**WADI : International Interdisciplinary E-Research Journal**
*A scholarly, peer-reviewed Research Journal*
**ISSN : 3107-8591**
**Vol. 2, Issue 1, Jan – Mar 2026**

# The Visual Thread: How Imagery Weaves Through Human Life

**Prof. Prashant S. Acharya**
Faculty of Art & Design, Department of Design
Vishwakarma University, Pune, Maharashtra, India

**Abstract**

*Visuals go way back to the Stone Age, when early humans relied entirely on visual drawing to communicate. They documented their life through visuals, and their cave paintings were more than art.*

*Over time, as humans evolved, ways changed from the first colours a child perceives to the signs and symbols that guides a adult through daily life, visuals empathise with humans and intertwine with their understanding. This research dives into imagery functions as a continuous thread that weaves through every stage of life, shaping the way a human learns, interprets and recollects information. In childhood, visual information forms the foundation through picture books and colour-based stimuli. As individuals grow, visuals evolve into tools for navigating complexity in the form of infographics, user interfaces and instructional guides. In old age, simplified visual systems assist them with memory and accessibility. By walking this journey across different life stages, the study highlights how visual communication transcends age, language and literacy barriers, revealing that visuals are a lifelong language of understanding.*

**Keywords**: Visual Communication, Visual Memory, Graphic Design, Visual Design, Cognitive Development, Visual Memory, Pictorial Representation.

## Introduction

From the earliest drawings on cave walls to the digital interfaces today, visuals have remained a constant medium through which humans learn, record, and communicate knowledge. In prehistoric times, early humans relied entirely on drawings and symbols to share experiences, communicate and document their surroundings, establishing the foundation of visual communication long before the development of written language. These early depictions not only expressed creativity but also served as educational tools, transmitting survival strategies, beliefs, and cultural practices through imagery.

Visual learning has since evolved alongside human society, adapting to technological and cultural changes while maintaining its cognitive significance. Studies in developmental psychology suggest that children acquire understanding primarily through visual cues, as imagery stimulates both perception and memory during early learning stages. As individuals mature, visuals continue to function as vital tools for comprehension and communication, appearing in the form of educational diagrams, infographics, signage, and user interfaces that simplify complex information.

Even in later adulthood, visuals retain their importance by supporting accessibility and cognitive retention. Research indicates that visual aids assist older adults in maintaining visual memory and compensating for cognitive decline, reinforcing their value as inclusive communication systems across age groups.

This research investigates how visual learning functions as a continuous and age-neutral process, shaping human cognition and communication from childhood to old age. By examining the role of imagery across distinct life stages, it aims to illustrate how visuals serve as an unbroken thread a universal language that connects human understanding throughout life.

## Literature review

Literature Review: A comprehensive review of existing literature on visual communication, cognitive development, and visual memory is conducted. This includes analysing studies from developmental psychology, graphic design, and educational methodologies to understand how visuals have been utilised throughout history and their impact on learning and communication. The origins of learning through visuals go back to societies. Researchers find that ancient humans used cave paintings, engravings and pictographs as a way to talk to each other before writing appeared. Michelson (2017) says that the drawings acted as teaching stories that passed knowledge about hunting, rituals and daily life. Lewis Williams (2002) argues that the images worked as memory tools, ways to store and keep the community memory. It is seen that the images helped the group keep its memory alive.

Evolutionary studies show that the human brain developed extensive neural pathways dedicated to visual processing, suggesting that imagery played a central role in early cognitive development (Dehaene, 2009). These findings situate visuals not as modern conveniences but as ancient, biologically integrated learning mechanisms.

It is examined that children learn mainly through visual experiences. The research on development shows that infants recognize shapes, colors and faces long before they understand language (Johnson et al., 2008). Lo and Wang (2024) show that including visual teaching aids improves thinking skills. Boost movement skills in children. Visual literacy matters. Noble (n.d.) emphasizes that literacy, the ability to interpret images, is one of the forms of intelligence to appear, and visual literacy builds the base for thinking with symbols. Visual literacy helps children understand the world. Paivio's (1986) Dual Coding Theory argues that visual and verbal systems process information separately. Support each other and Dual Coding Theory shows that pictures are especially good for memory, in learners. More studies show the benefits of visual learning: It has been noticed that visuals help readers. Visuals lower the effort needed (Mayer, 2001). It is seen that picture books improve acquisition. Picture books use imagery to help the learner see the meaning of words (Sipe, 1998). Children, with learning differences pay attention. Children, with learning differences also understand better when the instructions are Hodgdon, 1995). Together, these findings demonstrate that early childhood cognition is inherently visual, and that imagery provides a scaffold for later verbal and analytical skills.

