

Art as a means of communication and second language learning

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Abstract

Art, much like language, functions as a powerful medium of communication and self-expression; often described as a universal language, it transcends cultural and linguistic boundaries, enabling individuals to convey meaning beyond words. In addition to its aesthetic value, visual art facilitates cross-cultural understanding and serves both educational and therapeutic purposes, allowing people to express emotions, ideas, and experiences in nuanced and non-verbal ways.

This study investigates visual art as a form of visual language within educational contexts, focusing on its diverse roles in communication and collaboration. It highlights how art fosters creativity, enhances critical thinking, and increases learner engagement. Furthermore, the study examines the therapeutic and emotional dimension of art, alongside the cognitive and neural benefits associated with art-making practices. The findings provide insight into the broader implications of integrating visual aids into second-language learning.

Keywords

art-based learning, cognition, creativity, learner engagement, visual art, visual communication

Sztuka jako środek komunikacji a nauka języka obcego

Abstrakt

Sztuka, podobnie jak język, pełni rolę skutecznego środka komunikacji i wyrażania siebie, często określana jest mianem języka uniwersalnego, przekracza granice kulturowe i językowe, umożliwiając ludziom przekazywanie znaczeń wykraczających poza słowa. Oprócz wartości estetycznej sztuka wizualna sprzyja zrozumieniu międzykulturowemu i służy zarówno celom edukacyjnym, jak i terapeutycznym, pozwalając wyrażać emocje, idee i doświadczenia w sposób subtelny i niewerbalny.

Niniejsze badanie poświęcone jest sztuce wizualnej jako formie języka wizualnego w kontekście edukacyjnym, ze szczególnym uwzględnieniem jej różnorodnych ról w komunikacji i współpracy. Podkreśla ono, w jaki sposób sztuka sprzyja kreatywności, wzmacnia krytyczne myślenie i zwiększa zaangażowanie uczących się. Ponadto badanie analizuje terapeutyczny i emocjonalny wymiar sztuki, a także korzyści poznawcze i neuronalne związane z praktykami twórczości artystycznej. Wyniki dostarczają wglądu w szersze implikacje włączania pomocy wizualnych do nauki języka obcego.

Słowa kluczowe

komunikacja wizualna, kreatywność, nauczanie oparte na sztuce, sztuka wizualna, zaangażowanie uczniów

1. Introduction

Recent studies on visual art have increasingly examined its psychological and physiological impacts, particularly within clinical populations. The findings indicate that art-based interventions can promote emotional stability by alleviating distress, enhancing self-reflection and self-awareness, and influencing patterns of thought and behaviour. In addition, such approaches have been associated with physiological benefits, including the regulation of heart rate, blood pressure, and cortisol levels (Stuckey 2010, Cohen 2006, Leckey 2011, Geue 2010, Clow 2006).

Moreover, visual art extends beyond expression or communication, as it also challenges traditional, language-centred models of literacy. Visual art is believed to be beneficial not only for younger learners but also for elderly people. Eisner (2002: 93–144) emphasises that when children’s artistic practices are understood through a social rather than exclusively individual endeavour, learning is revealed as a process that goes beyond the acquisition of technical skills or mastery of materials. He argues that activities such as painting, sculpture, or other creative forms enable children to construct knowledge through their interactions with peers and mentors, situating them within a broader community of learners. Research by Lee et al. (2019: 20–25) indicates that participation in structured art activities, such as painting, among older adults not only supports active and dynamic learning but may also improve various cognitive functions. Furthermore, Zhao et al. (2025) note that previous studies have examined a broad range of artistic media, including drawing, painting, collage, sculpture, and digital forms, as well as different modes of engagement, such as individual practice, group workshops, and museum-based programmes. In this regard, opportunities for group discussion and the sharing of creative work function as integral components of the learning process.

This paper reviews the diverse roles of art as a means of communication and as a broader educational and expressive practice. It explores the contribution of visual art to educational contexts, its relationship with language learning, its potential to facilitate cross-cultural dialogue, and its therapeutic and emotional dimensions within art-based approaches. For this purpose, the current paper synthesises empirical evidence on the emotional and social benefits of art and presents survey data gleaned from 74 participants on the role of art as a communicative medium. The primary objectives of the study are addressed through the following research questions:

- (1) Does art stimulate second language acquisition?
- (2) To what extent are colours related to mood and emotion?
- (3) Does creating mental images or drawing representations of words or idioms facilitate memorisation?
- (4) Does language proficiency level relate to drawing a word as a memorisation strategy?

