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A multimodal investigation of EFL upper-intermediate learners' conceptual metaphors of language learning with some psychological implications

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Increased attention has been directed toward utilizing visual modes because linguistic modes cannot accurately depict L2 learners' metaphorical conceptions of their language-acquisition experiences. The goal of this study was to investigate the mental images that Saudi EFL students may have in mind while learning a foreign language. To this end, both verbal and nonverbal metaphorical conceptions were investigated. An experimental group of 12 students was randomly selected. Both the learners' written responses and drawn descriptions were evaluated to tap into the learners' mental representations of foreign language learning. The multimodality-based analysis of the upper-intermediate learners' metaphors demonstrated that the EFL learners' metaphorical verbal and non-verbal representations had the same perspectives on learning a foreign language. The learners' positive attitudes were also revealed by the extracted metaphorical concepts. Most of the metaphorical representations showed language learning as an exciting and uniquely personal experience. Few metaphorical representations showed that learning English was an awful experience.

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Introduction

One of the most effective tools for helping someone understand and explain a hypothetical or an abstract, difficult reality is a metaphor (Boyd, 1993). Johnson (2013) defined a metaphor as the description of a usual linguistic event in everyday language. Speakers commonly employ metaphors to make complex experiences simple. From this point of view, Blumenberg (2020) and Johnson (2013) pointed out that metaphors shape our perceptions and comprehension in addition to making our thoughts more vivid and engaging. They elaborated on this notion by saying that metaphor plays a role in how we think, feel, decide, and act in daily life.

Metaphors can be a useful way to get a sense of the hidden ideas and insights of individuals. By understanding the metaphors that they use, we can get a better understanding of their thinking. Metaphors allow us to understand complex ideas and phenomena by linking them to familiar objects. In second language (L2) education, it is of paramount significance to learn about the beliefs and ideas of diverse types of L2 learners that form and regulate the way they recognize L2 learning, acquisition, and teaching (Eftekhar, 2021; Gal, 2022a; Szolid, 2022; Archibald, 2014). The advantage of exploring the thoughts and beliefs of L2 learners via less vivid means is that the results are much more likely to be true and truly disclose the beliefs, thoughts, and values the learners hold (Gal, 2022b; Xia, 2019). On the other hand, as pointed out by Easter (2020), if L2 teachers are fully aware of L2 learners' beliefs, thoughts, and impressions of foreign language learning, they can adjust their teaching activities in a way that suits their students.

Visualization as a metaphorical method of conceptualization comes to the foreground in understanding metaphors about L2 learning. Oduor (2021) pointed out that drawings can provide clear evidence of the L2 learner's integrative motives for learning L2. Besides, considering visual metaphors provided by L2 learners can help L2 teachers tailor their classroom practices to their needs and desires (Sundberg and Wahlström, 2017). Furthermore, it has lately been shown that L2 students need to employ multimodal perspectives not only to use language but also to communicate with others and build knowledge. Jacknick (2021) argued that successful communication with others requires attention to all varieties of communication people employ, such as images, gestures, and postures and the relationships between them. Metaphors should be viewed as a powerful tool to help L2 learners approach communication creatively and critically (Gavrilescu, 2015; Xu et al., 2022).

Examining the supreme significance of recognition of upper-intermediate L2 students' mental representations of learning a foreign language; the limitations of linguistic modes to delineate aptly L2 students' perceptions; the combination of various modes of metaphor extracting can help to fill up the linguistic lacuna in this field. Albeit, to the best of the researcher's knowledge, no research study has examined upper-intermediate learners' metaphors of language learning via a multi-modal dissection. Thus, this was the main impetus for the researchers to explore L2 learning metaphorical concepts for Saudi learners via verbal and visual analysis.

Review of literature

Original and adapted metaphorical conceptions. Traditional theoretical frameworks claim that metaphor is a verbal rather than a mental activity (Duffley, 2020). These theoretical perspectives claim that a metaphor is a creative expressive language device in which a group of words is used to refer to a separate, related subject outside the framework of their usual use (Eidevall, 2020). In a sense, the traditional concept of an original metaphor

was a device for making comparisons between things (Turner and Fauconnier, 2009). The majority of scholars considered adapted metaphors to be a device for rhetorical flourish and poetic illusion (Shen, 1995). This point of view led to the majority of research studies on visual metaphors being in foreign or second languages.

Silver, Lakoff, and Johnson (1982) dispelled this notion and proposed a larger understanding of metaphor that focuses on a separation between concrete original metaphorical utterances and adapted conceptual metaphors. They demonstrated how metaphors may be created using everyday language; how they are largely conceptual; and how they exist only in our minds. In a way, metaphor serves two main purposes: it beautifies texts and illustrates the process of thinking in the human mind (Lakoff and Johnson, 2020). As noted by Lakoff and Johnson (2020), a conceptual metaphor is produced when someone compares one item to another, more specific thing.

As a result, metaphorical terms generated that sort of mapping between two different conceptual realms. In other words, one establishes links between the source domain and the target domain at the cognitive level (Lakoff, 2018). Lakoff and Johnson (2020) use metaphors such as "invest some time," "spend your time," and "waste my time" to help convey these complex ideas. These metaphorical structures show how time is thought of as being equivalent to money. These metaphorical expressions allow people to discuss time being invested, spent, and wasted even though time is not a solid or tangible concept. According to Lakoff (1998) and Dryll (2017), our conceptual framework is metaphorical and significantly contributes to the understanding of our daily reality.