Visual Learning in Adolescence and Adulthood Many people think visual learning is not that important. Visual learning stays important in adolescence and adulthood. Visual learning changes as the person grows.

1. Visual Learning in Education Visual aids such, as diagrams, maps, timelines and infographics improve understanding and remembering in learners. It is seen that visual aids help the older learners understand and keep information. Tillman and Nillas (2011) note that visual literacy enhances understanding of ideas across disciplines. Visual literacy is especially useful in STEM subjects because STEM subjects require the learners to read data. Schnotz and Bannert (2003) argue that visuals can show thought patterns. Visuals make abstract concepts more accessible, for the learners.
2. Research always shows that tools: Improve long-term memory (Levie & Lentz, 1982) Facilitate problem-solving skills (Ainsworth, 2006) Support multimodal learning styles (Fleming & Mills, 1992) In my experience the visuals become organizers, for adult learners. The visuals help adult learners understand, sort and keep the information well.
3. Visuals in Professional Environments I notice that adulthood brings visual systems. The visual systems include the diagrams, the user manuals, the workplace signage and the data dashboards. It is seen that Qasserras (n.d.) found that the visual aids, in workplace documentation, cut the error rates and raise the efficiency by making the process details simpler. It is noted that Norman (2013) emphasises that the modern digital interfaces rely on the signifiers: icons, colours, and spatial hierarchies to steer the user behaviour. Examples include: IKEA's language-independent assembly manuals (Bichard & Gheerawo, 2011). Medical visualisations make patient communication easier (Houts et al. 2006). When looking at data visualizations it is seen in the information (Tufte, 2001). Data visualisations turn numbers into pictures that people can read easily. It is noticed that these systems show that the adults still rely a lot on cognition. The adults rely on cognition for decision making, navigation, and efficiency.
4. Visuals and Digital Media It is seen that modern adults look at amounts of visual information, on smartphones, apps and social media. Human–Computer Interaction research shows that visual layouts, icons and motion patterns steer user attention and help learning (Nielsen & Loranger 2006). Visual learning remains essential in a world with technology. Visual learning remains a part of how we learn. I think that Additional studies highlight the benefits of visual learning: Early visual learning matters. Visuals lower the load for emerging readers (Mayer, 2001). Visuals also make it easier for emerging readers to follow the text. It is seen that picture books help children learn words. Picture books use pictures that give the context, and picture books help the acquisition (Sipe, 1998). Children with learning differences pay attention. Children with learning differences also may understand more when the instructions are clear (Hodgdon, 1995). Together, these findings demonstrate that early childhood cognition is inherently visual and that imagery provides a scaffold for later verbal and analytical skills.

**Why Visuals Work:**

The Pictorial Superiority Effect offers the best cognitive interpretation of persistent visual learning. In the 1970s, Nelson, Reed and Walling (1976) introduced one of the earliest demonstrations of better recall from pictures than words

**ISSN : 3107-8591**
**Vol. 2, Issue 1, Jan – Mar 2026**

a result that has been replicated countless times in cognitive psychology. Visuals involve several systems of the brain at once, including the emotional, perceptual and memory-related centres (Kosslyn, 1994).

Sann (2015) states that participants recognised images significantly faster than text, and Mayer (2001) posits the idea that graphics pair with verbal content to minimise cognitive load. These are universal ideas, which explains why imagery is such a powerful aid in learning regardless of one's age.

Visual Learning and Cognitive Support in the Ageing Brain. Visual elements also become a supportive factor for the elderly population. Research on cognitive ageing has demonstrated that visual memory is more protected than verbal memory (Ebaid & Crowther, 2019). This renders visuals a useful device for everyday functioning.

