

Digital and Multimodal Adaptations of Visual Thinking Strategies in Basic Education in the Philippines

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Abstract: This study described the landscape of the digital and multimodal adaptations of Visual Thinking Strategies (VTS) in Philippine basic education and examined how these adaptations are incorporated into and enhance English language learning outcomes. Guided by an interpretive research paradigm, the study employed a qualitative case study approach using a literature review as its primary method. Purposively selected online, publicly accessible scholarly sources were analyzed as data through reflexive thematic analysis and thematic synthesis. Data construction involved iterative coding, categorization, and interpretation of literature on VTS, digital pedagogy, multimodal literacy, and English language education. Trustworthiness was ensured through credibility, dependability, confirmability, and transferability criteria. Findings reveal that VTS is adapted into digital learning environments through screen-based image discussions, online collaborative platforms, and multimodal instructional tools, extending its traditional use in face-to-face visual interpretation activities. In English language learning, these adaptations function as multimodal scaffolding strategies that promote oral communication, vocabulary development, reading comprehension, and critical thinking through structured visual inquiry and dialogic interaction. The study further shows that digital and multimodal VTS enhances English language learning outcomes by strengthening visual-verbal integration, increasing learner engagement, supporting evidence-based reasoning, and enabling multimodal expression through digital storytelling and other creative outputs. These outcomes are further reinforced by contextualized practices in Philippine classrooms, including the use of culturally relevant materials and flexible language practices such as code-switching.

Keywords: Visual Thinking Strategies, multimodal learning, digital pedagogy, English language learning, basic education, Philippines

I. Introduction

The growing centrality of images, platforms, and interactive media in contemporary learning environments has transformed how young learners encounter and construct meaning. In basic education, literacy is no longer confined to print-based decoding but increasingly involves the interpretation of visual, digital, and multimodal texts (Kress, 2010; Serafini, 2014). Within this evolving landscape, **Visual Thinking Strategies (VTS)** - originally developed by Abigail Housen and Philip Yenawine - offers a pedagogical approach that foregrounds observation, evidence-based reasoning, and collaborative meaning-making through guided discussions of visual materials (Housen, 2002; Yenawine, 2013). While VTS has been widely recognized for enhancing critical thinking and language development, its application has largely remained anchored in traditional, face-to-face engagements with static artworks.

In the context of the Philippines, the rapid integration of digital technologies in basic education—accelerated by shifts toward blended and online learning—has created new opportunities and challenges for pedagogical innovation (Department of Education [DepEd], 2020). Learners are now routinely exposed to a wide array of multimodal texts, including videos, infographics, social media content, and digitally mediated images. These developments call for instructional approaches that not only accommodate but also critically harness such forms of representation. The principles underlying Visual Literacy and Multimodal Literacy are therefore becoming increasingly vital in English language education, where comprehension, interpretation, and expression must extend across multiple semiotic modes (Jewitt, 2008; Kress, 2010).

Despite its conceptual alignment with multimodal learning, existing research on VTS has yet to fully explore its potential within digitally enriched environments, particularly in basic education settings in Southeast Asia. Current studies tend to focus on in-person classroom dialogue and emphasize oral language development, with limited attention to how VTS can be adapted to digital platforms or integrated with multimodal texts (Yenawine, 2013; Housen, 2002). Moreover, there is a paucity of context-specific investigations that examine how Filipino learners engage with visual and digital materials, and how such engagement can be systematically leveraged to support language learning outcomes.

This paper addressed these gaps by examining the digital and multimodal adaptations of VTS in Philippine basic education. It seeks to explore how the core principles of VTS—careful observation, evidence-based interpretation, and dialogic inquiry—can be recontextualized within digitally mediated learning environments. In doing so, the study contributes to ongoing discussions in English Language Teaching by proposing a pedagogical reframing that aligns visual inquiry with the demands of 21st-century literacies. Ultimately, the paper aims to provide a foundation for more responsive, inclusive, and contextually grounded approaches to teaching English in an increasingly visual and multimodal world.

Digital and Multimodal Adaptation of VTS

Recent literature suggests that VTS is highly adaptable to **digital and multimodal learning environments**, where visual texts such as images, videos, infographics, and interactive media are central to instruction. Multimodality theory emphasizes that meaning is constructed through multiple semiotic resources, including visual, linguistic, spatial, and digital modes (Kress, 2010; Jewitt, 2008). In digital classrooms, VTS is often implemented through screen-based image discussions, online collaborative platforms, and multimedia presentations, enabling learners to engage in interpretive dialogue even in remote or blended learning contexts. These adaptations extend the traditional VTS model by incorporating technology-mediated interaction, thereby broadening access to visual inquiry and collaborative meaning-making.