Consequently, one's actions and thoughts are bound by metaphor. Since many concepts are not adequately expressed in human experience, our conceptual system requires metaphorical descriptions (Dryll, 2017). One must thus employ more familiar notions to comprehend them. As a result, metaphors serve a variety of functions in our daily functioning and are quite common in our thought, language, actions, and experiences. Metaphors, in brief, are the pervasive lenses that people use to perceive the world (Younes and Altakhaineh, 2022; Altakhaineh and Shahzad, 2020).

Metaphors can be an effective tool for analyzing common human behaviors and experiences due to their roles in human cognition (Leite, 2020). Once researchers switched their attention from an external framework of educational practice to day-to-day classroom realities, metaphors started to gain relevance as a study instrument in the fields of applied linguistics and education (Sher and Feinman, 1995). Over the past few years, the non-linguistic applications of metaphors have drawn a lot of attention. For instance, metaphorical gestures and visual metaphors have received a great deal of research (Wang, 2015; Roth and Lawless, 2002).

To access students' and teachers' cognition, researchers have employed both metaphorical gestures and visualized metaphors (Michalle, 2006; Sher and Feinman, 1995). Researchers can build helpful, indirect features of students' and instructors' cognitions by examining their metaphors (Öztürk and Yıldırım, 2016). For Xu et al. (2022) and Hunter and Serret (2020), the metaphors that learners and instructors express, or employ may subtly reveal how they plan and scheme their learning and teaching activities and how they assign meanings to their learning experiences.

Theoretical framework of conceptual metaphors (CM). The advent of Conceptual Metaphor Theory (CMT) has recently revolutionized the study of metaphor (Silver et al., 1982; Lakoff and Johnson, 2020). The foundation of the CMT is based on the

idea that metaphor is not merely a feature of language but also an essential component of the human mind, in contrast to preceding theories of metaphorical meanings. In essence, conceptual metaphors or pre-existing metaphorical thought processes are where most metaphorical language originates (Lantolf, 2006). Accordingly, this theory holds that metaphors are crucial to not only language but also mind and how we perceive the world (Kövecses, 2011). That is, because of our premature experiences in this world, particularly from our sensorimotor and physical interactions with the concrete realities, all of our thinking and language skills have developed (Ionta et al., 2011; Schoos and Suñer, 2020).

A metaphor, according to Conceptual Metaphor Theory, is of two levels: conceptual and linguistic. The former refers to the overarching conceptual framework and cognitive representations that support the language level, whilst the latter focuses on the lexical and phrasal decisions the speaker has chosen to express a particular message (Lakoff and Johnson, 2020; El Refaie, 2019). For instance, it may be assumed that the tacit conceptual scope of a speaker's use of languages such as investment, transactions, purchase, and profits when describing love as a business. The speaker views lovers as two parties or firms engaged in a business and views love as such. Thus, Lakoff and Johnson (2020) and El Refaie (2019) noted that while dissecting metaphors in language, one should consider what is behind the lexical level and pay heed to the speaker's conceptual framework.

Multimodality-based analysis of visual conceptualizations. Any investigation of metaphor should take "semiotics" into account as one of the essential ideas. Semiotics, in El Refaie (2019)'s view, is the study of signs. From this angle, metaphors and signals interact with one another. An innovative approach to human communication termed "social semiotics," which is described as "the way individuals employ semiotic resources both to make communicative artifacts and events and to analyze them," has addressed this intriguing link between signals and metaphors (Baynham, 2022). The core premise of social semiotics is that rather than constructing independent accounts of symbols (such as pictures, analogies, and metaphors), one should look for an integration logic to reveal how they function in a multimodal world.

The goal of multimodality is to recognize all the ways that learning takes place and how meaning is created. Multimodal semiotic resources, according to Baynham (2022), help one to understand how people construct meaning. Simply described, a multimodality-based metaphor can be expressed through more than one method of communication at the same time. The prevalence of conceptual metaphors in various semiotic modes in human communications has been emphasized because of scholars' growing interest in multimodality and cognitive linguistics. Visual conceptualization, often known as a visual metaphor, is a potent semiotic tool with a wealth of metaphorical information (Kamm, 1993). Visual metaphors are more effective outside-of-language ways of metaphorical expression, providing new insight into the beliefs of L2 learners regarding teaching and learning (Kamm, 1993; Baynham, 2022; Abdulaal et al., 2022).

Gibert (2018) claimed that the mental structures underpinning metaphors can be thoroughly tapped into by metaphorical portrayals. Furthermore, Canestri (2018) claimed that since a picture is one of the ways of symbolization, it can provide a perspective with three dimensions: language, cognition, and communication of metaphor, inspired by Forceville's and Urios-Aparisi's (2009) three-dimension theory of analyzing a multimodal metaphor. The researchers emphasized that this social approach makes it possible to examine forms (other than language) of metaphorical meaning transmission. Drawing is

considered a mediation technique used by students to clearly express themselves as they seek to study a new perspective of the universe (Forceville and Urios-Aparisi, 2009). Drawing, in a way, reveals what lies beneath the lexical level and makes mental simulations of L2 learning stages visible in the minds of EFL learners.