1) **Memory and Routine Support**: Colour coding, icons, cuter diagrams and visual schedules can also make the day-to-day easier for older adults. In older adults, although there appears to be slowing across a range of cognitive processes, Mayhew, Li & Kourtzi (2010) have shown that in learning newly experienced visual categories, they are able to generalize their model-based strategies. This indicates that visual learning is malleable even in older adults.
2) **Healthcare and Accessibility**: In medical contexts, pictorial instructions significantly improve comprehension and adherence among elderly patients (Houts et al., 2006). Visual signage assists with navigation in hospitals and long-term care facilities, especially for individuals with dementia or mild cognitive impairment (Day, Carreon, & Stump, 2000).

These findings reinforce the idea that visuals function as compensatory tools, supporting independence and quality of life in ageing populations.

**Gaps in Current Research**

Although visual learning is extensively studied within specific age groups, there is limited research examining it across the entire lifespan. Literature remains fragmented:

Childhood studies rarely connect with adult media literacy

Adult learning research seldom references ageing cognition

Neuroscience studies exist in isolation from educational theory

Historical perspectives are not integrated into cognitive development models

This fragmentation demonstrates the need for research synthesising visual learning as a continuous developmental phenomenon—an aim this paper addresses.

**References**

1) Ainsworth, S. (2006). DeFT: A conceptual framework for considering learning with multiple representations. Learning and Instruction, 16(3), 183–198.
2) Bichard, J., & Gheerawo, R. (2011). The IKEA effect: Visual design for instruction. Royal College of Art.
3) Day, K., Carreon, D., & Stump, C. (2000). The therapeutic design of environments for people with dementia. The Gerontologist, 40(4), 397–416.
4) Dehaene, S. (2009). Reading in the Brain. Viking.
5) Ebaid, D., & Crewther, S. (2019). Visual information processing in young and older adults. Frontiers in Aging Neuroscience, 11, 116.
6) Fleming, N., & Mills, C. (1992). VARK: A guide to learning styles. Journal of Educational Studies.
7) Hodgdon, L. (1995). Visual Strategies for Improving Communication. QuirkRoberts.
8) Houts, P., Doak, C., Doak, L., & Loscalzo, M. (2006). The role of pictures in improving health communication. Patient Education and Counseling, 61(2), 173–190.
9) Johnson, M., Grossmann, T., & Farroni, T. (2008). The social cognitive neuroscience of infancy. Social Cognitive and Affective Neuroscience, 3(3), 278–287.
10) Kosslyn, S. (1994). Image and Brain. MIT Press.
11) Levie, W., & Lentz, R. (1982). Effects of text illustrations. Educational Communication and Technology Journal, 30, 195–232.
12) Lewis-Williams, D. (2002). The Mind in the Cave. Thames & Hudson.
13) Lo, C., & Wang, H. (2024). Embedded visual image teaching aids and child development. Journal of Intelligence, 12(10), 102.
14) Mayer, R. (2001). Multimedia Learning. Cambridge University Press.

15) Mayhew, S., Li, S., & Kourtzi, Z. (2010). Learning shapes visual representation in the aging brain. Journal of Cognitive Neuroscience, 22(12), 2899–2912.
16) Michelson, J. (2017). A short history of visual literacy. Journal of Visual Literacy, 36(3–4), 1–14.
17) Nelson, D., Reed, V., & Walling, J. (1976). Pictorial superiority effect. Journal of Experimental Psychology, 2(2), 225–238.
18) Nielsen, J., & Loranger, H. (2006). Prioritizing Web Usability. New Riders.
19) Noble, J. (n.d.). Picture thinking and visual literacy development in young children. University of Cambridge Repository.
20) Norman, D. (2013). The Design of Everyday Things. MIT Press.
21) Qasserras, M. (n.d.). The role of visual learning aids in high school education. European Journal of Alternative Education Studies.
22) Sann, C. (2015). Visual cognition in fast perception. Cognitive Processing, 16(4), 325–338.
23) Schnotz, W., & Bannert, M. (2003). Construction and interference in learning from multiple representations. Learning and Instruction, 13(2), 141–156.
24) Sipe, L. (1998). How picture books work. Children's Literature in Education, 29(2), 97–108.
25) Tufte, E. (2001). The Visual Display of Quantitative Information. Graphics Press.
26) UNESCO. (2013). Global Media and Information Literacy Framework.
27) Tillman, D., & Nillas, L. (2011). Visual literacy as an educational competency. Illinois Wesleyan University.

■■■