Enhancing Vocabulary Acquisition through Song Metaphors: An Exploratory Study in a Novice-high/Intermediate-low Hindi Classroom

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Abstract
Vocabulary development is essential for learning any language. In this action-research study, we investigated how well songs work as a tool to enhance the ability of using and understanding metaphoric language, which is essential for second language (L2) vocabulary development. Fifteen novice-high to intermediate-low-level Hindi students were given the lyrics of three Hindi songs and watched YouTube videos of them over the course of two weeks. Before watching a video, the students took a pre-test of 10 vocabulary words from the song. While watching, they were encouraged to discover the words' meanings, which were embedded in metaphors, chunks, or lyrical contexts. After

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watching, they took a post-test of the 10 words, then discussed the words with the teacher. For each song, the students took a delayed post-test two weeks later. Students discussed what they thought of learning vocabulary through song. Results showed the songs expanded L2 knowledge because the songs connected emotion, cognition, communication, and culture. We suggest language teachers add songs to their teaching repertoire to advance learners' second-language vocabulary and metaphoric sense of language.

Keywords: Teaching Hindi as an Additional Language; Vocabulary learning; Vocabulary teaching; Music, Song, Metaphors

Introduction

Rhymes, songs, and poems can make a significant contribution to the development of language amongst young adult learners. According to Džanić and Pejić (2016), rhythmic language, such as that found in songs, is a versatile resource that enables educators to teach the language in a wide range of ways. Additionally, the play of words inside musical compositions, and more specifically, the language, is what makes lyrics "catchy" for young minds (Werner, 2019). When language learners have a meaning or notion that they wish to express, they must have a collection of words or word *chunks* (fixed or semi-fixed lexical phrases or multi-word expressions, metaphors, or idioms; see Hou et al., 2018) from which they can choose to express their meaning (Polkinghorne, 2005). As explained by Boers et al. (2010), medium-frequency *chunks* (which they also called *word strings*) of vocabulary rather than high-frequency chunks should be taught explicitly by language teachers because high-frequency ones tend to be learned implicitly, and medium-frequency

chunks are more difficult to learn without explicit instruction. The acquisition of chunks can make reading easier and, when a speaker uses them correctly, makes speaking more fluent. In other words, having a restricted vocabulary in a second language makes it more difficult to communicate effectively, thus vocabulary and chunk learning are essential components of language development. In this paper, we investigate the teaching and learning of vocabulary and chunks, which we also call metaphors, through song.

When words are associated with a certain rhythm or musical note, they have a more powerful impact on the mind of a student, as suggested by Džanić and Pejić (2016). Based on the same premise, when it comes to teaching a new language to youth and young adults, teaching through music can be useful because a vast majority of adolescents and students attending college spend their time listening to music in any case. Music as part of authentic pop culture, Werner (2019) argued, helps young learners with listening comprehension and vocabulary acquisition, and brings joy

into the classroom. Indeed, songs have a positive impact on the emotional condition of language learners, both young and adult, which has been confirmed by a number of studies (Bokiev & Othman, 2018; Džanić & Pejić, 2016; Kara & Aksel, 2013; Kumar et al., 2022). For example, Bokiev and Othman suggested that the utilization of songs can help learners gain exposure to authentic language input. In addition to providing learners with language input, songs provide the opportunity to gain access to (a) a variety of culturally particular ideas, (b) the pronunciations of words that are difficult to remember through reading alone, and (c) specific metaphors that can be used in particular contexts. Songs also help learners regulate their learning anxiety, as songs are viewed as a fun and relaxing element within a learning context (Kumar et al., 2022).

One of the distinctive characteristics of the chunk category called metaphors is that a metaphor combines two (or more) non-similar things to create a new meaning. When presented with a new metaphor in reading, people will guess

its meaning from context, no matter if the metaphor is in one's first or additional language (Dubin, 1993). Alqahtani (2015, p. 9) defined the *context* to be "the other words and sentences that surround that word." This further enables those "other words" to indicate the genuine meaning of the new term by including a reference to the word or chunk. Or, as explained by Gibbs (2008), video-based songs can also provide "other," semiotic, and multimodal experiences to help decipher meaning, as video-based songs may present "embodied image-schematic structures for the expression of meaning" (Gibbs, 2008, p. 12), which can be imagery, dance, gestures, or movement, or even feelings conveyed by the music or visual scene, all of which can be used by the learner to help decode meaning. For L2 learners, new vocabulary and metaphors in particular are a window into the collective cognitive activity within a language and culture. Through interventional teaching sessions, conceptual metaphors could provide a relatively easier way of introducing figurative expressions to foreign language learners (Saaty, 2016). We

hope that as readers progress through this article, they will gain an understanding of how songs that contain metaphors can be applied to the classroom teaching of vocabulary of any language, even though this study is with novice-high and intermediate-low learners of Hindi.