Empirical studies on metaphorical conceptions. Many earlier studies have taken into account how L2 learners conceptualize L2 learning. Using surveys, questionnaires, interviews, and reports, they have mostly concentrated on capturing L2 learners' viewpoints, attitudes, and impressions (Nor et al., 2019). Researching learners' visual metaphors of L2 learning and acquisition through the study of drawings, however, has long been lacking (Colligan, 1967). A few such research are here critically analyzed to set the foundation for the current investigation.

Neumann (2001) and Even and Green (2006) investigated six adult students enrolled in introductory German classes. To find and categorize the metaphors that the students utilized, the diaries of the students were examined. This research study revealed five conceptual metaphors and their implications, illuminating each metaphor's core terms with examples. The analogies comprised learning as a journey (for example, *I get completely lost*), as a maze, as a hardship, and as a struggle. The researchers proposed that these analogies might highlight two important ideas. First, the learners' cognitive and affective factors made learning German challenging for them. Second, they envisioned themselves as both learners and sufferers of events outside their control.

In a different study, L2 students' opinions of English language instruction at language schools in a Pakistani city were investigated by Khan et al. (2021). The study took into account the effectiveness of teaching strategies, course material, and classroom activities. The study of the students' writings revealed that their lecturers were more concerned with the course material than with the student's needs. However, the students said that these programs helped them sound more native and pronounce words. In addition, L2 learners' perceptions of the effectiveness of language teaching approaches were examined by Almohaimeed and Almurshed (2019). Their research showed that L2 components and L2 skills are prioritized over writing capability during the L2 learning processes at language institutes. Further, the participants reported that despite lacking supplementary materials, their school textbooks were beneficial for them.

Moreover, Oskooei and Salahshoor (2014) explored how Iranian EFL students view L2 learning activities in a perfect EFL class. Their research took into account three key teaching philosophies: communication-, control-, and form-oriented styles. Their findings showed that learners' views toward communication- and control-oriented approaches were not significantly different. Furthermore, their findings demonstrated that there was no correlation between the learners' views toward any of the lesson kinds and their age or level of language skill. Lessons that were more form-oriented were chosen by female students rather than male students when it came to the gender aspect.

Oskooei and Salahshoor (2014) concentrated on the various perspectives L2 learners have of their language training process and the effects these perspectives have on their success in acquiring a foreign language. The study of conceptual metaphors revealed that students in state schools blame their degree of language learning failure on the behavioristic methods used in their classes, whereas students in state schools blame their seeming success on the cognitive approach to learning. The investigation of L2 learners' visualizations about the nature of acquiring a second language found that some students had

relatively basic personal ideas, while others appeared to have well-thought beliefs about language acquisition. However, they were quite enthusiastic about learning a new language.

Furthermore, Senol and Ergun (2016) investigated the metaphorical conceptualization of this idea by preschool teachers' conceptions of language development. The information was gathered through a questionnaire that asked respondents to complete the statement, "Learning English is like..." Most of the participants saw learning English as an energetic and rewarding process, based on an examination of the metaphors that had been gathered. Leitch (2008) examined EFL learners' both drawings and narrative writings to delve into their metaphorical notions of L2 learning with a focus on non-verbal means of metaphorical depiction. L2 learners saw English learning as an active and learner-oriented process.

Moreover, the participants' drawings depicted their participation in the L2 learning processes, and acquisition—rather than participation—was the predominant metaphor for them. Levine (2007) made an effort to show how Latino migrants constructed and negotiated their identities during the transactional migration stage by using metaphorical conceptualizations of their language learning trajectories.

The findings showed that metaphors of *impairment* were frequently used in the participant's discourse. Waguespack (1989) used textual and visual metaphors of teaching to elicit teachers' perspectives on their professional identities. The analysis of the written metaphors and drawings of the participants revealed that most of the teachers conceived their identities and professional responsibilities using action-grounded metaphors. The results showed that visual metaphors strengthen teachers' self-metaphors.

There is scant research on EFL learners' verbal and visual metaphors of L2 learning in the Saudi context, as the analysis of the previously mentioned studies showed. This study uses a multimodal analysis to investigate Saudi EFL students' metaphorical perceptions of L2 learning to close this gap. The goal of the current study is to examine the visual metaphors used by EFL learners as well as the metaphors that are incorporated into their written descriptions to uncover the underlying metaphorical conceptual framework (metaphor in language). The results are expected to contribute to our knowledge of metaphorical ideas of L2 learning. The following research question was proposed to achieve these objectives:

1. How do Saudi upper-intermediate learners conceive foreign language learning?
2. What are the reasons lying behind positive or negative perceptions towards L2 learning?

Research methodology

Design of study research. This research study adopted a qualitative design because the necessary data were collected via meditative written statements and drawings downloaded from the internet and went through some adaptations. The qualitative method was thought to be more feasible given that the main objective of this study was to reveal EFL learners' perceptions of L2 learning operation. According to Cardano (2020), a qualitative design focuses on depicting, comprehending, and explaining a human experience. Thus, it deals with articulating the components of an unusual experience. The researchers were thus able to accurately gather, examine, and comprehend the participants' views and ideas on learning English, thanks to a multimodal analysis.

Research study participants. College of Science and Humanities in Al-Kharj, Saudi Arabia, was the site of the current study.

Convenience sampling was used to select some university first-year upper-intermediate learners. The students' ages ranged from 16 to 19, and there were both males ($N = 6$) and females ($N = 6$). The participants spend approximately 24 h a week learning English in the college. The four language skills were wholly covered in their textbooks, and their major goal was to master conversational English. They had no other opportunity to speak English outside of the language school where they were studying it.

