



Music on our Minds

How music can
enhance additional
language instruction

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LLL 509: Second or Additional Language Acquisition

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Prepared and Submitted Spring 2024

The Relationship Between Music and Language

The origins of language and music have long been debated. Some theories propose a common ancestor, while others see them as distinct.

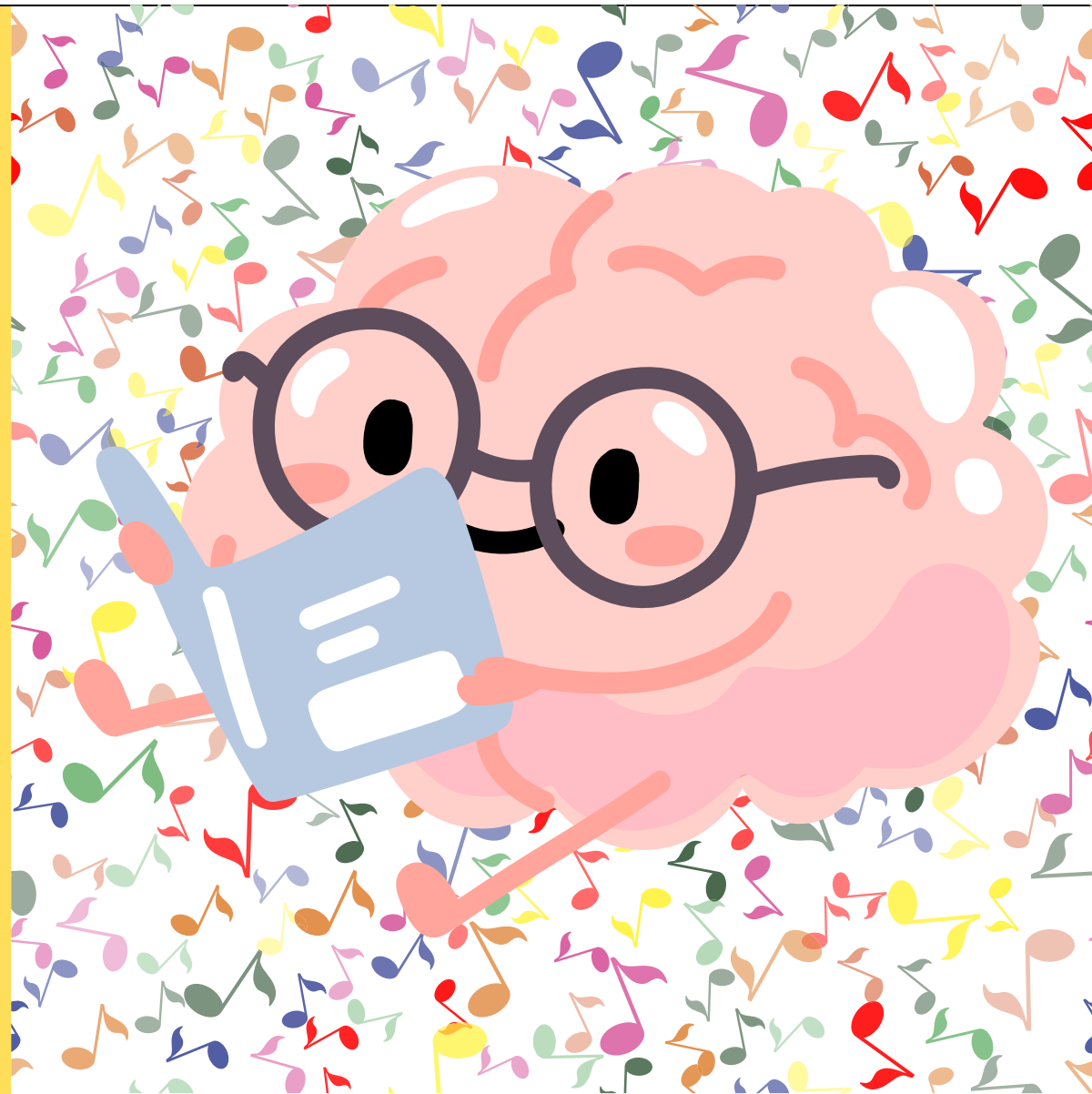
Language serves as a fundamental tool for communication and social bonding. It may have evolved to meet the need for cohesion within human groups. The unique characteristics of language contribute to its specific role in human cognition, which includes the expression of rational thought and the organization of societies.