Vocabulary and communication

When it pertains to communicative competence, vocabulary is essential for meaning making and for further learning (Schmitt & Schmitt, 2000). In other words, in order to be able to speak a language fluently, it is essential to have a large vocabulary. It is impossible to separate the process of learning a language from the process of learning vocabulary due to the fact that vocabulary consists of a large amount of material that constitutes the language. Vocabulary building is one of the essential elements of language acquisition that students must master (Wayan, 2020). When it comes to learning vocabulary, it is not quite clear which vocabulary items should be studied first or how the vocabulary should be grouped for the most effective learning (Susanto, 2017). Moreover, as

Lessard-Clouston (2021) noted, vocabulary can be described as the multiple words of a language, which includes idioms, collocations, phrases, and metaphors, all of which can be described as different types of lexical chunks. Although vocabulary focuses on single lexical items, which are words that have a particular meaning or meanings, in L2 studies and teaching, "vocabulary" also encompasses lexical phrases and multi-word expressions (chunks) that convey particular meanings, or that have socio-pragmatic implications that affect variation in the appropriateness (or in the effectiveness) of their use.

Particulars with learning Hindi vocabulary

The utilization of a new language can be achieved through a variety of tasks, projects, and activities, yet the acquisition of words that can contribute to total language proficiency is a challenge that even advanced-level learners in university face (Chamot, 2005).

In this study, we focus on the learning of Hindi. Importantly, there are a few sounds in Hindi that are not

natural or are new to people who are monolingual English speakers or who are not used to hearing Hindi speakers. One involves the speaker creating a *dental-retroflex consonant* by contacting the tip of the tongue to the back of the top front teeth. This can be difficult for first-language (L1) English speakers because they are more used to contacting the tip of the tongue to the alveolar ridge (Hayes-Harb & Barrios, 2022). The Hindi tongue movement is used to create a dental-retroflex voicing contrast in Hindi, which is further difficult for English speakers—for example, /d̪al/ (voiceless) "lentil" versus /ɖal/ (voiced) "branch"—which research has shown is a persistent challenge for L1-English speaking learners even after targeted pronunciation training (Hayes-Harb & Barrios). When read on paper, these sounds can be difficult to learn because of their novelty and their regionally specific pronunciation. Listening to songs in which words are repeated not only helps to the understanding of the spoken word, but also is a great way to teach the pronunciation of words in the target language. According to

Džanić and Pejić (2016), the repetition of words, linguistic structures, and rhythm is a powerful tool for enhancing learning and maintaining retention in the brains of learners. In fact, apart from actively listening to specific sounds, even non-lyrical music played in the background has proven to improve overall language skills (Degrave, 2019), perhaps because it heightens exposure, even if that exposure is implicit.

Using song as a vocabulary learning strategy

Teaching a language is, without a doubt, a challenging endeavor because teachers must present words in coherent, meaningful lessons. In order to make the process of teaching a language more effective, in the present era where students are more technologically advanced, teachers can implement specific tactics such as making the lessons playful and game-like; demonstrating the relevance of idioms, symbols, and words to real-world situations, and employing songs to encourage vocabulary development. The growth of digital learning tools and web applications create a modern and

advanced platform for learners to engage in lessons (Syafiqah Yaccob & Md Yunus, 2019). The classroom experience of a language learner is enhanced by these tactics, which not only arouse feelings of interest, astonishment, and wonder about language, but also make the classroom lively (Kumar et al., 2022). Ultimately, to foster vocabulary growth, the student's motivation to discover and attend to meaning in novel linguistic forms needs to be activated (Miller & Gildea, 1987; Nation, 2015).

There appears to be some overlap in brain activities between language and music, according to researchers in cognitive science and neuroscience who have discovered numerous linkages between the two (Davis, 2017). Since music is an effective medium for imparting listening comprehension skills within young minds, Sevik (2011) outlined the following salient features connected with music use in the classroom:

- Songs have the potential to enhance the attention span of young learners.

- The use of songs as a means of language acquisition at a young age is highly effective.
- There is a widespread belief that songs are an exceptional memory tool.
- Songs offer a wide range of meaningful input that can be understood.
- A secure and natural classroom ethos is created via the use of songs.
- There is a high degree of repetition in songs, which leads to increased linguistic fluency.
- There is a plethora of cultural richness in songs, which enhances the linguistic landscape in the classroom.

Music has long been shown to improve performance on cognitive variables related to second language acquisition. Research in neuroscience provides strong evidence supporting the link between the two (Dolean, 2016). In 2014, Ludke, Ferreira, and Overy randomly assigned 60 adult,

L1-English speakers to learn new Hungarian words in one of three conditions: through speaking them out loud, by rhythmically chanting them, or by learning them through song. The 20 who sung the new words learned them better than the 40 who learned through plain speaking or rhythmic speaking. These findings provided evidence that music and songs can improve language acquisition's cognitive processes. This can perhaps be explained by Paivio's dual-coding theory (1986) which suggests that human cognition has separate channels for the processing of visual and verbal information. Multimodal input (for example, consuming images, on-screen text, and audio at the same time) enriches and expands the meaning-making process, which may in turn lead to richer second language learning gains (Montero Perez, 2020).