The researchers went to the dean of the college and briefed him on the goals of the current study to gain access to the participants. He granted access to the researchers to the upper-intermediate classes and for the current investigation to be conducted in the context of the English language. The researchers randomly chose a class and joined it at the scheduled time. The researchers greeted the students warmly before requesting their consent to take part in this study. The learners who consented to participate in this study signed a formal form of authorization in Arabic.

Two tools—some drawings and a two-item questionnaire—were employed to gather the necessary data. The researchers hypothesized that the learners' written and visual representations of their learning may provide them with complementary insights into metaphorical conceptualizations of L2 learning. Visual representations allow L2 students to reflect on their metaphorical views of language acquisition and learning. The learners are set in three groups, each consisting of 4 members (2 males and 2 females). Each group was asked to draw or search the internet and find a picture that reflected their perception. Each group was also allowed to adapt the picture to fit their perceptions.

"What is L2 learning for you?" and "How does learning English impact your life outside the college?" are the two questions that the participants had to answer before visualizing their perceptions. The main goal of giving the participants such a prompt was to get them to talk about how they felt about L2 learning procedures. They were asked to respond to this stimulus by using all the metaphors they want to characterize their L2 learning experiences and to explain any provided metaphors to make data analysis easier.

It should be mentioned that the researchers employed a member-checking technique to assess the questionnaire's validity. To determine whether their readings of the children's drawings were accurate, the researchers chose three students. The participants generally agreed that the interpretations were correct. To verify the reliability of the data analysis processes, the researchers invited associate professors in Applied Linguistics. They recorded a high degree of uniformity across the procedures of data collection and analysis.

Procedures of data analysis. As stated above, the researchers used verbal and non-verbal metaphor-elicitation tools to collect data. The verbal tool took the form of a two-item questionnaire that asked participants to describe how they perceive L2 learning processes. The participants were asked to develop metaphors for L2 learning in general rather than detailing a specific course of study during this phase. The participants used many metaphors to communicate their opinions about studying L2.

The visual tool, specifically the adapted drawings made by the L2 students, was another metaphor-elicitation tool. The researchers were able to take into account all the possibilities available to the students in choosing the forms, colors, and layouts to show what they understood to be L2 learners thanks to the multimodal analysis of these drawings. In the written descriptions provided by the learners in the questionnaire, the metaphorical meanings represented in these images are addressed. It is important to highlight that the researchers explicitly described in Arabic what



Fig. 1 G1's original metaphorical representation. This figure shows that the learners believe that the textbook is the basic source of learning a language.



Fig. 2 G1's adapted metaphorical representation. This figure shows that EFL learners believe that learning English will help them to communicate with people from different parts of the world.

the participants were supposed to complete before the data collection phase began.

Results

In the first visual metaphor, prepared by G1 consisting of 2 males and 2 females, learning L2 is depicted as a mental process directed by the learners themselves. They can enhance their potential and personalize learning, for example, by learning from textbooks. However, this image is consistent with the argument that a learner's mind is where the best learning takes place (Lowie et al., 2010). Concentrating on the learner's head besides mentioning the source of language information (represented by the textbook) showed this cognitive dimension.

Albeit, by concentrating on the student's head and its direction toward contact with the outside world, the idea of private speech, offered as one of the fundamental assumptions of McCafferty (2016), is demonstrated and stressed. It clarifies that this cognitive function enhances learning by enabling students to pose questions to themselves, provide themselves with answers, and determine whether certain statements are true or false (Lowie et al., 2010). As a result of this privatization of speech, the student's biological potential is arranged into a culturally mediated mind, which ultimately develops into inner speech. Pure meaning and appropriate learning are thus created (see Figs. 1 and 2).

In the written description of G1, the learners used some metaphors to illustrate these ideas, such as a personal trip (*I'm excited to find my way to the realm of English in addition to developing my knowledge about it.*), going abroad (*It is significant to study English to speak and communicate with a lot of people in every part of the universe.*), a detection-based mission (*Studying English helps me to know many fascinating things about other cultures.*), and confidentiality (*I attempt to deal with my errors when learning English and precisely increase my stock of English*



Fig. 3 G2's original visual representation. This figure shows how EFL learners perceive traditional learning methodologies.



Fig. 4 G2's adapted visual representation. This figure shows how EFL learners perceive the role of technology in language learning.

knowledge.), learning (*I get better in English incrementally*) and a lengthy journey (*English learning is energy and time-consuming*.) (see Figs. 1 and 2).

The second metaphor, given by G2 consisting of 2 males and 2 females, emphasized the multimodal nature of L2 learning. The picture drawn by the learners showed unequivocally how they received their linguistic information depending on various technologies (e.g., smartphone and personal computer). The variety of information sources offers a smooth path into the world. This is illustrated by the wonderful route they are traveling on and the breathtaking surroundings. Further, the emphasis on two input sources—formal (such as teachers and textbooks) and informal (e.g., laptop and smartphone)—depicts the difference between learning and acquisition. This visual metaphor highlights the fact that foreign learning processes involve formal and casual exposure to the foreign language.

This learners' portrayal of L2 learning through imagery appears to demonstrate their knowledge of the value of various communication channels. In this way, every input source plays a significant role in L2 learning. A multimodal learning experience may be created when the learners and several resources for meaning-making interact (see Figs. 3 and 4).