While there is no clear biological or evolutionary reason for it, our brains appear to be hardwired for music. There are specific areas in the brain dedicated solely to processing music. Structurally, language and music share similarities such as rhythm and discrete units—phonemes in language and pitches in music. Functionally, both rely on intentionality and memory and develop through specific learning processes. With advancements in brain imaging, researchers can now better investigate the similarities and differences in how the brain processes language and music (Besson & Schön, 2001).

Understanding how our brains respond to music can provide valuable insights into language acquisition and processing, especially in the context of learning a second or additional language (Hansen & Milligan, 2012; Pastuszek-Lipinska, 2008; Zeromskaite, 2014).



Reading Words VS Reading Music



Both musical notation and written language have evolved over centuries as systems to convey complex information. Musical score reading and word reading share many similarities, including historical origins, cognitive processes, and neural bases.

Music notation and linguistic text both involve formal written notation read from left to right, potentially facilitating transferable skills: both are complex systems for encoding and communicating ideas and emotions through structured symbols and rules (Butzlaff, 2000).

Historically, the development of musical notation paralleled the evolution of written language as societies sought methods to record and transmit artistic and intellectual content. The notational systems of both domains have become increasingly sophisticated to meet the needs of their respective fields, allowing for the precise communication of ideas—musical or linguistic (Besson & Schön, 2001).

Cognitive Processes in Reading Words & Reading Music

Cognitively, both musical score reading and word reading involve complex decoding processes (Butzlaff, 2000, Besson & Schön, 2001).

When reading words, the brain deciphers symbols (letters) to understand language, syntax, and semantics. Similarly, reading music involves interpreting symbols (notes and other musical notations) to understand pitch, rhythm, and dynamics.

Symbol Recognition

Identifying and understanding the symbols used (letters and words for text, notes and rests for music).

Pattern Recognition

Recognizing patterns within the symbols (such as words or phrases in language, and musical phrases or motifs in music).

Sequential Processing

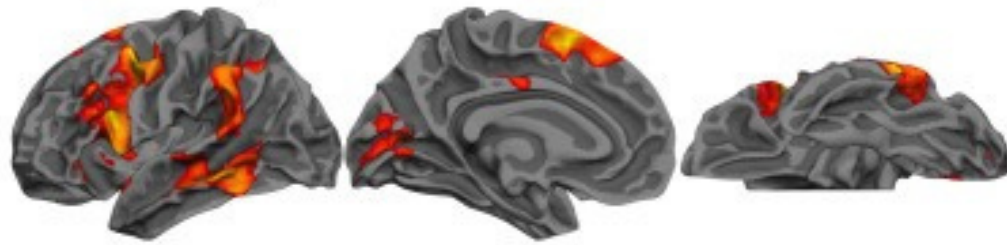
Decoding symbols in a specific order to derive meaning (reading left to right, top to bottom for text, and following the musical staff and its conventions for music).



Neural Overlap in Score Reading and Word Reading

Word and music reading networks in musicians

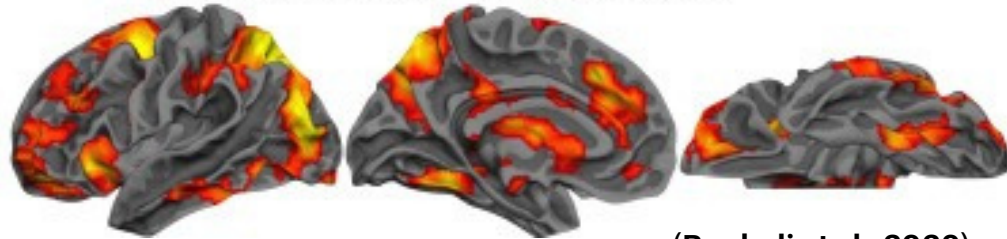
Overlap of word and music networks



Word reading > Music reading



Music reading > Word reading



(Bouhali et al., 2020)

Modern technology allows us to see that our brain uses similar resources for both language and music, like understanding sounds and controlling movements.