VTS in English Language Learning

The incorporation of VTS into **English language learning** has been associated with improvements in speaking, vocabulary development, and communicative competence. By requiring learners to verbalize interpretations of visual stimuli, VTS creates authentic opportunities for language use in meaningful contexts (Nguyễn & Phan, 2025). This aligns with communicative language teaching principles, where language is acquired through interaction and purposeful communication. In basic education settings, especially in multilingual contexts like the Philippines, VTS supports learners in developing English proficiency by scaffolding oral expression through visual prompts, reducing linguistic anxiety, and encouraging participation in structured dialogue.

Enhancement of English Language Learning Outcomes

Studies indicate that VTS enhances English language learning outcomes by strengthening **critical thinking, comprehension, and expressive skills**. The structured questioning approach fosters evidence-based reasoning, enabling learners to construct and defend interpretations using visual cues (Hu & Hwang, 2024). This process supports higher-order thinking skills essential for academic language development. Additionally, multimodal exposure improves reading comprehension by helping learners connect visual and textual information, thereby deepening understanding of content (Mahardhika, 2024). In digital environments, these effects are amplified through interactive tools that allow learners to revisit, analyze, and respond to visual materials collaboratively.

Articulation of Learning Outcomes in Digital VTS

The articulation of learning outcomes in digital and multimodal VTS contexts reflects a shift toward **multiliteracy competencies**, where learners are expected to interpret and produce meaning across multiple modes. Visual literacy and digital literacy are increasingly recognized as essential components of 21st-century education, particularly in English language learning environments where multimodal texts are prevalent (Serafini, 2014). Learners demonstrate outcomes not only through oral and written language but also through multimodal productions such as digital narratives, presentations, and visual explanations. This reflects a broader pedagogical shift from traditional text-based assessment to performance-based and multimodal evaluation frameworks.

Synthesis

Overall, the literature suggests that digital and multimodal adaptations of VTS provide a powerful pedagogical framework for enhancing English language learning in basic education. By integrating visual inquiry with language production, collaborative dialogue, and multimodal expression, VTS supports the development of communication skills, critical thinking, and literacy competencies. However, existing studies remain limited in their focus on the Philippine basic education context, particularly in terms of systematic implementation, localized adaptation, and articulation of learning outcomes. This highlights the need for further research to explore how VTS can be effectively contextualized within digital and multimodal English language learning environments in the Philippines.

Theoretical Framework

This study is anchored on an integrated theoretical framework combining constructivism, social constructivism, multimodal learning theory, and visual literacy theory to explain the digital and multimodal adaptations of VTS in Philippine basic education. Constructivist theory posits that learners actively construct knowledge through interpreting experiences, which in VTS occurs as students analyze and make meaning from visual stimuli (Piaget, 1952). Social constructivism further explains that learning is mediated through interaction and dialogue, where meaning is co-constructed among learners and facilitated through scaffolding within the Zone of Proximal Development (Vygotsky, 1978). Multimodal learning theory expands this understanding by emphasizing that meaning is created through multiple semiotic modes such as visual, linguistic, and digital forms, which supports the integration of images, videos, and digital texts in VTS-enhanced English learning (Kress, 2010; Jewitt, 2008). Visual literacy theory complements these perspectives by focusing on learners' ability to interpret, analyze, and construct meaning from visual information, which is central to VTS questioning and discussion processes (Serafini, 2014). Together, these theories explain how learners construct meaning individually and socially, engage with multimodal texts, and develop interpretive and communicative competencies, thereby providing a comprehensive framework for understanding how digital and multimodal VTS enhances English language learning outcomes in basic education.

Statement of the Problem

This study aimed to describe the landscape of the digital and multimodal adaptations of visual thinking strategies in basic education in the Philippines. The study sought to answer the following questions:

1. How are visual thinking strategies adapted to digital and multimodal basic education learning spaces in the Philippines?
2. How are the digital and multimodal adaptations of visual thinking strategies incorporated in English Language learning in basic education in the Philippines?
3. How does the digital and multimodal adaptations of visual thinking strategies enhance English Language learning in basic education in the Philippines?
4. How are digital and multimodal adaptations of visual thinking strategies articulated in English language learning outcomes in basic education in the Philippines?