Using metaphors like “tour spectacular land” (I really enjoy traveling the world by learning English), “simplification” (Studying English facilitates my life and accelerates my professional development), and “inspiring” (English is so engaging to me because I make much effort to ameliorate my English language stock even by some outside-the-class activities), “globe” (It transports me wherever in the world, especially to locations I wouldn't otherwise go), “school” (It helps me to get to higher levels of education), and “telephone” (It is a part of our daily life and is similar to a basic need) (see Figs. 3 and 4).

The third metaphor, given by G3 consists of two males and two females, which is opposite to the previous ones. The L2 learners do not seem to enjoy the learning process. The frowning face and the scowling eyebrow indicate that the learner is not satisfied with the learning process at all. The body gestures say (*I am not feeling that comfortable in learning such a language*). The high waves of the sea are also suggestive; it reflects the unstable mental state that the L2 learners are going through while studying English. The presence of the smartphone reflects the learner's hope to receive technology-based learning; the learner may feel embittered by conventional teaching methods. The flipped word is very indicative. It reflects how the learners perceive L2 as a convoluted process. Further, it reflects the instructor's inability to convey the learning message. The L2 learners accuse the instructor of complicating the subject matter for them, making them unable to attain the course learning outcomes (see Figs. 5 and 6).

Discussion

Through a multimodal examination of metaphors, the current study sought to understand how Saudi upper-intermediate learners discern L2 learning from a metaphorical perspective. The results showed that the L2 learners' common viewpoints on learning English were shared by the metaphorical verbal and

visual representations. Most of the learners had pleasant and upbeat attitudes regarding L2 learning procedures, and a few students were embittered with the process of English learning. The findings of the study are consistent with those of Lakoff and Johnson (2020) and El Refaei (2019), who found that L2 students viewed learning a second language as an exciting, rewarding process. These results may be demonstrated by one of the tenets of cognitive linguistics, which holds that language acquisition is always motivated and that there are actual relationships between form, meaning, and use.

From this viewpoint, aligned with Şenol and Ergun (2016), it may be claimed that L2 learners may be more likely to approach it from cognitive, emotive, and pragmatic perspectives since they were aware of the motivated nature of L2 learning as illustrated in G3's adapted and original metaphors. Şenol and Ergun (2016) asserted that as a result, the EFL learners may have been motivated to examine and confirm the connection between forms and semantic contexts, resulting in deeper processing and increased learning.

Furthermore, the study's findings, as illustrated in G3's adapted and original metaphors, showed that the metaphorical notions used by the participants reflected the internal and unique nature of L2 learning. The pillars of McCafferty (2016)'s theory might provide credence to these findings. They emphasize that for learners to jointly construct knowledge at the individual level, they must move from the object-controlled system, in which their actions are influenced by the objects they face in their environment (such as textbooks), to the self-controlled system, in which they can engage in independent strategic functioning as a result of internalizing knowledge (Fariás and Véliz, 2019). The study's results are conceptually justified in accordance with the genetic research methodology (GRM) concepts put forth by Fariás and Véliz (2019).

To put it another way, development is a multifaceted procedure of qualitative adjustments to the human conceptual processes that occur in sociocultural situations. EFL learners' conception of L2 learning may also be based on Boyd (1993)'s learner-centered growth paradigm, which emphasizes the development of innate potential in learners.

Fariás and Véliz (2019), who claim that learners' drawings showed language learning as a dynamic and learner-oriented process, may further lend credence to the study's conclusions. The study's findings also showed that the learners' visual metaphors for L2 learning alluded to ideas of connection and contact with the outside realm through English language learning. These results are consistent with connectivism, an epistemological school of thought in teaching and learning that is based on network interactions both within and outside of a person's head. The study's findings can be viewed from the viewpoint that a learner's link to the outside realm helps continuous, constant learning by supporting knowledge flow, enabling the growth of concepts, ideas, and values, and enabling the development of socialization.

Another aspect of the study's results showed that the EFL students expressed their views on L2 learning by using metaphors like enjoyment, joy, a wonderful adventure, and fun. It may be claimed that the students may have discovered that learning a second language is enjoyable and beneficial. According to McCafferty (2016), there is a connection between the effectiveness of learning a task and the enjoyment factor when it comes to learning psychology, which may provide credence to this point of view. In other words, what makes learning L2 more beneficial also makes it more fun. These results are consistent with those of Leitch (2008), who showed that while EFL learners considered studying English to be challenging, they also found it to be enjoyable. The study's results, however, differ from those of Baynham (2022), who found that all EFL university learners'

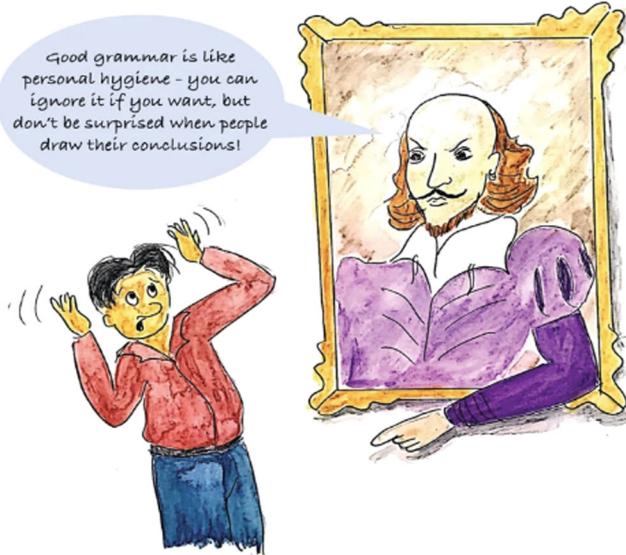


Fig. 5 G3's original visual representation. This figure shows that some learners feel discontented with learning English literature.