In the ventral occipitotemporal cortex (VOT), the Visual Word Form Area is known for its unique connectivity to language regions (Bouhali et al., 2020). Studies have found that people who are musicians have more similar brain patterns when reading words and music compared to non-musicians. This suggests that musical expertise can help make the brain more efficient at processing both music and language (Besson & Schön, 2001).

Neuroimaging research also shows that music training can lead to significant changes in the brain, particularly in areas critical to sound sensitivity. Studies using technologies like fMRI reveal that music training increases the size and functionality of the temporal lobe and enhances neural connections between the brain's hemispheres. These changes are associated with improvements in auditory discrimination, fine motor skills, vocabulary, and nonverbal reasoning (Hansen & Milligan, 2012).

Listening to Learn: Music & Phonological Awareness

Learning to read fluently requires children to transform symbolic information from print into mental representations based on their prior language experience.

Numerous studies have linked music skills and training to enhancements in speech perception, auditory perception, and language acquisition, suggesting a potential relationship between music training and literacy development (Gordon et al., 2015) .

Reading specialists and music educators both recognize the importance of auditory processing skills for successful reading. Music education, which inherently involves aural skills, can support the development of phonological awareness—the ability to understand the sounds of language, including word segmentation, beginning and ending sounds, and individual phonemes. These skills are foundational to both music and reading (Hansen & Milligan, 2012).



The Transfer Effect: Music & Language Learning



The phenomenon where skills acquired through musical practice extend beyond music-specific tasks and positively impact various aspects of language development and processing is known as the transfer effect (Neves et al., 2022).

Musical training has been shown to have a positive impact on language abilities by enhancing various cognitive processes involved in language learning, and research suggests that individuals with musical training often demonstrate superior phonological awareness, auditory discrimination, and memory skills, all of which are crucial for additional language acquisition (Lems, 2001).

Additionally, musical training can improve auditory processing, which can lead to better pronunciation and fluency in additional language learners (Lems, 2001; Francois et al., 2013).



The Building Blocks of Language and Music

Music and language share fundamental elements that can be paralleled to enhance language learning.

Just as music is comprised of beats, melodies, and harmonies, language consists of syllables, intonation, and stress patterns. Recognizing these parallels can significantly improve pronunciation and overall language comprehension. Studies show that musical activities, like singing songs with repetitive patterns or rhythmically chanting lyrics, can enhance phonological awareness (Pastuszek-Lipinska, 2008). Similarly, auditory discrimination, the ability to perceive and differentiate between different sounds, is sharpened through music exercises that require precise listening and discrimination of pitch, tone, and timbre (Heikkola & Alisaari, 2019).

These refined auditory abilities can generalize to language processing tasks, enabling individuals to better perceive subtle differences in speech sounds, detect phonetic contrasts, and comprehend spoken language more accurately (Ball & Blachman, 1988; Lems, 2001; Ladányi et al., 2021).



Music & Mimickry

When students sing along with native singers, they learn to mimic the phonetic structure and rhythm of the target language.



By integrating music education into language learning curricula, educators can create a dynamic and engaging learning environment that supports the development of additional language skills. As students engage in activities like clapping along to the rhythm of spoken sentences or singing phrases with clear articulation, they develop skills in segmenting auditory input into distinct units (Lems, 2001). These segmentation abilities can transfer to language processing tasks, allowing individuals to parse spoken language more effectively and extract meaningful information from speech streams with greater ease (Heikkola & Alisaari, 2019).

By mimicking native singers' phonetic structure and rhythm, students develop strong kinesthetic associations with the language's phonetic features. This practice helps increase the tempo of their speech and enhances overall language proficiency. Using music in language learning not only aids in vocabulary acquisition but also improves pronunciation and fluency, making it a highly effective and enjoyable educational tool (Speh & Ahramjian, 2010).