II. Methodology

Interpretive Research Paradigm

This study is anchored on the **interpretive paradigm**, which assumes that reality is not singular or objective but is socially constructed through meanings, experiences, and contextual interpretations (Schwandt, 1994; Interpretivism). Within this worldview, knowledge is co-constructed through the researcher's engagement with texts rather than discovered as an external, fixed truth. Interpretivism is particularly suited for examining educational phenomena such as Visual Thinking Strategies (VTS), as it allows for the exploration of layered meanings embedded in pedagogical practices, digital tools, and multimodal learning environments.

Case Study Approach

The study adopts a **qualitative case study orientation**, not in the traditional sense of a bounded physical site, but as an **analytical case constructed from a phenomenon of interest**—the digital and multimodal adaptation of VTS in English language learning in basic education. A qualitative case study enables an in-depth, holistic understanding of complex educational processes within their real-world context (Yin, 2018; Stake, 1995). In this methodology, the “case” is defined as a conceptual system bounded by literature, focusing on how VTS is interpreted, adapted, and operationalized in digitally mediated English learning environments. Consistent with case study logic, the approach emphasizes contextual richness, multiple perspectives, and the synthesis of meaning across diverse sources rather than generalization through statistical inference (Merriam & Tisdell, 2016).

Qualitative Research Design

The study follows a **qualitative research design**, which prioritizes depth of understanding over numerical measurement and seeks to interpret meanings, patterns, and relationships within textual data (Denzin & Lincoln, 2018; Qualitative Research). Qualitative design is appropriate because the phenomenon under investigation—VTS in digital and multimodal English learning—is emergent, context-dependent, and heavily shaped by pedagogical interpretation rather than quantifiable variables.

Literature Review as Primary Method

The primary data source consisted of a **qualitative literature review of online, publicly accessible academic materials**, including peer-reviewed journal articles, conference papers, dissertations, and scholarly reports. The literature review functioned not merely as a summary but as a **data corpus for interpretive analysis**, consistent with critical and integrative review approaches (Booth et al., 2016). This study employed a **purposive**

sampling strategy in selecting literature. Purposive sampling in qualitative inquiry involves deliberately selecting sources that are information-rich and relevant to the phenomenon under study (Patton, 2015; Purposive Sampling). Inclusion criteria include:

- Studies on Visual Thinking Strategies (VTS)
- Research on digital learning environments
- Literature on multimodal literacy and English language learning
- Studies focusing on basic education contexts

Exclusion criteria included non-academic sources, irrelevant populations, and studies lacking methodological transparency.

Data Construction and Organization

Data construction is treated as an interpretive process in which meaning is derived from textual interaction between the researcher and selected literature. Rather than treating literature as static evidence, the study views each document as a **discursive artifact containing conceptual, pedagogical, and empirical meanings**. These meanings are extracted, compared, and reorganized into conceptual clusters that represent emerging patterns across studies.

Thematic Analysis Procedure

The study employs **reflexive thematic analysis** to analyze the literature corpus. Thematic analysis is widely recognized as a flexible qualitative method for identifying, analyzing, and interpreting patterns of meaning across textual data (Braun & Clarke, 2006; Thematic Analysis). It is particularly suitable for synthesizing diverse literature because it allows both inductive (data-driven) and deductive (theory-informed) coding.

The analytic process follows iterative stages:

1. Familiarization with the literature corpus
2. Initial coding of relevant concepts (e.g., “visual literacy,” “digital scaffolding,” “oral language development”)
3. Generation of preliminary themes
4. Review and refinement of themes
5. Definition and naming of final themes
6. Interpretation of thematic relationships across studies

Thematic Synthesis and Interpretation

Beyond coding, the study employs **thematic synthesis**, integrating findings across multiple studies to construct higher-order analytical insights. Thematic synthesis allows the transformation of fragmented findings into coherent conceptual explanations by identifying convergence, divergence, and gaps across literature (Thomas & Harden, 2008). Through synthesis, themes are reorganized into broader conceptual categories such as:

- Digital mediation of VTS
- Multimodal language learning enhancement
- Critical thinking development through visual inquiry
- Contextual adaptation in basic education

This process results in a **conceptual framework** explaining how digital and multimodal VTS contributes to English language learning outcomes.