This paper is structured around these questions to support a deeper understanding of visual art as a pedagogical tool and to highlight its potential in emotional expression.

2. The contribution of visual art to education

According to Berriz et al. (2019: 12), the arts can be understood as “foundational literacies that involve participants in the processes of observing, connecting, finding answers, generating meaning, and communicating/expressing”.

Rather than being just a complement in educational settings, the ‘aesthetic languages’ of various art forms, such as media arts, visual arts, theatre, gesture, image, sound, writing, and music, act as tools for meaning-making. These tools help teachers understand their students’ classroom experiences (Cornell 2019: 513–516). Engaging with the arts can enhance language skills, provide therapeutic benefits, and promote bodily-kinaesthetic involvement (Gardner, qtd. in Davis, 2011: 488). Together, these factors contribute to a more holistic and meaningful learning experience. Integrating art into language education not only supports linguistic development but also fosters creativity, activates multiple intelligences, and strengthens learners’ connection to cultural contexts. Cahnmann-Taylor and Sanders-Bustle (2019) emphasise the significance of arts education within curriculum and instruction, highlighting its role in supporting interdisciplinary teaching and learning. Integrating the arts connects multiple subject areas within a cohesive learning framework while enhancing student achievement in disciplines such as mathematics, science, social studies, language arts, and foreign languages. Furthermore, arts-informed pedagogies

promote holistic and active meaning-making and contribute to teachers' professional identity, reflection, job satisfaction, retention, and the development of professional relationships. Furthermore, it highlights the value of artistic creation and promotes experiential learning through hands-on visual activities, such as drawing, painting, and crafting. Such activities help learners see themselves as active participants in the educational process, fostering meaningful engagement rather than passive involvement.

According to Gisela Hoecherl-Alden and Kathy Fegeley (2019: 57–78), integrating visual art into second language (L2) education can have a positive, overall effect on language acquisition. Engagement with visual art exposes learners to diverse perspectives and fosters intercultural understanding, thereby supporting vocabulary retention through the interpretation of imagery and enhancing comprehension through the creation of meaningful combinations of visual and textual elements. With instructor-provided visual scaffolding, the analysis of visual and textual materials cultivates critical thinking and interpretive skills, which are essential for understanding nuanced meanings in a second language.

Wammes et al. (2019) argue that drawing serves as a highly effective learning strategy, enhancing memory retention for single words, images, and textbook definitions. Their findings demonstrate that drawing leads to better recall compared to other mnemonic methods such as semantic elaboration, visualisation, writing, or tracing. This highlights the importance of multimodal encoding in facilitating deeper learning.

Furthermore, art-based pedagogical methods foster creativity and motivation, offering benefits for learners with dyslexia who may struggle with traditional reading and writing tasks. These approaches provide alternative ways to express themselves, allowing learners with diverse interests and abilities to actively create language through artistic means, explore different narrative styles, and communicate ideas in both written and spoken forms. A notable example is Mackenzie Thorpe, a con-

temporary British artist with dyslexia, for whom art serves as a key mode of self-expression. Thomas G. West (2009: 7) also argues that individuals with dyslexia often demonstrate strengths in visual and creative thinking, thereby providing a theoretical foundation for integrating art into language education for neurodiverse learners. For over twenty-five years, Thomas G. West has been a prominent advocate for the significance of visual thinking, the role of visual technologies, and the creative potential of individuals with dyslexia and other learning differences (West 2017).

3. Art as a unifying force across cultures

Throughout history, art has played a significant role in shaping and advancing human civilisation. Through its distinctive modes of expression—such as symbols, metaphors, rhythm, movement, imagery, colour, and sound—art has the capacity to engage deeply with human experience and convey meanings that extend beyond the limits of descriptive language. Across cultures, art has served as a means for individuals and communities to transcend conditions of injustice, fragmentation, and spiritual decline, while aspiring toward ideals of moral and social renewal.

The concept of art as a unifying and constructive force highlights its potential to bring people together and foster dialogue among artists and broader society. In this sense, art functions not only as a form of expression but also as a medium for social cohesion and transformation, contributing to both spiritual development and collective progress.