Using metaphors and symbols in songs as a way of teaching vocabulary

According to Bokiev et al. (2018), teachers have access to a rich and genuine resource in the form of music and songs, which they can use to encourage student involvement in

language classrooms and to establish a connection that is satisfying between learning and recreational activities. Additionally, the use of popular music can be beneficial in the process of learning the target language and its culture (Kumar et al., 2022; Ludke, 2019). Several authors advocate for the utilization of folk songs, which typically possess greater prosodic quality, frequently tell a story, and have relatively easy melodies (Spicher & Sweeney, 2007; Zogota, 2011). In the context of using songs for language learning, language needs to be delivered at a manageable pace. Additional connections need to be made between the linguistic forms that have been taught in the past and those that will be learned in the near future (Džanić & Pejić, 2016). For example, phrases such as "my love is a red, red rose" and "this task is a nightmare" contain more than one word, yet they demonstrate a formulaic usage and contribute to the process of fluent and meaningful comprehension and production. These are examples of language chunks that are

metaphors and that can be "picked up" or implicitly learned through songs.

Vocabulary learning strategies play a crucial role in language learning due to their contribution to helping learners develop independent language competence and self-regulate their learning (Schmitt & Schmitt, 2000). Guessing meaning from context is one such cognitive strategy that enhances vocabulary acquisition according to Schmitt and Schmitt. This can happen during extensive reading, when taking part in a conversation, when listening to stories (in person or on the radio), or when watching movies or television. In order to activate guessing in a written or spoken text, the learner must first notice and pay attention to the new item (Nation, 2015), and there should be four elements available: the reader, the text, the unknown words, and clues in the text including some knowledge about guessing. The absence of one of these elements may affect the learner's ability to guess (Susanto, 2017). Based on Gibbs's (2008) model of metaphors (that they surface through cognitive functioning, bodily

experiences, and the culture(s) of a people) and other models of multimodal learning (Montero Perez, 2020), we also hypothesized that learners could glean meaning of the novel vocabulary, chunks, or metaphors through the visuals and musical tone in video-based songs because the visuals and tone provide contextual clues and extralinguistic information (Vanderplank, 2019). In other words, the extralinguistic information may foster more *educated guessing*, that is, guessing that is based on evidence, prior knowledge, or past experience, and it may reduce the amount of more random or "shot-in-the-dark" guessing that people may have to do if they have no contextual or extralinguistic clues from which to derive meaning. Focusing on this framework, we attempted to find if students could search for and decipher the meaning of words and metaphors from the visuals, music, and lyrics of video-based songs.

The concept of using surrounding words and context to help in the creation of meaning for individual words and chunks is something that teachers can apply in order to teach

language, and we conducted our study in this context. Additionally, the utilization of metaphors and symbols in songs to teach vocabulary in the classroom has not been evaluated by a significant number of researchers yet. Moreover, there are almost no studies about learning vocabulary, chunks of language, nor metaphors through song in the Hindi-language-learning context. This brings us to the research questions that we will be addressing in this article:

1. What kinds of songs are suitable for use in the classroom when teaching vocabulary to individuals who are learning the language?
2. What are the potential benefits of instructing vocabulary through the use of songs in the target language?

Methodology

In this section, we describe the participants, the materials, and the methods we used for this study, which is an exploratory, mixed-methods, action-based research study carried out in an in-tact class. We would like to point out that *action research* in

applied linguistics is a type of participative, naturalistic enquiry, which differs greatly from scientific (empirical) research (Benitt, 2015; Burns, 2005). First of all, teacher-educator action research has, as its main goal, the teacher-educator's desire to improve their own teaching. Second, by disseminating the results of the action research, the teacher-researcher aims to help improve the teaching of others. The aim of this research involved coming to better understand whether (and how) a concrete strategy of teaching vocabulary and metaphors through songs may help the learners and improve teaching. As described by Burns (p. 61), action research is more subjective than objective, has interventions that are necessarily constrained by the practical, social, ethical, and educational needs of the language classroom, and does not have an end goal to "generalize" broadly, but rather to produce pedagogical evidence that speaks to other teachers and practitioners in the field. As we describe below, the teacher-researcher's planned intervention was to use three video-based songs in her own Hindi class to

see if they helped the students learn vocabulary and metaphors.

Participants

Fifteen upper-class students of the Hindi language were the subjects of the experiment, which was carried out at a large institution located in the mid-west of the United States in the spring of 2023. As per the teacher's observation and classroom-based evaluations, the competence level of participants was observed to be novice-high or intermediate-low on the ACTFL (2024) scale. These students were from the third and fourth years of Hindi study, which are combined at the university, and which were taught by the first author. Fourteen were heritage students, and one was a non-heritage student. The students were 10 females and 5 males from the Hindi class. Each student signed institutionally approved consent forms to participate in the research. Each participant had been studying Hindi at the university for at least three years. A significant number of

students spoke a western Hindi dialect. They were aware that the findings of the data collection were only going to be used for the specific purpose of conducting research.