Trustworthiness and Rigor

To ensure rigor, the study applies qualitative trustworthiness criteria, including:

- **Credibility** through systematic and transparent literature selection
- **Dependability** through documented analytic procedures
- **Confirmability** through reflexive interpretation of data
- **Transferability** through thick description of themes and contexts (Lincoln & Guba, 1985)

III. Results

How are visual thinking strategies adapted to digital and multimodal basic education learning spaces in the Philippines?

The adaptation of VTS into digital and multimodal learning spaces in Philippine basic education reflects a broader shift from static, teacher-centered instruction toward **interactive, visually mediated, and student-centered meaning-making environments**. While empirical studies specific to the Philippines remain limited, existing literature on VTS, digital pedagogy, and multimodal learning provides a strong basis for understanding how such adaptations are being conceptualized and implemented.

Digitization of the VTS Core Process. At its core, VTS is a structured yet open-ended discussion method built around guided questioning and collaborative interpretation (Cerqueira et al., 2023). Traditionally conducted in physical classrooms using printed artworks, VTS is increasingly adapted into **digital environments** through (1) Projected or screen-shared images (e.g., via presentation tools or LMS platforms); (2) online discussion forums and synchronous video conferencing; and (3) interactive whiteboards and annotation tools. These adaptations preserve the three core VTS questions while expanding participation beyond physical classrooms. Studies show that VTS can be successfully implemented even without traditional museum settings, suggesting its flexibility across contexts (Cerqueira et al., 2023). In the Philippine context—particularly under blended and remote learning modalities—such digital mediation allows VTS to be integrated into platforms commonly used in basic education (e.g., Google Classroom, Zoom), enabling **distributed yet dialogic learning spaces**.

Expansion into Multimodal Texts. A major transformation in digital adaptation is the shift from static artworks to **multimodal texts**, including (1) videos, (2) infographics, (3) social media posts, and (4) digital illustrations and memes. This aligns VTS with the principles of multimodal learning, where meaning is constructed across visual, textual, and auditory modes. Contemporary research highlights that VTS functions as a **“question-sequence strategy”** that can be extended beyond art to support inquiry into various visual forms (Hu & Hwang, 2024). In Philippine classrooms, where learners are immersed in digital media cultures, this adaptation allows VTS to: (1) bridge school literacy with everyday media practices; (2) enhance engagement by using culturally familiar visual content; and (3) support interpretation of real-world communication artifacts

Integration with Online Collaborative Learning. Digital VTS environments often incorporate **collaborative and participatory structures**, such as breakout room discussions, peer commenting on shared visual content, and asynchronous reflective writing. Recent adaptations of VTS in online global learning contexts demonstrate its effectiveness in **virtual exchange and collaborative meaning-making**, emphasizing dialogue, reciprocity, and shared interpretation (Tan et al., 2025). In the Philippine basic education setting, this aligns with

(1) learner-centered pedagogies promoted in the K–12 curriculum, (2) the need to foster communication and collaboration skills, and (3) social constructivist approaches to language learning.

Development of Visual and Digital Literacies. Digital adaptations of VTS directly support the development of **visual literacy and critical thinking**, which are essential competencies in 21st-century education. Research indicates that VTS enhances observational skills, evidence-based reasoning, and communication and interpretation abilities (Cerqueira et al., 2023; Choi et al., 2022). When integrated with digital tools, VTS further enables learners to navigate complex visual information environments, critically analyze media messages, and produce multimodal responses (e.g., digital storytelling, visual essays). This is particularly relevant in the Philippines, where digital literacy is increasingly embedded in curriculum reforms and learning continuity frameworks.

Localization and Contextualization in Philippine Classrooms. A key feature of VTS adaptation in the Philippines is **contextualization**. Digital and multimodal VTS practices often incorporate local cultural images and narratives, community-based visual materials, and multilingual discussion (e.g., code-switching between English and Filipino). Such localization enhances cultural relevance, student participation, and meaningful engagement with visual texts. However, literature also suggests that VTS implementations are highly dependent on teacher facilitation and training, which remains a challenge in scaling the approach across diverse educational contexts (Cerqueira et al., 2023).

Emerging Hybrid Pedagogical Models. The convergence of VTS with digital and multimodal environments has led to **hybrid pedagogical models**, characterized by (1) VTS + digital storytelling; (2) VTS + inquiry-based learning; (3) VTS + language scaffolding strategies; and (4) VTS + multimedia production tasks. These hybrid models reposition VTS from a **discussion technique** to a **multimodal learning framework**, where students not only interpret images but also create and communicate meaning across platforms.