Beyond the Basics: Music, Mneumonics and Memory

Music has a profound impact on memory and recall, stemming from its unique combination of melody, rhythm, and lyrics, which together form potent mnemonic devices (Legg, 2009):

Melody & Memory

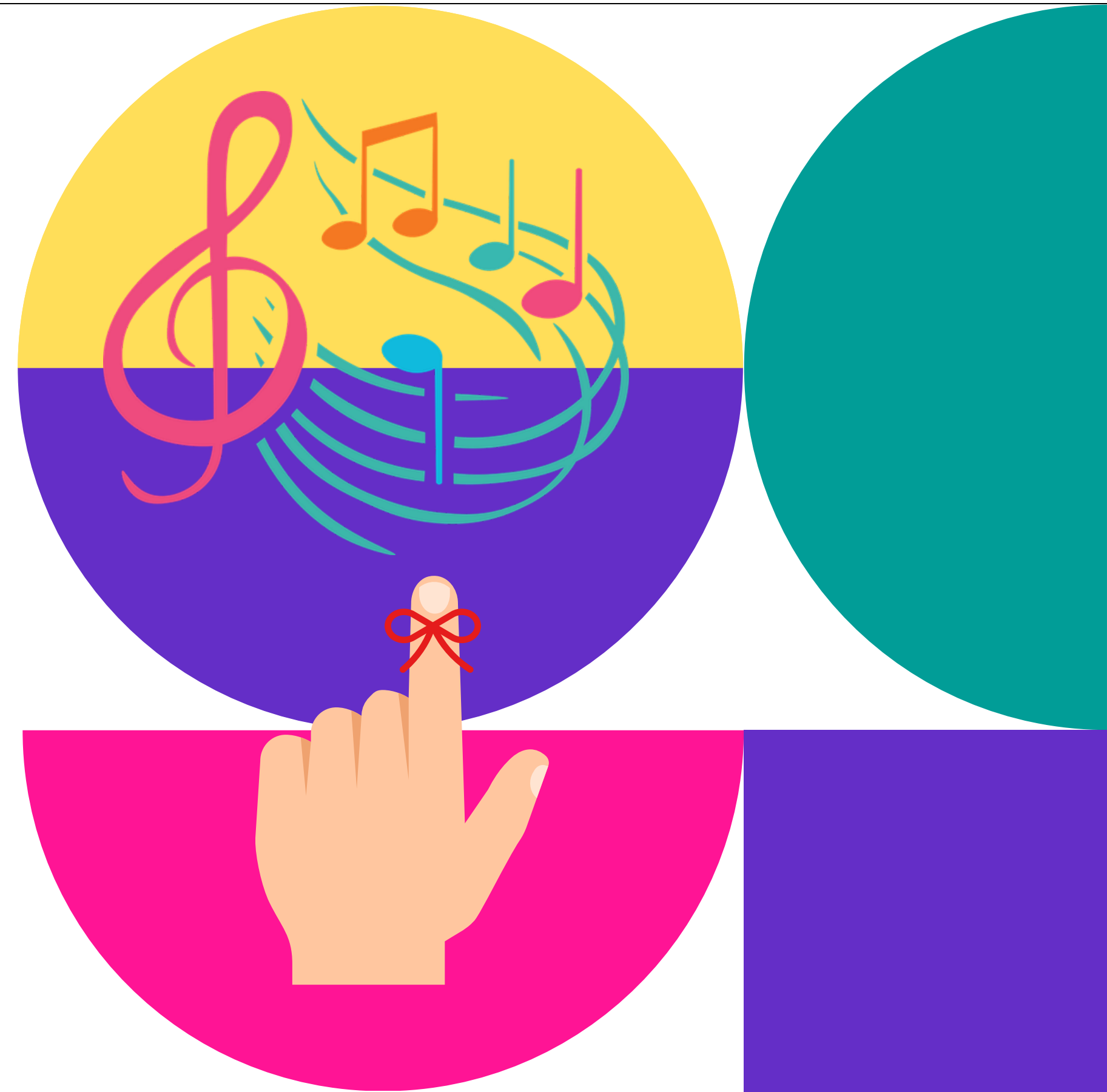
Melodies provide a structure that can help encode information in a more organized and memorable way. The repetitive and predictable patterns in melodies make it easier for our brains to remember sequences of information.