Fig. 6 G3's adapted visual representation. This figure shows how difficult and hazy the literary texts are for EFL learners.

metaphorical conceptions are depressing besides being perplexing.

Furthermore, the socio-semiotic paradigm of literacy may provide support for the study's results (Eftekhar, 2021; Gal, 2022a; Szelić, 2022; Archibald, 2014). From this point of view, it could be stated that the multimodal metaphors revealed the conceptual insights of the L2 learners into the L2 learning fonts of knowledge. To increase perspective consciousness of classroom events, style clashes, and instructional approaches, Cardano (2020) emphasized the significance of investigating alternative metaphors and underlying assumptions. Moreover, the results of the study may be explained in light of the Conceptual Metaphor Theory put forth by Even and Green (2006). Along with this theoretical framework, it might be claimed that the learners' use of metaphors could serve two purposes at once: as a linguistic ornament or stylistic device and as a means of conceptualizing their inner selves.

In other words, it may be claimed, along with Jacknick (2021), that the L2 learners' basic ideas and conceptions of the world were metaphorical as well as the fact that they found metaphorical language in English. The study's results can support Sundberg and Wahlström (2017)'s acquisition/learning concept. According to Sundberg and Wahlström, the study's findings may have drawn attention to the existence of two distinct methods for learning a second language, namely learning (conscious) and acquisition (subconscious). While acquisition happens in the natural environment, learning is related to the classroom setting. The L2 students relied more on the previous to acquire the requisite knowledge of the target language.

Conclusion

The basic goal of the current study was to investigate the metaphors Saudi EFL learners employed to characterize the L2 learning procedures. The investigation of the visual and conceptual metaphors used to describe L2 learning could provide insight into how the learners thought about their learning processes and the items they saw as helpful or frustrating along the road to learning. The results showed that the EFL learners' opinions on L2 learning are favorable and enjoyable. The visual metaphors used by the L2 learners also portrayed L2 learning as a happy, enjoyable pastime as well as an inward, private process. According to the findings from the written remarks, the L2 students saw studying English as an enjoyable adventure that may give them valuable chances to connect with different people and cultures. Very few cases reported bad and negative attitudes toward EFL learning, especially at the early levels. These negative perspectives may be attributed to the change in the teaching and learning environments to which the learners are exposed after leaving the high school setting and moving to the university environment.

Data availability

The datasets generated during and/or analyzed during the current study are available from the corresponding author upon reasonable request.

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References

Abdulaal MA, Alenazi MH, Tajuddin AJ, Hamidi B (2022) Dynamic vs. diagnostic assessment: impacts on EFL learners' speaking fluency and accuracy, learning anxiety, and cognitive load. *Language Test Asia* 12(1):1–24. <https://doi.org/10.1186/s40468-022-00179-0>

Almohaime MS, Almurusli HM (2019) Foreign language learners' attitudes and perceptions of L1 use in L2 classroom. *Arab World Engl J.* 8(2), 31–45. <https://doi.org/10.31235/osf.io/r6j2e>

Altakhineh ARM, Shahzad NM (2020) Using pictures in teaching metaphorical expressions to Arabic-speaking EFL learners. *Asian J Appl Linguist* 7(1):32–44

Archibald JD (2014) Competing visual metaphors. Aristotle's Ladder, Darwin's Tree 3(5):53–79. <https://doi.org/10.7312/columbia/9780231164122.003.0003>

Baynham M (2022) Book review: multimodality and identity. *Multimodality Soc* 2(1):86–90. <https://doi.org/10.1177/26349795211067691>

Blumenberg H (2020) Observations are drawn from metaphors. *Hist Metaphor Fables* 2(3):209–238. <https://doi.org/10.7591/cornell/9781501732829.003.0010>

Boyd R (1993) Metaphor and theory change: what is a metaphor? *Metaphor Thought* 8(1):481–532. <https://doi.org/10.1017/cbo9781139173865.023>

Canestri J (2018) Language, symbolization, and psychosis: an introduction. *Language Symb Psychos* 9(2):33–45. <https://doi.org/10.4324/9780429476570-1>

Cardano M (2020) The qualitative research design. *Defending Qual Res* 4(2):64–111. <https://doi.org/10.4324/9780429464232-5>

Colligan RC (1967) Learning inhibitions in children related to their human figure drawings. *Psychol Sch* 4(4):328–330. [https://doi.org/10.1002/1520-6807\(196710\)4:4<328::aid-psch1233>3.0.co;2-5](https://doi.org/10.1002/1520-6807(196710)4:4<328::aid-psch1233>3.0.co;2-5)

Dryll EM (2017) Metaphorical descriptions of wrongdoers. *Psychol Language Commun* 21(1):171–191. <https://doi.org/10.1515/plc-2017-0009>

Duffley P (2020) Cognitive semantics and the semiological function of language. *Linguist Mean Meets Linguist Form* 21(1):163–188. <https://doi.org/10.1093/oso/9780198850700.003.0004>