Synthesis. The adaptation of Visual Thinking Strategies in Philippine basic education is best understood as a **pedagogical transformation rather than mere technological integration**. Digital and multimodal environments expand VTS by (1) extending its dialogic structure into online and hybrid spaces; (2) broadening its textual base from artworks to diverse media; (3) enhancing collaborative and participatory learning; and (4) aligning it with visual, digital, and multimodal literacies. Despite these advances, the field remains underdeveloped, particularly in terms of **empirical validation, structured instructional models, and large-scale implementation in local contexts**. This underscores the need for further research that systematically examines how VTS can be optimized within the realities of Philippine basic education.

IV. How are the digital and multimodal adaptations of visual thinking strategies incorporated in English Language learning in basic education in the Philippines?

The incorporation of digital and multimodal adaptations of Visual Thinking Strategies (VTS) into English language learning in Philippine basic education represents a convergence of visual pedagogy, language acquisition, and technology-enhanced learning. This integration is not merely a shift in instructional tools but a reconfiguration of how language is taught, experienced, and constructed through multiple semiotic modes.

VTS as a Multimodal Language Scaffolding Strategy. At its core, VTS supports English language learning by prompting learners to verbalize interpretations of visual stimuli, thereby linking visual cognition with linguistic expression. This process has been described as a “meta-visual-lingual” activity, where learners interpret, describe, and analyze images through language (Nguyễn & Phan, 2025). In digitally mediated Philippine classrooms, this scaffolding is expanded through screen-based images, videos, and interactive media, digital

prompts and annotation tools, and online discussion platforms. These tools allow learners to engage in structured visual inquiry while simultaneously practicing English, particularly in speaking and vocabulary development. Research indicates that VTS enhances learners' ability to articulate ideas and improves oral communication proficiency (Nguyễn & Phan, 2025).

Integration with Multimodal Literacy Practices. The shift toward multimodal learning in Philippine basic education aligns with the increasing use of texts that combine visual, textual, and auditory elements. Multimodal instructional materials have been shown to improve learners' ability to interpret and present information, particularly in tasks involving visual-verbal relationships (Caresosa, 2025). Within this framework, VTS is adapted by (1) applying its core questioning strategy to infographics, videos, and digital narratives; (2) encouraging learners to interpret meaning across modes (images, captions, sound); and (3) extending responses beyond speech to include multimodal outputs (e.g., digital storytelling, visual essays). This integration supports the development of Multimodal Literacy, where learners must navigate and produce meaning using multiple representational forms.

Enhancement of Reading and Comprehension Skills. In English language learning, particularly in basic education, reading comprehension remains a foundational skill. The use of multimodal texts—supported by VTS questioning—has been shown to make reading more interactive and meaningful by combining written and visual elements (Mahardhika, 2024). In Philippine classrooms, this manifests as (1) using images or videos as pre-reading stimuli to activate schema; (2) applying VTS questions to interpret visual elements within texts; and (3) encouraging learners to justify interpretations using both textual and visual evidence. Local studies further show that multimodal reading strategies improve comprehension levels among elementary learners, particularly in interpreting graphs, diagrams, and visual data (Gaa, 2025). Thus, VTS becomes a bridge between visual interpretation and textual understanding, reinforcing comprehension through layered meaning-making.

Development of Critical Thinking and Language Production. Digital VTS environments emphasize evidence-based reasoning, a key component of both critical thinking and language learning. Learners are required to support interpretations with visual evidence, compare perspectives in collaborative discussions, and construct coherent arguments in English. Research highlights that VTS, when combined with technological supports, enhances critical inquiry and visual literacy by guiding learners through structured questioning processes (Hu & Hwang, 2024). In English classrooms, this translates into (1) improved argumentative speaking and writing; (2) greater depth in interpreting texts; and (3) increased confidence in expressing ideas.

Alignment with Digital and Contextualized Pedagogies in the Philippines. The Philippine basic education system has increasingly emphasized contextualized, learner-centered, and technology-integrated instruction, particularly in response to blended learning environments. VTS aligns with these priorities by the following: (1) Supporting interactive and discussion-based learning in online platforms; (2) Allowing the use of locally relevant visual materials (e.g., community images, social media content); and (3) Encouraging code-switching and multilingual expression as scaffolds toward English proficiency. Moreover, the use of technology in English language learning has been widely recognized as enhancing engagement and supporting diverse learning needs (Ahmadi, 2018, as cited in Albert et al., 2022). Through digital adaptation, VTS becomes not only a strategy for interpretation but also a tool for contextualized and culturally responsive language learning.