Materials

The first author selected three songs for this study to be played on the projector in the classroom. The song selection was a subjective process and there were a lot of songs from which to choose. The teacher educator considered the following dimensions when searching for songs for the study: Only songs that did not have any inappropriate language, did not contain any offensive language or visuals, and most significantly, had metaphors and symbolism, which is the foundation of the research, were selected for use. Other criteria such as the difficulty level of the songs' metaphorical expressions, the grammatical structures within the songs, and the popularity of cultural nuances within the songs were also considered. The factors of song pace, word difficulty, song length, tune or rhythm, and the era to which the song belonged were kept in mind while selecting the songs. For

this study, the songs were located on YouTube, and the vocabulary pulled from the songs as targets are in the Appendix. When the songs were played, their captions in Hindi were shown on screen. In sum, "Ek Ladki Ko Dekha Toh Aisa Laga" (When I saw a girl) was the first song (S1). It was presented in the film *1942 Love Story,* a Hindi-language patriotic romantic drama film released in the cinema with an English name. Due to the fact that it was sung at a leisurely speed, as we will demonstrate in the results section, it was the song that was the most straightforward to understand. "Afreen Afreen" (a woman's name repeated) was the second song (S2) from the *Coke Studio Season-9*. It was more difficult than the song that came before it because the tempo of the wordings in the song was faster. The third song (S3) was *Breathless* (originally named in English) by Shankar Mahadevan. This was played in the classroom at a speed of 0.75x speed on YouTube. This was done since the song has a rapid pace and the teacher-researcher thought it could be difficult to comprehend for some of the students. The songs

selected for the study were chosen by the first author as they were classics and enjoyable in nature and presented a variety of styles and genres. The metaphorical expressions in the songs were predicted by the teacher-researcher to be relatable for the students as well as easy to comprehend when associated with surrounding lines or words.

Each song had a ten-word vocabulary test that was administered three times: as a pretest, post-test, and a delayed post-test. Each song's lyrics were also downloaded from YouTube. The first author highlighted and bolded the 10 targeted words in the downloaded lyrics. As explained next, these were used as handouts in the class.

Procedure

The songs were taught over the course of two weeks in the middle of a spring 2023, 15-week-long Hindi class. Before any song was played, a pre-test was carried out focusing on 10 significant terms that were chosen from the songs as targeted vocabulary for the study (see the Appendix). Additionally, it was made certain that the selected words were utilized in the

song in conjunction with another term, either as a metaphor or a phrase, or in a language chunk. The pre-test consisted of a vocabulary knowledge rating scale, in which the ten words from the song were listed, and the students were required to write an explanation of the meaning of those words to the best of their ability. Students were permitted to use English or Hindi when responding to the posed questions in order to enhance the validity of the data and prevent them from misunderstanding or failing to adequately express their opinions (owing to limitations in their Hindi proficiency). After the pre-test, the song was played in the classroom with Hindi captioning, and the students were given the lyrics of the song in Hindi on paper. As mentioned above, the words of the pre-test that were embedded in a metaphor, phrase, or chunk were underlined, and the entire metaphor, phrase or chunk was in boldface. Following that, the students were given a post-test to complete, in which the terms that were used in the pre-test were listed along with the words that were linked with them as part of a metaphor, phrase, or chunk. At

this point, the students endeavored to report the full meaning of the metaphor, phrase, or chunk by looking at the words together.

For instance, if the term "khilta"(खिलता) (which means "blooming") was shown by itself in the pre-test, then in the immediate post-test, it was presented alongside the phrase "khilta gulab,"(खिलता गुलाब) which means "blooming rose." Immediately following the completion of the post-test in the classroom, the words that were utilized in the songs were deciphered and discussed by the students. Words that have special cultural connections were discussed, and the meanings of these words as well as their origins were also revealed at the same time in the classroom. A delayed post-test was administered two weeks after the immediate post-test in order to evaluate the students' ability to remember and retain the words that they had attempted previously. The delayed post-test consisted of the identical words that were used in the immediate post-test. Thus, there

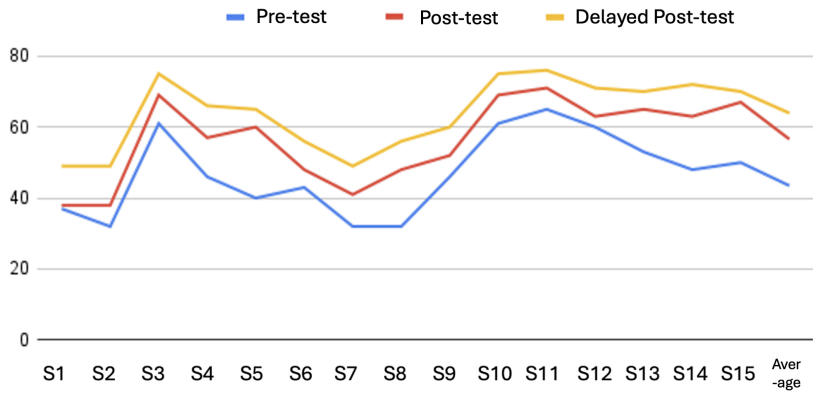
were three delayed post-tests total (10 words each), staggered respectively over a two-week period. It must be noted that the delayed post-tests happened without any further educational units or instruction on the words in class. This was also seen in similar research by Ludke et al. (2014), where a 15-minute learning period was followed by a series of five different production, recall, recognition, and vocabulary tests for the English–Hungarian pairs in their study with young adult learners. As in all action research (see Burns, 2005), the intervention was not tightly controlled. It is possible that students discussed the novel vocabulary and idioms further outside of class or learned them more (either implicitly or explicitly) on their own. Teachers and readers of the research will thus need to judge on their own the extent to which they believe the procedures and results resonate with their own teaching practices.