Easter MA (2020) The relationship between learners' motivational schemas, learners' effect, and changes to learners' achievement goals: a test of the cognitive change of motivational beliefs. *Educ Couns Psychol*. <https://doi.org/10.32469/10355/10283>

Eftekhar M (2021) Do learners' beliefs matter? Self-efficacy and second language achievement among Iranian second language learners. *Toronto Metropolitan Univ* 11(2):173–189

Eidevall G (2020) Use of metaphors. Tiemeyer L-S (ed.) In: *The Oxford handbook of Isaiah*. Oxford University Press. pp. 408–425

El Refaei E (2019) Reanimating the Body in Conceptual Metaphor Theory, Visual Metaphor and Embodiment in Graphic Illness Narratives (New York, online edn, Oxford), <https://doi.org/10.1093/oso/9780190678173.003.0002>, accessed 9 Feb. 2023

Even V, Green M (2006) Cognitive linguistics: an introduction. Edinburgh University Press

Farías M, Véliz L (2019) Multimodal texts in Chilean English teaching education: experiences from educators and pre-service teachers. *Profile* 21(2):13–27

Forceville CJ, Urios-Aparisi, E (eds) (2009) *Multimodal metaphor*. Mouton De Gruyter

Gal M (2022a) The advent of the visual perspective of metaphors. In: *Visual metaphors and aesthetics: a formalist theory of metaphor*. Bloomsbury Academic, London, pp. 99–124

Gal M (2022b) The visuality of metaphors. *Benjamins Curr Top* 61–80. <https://doi.org/10.1075/bct.124.04gal>

Gavrilescu M (2015) Recognizing emotions from videos by studying facial expressions, body postures and hand gestures, 23rd Telecommunications Forum Telfor (TELFOR), Belgrade, Serbia, pp. 720–723, <https://doi.org/10.1109/TELFOR.2015.7377568>

Gibert T (2018) Unraveling the mysteries of childhood: metaphorical portrayals of children in Margaret Atwood's fiction. *ES review. Span J Engl Stud* 29–50. <https://doi.org/10.24197/ersjes.39.2018.29-50>

Hunter F, Serret N (2020). Inclusive planning for learning. *Purp Plan Learn* 14–20. <https://doi.org/10.4324/9780429489266-3>

Ionta S, Gassert R, Blanke O (2011) Multi-sensory and sensorimotor foundation of bodily self-consciousness—an interdisciplinary approach. *Front Psychol* 2:383. <https://doi.org/10.3389/fpsyg.2011.00383>

Jacknick CM (2021) Classroom discourse and multimodal conversation analysis. *Multimodal Particip Engagem* 15–40. <https://doi.org/10.3366/edinburgh/9781474455183.003.0002>

Johnson M (2013) Metaphor. *Linguistics*. <https://doi.org/10.1093/obo/9780199772810-0167>

Kamm R (1993) Metaphorical thinking and information systems: the example of the mechanistic metaphor. *Syst Sci* 373–378. https://doi.org/10.1007/978-1-4615-2862-3_67

Khan U, Malik T, Shams SA (2021) Pakistani advanced EFL learners' perceptions of the role of Pakistani English short stories in increasing motivation and interest in the reading classroom. *Global Language Rev* VI(II):263–275. [https://doi.org/10.31703/glr.2021\(vi-ii\).28](https://doi.org/10.31703/glr.2021(vi-ii).28)

Kövecses Z (2011) Methodological issues in conceptual metaphor theory. *Windows to the Mind: Metaphor, Metonymy and Conceptual Blending*, edited by Sandra

Handl and Hans-Jörg Schmid, Berlin, New York: De Gruyter Mouton, pp. 23–40. <https://doi.org/10.1515/9783110238198.23>

Lakoff G (2018) Ten lectures on cognitive linguistics. *Leonardo* 17(2):301–322. <https://doi.org/10.1163/9789004325302>

Lakoff G (1998) The metaphorical conception of events and causes: some implications of cognitive science for philosophy. *Discourse Interact Commun* 49–83. https://doi.org/10.1007/978-94-015-8994-9_4

Lakoff G, Johnson M (2020) Conceptual metaphor in everyday language. *Shap Entrep Res* 475–504. <https://doi.org/10.4324/9781315161921-21>

Lantolf JP (2006) Sociocultural theory and L2: state of the art. *Stud Second Language Acquisition* 28:67–109. <https://doi.org/10.1017/S0272263106060037>

Leitch R (2008) Creatively researching children's narratives through images and drawings. In Thomson P. (Ed.), *Doing visual research with children and young people* (pp. 37–58). London, England: Routledge

Leite DA (2020) Computational theory of human cognition and belief-desire theory of human cognition. *Cogn Syst Monogr* 131–184. https://doi.org/10.1007/978-3-030-63680-7_6

Levine E (2007) Mexican migrants to the US and the perspectives for socio-economic mobility. *J Latino/Latin Am Stud* 2(4):117–143. <https://doi.org/10.1080/llas.2.4.4602576x2g5227v1>

Lowie W, Verwoerd M, Seton B (2010) Conceptual representations in the multi-lingual mind. *Cogn Process Second Language Acquisition* 135–148. <https://doi.org/10.1075/celcr.13.12low>

Michalle G (2006) The advent of the visual perspective of metaphors. *Visual Metaphors Aesthet*. <https://doi.org/10.5040/9781350127746.ch-004>