Rhythm & Recall

Rhythm helps to chunk information into smaller, more manageable units. This rhythmic segmentation can enhance recall by providing a temporal structure that our brains find easier to process and retrieve.

Lyrics as Mneumonics

Lyrics add a layer of linguistic content that can be directly tied to the information being learned. When lyrics are set to music, they benefit from the same melodic and rhythmic enhancements, making them easier to remember than spoken or written words alone.



Using Familiar Songs for Language Acquisition

Music is an extremely effective medium to reinforce speaking, listening, reading, and writing skills in our classrooms (Failoni, 1993). Music, particularly songs with lyrics, offers several advantages for language learners:

Common Features: Pop songs often feature common, short words, personal pronouns, conversational language, and repetitive structures, making them accessible and relatable for learners.

Pronunciation Practice: Songs help students understand the natural rhythm, stress, and intonation of spoken English. They can practice phonemic differences and the natural reductions that occur in spoken language.

Interpretation: The fluid meanings of song lyrics allow for various interpretations, similar to poetry, which can stimulate discussion and critical thinking.

(Lems, 2001)



Common Denominator: Music is for Everyone

By tapping into students' musical interests, teachers can create a more engaging and effective learning environment.

Music is a powerful motivator due to its general appeal among students. It taps into students' interests and engages them in the learning process. Music activities create a relaxed, informal atmosphere that fosters learning and participation (Lims, 2001).

Its versatility makes it a valuable resource for additional language learning by integrating three key elements into our teaching: diversity of musical style, cultural topics in text, and reinforcement of communication skills (Failoni, 1993).

Music provides an authentic glimpse into different societies through its styles and lyrical themes. By integrating music into language instruction, students can gain insights into the cultural contexts of the target language.

Pronunciation variations and dialects in songs further offer students a deeper understanding of linguistic diversity within the same language (Failoni, 1993).



Practical Suggestions for using Music the Classroom

(Failoni, 1993)



Lyric Translation

Have students translate their favorite songs from the target language to their native language or vice versa. This helps with understanding sentence structure and vocabulary.



Music Videos

Show music videos and discuss the storyline, vocabulary, and expressions used. This combines visual and auditory learning, making the language more memorable.



Songwriting

Encourage students to write their own songs in the target language. This activity can reinforce vocabulary and grammar, as well as encourage creative expression.



Music and Movement

Combine music with physical activities, such as dancing or hand gestures, to reinforce language learning through multiple sensory channels.



Listening Comprehension Tests

Create comprehension questions based on song lyrics. This helps assess students' understanding and listening skills.

Using Pop Music for Additional Language Learning

Using familiar music in the classroom is especially fun for students. Here are some free ways to incorporate pop music into additional language instruction:

- **Fill in the Blanks:** Websites like [AZLyrics](#), and [Genius](#), provide free access to song lyrics. Choose popular songs in the target language and create fill-in-the-blank worksheets using the lyrics of a song. Remove certain words or phrases for students to fill in as they listen. This enhances listening skills and reinforces vocabulary.
- **Karaoke:** Singing lyrics as they appear tests reading and pronunciation skills and can make phrases and words stick. Free options include [Sing King](#) and [KaraFun](#) on YouTube, or [Yokee](#) an app available for download.
- **What's the Story?:** Play a music video and have students try to guess the meaning of the song. Then, look at the lyrics word by word and compare each line to the music video.
- **Lyric Hunt:** Pop songs are often full of expressions and slang. Have students identify confusing English expressions try searching them using [Song Search](#), which gives context to how common expressions and idioms are used.
- **Sentence Mining:** Lyrics provide good examples of proper sentence structure and grammar. Provide song lyrics, and have students replace words to create new sentences.

