

Multimodal Approach, Learning Styles, and Artificial Intelligence in an EFL Context

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Abstract : This article examines the interrelationship between multimodal pedagogy, learning styles, and AI in EFL education. It reviews the theoretical foundations of these concepts, discusses their classroom applications, evaluates their pedagogical benefits and challenges, and explores future directions for technology-enhanced language learning. The study argues that the thoughtful integration of multimodal teaching strategies, learner diversity, and AI-supported instruction can substantially improve learner engagement, communicative competence, learner autonomy, and overall academic achievement in contemporary EFL classrooms.

Keywords: *Multimodal Pedagogy; Learning Styles; Artificial Intelligence; English as a Foreign Language (EFL); Technology-Enhanced Learning; Personalized Learning; Digital Education.*

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I. INTRODUCTION

The teaching of English as a Foreign Language (EFL) has undergone profound transformations over the last few decades as a result of globalization, technological innovation, and the increasing demand for effective communication in international contexts. Traditional teacher-centered approaches, which primarily relied on lectures, textbooks, and memorization, are progressively giving way to learner-centered pedagogies that encourage interaction, collaboration, creativity, and active participation (Richards & Rodgers, 2014).

The rapid expansion of digital technologies has created new opportunities for language teachers to diversify instructional practices. Contemporary EFL classrooms now incorporate a wide range of instructional resources, including videos, podcasts, interactive whiteboards, online discussion forums, digital textbooks, educational applications, virtual learning environments, and mobile technologies. These resources provide learners with authentic linguistic input while simultaneously supporting the development of listening, speaking, reading, and writing skills through multiple communication channels.

Within this evolving educational landscape, multimodal pedagogy has become one of the most influential approaches to language instruction. Rather than relying exclusively on written or spoken language, multimodal teaching integrates verbal, visual, auditory, spatial, and digital modes of communication to facilitate deeper comprehension and more meaningful learning experiences (Kress & van Leeuwen, 2001). Such an approach recognizes that communication in

the twenty-first century extends far beyond printed texts and increasingly involves the coordinated use of multiple semiotic resources.

Equally important is the recognition that learners differ in the ways they process, interpret, and retain new information. Although the concept of learning styles remains the subject of scholarly debate, many educators acknowledge that learners display different instructional preferences and benefit from varied teaching strategies. Consequently, effective EFL instruction should incorporate diverse learning activities that address a broad range of learner characteristics while promoting flexibility rather than rigid categorization (Fleming, 2001; Pashler et al., 2008).

More recently, Artificial Intelligence (AI) has emerged as a transformative force in education. AI-powered applications—including intelligent tutoring systems, automated writing evaluation, speech-recognition software, conversational chatbots, and adaptive learning platforms—offer new possibilities for personalized instruction and continuous formative assessment. These technologies analyze learner performance, provide immediate feedback, identify learning gaps, and recommend individualized learning activities, thereby supporting both teachers and students throughout the learning process (UNESCO, 2021).

The convergence of multimodal pedagogy, learner diversity, and Artificial Intelligence presents significant opportunities for improving language education. By combining multiple communication modes with adaptive digital technologies, EFL teachers can create more engaging, inclusive, and responsive learning environments that

accommodate diverse learner needs while fostering communicative competence and learner autonomy.

According to Mayer (2009), learners generally achieve deeper understanding when instructional materials combine verbal explanations with relevant visual representations rather than relying solely on words. Likewise, Vygotsky (1978) emphasizes that learning is fundamentally a social process in which interaction, collaboration, and guided support contribute significantly to cognitive development. These theoretical perspectives provide a strong foundation for integrating multimodal instructional practices and AI-supported learning environments in EFL education.

This article therefore examines the relationship between multimodal pedagogy, learning styles, and Artificial Intelligence in EFL contexts. It discusses the theoretical underpinnings of these educational concepts, analyzes their practical classroom applications, evaluates their pedagogical advantages and limitations, and considers future perspectives for creating more inclusive, technology-enhanced language learning environments.

II. MULTIMODAL APPROACH IN EFL TEACHING

➤ *Concept of Multimodality*

Multimodality refers to the use of multiple modes of communication to construct and convey meaning during the teaching and learning process. Rather than relying exclusively on spoken or written language, multimodal instruction combines a variety of semiotic resources, including visual images, written texts, audio recordings, gestures, videos, animations, graphics, digital media, and interactive technologies. These different modes complement one another and provide learners with richer learning experiences that accommodate diverse cognitive processes.