Results and findings

First, we present our quantitative results. Each student received a categorical score of 1, 2, or 3 for each item on the tests (10 items on each test, 30 items total, 90 points possible overall). A category score of 1 was provided when the student answered wrong or did not answer at all (with category 1 meaning "no knowledge"). A category score of 2 was given when the student was close to the correct answer or wrote an answer that was closely related to the meaning of the word (with category 2 meaning "partial knowledge"). Finally, a category score of 3 was given when the student answered correctly (with category 3 meaning "mastery"). After all of the students had been given scores for each test across all three songs, the averages of their pre-tests, post-tests, and delayed post-test performances were computed to see how the group as a whole fared at the three evaluation points. As a reminder to the readers, the pre-test was carried out before the song was played for the students, so level 1 knowledge (10 points on any one pre-test; 30 points on the three pre-tests

together) was expected. The objective of the pre-test was to assess the pre-learning level of vocabulary knowledge possessed by the individual learners, as some, especially the heritage learners, may have known some of the phrases beforehand, with the intention of comparing the pre-test outcomes with those obtained from the immediate post-test and the delayed post-test. Please note that we do not identify the non-heritage learner in the study's illustrations to protect the participant's anonymity. Figure 1 illustrates the extent of the study's success, as well as the average scores on the pre-tests, post-tests, and delayed post-tests as performed by the participants. Please note that we do not identify the non-heritage learner in the study's figures to protect the participant's anonymity.

Figure 1. Levels of Success on the Tests by Students and on Average



Note: There were 90 points total possible. S = student.

When students were able to extract the meanings of words from the pre-test with the words in the surrounding passages, on the immediate post-test, their vocabulary acquisition increased. At the beginning when pre-tests were given, the average score was 43.5, but after learning, at the post-test, the average score increased to 56.6. Furthermore, when the delayed post-test was carried out, a score of 63.9 was obtained, which suggests that the vocabulary that was gained through songs grew after two weeks, most likely due to the discussion of the vocabulary immediately after the post-test

(the explicit learning opportunity), and despite the fact that the students did not listen to the songs again during or after that time period. On the basis of this, it is reasonable to assume that listening to songs is beneficial to the process of vocabulary learning, and vocabulary is retained weeks post video-watching and discussing.

We would like to point out that during both the pre-tests and the post-tests, students failed to recognize a number of words that had very specific cultural references, such as "sandal" (सन्दल) which means sandalwood, "shringaar" (श्रृंगार) which means ornaments of beautification and "ajanta" (अजंता) which is the name of famous sculpture in India. This indicates that owing to a lack of cultural and heritage knowledge, students were unable to decode specific words that contained cultural history. Sandalwood is a type of tree which is famously used in making furniture all around the nation. Shringaar is a Hindi word which translates to beautification or makeup, and Ajanta is a famous tourist spot

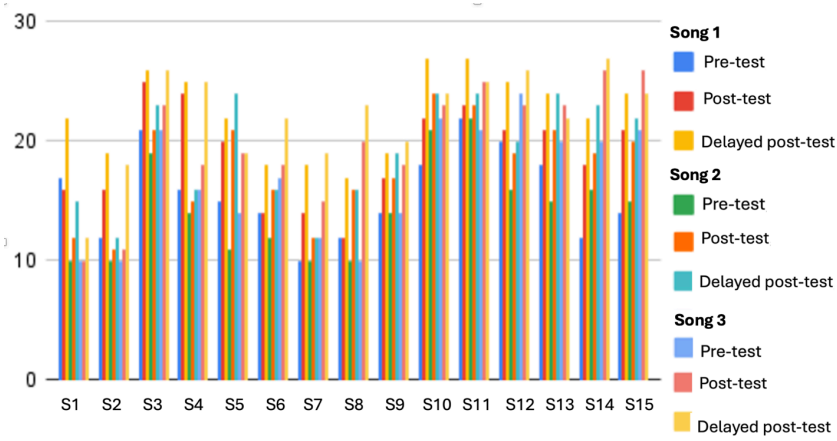
in India that has beautiful and historic sculptures. The non-heritage student was also unaware of these cultural notions, and as a result, was unable to provide answers. This also suggests that these words could not be acquired implicitly, even with the multi-modal assistance of extralinguistic components in the video-songs' imagery and musical tone, and even with the transcripts' and songs' larger contextual phrases and words surrounding the targeted constructions. These forms thus needed explicit instruction. In comparison with the abstract words described above, more common words like "गुलाब" (khilta) which means a rose, "चाँदनी," (chaandni) which means moonlight, and "यादें" (yaadein) which means memories, were typically responded to correctly by students in English, showing that words more popular or frequent in discussions or classroom teachings were simpler to recall and absorb by these levels of students.