What do we mean when we refer to art? Art, as an umbrella term, refers to any artistic practice, including music, drama, literature, sculpture, and painting, to name a few. Every human society engages in activities that can be understood as “art”, and in most cultures, artistic practices are deeply woven into everyday social life. This raises a further question: what does it mean to describe art as “universal”? To fully grasp art as a universal

human capacity, Ellen Dissanayake (1990) in *What Is Art For?* argues that it is necessary to move beyond narrow, modern Western perspectives that often marginalise non-Westerners. One influential perspective on the nature of art comes from Leo Tolstoy. In his classic book, *What Is Art?* (1904: 20), Tolstoy contends that art should not be defined merely as a source of pleasure, but rather as an essential part of human life. From his perspective, art functions as a means of communication between individuals. He further asserts, “art unites men”, emphasising that artistic expression enables individuals to acknowledge their shared humanity through exchanging emotions grounded in universal human experience. By the same token, actively engaging with what we see naturally makes us more open to diverse viewpoints, cultures, values, and ideas. In this way, visual art functions as a universal language, fostering an awareness of our shared connection within the broader human experience. Art serves as a medium for conveying cultural experiences and meanings, which can be universal or specific to communities (*Art as a Universal Language*).

It is an undeniable fact that any form of art has the potential to bring people from all walks of life together, including music festivals, art exhibitions, artistic events, and theatre, to name a few, provide gateways for communication, interaction, and inspiration. Sharing artworks encourages connection, reciprocity and can boost inspiration among people. Elaborating on this perspective, Dissanayake (1990) views art, alongside play and ritual, as a fundamental human activity that serves to “make special” certain experiences. She suggests that this tendency is innate, much like language or tool use, and is embedded in human nature. According to her, artistic practices evolved to highlight meaningful social events, making them more emotionally engaging and memorable. In this way, the diverse forms of art have played a crucial role in fostering social cohesion and a sense of community among individuals. Parallel to this, Shelby Skumanick (2021) argues that when individuals can express themselves, their well-being positively influences the

wider community. Engaging with visual art, whether through creation and observation, allows individuals to interpret their experiences and connect with others through a shared sense of identity. Cole (2026), in an article published by the University of North Carolina School of the Arts, titled “The role of art in building unity and understanding in a divided society”, highlights works such as *Guernica* by Pablo Picasso and *Migrant Mother* by Dorothea Lange that continue to inspire dialogue on human suffering and resilience. Numerous additional examples can be found across a wide range of artistic disciplines. As a result, these artistic interactions nurture mutual understanding, strengthen empathy, and contribute to the development of more cohesive and socially connected communities. Photograph 1 demonstrates the potential of art as a medium of interaction.



Photograph 1. Exhibition Vernissage: “Poetry on Canvas”
Photo: Martin Blaszk

4. Visual art as a means of communication

Throughout human history, visual forms have served as a fundamental means of storytelling and communication. From Stone Age cave paintings and Mesopotamian cylinder seals to Egyptian tomb reliefs and Native American petroglyphs, as well as religious icons, political propaganda, Socialist Realist imagery of the Communist era, and contemporary representations of social empowerment, these artefacts serve as creative expressions of a shared human experience (*Art as a Universal Language*). In contrast to verbal or written language, which often requires time and effort to master, visual imagery communicates almost instantly, operating on both conscious and subconscious levels (*Art as a Universal Language*). As human civilisation developed, systems of communication gradually shifted towards the use of symbols representing sounds. From earlier pictorial systems, phonograms emerged as symbols designed to correspond to the elements of spoken language (Dunn 2018: 4). This transition marks a significant development in the relationship between visual representation and linguistic meaning. As John Berger et al. (1972: 7) argue, “Seeing comes before words. The child looks and recognises before it can speak.” This statement emphasises the importance of visual perception in human cognition and experience. He further suggests that humans perceive the world differently, and that our knowledge and beliefs shape how we see it. For instance, during the Middle Ages, the widespread belief in the reality of Hell intensified the perceived terror of fire. Observation of fire, combined with the experience of burning objects to ash, contributed to a culturally constructed visual understanding of fear and punishment.