Kress and van Leeuwen (2001) argue that communication in contemporary society has become increasingly multimodal because meaning is created through the interaction of various representational forms rather than through language alone. Consequently, effective language instruction should expose learners to multiple forms of communication that reflect authentic language use in today's digital world.

In EFL classrooms, multimodal pedagogy enables students to interact with authentic linguistic materials while simultaneously developing their communicative competence. Learners are encouraged to interpret spoken language, written texts, visual information, and non-verbal cues together, thereby improving both language comprehension and communicative effectiveness. This integrated approach reflects the reality of everyday communication, where individuals frequently combine speech, images, gestures, and digital media to exchange information.

➤ *Theoretical Foundations of Multimodal Learning*

The effectiveness of multimodal instruction is supported by several influential educational theories. Mayer's Cognitive

Theory of Multimedia Learning (2009) proposes that learners process information through two primary cognitive channels: a verbal channel and a visual channel. Learning becomes more effective when these channels work together in a coordinated manner because learners are able to construct stronger mental representations of new knowledge.

Similarly, Paivio's Dual Coding Theory (1986) explains that information presented simultaneously through verbal and visual forms is more likely to be retained in long-term memory than information delivered through a single mode. By engaging multiple cognitive pathways, multimodal instruction promotes deeper understanding and facilitates knowledge retention.

Social constructivist theory also supports multimodal learning. According to Vygotsky (1978), knowledge develops through social interaction and collaborative learning. Digital technologies and multimedia resources provide numerous opportunities for learners to interact with teachers, classmates, and authentic language materials, thereby creating meaningful learning experiences within supportive educational environments.

These theoretical perspectives demonstrate that multimodal teaching is not merely a technological innovation but a pedagogically grounded approach that enhances language acquisition by engaging learners cognitively, socially, and emotionally.

➤ *Importance of Multimodal Teaching in EFL*

Language learning extends beyond memorizing vocabulary and grammatical rules. Effective communication requires learners to interpret pronunciation, facial expressions, body language, cultural references, visual contexts, and situational meanings. Multimodal instruction responds to these diverse communicative demands by integrating multiple forms of language input into classroom activities.

Through multimodal teaching, students encounter authentic English in realistic contexts. Watching interviews, films, documentaries, and classroom simulations enables learners to observe pronunciation, stress patterns, intonation, gestures, and cultural conventions simultaneously. Such authentic exposure contributes significantly to the development of communicative competence and intercultural awareness.

Moreover, multimodal instruction accommodates learner diversity by presenting information through different formats. Students who may struggle with lengthy written texts often demonstrate improved comprehension when visual illustrations, audio recordings, or interactive digital resources accompany instructional materials. Consequently, multimodal teaching contributes to more inclusive learning environments where learners with varying abilities can participate successfully.

➤ *Classroom Applications of Multimodal Pedagogy*

Modern EFL teachers increasingly employ multimodal instructional strategies to create dynamic and learner-centered classrooms. Common classroom applications include:

- Viewing English-language videos accompanied by subtitles to improve listening comprehension and vocabulary acquisition.
- Using podcasts and recorded conversations to develop pronunciation, listening accuracy, and speaking fluency.
- Incorporating digital presentations containing photographs, diagrams, animations, and infographics to support reading comprehension and classroom discussions.
- Organizing role-play activities in which learners combine verbal communication with gestures, facial expressions, and contextual interaction.
- Employing online collaborative platforms that enable learners to exchange written messages, audio recordings, presentations, and multimedia projects.
- Designing project-based learning activities requiring students to create digital stories, videos, podcasts, or multimedia presentations using English.

These instructional practices engage learners actively and encourage them to apply language skills in meaningful communicative situations rather than simply memorizing isolated linguistic structures.

➤ *Pedagogical Benefits of Multimodal Instruction*

The integration of multiple communication modes offers numerous educational advantages in EFL settings.

First, multimodal instruction increases learner motivation by creating engaging and interactive classroom experiences. The use of videos, educational games, digital storytelling, and collaborative online activities stimulates curiosity and maintains students' interest throughout the learning process.

Second, it enhances language acquisition by allowing learners to process information through complementary sensory channels. Combining visual, auditory, textual, and interactive materials promotes deeper comprehension and facilitates vocabulary retention.

Third, multimodal learning supports the simultaneous development of the four fundamental language skills—listening, speaking, reading, and writing—within authentic communicative contexts. Rather than teaching these skills separately, teachers can integrate them into meaningful learning tasks that mirror real-world communication.