McCafferty SG (2016) Dynamic systems theory and sociocultural theory: Some connections and distinctions. *Language Sociocult Theory* 3(1):83–88. <https://doi.org/10.1558/lst.v3i1.30476>

Neumann C (2001) Is metaphor universal? cross-language evidence from German and Japanese. *Metaphor Symbol* 16(1):123–142. https://doi.org/10.1207/s15327868ms1601&2_9

Nor MH, Yusuf R, Salleh NM (2019) The influence of learner's motivation and attitudes on foreign language learning among Malaysian students in UPSI. *Int J Acad Res Bus Soc Sci* 9(1). <https://doi.org/10.6007/ijarbss/v9-i1/5494>

Oduor SO (2021) Kenyan Mandarin learners' motivations, beliefs & Strategies. *Int J Linguist* 13(5):132. <https://doi.org/10.5296/ijl.v13i5.19023>

Oskooei SK, Salahshoor F (2014) The relationship between multiple intelligences and L2 reading skill among Iranian EFL University students. *Int J Appl Linguist Engl Lit* 3(5). <https://doi.org/10.7575/aiac.ijalel.v.3n.5p.229>

ÖzTÜRK M, Yıldırım A (2016) English as a foreign language instructors' cognition on language learning processes and factors affecting those cognitions. *TED Eğitim Bilim* 40(182). <https://doi.org/10.15390/eb.2015.4776>

Roth W, Lawless D (2002) Scientific investigations, metaphorical gestures, and the emergence of abstract scientific concepts. *Learn Instr* 12(3):285–304. [https://doi.org/10.1016/s0959-4752\(01\)00023-8](https://doi.org/10.1016/s0959-4752(01)00023-8)

Schoos M, Suñer F (2020) Understanding humorous metaphors in a foreign language: a state-of-the-art review. *Z Interkult Fremdsprachenunterr* 25:1431–1446

Şenol FB, Ergün M (2016) The comparison of teacher self-efficacy beliefs between pre-service preschool teachers and preschool teachers. *Kuramsal Eğitimbilim* 8(3):297–315. <https://doi.org/10.5578/keg.8972>

Shen Y (1995) Cognitive constraints on directionality in the semantic structure of poetic vs. non-poetic metaphors. *Poetics* 23(4):255–274. [https://doi.org/10.1016/0304-422X\(95\)00002-2](https://doi.org/10.1016/0304-422X(95)00002-2)

Sher G, Feinman MA (1995) The day-to-day realities: commentary on the new eugenics and Medicalized reproduction. *Camb Q Healthc Ethics* 4(3):313–315. <https://doi.org/10.1017/s096318010000606x>

Silver M, Lakoff G, Johnson M (1982) Metaphors we live by. *Leonardo* 15(4):323. <https://doi.org/10.2307/1574760>

Sundberg D, Wahlström N (2017) From transnational curriculum standards to classroom practices. *Transnational Curriculum Standards Classroom Practices* 133–150. <https://doi.org/10.4324/9781315110424-9>

Szelid V (2022) Poetic and visual metaphors in Hungarian folklore. *Benjamins Current Top* 4(3):117–146. <https://doi.org/10.1075/bct.124.06sze>

Turner M, Faconnier G (2009) Metaphor, metonymy, and binding. *Metaphor and Metonymy in Comparison and Contrast*, edited by René Dirven and Ralf Pörlings, Berlin, New York: De Gruyter Mouton, 2002, pp. 469–488. <https://doi.org/10.1515/9783110219197.4.469>

Waguespack LJ (1989) Visual metaphors for teaching programming concepts. In *Proceedings of the twentieth SIGCSE technical symposium on Computer science education (SIGCSE '89)*, Association for Computing Machinery, New York, NY, USA, 141–145. <https://doi.org/10.1145/65293.71203>

Wang Q (2015) A multimodal corpus-based study on co-speech metaphorical gestures in political speeches. *Linguist Lit Stud* 3(5):240–247. <https://doi.org/10.13189/lls.2015.030507>

Xia CM (2019) Metaphorical expressions under the cross-linguistic influence. In: *Acquiring metaphorical expressions in a second language: performance by Chinese learners of English*. Bloomsbury Academic, London, pp. 29–54

Xu L, Naserpour A, Rezai A (2022) Exploring EFL learners' metaphorical conceptions of language learning: a multimodal analysis. *J Psycholinguist Res* 51:323–339. <https://doi.org/10.1007/s10936-022-09842-2>

Younes AS, Altakhaineh AR (2022) Metaphors and metonymies are used in memes to depict COVID-19 in Jordanian social media websites. *Ampersand* 9:100087. <https://doi.org/10.1016/j.amper.2022.100087>

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Author contributions

All authors made substantial contributions to the conception and design of the work. The interviews and the analysis were conducted by the first author. All authors participated in the interpretation of data. All authors drafted the work and revised it critically for important intellectual content. All authors gave final approval of the version to be published and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Competing interests

The authors declare no competing interests.

Ethics approval

The study was approved by the Scientific Research Ethics Committee at Prince Sattam bin Abdulaziz University. The researchers confirm that all research procedures were performed in accordance with the relevant guidelines and regulations involved in the Declaration of Helsinki.

Informed consent

Written consent was obtained from the participants to use their drawings for research purposes. The participants signed the following endorsement: 'I have read and understood the provided information (i.e., research purpose) and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost'.

Additional information

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