*Adapted from "How to Use Music in ESL Class". (n.d.). TeachThis Limited.

Final Tips: Selecting Music for Language Learning

Songs are a rich source of cultural information, reflecting human relations, ethics, customs, history, humor, and regional differences.

When selecting music for the classroom, consider the following:

Clarity

Choose songs with clear and loud lyrics.

Appropriate Vocabulary Load

Ensure the vocabulary is suitable for the students' proficiency level.

Content

Avoid songs with explicit language, violent acts, or inappropriate religious references.

Engaging Lyrics

Use songs with direct, relatable lyrics that can be easily understood by learners.

Curriculum Alignment

Ensure that the music activities align with the language learning goals and curriculum standards.

Variety

Use a diverse range of music genres and styles to cater to different student preferences and keep them engaged.

Consistency

Regularly integrate music activities into the lesson plans rather than using them sporadically.

Student Involvement

Allow students to choose some of the songs or music activities. This increases their motivation and investment in the learning process.

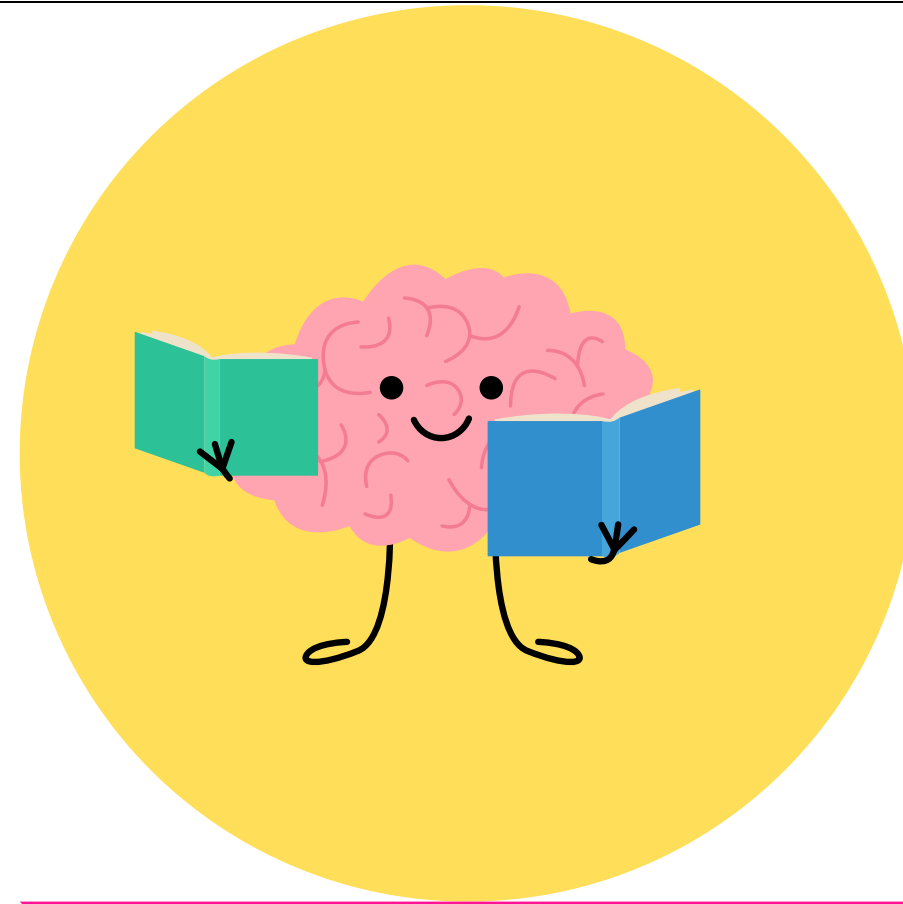
Assessment

Evaluate the effectiveness of music integration through both formal and informal assessments, adjusting the approach as needed based on student feedback and performance.