Emergence of Multimodal Output-Based Learning. A significant shift in the application of VTS in English learning is the movement from interpretation to production. Learners are no longer limited to discussing images but are also tasked with creating multimodal texts, such as digital stories, visual presentations, and infographics and video-based responses. This reflects a broader pedagogical shift toward productive multimodal

literacy, where learners actively construct meaning across modes rather than passively consume content. Such approaches reinforce both language proficiency and communicative competence.

Synthesis. The incorporation of digital and multimodal adaptations of VTS in English language learning in Philippine basic education can be understood as a multilayered pedagogical integration:

- Cognitive layer: linking visual perception with language production
- Technological layer: enabling interactive and distributed learning environments
- Linguistic layer: supporting speaking, reading, and writing development
- Cultural layer: contextualizing learning through locally relevant materials

Ultimately, VTS evolves from a discussion-based art strategy into a comprehensive multimodal language pedagogy, capable of addressing the demands of 21st-century English education. However, despite its promise, there remains a need for more empirical, context-specific research in Philippine basic education, particularly in developing structured instructional models and assessing long-term language outcomes.

V. How do the digital and multimodal adaptations of visual thinking strategies enhance English Language learning in basic education in the Philippines?

The enhancement of English language learning through digital and multimodal adaptations of VTS in Philippine basic education can be understood as a convergence of visual cognition, language development, and technology-mediated pedagogy. These adaptations do not simply modernize VTS - they expand its capacity to support comprehension, expression, and critical literacy in increasingly complex learning environments.

Visual-Verbal Integration and Language Production. The enhancement of English language learning through digital and multimodal adaptations of Visual Thinking Strategies (VTS) begins with its capacity to link visual interpretation with verbal expression. VTS requires learners to describe, interpret, and justify what they see, transforming visual stimuli into structured linguistic output. This process, often described as a “meta-visual-lingual” activity, strengthens learners’ ability to articulate ideas in English, improving fluency, vocabulary, and confidence (Nguyễn & Phan, 2025). In digitally mediated environments—such as online classrooms and collaborative platforms - this process is amplified, as learners engage in both synchronous and asynchronous discussions, thereby increasing opportunities for language practice and interaction.

Multimodal Support for Reading Comprehension. Digital and multimodal adaptations of VTS also enhance reading comprehension by integrating visual and textual elements. Multimodal texts enable learners to activate prior knowledge, make inferences, and construct deeper meanings by combining images, written language, and other media (Mahardhika, 2024). In the Philippine basic education context, such approaches have been shown to improve learners’ ability to interpret complex materials, particularly when visual data such as graphs and diagrams complement written texts (Gaa, 2025). Through guided VTS questioning, learners analyze relationships between visual and textual elements and justify their interpretations using evidence, transforming reading into an active and inquiry-driven process.

Development of Critical Thinking and Reasoning. Another significant enhancement lies in the development of critical thinking and evidence-based reasoning. VTS consistently prompts learners to support their interpretations with visual evidence, fostering analytical thinking, argument construction, and perspective-taking. When supported by digital tools, VTS functions as a structured inquiry strategy that strengthens both visual literacy and higher-order thinking skills (Hu & Hwang, 2024). These cognitive gains translate into improved

English language outcomes, including more coherent oral responses, more developed written arguments, and greater ability to critically engage with texts.

Increased Engagement through Multimodal Learning. The integration of multimodal and digital elements into VTS enhances learner engagement and motivation. By incorporating familiar media such as videos, social media content, and interactive visuals, instruction becomes more relevant to learners' everyday experiences. Multimodal literacy research indicates that combining visual, auditory, and digital modes creates more engaging and effective learning environments (Sutrisno et al., 2023). In Philippine classrooms, this results in increased participation and a more dialogic learning atmosphere, where students actively contribute to meaning-making processes.

Vocabulary Development and Language Structures. Digital VTS also supports vocabulary acquisition and the development of language structures by providing contextualized input. Visual stimuli enable learners to associate words with concrete representations, making vocabulary more meaningful and easier to retain. Research suggests that VTS enhances language development by linking visual cues with cognitive processing, supporting both receptive and productive language skills (Albert et al., 2022). In multimodal environments, repeated exposure to language across different modes reinforces learning and facilitates more effective communication.