In addition, spatial composition elements such as shape, volume, light and objects also influence how audiences engage with artworks, encouraging them to actively construct meaning from both their visual perception and internal emotional response (Berger et al. 1972: 16). This process emphasises how human perception is organised and guided, illustrating that

even before language shapes our understanding, the act of seeing itself influences how we relate to the world around us. In line with this perspective, Arnheim (1974) in *Art and Visual Perception: A Psychology of the Creative Eye* conceptualises visual elements such as balance, shape, form and composition as components of “visual grammar”, which underlines artistic communication. Based on the principle of Gestalt psychology, Arnheim (1975: 53) describes visual perception as follows: “Any stimulus pattern tends to be seen in such a way that the resulting structure is as simple as the given conditions permit”. Expanding on this perspective, Gyorgy Kepes in *Language of Vision* (1969: 14) characterises visual communication, often described as the language of vision, as one of the most powerful means of unifying human knowledge and shaping individuals into more integrated beings. He argues that visual language enables the transmission of information more effectively than many other forms of communication, allowing individuals to express and share their experiences in tangible, visual forms. Unlike verbal language, visual language, such as images, symbols, and visual elements, allows immediate interpretation and can transcend linguistic boundaries, as it is not constrained by vocabulary or grammar and can be understood by both literate and illiterate audiences. Furthermore, artworks and visual media can convey complex ideas without relying on words. However, interpretation remains subjective, as it is shaped by individual perception, cultural background, and prior experience. Therefore, visual language serves as an intermediary facilitating communication across diverse contexts. Photograph 2 illustrates how paintings can function as a visual language, engaging audiences and establishing a direct, eye-to-eye connection with the viewer.



Photograph 2. Exhibition Vernissage: “Poetry on canvas”
Photo: Martin Blaszk

5. Therapeutic and emotional outcomes in art-based learning

Visual art extends beyond the limits of spoken and written language, offering access to the emotional and psychological depths of both the creator and the viewer. Through this form of dialogue, individuals can explore the complexity and subtlety of their inner experiences, develop emotional awareness, and promote psychological well-being (Skumanich 2021). For decades, occupational therapists have used arts and crafts to enhance participation and promote overall well-being. Perrin (2001) highlights this approach by suggesting that the therapeutic power of creativity and purposeful activity creates a strong dynamic, one that occupational therapists are specially trained to leverage and turn into meaningful health benefits for those they serve.

Art therapy, as Rio Diéguez et al. (2024) note, is an effective, non-pharmacological mental health approach, especially for chronic conditions. It enhances well-being, emotional regulation, and cognitive restructuring while bridging psychological, social, and aesthetic dimensions to support self-expression, reduce anxiety, and improve interpersonal skills. For many individuals, engaging in artistic activities is rewarding and can improve their health, both personally and within their community (Fenner et al. 2017). Based on her own artistic experience, the author of the present paper contends that “art not merely possesses social advantages, but its therapeutic value should not be underestimated, either; as it enables the expression of emotions, ideas, and experiences that are often hard to articulate verbally; moreover, it helps improve our mood and, to some extent, get rid of minor stress we may encounter in our lives”. Fancourt and Ali (2023) examined how individuals with depression engage in emotion regulation strategies (ERSs) through the arts. In a large-scale study involving 11,000 participants with depression compared to a matched group without depression, the researchers found that individuals with depression reported slightly less use of specific strategies, particularly cognitive reappraisal, defined as the process of reframing one’s thoughts to regulate emotions. In contrast, their use of avoidance strategies remained similar. Notably, the differences observed were minimal, suggesting that individuals with depression can still benefit emotionally from artistic activities. This outcome may help explain the effectiveness of arts-based interventions in alleviating depressive symptoms. Hoecherl-Alden and Fegely (2019: 61) in their studies argue that some learners may experience anxiety when asked to interpret a work of art. To address this, using icebreakers and carefully structured, hands-on activities can help create a more supportive learning environment. Such activities may include collaborative tasks, designing visual messages, exploring how images communicate bias, progressing from detailed observation to holistic understanding, and engaging multiple senses during interpretation. These approaches

can gradually develop learners' visual literacy while encouraging them to rely on their intuition and prior experiences. Furthermore, effective scaffolding of these activities ensures that students engage with all three stages of the interpretive process: comprehension, interpretation, and analysis. Initially, learners demonstrate an understanding of the content; subsequently, they examine, compare, and reflect on cultural products and practices; and finally, they establish connections with new or unfamiliar contexts. Similarly, visual analysis involves a sequence of stages, beginning with comprehension, followed by interpretation, and resulting in an explanation of the image's meaning within its cultural framework.