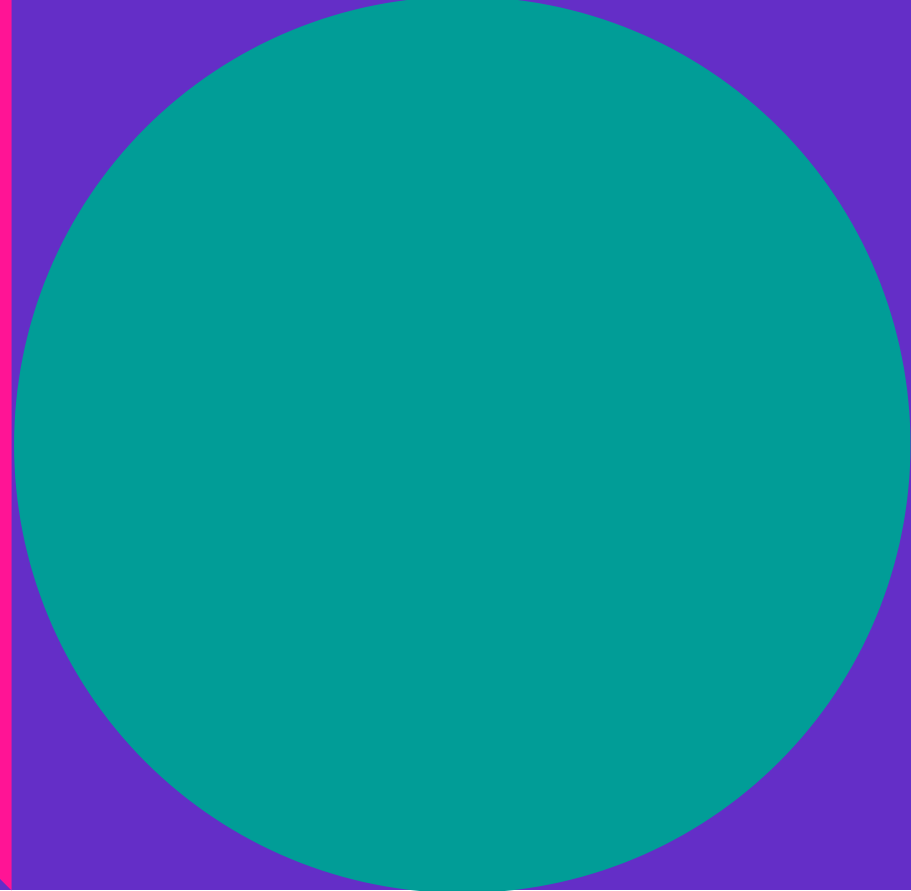
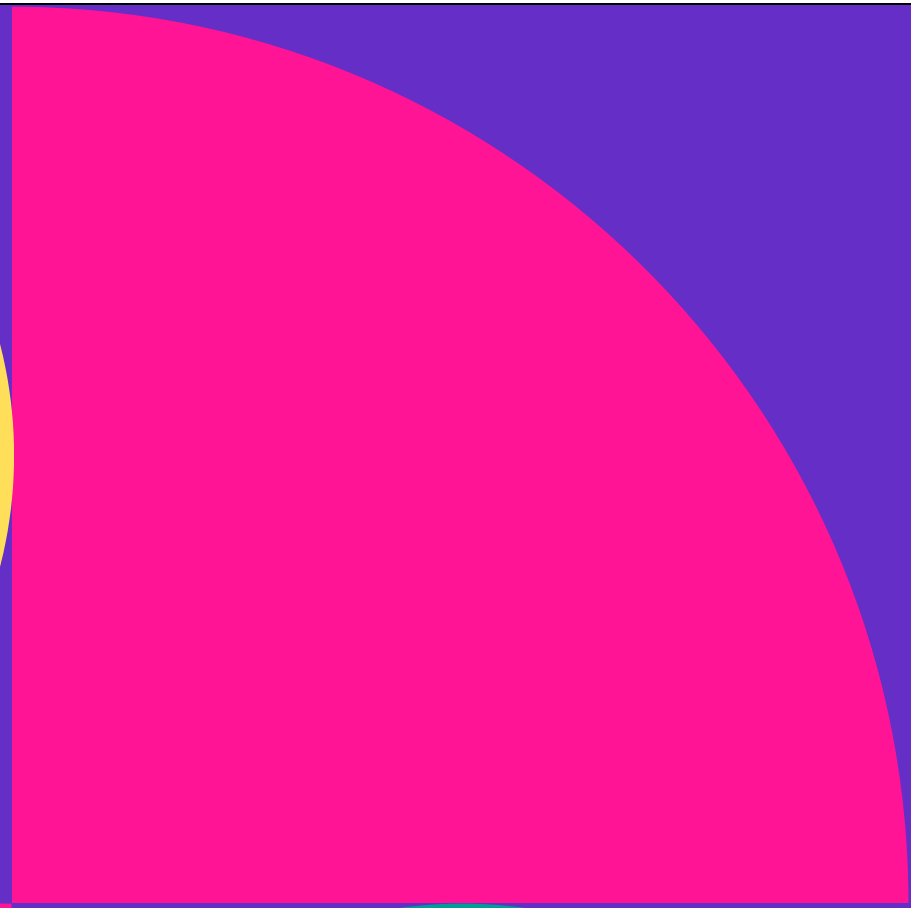
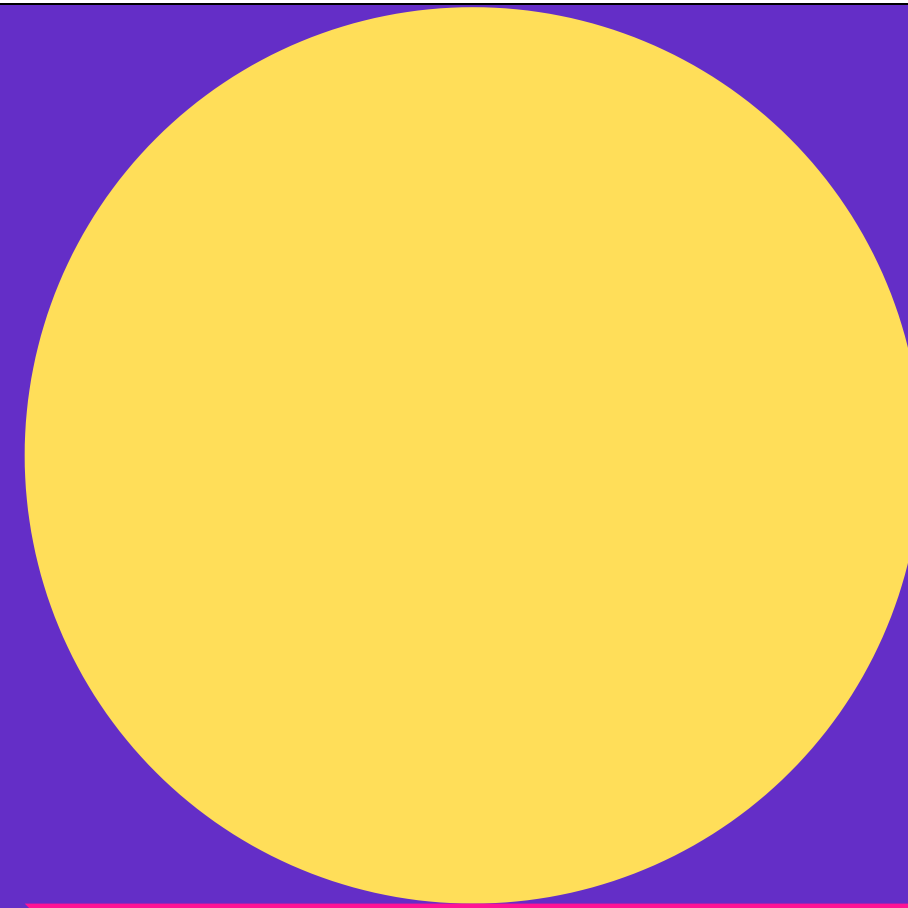
(Lims, 2001)

References, Resources & Further Readings

Please click or scan below for an annotated list of references and additional readings to further your knowledge about the magical relationship between music, literacy and language acquisition!



“ Thank you!



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