As may be seen in Figure 2, the scores by test and by song are shown. Compared to song 2 and song 3, the

students' performance in song 1 was higher. The delayed post-test of song 1 revealed that a maximum result of learning was achieved. The first song was the song that was presented in a very clear, story-line-based, audio-visual format (almost like a short movie), and it was the slowest song. Song 2 was presented at a somewhat greater tempo, but in song 2 the video was of the band playing a live performance, thus there was little imagery that was related to the lyrics of the song. Song 3 was slowed down by a factor of 0.5 by the teacher because the music had a very high pace. Song 3 was of the singer with artistic imagery behind him in the background, thus the visuals of the video were somewhat in between that of song 1 and song 2. For this group of learners at the novice-high, intermediate-low level, we found that songs that are sung at a relatively slow pace and that are incorporated with a story-line-based video can be particularly beneficial for the students' processing of new vocabulary terms. Every single student showed a discernible improvement during the course of the research project, with a

minimum rise of at least one or two points in post-tests and a maximum gain of twenty-three points in delayed post-tests, but the strongest story-line-based video-song (song 1) had the most learning attributed to it. Additionally, the strong trend of a rise in scores from the pre-test to the immediate post-test for most students (note that students 1, 6, and 8 did not have gains pre-test to immediate post-test on song 1, and student 1 did not have gains from the pre-test to the immediate post-test on song 3) demonstrated how the implicit association of terms with words nearby was possible in song-based videos. Furthermore, an increase in delayed post-test from the previously conducted post-test was also seen—and for all students—demonstrating the benefits of explicit classroom instruction and discussion on the terminologies after watching the videos.

Figure 2. Illustrative Comparison among Songs and the Students' Successes in Learning



Note: 0 to 30 = number of points possible on each test. S = Student.

Next, we provide our qualitative findings that back up the quantitative results. First of all, students expressed the following comments as feedback to their teacher, the first author of this study, on using songs to learn cultural ideas and new forms:

- "Using songs in class increased my interest in learning listening to Hindi songs."
- "It was useful to practice grammar with songs."

- "I can memorize vocabulary with ease through songs."
- "Listening to songs and learning the cultural cues through them was very exciting to me."
- "I feel like songs should be more often utilized in classroom. They uplift the spirit of the class."

These illustrative comments provided evidence that the songs were motivating, lowered anxiety (Degrave, 2019; Kumar et al., 2022), aided learning (Ludke et al., 2014; Sevik, 2011), and contributed to a positive classroom atmosphere (Kara & Aksel, 2013; Kumar et al., 2022), which in itself creates a non-stressful environment that is optimal for learning. Through songs, students were able to learn vocabulary and metaphor "with ease" according to the students, which is important, because vocabulary and metaphors are part of human cognition and how a particular

society of language users communicate and think day to day (Gibbs, 2008).

Overall, the use of songs in the classroom to teach new vocabulary was found to raise students' interest in the lessons, as indicated in their comments, as well as to help in the acquisition of vocabulary, also according to the responses of a large proportion of students. Because this is action research and the teacher's positionality and views are important in action research (Bennit, 2015; Burns, 2005), we would like to note that the teacher-researcher (this paper's first author) found tangible benefits in teaching with the video-based songs in the class, as they brought diversity to her teaching of language chunks and metaphors and contributed to her personal goal of teaching with authentic, culturally rich materials. The video-based songs spurred much classroom discussion, she observed, on the cultural nuances inherent in the videos, which also helped her better understand the various students' levels and depth of familiarity with Hindi culture, which helped the students

better come to know themselves as a cohort of learners in a learner-centered classroom. In sum, similar to Sevik (2011), the teacher-researcher of this study experienced that teaching with video-based songs fostered the teaching of numerous constructs, with vocabulary, metaphors, communication skills, and cultural awareness and understanding rising through the core of the video-song-based lessons.

Discussion and pedagogical implications

From this action-oriented, classroom-based research, we have positive evidence that video-based songs can help teachers successfully teach language chunks and metaphors, which answers our research question, "What are the potential benefits of instructing vocabulary through the use of songs in the target language?" But in addition to the benefit of students learning new language chunks and metaphors, our study additionally supports the notion that video-based songs contribute to a positive motivational atmosphere in the language classroom. Kara and Aksel (2013) reviewed that songs, due to their joyful and appealing nature, reduce worry

and stress. They further described how songs create cognitive links among emotion, meaning, and verbal information. Kumar et al. (2022) concluded the same. Ludke et al. (2013) noted that music and lyrics together may boost memory for the vocabulary and phrases in the music. And within the field of applied linguistics, Montero Perez (2020) reviewed that multi-modal learning–such as, for example, learning language and content through videos with on-screen captions–can help enrich the L2-input for better cognitive processing and allows language learners multiple channels through which to associate meaning and form, increasing the chances of learning overall. Our study's results bring together and support these theories, especially when the teacher adds explicit learning opportunities to move recently and implicitly acquired forms into longer-term memory storage.

This study's beneficial intervention of including video-based songs in instruction was enriching for the Hindi language class and is something other teachers can replicate. However, this exploratory action research found Hindi

heritage students in general couldn't fully comprehend or explain culturally specific terms on their own after watching videos with them, which was found by lower test scores at the immediate post-test than at the delayed post-test. We would like to stress here again that formal, explicit instruction on the new metaphors, phrases, and chunks occurred after the post-tests and helped improve comprehension and learning. This demonstrated the *need* for explicit instruction of the terms, despite the implicit opportunities to learn them through video-based songs.

We believe some learners failed to associate meaning even after attaching each Hindi phrase with its English equivalent because specific terminologies were related to specific cultures and traditions, which is exactly why medium-frequent metaphors in particular are explained as being so difficult to learn without explicit instruction (Boers et al., 2010). Exposure to cultural terms and traditions differed from individual to individual in class, due to their varying prior knowledge and heritage nuance. This variance in prior

knowledge was reflected in the pre-test scores and in the subsequent post-test and delayed post-test scores. Thus, this study points out that individualized tracking of learning in the language classroom is needed for outcomes to be fair and truly informative.