Another important dimension of learning that the arts can support is emotional motivation, which encourages active engagement in the learning process, particularly among learners with an interest in such activities. Such engagement may activate various instinctive impulses and contribute to the development of new interests, as William McDougall (1923: 276) argues that individuals acquire a wide range of interests through the formation of sentiments toward different objects.. Inspiration, in this context, can be understood as a complex mental function that operates at the intersection of cognitive, emotional, and conative processes – conative processes refer to goal-directed aspects of the mind, such as desire, ambition, and will – and are traditionally identified as the third component of mental functioning by thinkers such as Kant (1788) and McDougall (1923: 276–277). According to Tyler and Likova (2012), inspiration can transform ordinary activities into meaningful pursuits that contribute to personal fulfilment and the achievement of life goals. In contrast, the absence of inspiration may hinder an individual's ability to learn, adapt, and thrive. Therefore, inspiration can be understood as a powerful element of human experience that bridges artistic and scientific domains. By integrating drawing or painting into learners' education, educators can tap into learners' intrinsic motivation while also fostering extrinsic motivation through the expression and interpretation

of their creative work. From a cognitive-affective-conative perspective, art and colour thus function as mediating tools that support comprehension, intensify emotional involvement, and activate learners' motivational drive during language acquisition.

6. Cognitive and neural benefits of artmaking

McDougall (1923: 291) argues that the development of language and the use of words have significantly stimulated the exercise of imagination, although they are not essential to it. Stretching participants' imaginations through visual art activities provides numerous cognitive and neurological benefits. Such engagement stimulates both hemispheres of the brain, enhances neural plasticity, and activates brainstem functions, all of which contribute to holistic development. According to Bolwerk et al. (2014), artistic creation involves an extensive network of brain regions, including those linked to sensory, motor, and emotional processes, such as the default mode network, the sensorimotor cortex, and areas associated with visuospatial abilities and emotional regulation. Stanulewicz and Danilewicz (2016) argue that the social semiotic significance of colour lies primarily in its function as a tool for constructing meaning within cultural and societal frameworks. This perspective emphasises the cognitive dimensions of colour categorisation, in which meaning emerges from the interaction between a reference point and individual perception – two mental coordinates that shape how colour is understood and interpreted. Similarly, Lamb (1999: 1) emphasises that language is “profoundly linked to other cognitive systems”, a view that aligns with James's viewpoint (1980: 42–56), who indicates that the mental processing of language is intricately associated with broader cognitive functions, enabling individuals to engage with various facets of human experience. Together, these perspectives highlight the central role of language within the neurocognitive system.

Neuroimaging studies by Vessel et al. (2012) have revealed that engagement with aesthetic stimuli is associated with activity in specific brain regions, particularly the anterior medial prefrontal cortex (aMPFC) and the caudate/striatum, as well as additional areas that appear in some studies but not consistently across all investigations. This interaction between the hemispheres is vital for fostering creativity, as it enables the simultaneous activation of various neural systems. This highlights the cognitive, emotional, and overall brain health benefits of both creating and appreciating visual arts. Hoecherl-Alden (2019: 69) demonstrates that incorporating visual analysis, such as examining the Kindertransport sculpture, prior to engaging with literary texts on topics like the Holocaust and exile can enhance learners' depth of understanding across both visual and textual domains. This integrated approach supports cognitive development by encouraging learners to process information through multiple representational systems. In this framework, the concept of mental imagery – defined as the ability to create, maintain, and manipulate sensory representations in the mind in the absence of direct external stimuli – plays a crucial role, enabling learners to internally visualise and connect both artistic and linguistic input. For learners at the intermediate-low proficiency level and above, the combination of visual and verbal materials also creates opportunities to develop interpersonal, interpretive, and presentational communication skills. Moreover, as both poetry and visual art rely on imagery and symbolism, their combined use strengthens learners' interpretive abilities, fostering more advanced cognitive processes such as meaning-making, abstraction, and critical analysis. In this way, integrating artmaking and literary engagement contributes not only to language development but also to broader cognitive enhancement, with mental imagery functioning as a key mediating mechanism. Bolwerk et al. (2014) emphasise the neurological significance of artistic engagement, noting that “visual art represents a powerful resource for mental and physical well-being”, while also highlighting that the neural

mechanisms underlying these effects remain insufficiently understood. Their study specifically examined whether visual art production and cognitive art evaluation produce different effects on the brain's default mode network (DMN). Using fMRI, the researchers compared two groups of older adults participating in 10-week interventions: one group, consisting of 14 participants, actively engaged in creating art, while the other, consisting of 14 participants, focused on evaluating artworks. The findings revealed that participants involved in visual art production demonstrated greater improvements in functional connectivity within key brain regions, particularly between the posterior cingulate cortex and frontal and parietal areas, compared to those engaged only in cognitive evaluation.