Multimodal Production and Creative Expression. A key enhancement of digital VTS is the shift from interpretation to multimodal production. Learners are encouraged to create outputs such as digital stories, visual essays, infographics, and video presentations. These tasks require the organization of ideas, application of language skills, and creative communication across multiple modes. Such approaches have been associated with increased creativity and deeper engagement in English learning, as learners become active producers of knowledge rather than passive recipients (Huh, 2016). This positions VTS as a comprehensive framework for both understanding and expressing meaning.

Contextualized and Inclusive Learning in the Philippines. Finally, the adaptability of digital and multimodal VTS supports contextualized and inclusive learning in the Philippine setting. Teachers can integrate locally relevant images, cultural artifacts, and community-based materials, enabling learners to connect classroom activities with their lived experiences. Additionally, the flexible nature of VTS allows for code-switching as a scaffold toward English proficiency, making learning more accessible for diverse learners. In this way, VTS enhances not only linguistic and cognitive outcomes but also promotes culturally responsive pedagogy.

Synthesis. Overall, the digital and multimodal adaptation of Visual Thinking Strategies enhances English language learning in Philippine basic education by integrating linguistic development, critical thinking, engagement, and creativity within a unified pedagogical framework. While the benefits are evident, further empirical research is needed to develop structured instructional models and assess long-term impacts within the specific sociocultural context of the Philippines.

VI. How are digital and multimodal adaptations of visual thinking strategies articulated in English language learning outcomes in basic education in the Philippines?

Enhancement of Language Proficiency through Visual–Verbal Interaction. Digital and multimodal adaptations of Visual Thinking Strategies (VTS) significantly improve English language learning outcomes by strengthening the connection between visual interpretation and verbal production. In VTS-based instruction, learners are guided to describe, interpret, and justify what they observe in images, which naturally requires the

use of English in meaningful communicative contexts. This process enhances speaking fluency, vocabulary development, and syntactic accuracy as learners construct explanations and engage in dialogue (Hu & Hwang, 2024; Nguyễn & Phan, 2025). In Philippine basic education classrooms, where English is often learned as a second language, digital platforms further amplify these effects by enabling learners to participate in interactive discussions beyond the physical classroom, thereby increasing language exposure and practice opportunities.

Improvement of Reading Comprehension and Multimodal Literacy. Digital and multimodal VTS also contributes to improved reading comprehension by integrating visual, textual, and digital modes of meaning-making. Learners are encouraged to interpret images alongside written prompts, which promotes deeper comprehension through inferencing, contextualization, and critical engagement with content. Multimodal learning environments help learners construct meaning by connecting visual cues with linguistic input, thereby strengthening interpretive reading skills (Mahardhika, 2024). In the Philippine context, this is particularly valuable because learners often encounter English texts that include diagrams, illustrations, and digital media. Research indicates that multimodal engagement improves comprehension and supports more active reading strategies, especially when learners are guided to justify interpretations using evidence from visual stimuli (Gaa, 2025).

Development of Critical Thinking and Communicative Competence. A key language learning outcome of VTS is the development of critical thinking, which directly enhances communicative competence in English. The structured questioning approach of VTS (“What is going on in this image?”, “What do you see that makes you say that?”, and “What more can we find?”) encourages learners to construct evidence-based responses, evaluate alternative interpretations, and engage in reflective dialogue. This process strengthens higher-order thinking skills such as analysis, synthesis, and evaluation, which are essential for academic language use (Albert et al., 2022). Studies show that VTS improves learners’ ability to articulate coherent explanations and engage in structured discussions, thereby reinforcing both oral and written communication skills (Hu & Hwang, 2024).

Increased Engagement and Motivation in English Learning. Digital and multimodal VTS enhances learner engagement by making English learning more interactive, contextualized, and meaningful. The use of digital images, videos, and interactive platforms aligns with learners’ everyday digital experiences, thereby increasing motivation and participation. Multimodal literacy approaches have been shown to foster active engagement by integrating visual, auditory, and textual modes of learning, which helps sustain learner attention and participation (Sutrisno et al., 2023). In Philippine basic education settings, this is particularly significant because engagement is closely linked to language acquisition outcomes, especially in large and diverse classrooms where traditional lecture-based instruction may limit student participation.