However, it must be noted that simpler colloquial words were easier to grasp by all learners due to the presence of the audio-visual components (the extralinguistic information) within the video-based songs: There were some metaphors, phrases, or chunks that the learners could guess on their own using visual information from the video context, the musical tones and sounds, and without further instruction, supporting the theory that multimodal instruction has strong benefits (Montero Perez, 2020). Thus, we believe that in addition to using songs in class, it could be beneficial for instructors to assign the students video-based songs to listen to and watch outside of class, and ask students to keep learning journals on the vocabulary they learn from them.

Thus, based on this action-research, we have recommendations in the form of six steps (Table 1) for teachers in the field who would like to try chunk- and metaphor-instruction through video-based songs. These recommended steps also answer our other research question of "What kinds of songs are suitable for use in the classroom when teaching vocabulary to individuals who are learning the language?" As we explain more below, they should be carefully considered by the language teacher so they are at the right level of comprehension difficulty, they should optimally have a visual and contextual storyline that students can follow and enjoy, and they should be authentic and culturally rich.

Table 1. Recommended steps for teaching through video-based songs

Step	**Process**	**Adjustments or Alternatives**
1. Video identification; teacher-fronted difficulty-level checks	● The teacher should identify video-based songs on YouTube or other video-based platforms that can be played in class and that are age and proficiency-level appropriate (based on teacher-expert judgement). ● The videos should have content that is interesting to the learners.	● The teacher can manipulate the playback speed or can replay the song multiple times to help reduce the comprehension-difficulty level of the video if needed. ● Another option is for students to watch on their own devices in or outside of class, providing them control of speed and playback.
2. Multimodal support enhancements and learning-strategy guidance	● The transcripts of the songs should be downloaded. On the transcript, the teacher can highlight or underline novel language chunks or idioms for targeted learning. ● The teacher should highlight in another color (or bold) the immediately surrounding words that provide contextual clues to the meaning of the targeted forms.	● Another option, if students are viewing the videos at home, would be to have them markup the transcript (underline new chunk/metaphor; highlight surrounding words that give clues to meaning). ● Or the teacher can have the students keep a chunk/metaphor-learnin g journal in which they record novel forms they gleaned from context.

3. Learning measurement creation	• Next, the teacher can create simple vocabulary learning tests to measure form learning. • These can be open-ended vocabulary tests as used here in this study.	• Or they can be L1-L2 matching tests, which would be easier for the students (as they test receptive rather than productive knowledge). • Or they can be other forms of assessment (like the learning journal mentioned above).
4. Explicit instruction creation	• The teacher should plan to discuss with the students the targeted forms after the immediate post-test. • This would be an explicit-learning section within a task-supported or task-based communicative curriculum.	• Explicit instruction could also be done before the song-based video is watched. • The immediate post-test would then be measuring both explicit and implicit learning.
5. Measuring retention of knowledge	• Two weeks later (as in this study), the teacher can administer delayed post-tests to monitor the students' retention of the forms. • This additional testing provides another layer of exposure, which helps with movements from short-term to long-term memory (Hou et al, 2018; Nation, 2015; Schmitt & Schmitt, 2000).	• The amount of time need not be two weeks; it can be when the teacher deems it right. • It could be toward the end of the semester with all new targeted forms tested at the same time. • The teacher can decide if students should review or study for delayed testing. • Results will help the teacher understand which videos were most effective.

6. Follow-up for the future	• After the immediate post-test, the teacher follows up with the students, asking them their opinions on the videos. • The teacher can ask if they have specific suggestions for learning with songs at their proficiency level and considering their age and backgrounds.	• If needed, the follow-up and reflection could be done after the delayed post-testing or at the end of the semester as part of course evaluation.

Limitations and pedagogical directions for the future

We would be remiss to not mention some of our study's limitations. In this study, we allowed the students to write their understandings of the vocabulary words in a free response format. They were allowed to use Hindi or English to respond. That worked well because it allowed us to employ partial credit amounts (2 to 3 points), and because we had much time to do the scoring. As we alluded to in Table 1, in a language classroom wherein the teacher may not have much time, especially if the class is large with many students, testing could be done with the provision of a word bank as well. In

other words, vocabulary checking could be done at a lower, receptive-knowledge level (Schmitt & Schmitt, 2000).

Second, we believe it is important to stress that we determined that songs with visuals that had a strong story-line (a mini-movie, in effect) were more effective in helping students determine the meanings of the words that were being discovered in the study. Song videos more simply showing the band playing or showing the singer were not as effective in helping students decipher cultural nuances or learn words or metaphors. We thus encourage teachers to use songs for vocabulary and metaphor instruction, but moreover to use video-based, story-lined songs with captions, building on the theories of multimodal learning (Montero Perez, 2020; Vanderplank, 2019) when possible. Teachers should encourage students to find songs on their own for their at-home learning of language and culture, and also to share them with their teacher and peers in class to help create banks of music videos and songs for sharing, learning, and enjoyment.