7. Design for data collection, procedures and analysis

The study adopted a mixed-methods research design, integrating both quantitative and qualitative approaches. Data were collected through multiple methods, including online questionnaires, semi-structured and unobtrusive observational techniques conducted during art exhibitions and a workshop. This design enabled triangulation of findings and facilitated the collection of both numerical data and, to some extent, insights into participants' cognitive and emotional engagement with visual artworks.

Data collection was carried out using a range of methods. A structured online questionnaire, administered in English via Microsoft Forms, consisted of closed-ended questions exploring participants' perceptions of colour, emotional associations, and the use of visual strategies, such as drawing and mental imagery, for memorisation. In addition, semi-structured interviews were conducted to gain deeper insight into participants' experiences, attitudes toward art-based learning, and emotional engagements. Qualitative data were further supplemented by unobtrusive observation at art exhibitions and a workshop, enabling analysis of natural engagement with visual materials

and art-based activities. Quantitative data were analysed using descriptive statistics, including frequencies and percentages, and were further examined using the chi-square test to identify relationships between categorical variables. A chi-square test of independence was employed to determine whether there is a statistically significant association between language proficiency level (CEFR categories) and the use of drawing as a memorisation strategy.

The study involved 74 participants from diverse national backgrounds, including Belarus, Iran, Poland, Spain, and Ukraine. Participants represented various age groups (18 to 45+) and gender identities, with female respondents outnumbering male respondents. Most participants were English language learners with proficiency levels predominantly at B2 and C1. The target group consisted of individuals who were readily accessible through academic environments and social networking platforms.

Figure 1 presents the demographic characteristics of the study participants, categorised by age group, nationality, and gender. It provides an overview of the sample composition and illustrates the distribution of respondents across demographic variables.

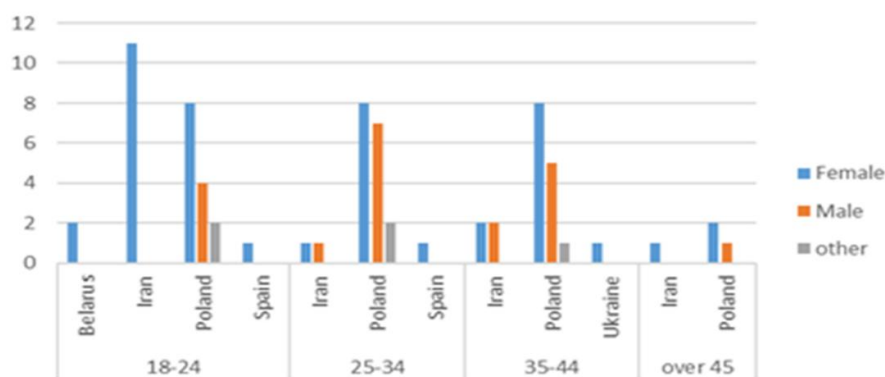


Figure 1. Demographic distribution of respondents by age group, nationality, and gender category

Table 1. Distribution of responses to the question
“Does art stimulate second language learning?”

Response	Frequency (n)	Percentage
Yes	50	67.57%
No	2	2.70%
I don't know	12	16.22%
No response	10	13.51%
Total	74	100.00%

As shown in Table 1, the majority of respondents viewed art as a positive stimulus for second language learning. Most participants ($n = 50$) selected “yes,” whereas only 2 reported a negative perception. A smaller group ($n = 12$) expressed uncertainty, and 10 participants did not respond. These results indicate a clear overall tendency to perceive art as a supportive tool for second-language acquisition.

Table 2 presents the distribution of responses to the question concerning the relationship between colours and mood and emotion. It provides an overview of participants' perceptions, indicating the frequency and percentage of each response category.

The findings presented in Table 2 indicate a strong consensus among participants regarding the relationship between colour and mood or emotion. A substantial majority ($n = 61$) reported that colours are associated with emotional states, while only a small number ($n = 3$) expressed disagreement. A minority of participants ($n = 10$) indicated uncertainty. Overall, these results suggest that colour is widely perceived as an influential factor in emotional experience.