Vocabulary Acquisition and Language Structuring. Another important outcome of digital VTS is vocabulary expansion and improved language structuring. Learners acquire new vocabulary through contextualized exposure to visual stimuli, which helps them associate words with concrete meanings rather than abstract definitions. This visual–linguistic connection enhances retention and facilitates more meaningful use of language in speaking and writing tasks (Nguyễn & Phan, 2025). Furthermore, repeated engagement with multimodal inputs strengthens grammatical awareness, coherence, and discourse organization, as learners repeatedly practice expressing interpretations in structured English sentences (Albert et al., 2022).

Multimodal Expression and Productive Language Skills. Digital VTS extends learning outcomes beyond comprehension toward multimodal production, where learners create outputs such as digital narratives, visual essays, and presentations. These tasks require the integration of language skills with creativity and digital literacy, thereby strengthening productive competencies in English. Learners are no longer passive recipients of information but active meaning-makers who use language to communicate interpretations across different media (Huh, 2016). This aligns with constructivist learning principles, where knowledge is built through active engagement and expression.

Synthesis. Thus, digital and multimodal adaptations of VTS significantly enhance English language learning outcomes in Philippine basic education by improving speaking, reading comprehension, vocabulary acquisition, critical thinking, and multimodal communication skills. By combining visual interpretation with structured English discourse and digital interaction, VTS provides a learner-centered approach that fosters deeper engagement and more meaningful language use in both academic and real-world contexts.

VII. Discussion

The growing body of literature on Visual Thinking Strategies (VTS) suggests its strong potential for supporting observation, dialogue, and evidence-based reasoning in educational contexts (Yenawine, 2013). More recent developments have extended VTS into digital and multimodal learning environments, where learners engage with images, videos, and interactive media through online platforms and blended classroom settings. These adaptations align with multimodal learning theory, which emphasizes that meaning is constructed through the integration of visual, linguistic, and digital modes (Kress, 2010; Jewitt, 2008). In such environments, VTS is increasingly used to promote participation, interpretation, and communication in English language learning.

However, despite this technological and pedagogical expansion, a significant gap exists between the implementation of digital and multimodal VTS practices and the systematic articulation of their impact on English language learning outcomes in Philippine basic education. While studies highlight that VTS enhances oral communication, vocabulary development, and critical thinking by encouraging learners to verbalize interpretations of visual stimuli (Nguyễn & Phan, 2025), these findings are often situated in higher education or non-Philippine contexts. As a result, there is limited empirical evidence demonstrating how these adaptations function within the linguistic, curricular, and socio-cultural realities of Philippine basic education classrooms.

A further gap lies in the lack of clearly defined learning outcome frameworks that connect digital VTS activities to measurable English language competencies. Although multimodal and visual literacy research indicates that learners develop interpretive and expressive skills through engagement with multimodal texts (Serafini, 2014), these competencies are not consistently translated into structured English language learning outcomes such as reading comprehension levels, speaking proficiency indicators, or writing performance standards. In many cases, VTS is described as an instructional strategy rather than being systematically aligned with curriculum-based language outcomes or assessment criteria.

Additionally, while digital adaptation of VTS allows for expanded interaction through online platforms, multimedia content, and collaborative tools, there remains a disconnect in how these practices are evaluated in relation to learning achievement in English. Existing research tends to emphasize engagement, critical thinking, and participation (Hu & Hwang, 2024), but rarely traces how these cognitive and communicative gains translate into formal English language performance indicators in basic education settings. This creates a conceptual gap between pedagogical innovation (digital VTS use) and outcome articulation (English language proficiency standards and assessments).

In the Philippine context, this gap is further widened by the limited availability of localized studies that examine how teachers integrate VTS into English instruction while aligning it with the Department of Education's learning competencies. Although multimodal instruction has been recognized as beneficial for comprehension and engagement (Mahardhika, 2024), there is insufficient evidence on how VTS-based multimodal tasks are formally embedded in curriculum-aligned English learning outcomes, particularly in primary and secondary education.

Overall, the literature reveals a clear disconnect between (1) the emerging use of digital and multimodal VTS in basic education learning spaces and (2) the systematic articulation and measurement of its impact on English language learning outcomes in the Philippines. This gap underscores the need for research that not only

documents how VTS is adapted in digital environments but also critically examines how these adaptations translate into defined, assessable, and curriculum-aligned English language competencies.

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