Third, the students who participated in the research were predominantly heritage language learners, with various types and levels of connections with speakers of Hindi and Hindi communities. Teachers of predominantly non-heritage language learners may find the effects of the videos on the classroom and on learning to be different. Additionally, because this was an action-based, exploratory research project in a classroom environment, we did not include a control group that learned the same vocabulary without songs. Such research could prove interesting, but we do believe, based on the comments from the students, that vocabulary learning through songs is motivating, engaging, and increases classroom enjoyment, as others (see Kumar et al., 2022) have suggested. As teachers, we would also find it potentially problematic to teach these particular sets of vocabulary without the songs' contextual cohesion, which gave the purpose for teaching the vocabulary at hand. We believe all instruction should be meaningful and purposeful; thus we would suggest a study with a control group be

non-classroom-based and conducted in a laboratory setting. However, such empirical work could be a logical next step for researchers who would like to pinpoint the cognitive and emotional/affective benefits of learning vocabulary through songs. Lastly, neurodivergent learners couldn't be examined in this study, since no neurodivergent learners were in the class for this research. Scholars in the field need to explore in more depth the background characteristics of the learners and how songs in the classroom for learning vocabulary affect them. Such research may prove an interesting next step.

Conclusion

As language teachers, we seek ways to motivate our students as much as we can. In the current times, when a majority of students seek information and ideas online instead of by reading books, language teachers need to encompass digital materials in their lesson plans and classroom environments. Multimedia (Montero Perez, 2020; Vanderplank, 2019) and songs (Almutairi & Shukri 2016; Bokiev et al., 2018) raise meaningful attention, which is necessary for learning

vocabulary (see Schmitt & Schmitt, 2015), and also deviate from the regular lecture method used in delivering lessons to the class. This study provided strong evidence that audio-video materials such as songs on YouTube are an essential part of digital literacy in the classroom that enhances vocabulary and metaphor acquisition, as also found by Werner (2019). They are excellent teaching tools that are readily available in the public domain. Teachers need only to carefully select video-based songs that are rich with a story line, play them at a speed comfortable to the students, and then enhance learning from the video-based songs through explicit discussions on the novel content. Good, enjoyable themes rich in culture help in motivating students' interests (Džanić & Pejić, 2016; Kara & Aksel, 2013, Kumar et al., 2022) and also develop their understanding of culturally significant concepts (Dolean, 2016). But even if students do not learn every word when it is encountered in a video-based song, it is okay, because vocabulary learning is a multi-step process, with multiple exposures benefiting learning (Schmitt

& Schmitt, 2000). Furthermore, as we found in this study and as others have found (Bokiev et al., 2018; Davis, 2017; Degrave, 2019), the benefits from teaching with songs go beyond form-learning: positive socialization, discussions on culture, and reflections on student and classroom-community identities can come from lessons using video-based songs. An increased level of joy in the classroom is another reason to employ songs. Therefore, the benefits of songs in the language classroom shouldn't be disregarded, and should be embraced.

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Appendix. The songs and vocabulary used in this study

Note: Vocabulary word(s) used in the pretest are underlined. The vocabulary words used in post-tests are in bold and added along with the underlined words of the pretest. Meanings of the underlined words from pre-tests have been written in bold in brackets.

(S1) Ek Ladki Ko Dekha Toh Aisa Laga (When I saw a girl)

https://www.youtube.com/watch?v=CZ5a69wwg5k

1. खिलता गुलाब (blooming **rose**)
2. उजली किरन (glowing **ray of light**)
3. चाँदनी रात (**moonlit** night)
4. जलता दिया (burning **lamp**)
5. वीणा की तान (**a note** from veena)
6. बलखायें बेल (twisting **vine**)
7. रेशम की डोर (**thread** of silk)
8. सन्दल की आग (fire of **sandalwood**)
9. सोलह श्रृंगार (the sixteen **beauty ornaments**)

10. रस की फुहार (refreshing **mist**)

(S2) Afreen Afreen

https://www.youtube.com/watch?v=kw4tT7SCmaY

1. अजंता की मूरत (caves of **Ajanta**)
2. महकती हुई चाँदनी (**scented** moonlight)
3. मचलती हुई रागिनी (stubborn **melody**)
4. खिलता हुआ चमन (blooming **garden**)
5. सूरज की पहली किरण (first **ray** of the sun)
6. बांधे तूने अखियों के डोर (**thread** tied by your gaze)
7. खिंचा चला तेरी ओर (drawn towards your **direction**)
8. फूल की तरह शादाब (**fresh** as a flower)
9. चेहरा जैसे कली (face like a **bud**)
10. अलिफ़ लैला की दास्ताँ (fictional **tales**)

(S3) Breathless

https://www.youtube.com/watch?v=nWeax5joZFw

1. गीतों की रुत (**season** of songs)
2. रंगों की बरखा (**rain** of colors)

3. खुशबू की आँधी (**storm** of fragrance)

4. धड़क रहा है दिल (heart is **beating**)

5. बादल में एक चाँद छुपा है (moon is **hidden** behind the clouds)

6. रात के पर्दे (**curtain** of night)

7. चाँदी की पायल (**anklet** of silver)

8. छन से टूटे (broken **suddenly**)

9. रंज की बातें (**talks** of sorrow)

10. प्यार की यादें (**memories** of love)