Table 2. The distribution of responses to the question
“Do colours relate to mood and emotion?”

Response	Frequency (n)	Percentage
Yes	61	82.43%
No	3	4.05%
I don't know	10	13.51%
Total	74	100%

Table 3 presents the distribution of responses regarding the extent to which mental imagery and drawing support the memorisation of words and idioms. It provides an overview of participants' perceptions, including the frequency and percentage for each response category.

The results presented in Table 3 indicate that the majority of participants perceive mental imagery and drawing as effective strategies for memorisation. A total of 58 respondents selected 'Yes', compared with a small minority ($n = 5$) who responded negatively, while 11 participants expressed uncertainty. This distribution suggests a preference for imagery-based approaches in lexical learning.

These findings can also be supported by Dual Coding Theory, mnemonic techniques, and Multiple Intelligences Theory, which emphasise the interaction between visual, motor, and verbal processes in learning.

Table 3. Responses to the question on the extent to which mental imagery and drawing support memorisation of words and idioms

Response	Frequency (n)	Percentage (%)
Yes	58	78.4%
No	5	6.8%
I don't know	11	14.9%
Total	74	100%

Figure 2 presents the results of a chi-square test examining the relationship between language proficiency level (below B2 vs. B2 and above) and the use of colour as a memorisation strategy. It displays the frequency of participants who reported using or not using colour across the two proficiency groups.

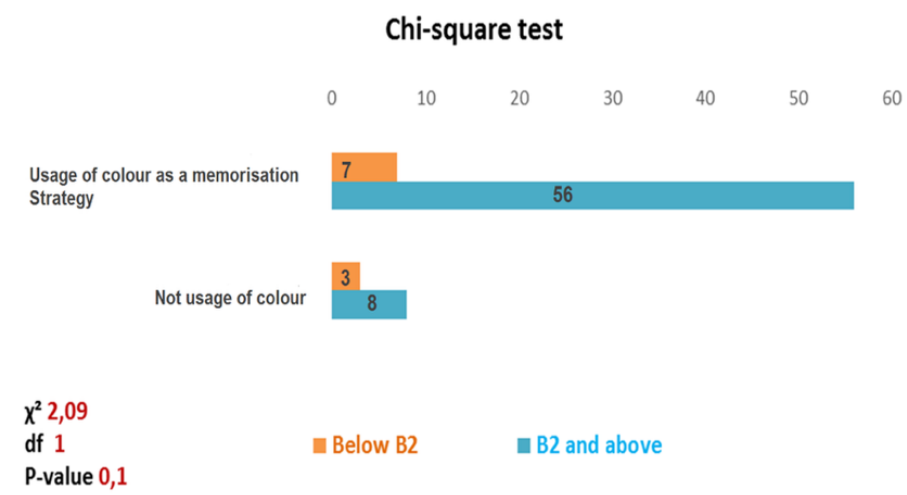


Figure 2. Compares two variables: language proficiency level and drawing a word as a memorisation strategy

Table 4 presents the contingency table used for the chi-square test examining the relationship between language proficiency level and the use of colour as a memorisation strategy.

Table 4. The distribution of respondents using colours as a memorisation strategy

Use of colour	Below B2	B2 and above	Total
Yes	7	56	63
No	3	8	11
Total	10	64	74

Note: χ^2 (1) = 2.09, p = .10

The results of this analysis indicate that the majority of participants at B2 level and above reported using colour as a memorisation strategy ($n = 56$), compared to a smaller number below B2 ($n = 7$). A similar pattern is observed for non-use, though with lower frequencies overall. However, the chi-square test ($\chi^2 = 2.09$, $df = 1$, $p = .10$) shows that this relationship is not statistically significant. Therefore, there is insufficient evidence to conclude that the use of colour as a memorisation strategy is associated with language proficiency level. Although colour may function as a supportive factor in learning, the process is likely influenced by numerous variables, including repetition and the combined use of different techniques and strategies.

8. Key findings

The findings of the present study support the view that visual representations play a significant role in shaping learners' perceptions and cognitive processing, as suggested by Howson (2008:45), who claims that "visual representations help to shape people's perceptions of the world, and we use visual information to interpret and make sense of life". In accordance with this perspective, the findings indicate that engagement with visual arts, particularly through colour and art-based tasks, contributes relatively to the enhancement of cognitive and emotional aspects of learning. Participants reported improvements in memory and attention, which, in turn, supported increased motivation and enjoyment in the learning process. These outcomes can be interpreted through the lens of the perception-action cycle proposed by Gazzaniga et al. (1965), which holds that perception and action are dynamically interconnected, with sensory input guiding behaviour and motor activity simultaneously shaping perceptual experience. This reciprocal relationship is further supported by Paivio's Dual Coding Theory (1991) and its extension into Common Coding Theory, which emphasises the integration of verbal and non-verbal systems in knowledge representation.

