the student develop receptive vocabulary?	
	Would supplementary aids help the student sustain attention?	
	Does the student need special seating to support listening? Does the student need scaffolds/supports to effectively listen to peers during collaborative activities? Would student benefit from differentiated grouping (e.g., pair vs. triad vs. group of 4–6)?	
	Do personnel need additional training to support the student's needs?	

listening underscore previous knowledge in processing messages rather than the reliance on individual words. Interactive models posit a parallel and interactive processing of phonological, syntactic, semantic, and pragmatic information. Successful listeners in their L2 approach listening from a top-down manner while employing bottom-up strategies as tools to work with top-down strategies (O'Malley et al., 1989; Vandergrift, 2003). Thus, to provide MLLDs' opportunities to develop both the linguistic and cognitive skills associated with listening comprehension, interactive models of second language listening and the Framework for Listening Comprehension for MLLDs served as the foundation for the recommended listening routine that follows.

First and foremost, it is imperative that MLLDs have multiple opportunities to listen to the selected text. Consider a minimum of three-four opportunities to listen.

- First time listening: listen to familiarize and orient to the spoken text.
- Second time listening: listen for specific word-level information (e.g., academic vocabulary, morphology).
- Third time listening: listen for key ideas in the spoken text. Focus on elements at the word, sentence, and discourse levels that facilitate identifying key ideas.
- Fourth time listening: listen to make connections to personal experience, background knowledge, and to infer.

Prior to beginning a listening activity it is important to prepare learners for listening. First, set the purpose for listening (content learning target) and make students aware of the type of listening they will engage in. Identifying the purpose and type of listening will help listeners at the recognition and selection stages of the listening comprehension process. This step will help in the recognition of key spoken words and help sort relevant and irrelevant information. It will also guide students where to place their attention. Also prior to learning, tap into students' background knowledge and engage students in making predictions.

Before listening, it is important to provide explicit instruction at the word level (Cárdenas-Hagan, 2016). If a student has specific phonological needs, explicitly teach the sounds students are listening for. Preteaching critical academic vocabulary would also take place during this time. Word-level instruction will aide students at the perception and recognition stages of the listening comprehension process.

The first time students listen, the aim is for students to orient themselves to the text. When listening, many learners need time to become accustomed to the speaker's voice and "tune in" to what is being said (Goh and Vandergrift, 2021). Often, words in connected speech are quite different acoustically than their discrete phonological sounds spoken in isolation (Lange and Matthews, 2020). Learners need time to segment the sound stream into meaningful units (Vandergrift and Baker, 2015). As students listen, they orient themselves to the topic, the purpose for listening, and connect their background knowledge with speech.

The second time students listen, focus on word-level linguistic skills associated with building the mental model. Students can listen for essential academic vocabulary and the context surrounding the vocabulary that begins to create a model of the overall message as it relates to the content learning target. They can listen for important morphologically complex words that contribute to meaning making.

This supports students at the recognition stage as they begin to derive meaning from spoken words. Prompt students to continue to make connections to their background knowledge.

The third time students listen, the intent is for students to listen for the key ideas in the spoken text as they relate to the content learning target. During this listening opportunity, the goal is for students to develop a rudimentary mental representation of the text. To do this, the listening text can be "chunked" so that students listen to segments and pause to identify the "gist" of what was heard. Students can be asked to listen for particular grammatical structures and discuss how they contribute to their mental model. This supports the selection stage of the listening comprehension process.

The fourth time students listen, the objective is for students to infer and elaborate. At this stage, students are selectively and purposefully using their personal experiences and background knowledge to "gap fill" and develop a refined mental model of the spoken text. Prompt students to justify how their connections (personal experiences, background knowledge) help them better understand the topic and the content learning target.

During listening, provide instructional support materials that are directly connected to supporting MLLDs' listening comprehension. Word walls, anchor charts, and visuals can help students at the recognition stage of learning as they are deriving meaning from words. They will also aide the student in focusing their external attention. Graphic organizers and outlines can assist students in both the selection and integration stages of the listening comprehension process. Outlines and graphic organizers can help students identify relevant information and chunk it into meaningful units. Graphic organizers are powerful in assisting students in the integration of information leading to a refined mental representation. Graphic organizers and outlines will assist MLLDs with the focus of their internal attention.

5. Strengths and limitations

The purpose of this conceptual analysis was to examine the underlying components of listening comprehension from the perspective of learning disability and second language acquisition with the aim to facilitate discussion as to how listening comprehension can serve as a vehicle to a MLLD's meaningful access of the general education curriculum. By compiling the existing literature from the two fields, an initial frame of how each of the components may be impacted by a student's learning disability or their developing proficiency was developed.

This study is not without several limitations. The inconsistency of the definition and measurement of listening comprehension, coupled with the complexity of the listening comprehension process make specificity in the process difficult to produce. In younger children, oral language skills are best understood as unidimensional whereas oral language skills for older students are discrete (i.e., vocabulary, grammar, discourse; Hagen et al., 2022). Individual learner characteristics (e.g., disability, language proficiency) influence not only overall listening comprehension but each individual component and process that happens simultaneously during listening. Understanding the range of the impact of individual learner characteristics on listening is critical in individual planning but is beyond the scope of this analysis.

6. Conclusion

As educators, we have a legal and moral obligation to design and deliver instructional programming to ensure that MLLDs can participate meaningfully and equally in learning (see Title VI Civil Rights Act of 1964, Equal Educational Opportunities Act of 1974). As such, MLLDs should be afforded appropriate language assistance services to participate equally in the standard instructional program with access to their grade-level curriculum (U.S. Department of Justice and U.S. Department of Education, 2015). This means, in addition to supporting cognitive and academic needs as a student with a learning disability, support in developing their English proficiency as a multilingual learner takes equal priority. Although specialized instructors (e.g., ESL, bilingual teachers) can support a ML's language development, their language development needs cannot be viewed as separate from their needs as a student with a learning disability. Cognitive, academic, and linguistic skills are symbiotic and should not be viewed in isolation. A ML cannot meaningfully participate in the general education curriculum without support for their developing listening, speaking, reading, and writing skills from the perspective of second language acquisition.

The purpose of this conceptual analysis was to examine the underlying components of listening comprehension from the perspective of learning disability and second language acquisition with the aim to facilitate discussion as to how listening comprehension can serve as a vehicle to a MLLD's meaningful access of the general education curriculum. Neither the conceptual analysis, nor the proposed framework of listening comprehension, is exhaustive nor comprehensive, but is rather a beginning step in how educators might support and teach listening to facilitate learning, or as a scaffold for other literacy skills.

Listening comprehension can be a powerful scaffold to reading comprehension and other literacy skills. It is also a critical life skill to be an effective communicator and consumer of information. Our children today are bombarded with information. Effective listening skills will help them sort through facts, fiction, and sensationalism to make good decisions. As our students improve their listening skills, they may also find that their relationships improve. Through effective listening, listeners demonstrate empathy, build trust and can curtail misunderstandings. So while listening comprehension is complex, it deserves more prominent attention not only for our students' meaningful participation in the general education curriculum, but also in their lives.

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