Moreover, participation in collaborative and creative activities was associated with the development of key social competencies, including cooperation, communication, and empathy, highlighting the broader educational value of art-based approaches. These findings reinforce the argument that integrating visual and creative strategies into language learning not only enhances linguistic outcomes but also supports holistic learner development across cognitive, emotional, and social growth.

Although many individuals take art's importance in their lives for granted, integrating art into educational settings appears to enhance academic outcomes by fostering learner engagement. In addition to its educational value, creative expression also offers therapeutic advantages, including reduced anxiety, improved emotional regulation, and enhanced overall well-being (Malchiodi 2012). As Chapell and Cahnmann-Taylor (2013: 250) note, the arts contribute to academic development, reinforce personal and collective identities, and support principles of social justice. Through multimodal, collaborative activities, they promote critical thinking, creativity, and problem-solving while also providing a space to address social issues and enhance socio-emotional development.

Furthermore, involvement in artistic activities supports personal growth by enhancing confidence, encouraging self-discovery, and promoting the acquisition of learning skills tailored to individuals' learning needs. Art-based learning approaches can be adapted to suit diverse learning styles, including those learners with dyslexia. Simultaneously, engagement in artistic practices is associated with a range of neural benefits, including the activation of both hemispheres of the brain, enhanced neural plasticity, and the stimulation of brainstem functions. Collectively, these effects contribute to the development of cognitive, emotional, and social capacities.

9. Concluding remarks

This study aimed to explore the role of visual art not merely as a communication tool but also as an influence on cognitive and emotional processes and as a pedagogical component of second language acquisition. The findings of the present research indicate that imagery-based approaches, particularly mnemonic techniques and drawing, are widely used by participants and contribute to increased engagement and improvements in memory retention and emotional expression. Participants' responses indicate that integrating visual elements, especially colour, supports vocabulary learning and facilitates more personalised and meaningful language use. The results highlight the importance of multimodal learning environments, where visual, verbal, and motor processes interact to enhance learning outcomes. In this study, learners who engaged with colour and creative tasks reported higher levels of attention, motivation, and emotional involvement, reinforcing the value of integrating multiple modes of representation. These findings are consistent with frameworks such as Paivio's Dual Coding Theory (1991), which emphasises the interaction between verbal and non-verbal systems, and Lamb's (1999) view of language as closely interconnected with broader cognitive processes.

Moreover, the study demonstrates that visual art supports not only cognitive development but also emotional engagement and self-expression. Participants indicated that creative activities allowed them to better express emotions and connect with the learning material, highlighting the interdependence of cognition and affect in language learning. This aligns with observation that language plays a key role in processing perceptual and cognitive information.

Overall, the findings of this study underline the effectiveness of incorporating visual art and colour-based strategies into language education. By prioritising learners' experiences and preferences, the research shows that such approaches can

enhance engagement, support memory processes, and contribute to a more inclusive and meaningful learning environment.

In summary, this study indicates that visual art has considerable potential to enhance cognitive and emotional functioning across different age groups, including both young learners and older learners. Although many studies report positive effects, the existing research has numerous limitations, including the duration and intensity of hands-on experiences and limited control over participant groups. In addition, the lack of standardised research tools and inconsistencies in sample sizes make it difficult to compare findings across studies. At the same time, the study is not without limitations. The reliance on self-reported data and the variability in participants' backgrounds may influence the generalisability of the findings.

Additionally, questionnaire-based methods limit the ability to observe real-time learning processes and behavioural responses. Given these limitations, future research should adopt more systematic and rigorous approaches. In particular, there is a need for experimental and longitudinal designs, as well as more diverse and representative participant groups, to further investigate the long-term effects of art-based strategies in SLA. The development of standardised research protocols and evaluation tools would further enhance the comparability and reliability of findings. Additionally, greater integration of visual and motor-based activities into empirical studies could provide deeper insights into the long-term impact of art-based strategies on second language acquisition and cognitive development.

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