Fourth, multimodal pedagogy encourages critical thinking and creativity. Students learn not only to consume multimedia content but also to evaluate information critically, solve problems collaboratively, and produce their own digital materials using English as a medium of communication.

Finally, multimodal instruction prepares learners for participation in contemporary digital societies, where

communication increasingly involves multimedia platforms, virtual collaboration, and technology-mediated interactions. Consequently, learners develop both linguistic competence and digital literacy, two essential competencies for academic and professional success in the twenty-first century.

In summary, multimodal pedagogy represents a comprehensive instructional framework that enriches EFL education by combining diverse communication modes, evidence-based learning theories, and technology-enhanced teaching practices. When implemented effectively, it creates engaging, inclusive, and authentic learning environments that promote language proficiency, learner autonomy, and lifelong learning.

III. LEARNING STYLES IN EFL EDUCATION

A. *Understanding Learning Styles*

One of the fundamental principles of contemporary language education is the recognition that learners differ in the ways they perceive, process, and retain information. These differences have often been described through the concept of learning styles, which refers to learners' preferred approaches to acquiring knowledge and developing new skills. Understanding these preferences enables teachers to diversify instructional strategies and create more inclusive learning environments that respond to students' varied educational needs.

In English as a Foreign Language (EFL) classrooms, learner diversity is particularly evident. Students often differ in their linguistic backgrounds, motivation, cognitive abilities, cultural experiences, and prior exposure to English. Consequently, a single teaching method is unlikely to meet the needs of every learner. Instead, effective EFL instruction requires flexible pedagogical approaches that provide multiple opportunities for students to engage with language through different learning experiences.

Fleming's (2001) VARK model remains one of the most widely recognized frameworks for describing learning preferences. It identifies four broad categories of learners:

- Visual learners
- Auditory learners
- Reading/Writing learners
- Kinesthetic learners

Although these categories should not be viewed as rigid classifications, they provide useful guidance for designing varied instructional activities that encourage greater learner participation.

It is important to note that recent educational research cautions against labeling students permanently according to a single learning style. Pashler et al. (2008) argue that there is limited empirical evidence supporting the idea that students learn best exclusively through one preferred style. Rather than assigning learners to fixed categories, teachers should expose students to diverse instructional approaches that strengthen multiple learning abilities. This balanced

perspective is particularly valuable in EFL education, where language learning naturally involves listening, speaking, reading, writing, observation, and interaction.

B. Major Learning Preferences in EFL Classrooms

➤ Visual Learners

Visual learners generally understand new information more effectively when it is presented through images, diagrams, charts, maps, videos, demonstrations, and graphic organizers. They often benefit from seeing relationships between ideas before attempting to use new language independently.

In EFL instruction, teachers can support visual learners by incorporating:

- Illustrated vocabulary cards
- Infographics
- Mind maps
- Graphic organizers
- Educational videos
- Interactive whiteboard presentations
- Picture-based storytelling
- Captioned films

Visual materials facilitate vocabulary acquisition because learners associate words with meaningful images rather than relying solely on translation. They also improve reading comprehension by providing contextual clues that help learners infer meaning from unfamiliar texts.

➤ Auditory Learners

Auditory learners tend to acquire knowledge most effectively through listening and verbal interaction. They benefit from hearing language used in authentic communicative situations and often develop pronunciation and speaking skills through repeated exposure to spoken English.

Effective instructional activities for auditory learners include:

- Classroom discussions
- Lectures
- Storytelling
- Podcasts
- Audiobooks
- Songs
- Pronunciation drills
- Debates
- Group conversations

Listening activities expose learners to authentic pronunciation, rhythm, stress patterns, and intonation. Frequent oral interaction also contributes to greater communicative confidence and speaking fluency.

➤ Reading/Writing Learners

Reading/Writing learners generally prefer information presented in written form. They learn effectively through

reading texts, taking notes, completing written exercises, and producing written assignments.

Teachers can support these learners by providing:

- Academic articles
- Textbooks
- Reading comprehension exercises
- Grammar explanations
- Essay writing activities
- Vocabulary journals
- Reflective learning diaries
- Research projects

These activities promote analytical thinking while strengthening learners' grammatical accuracy and academic writing skills.

➤ Kinesthetic Learners

Kinesthetic learners prefer active participation and practical experience. They often learn most effectively through physical movement, experimentation, role-playing, simulations, and hands-on activities.

Examples of effective EFL activities include:

- Role-playing real-life situations
- Classroom games
- Language simulations
- Drama activities
- Problem-solving tasks
- Information-gap activities
- Project-based learning
- Outdoor learning experiences

Such activities transform language learning into an active process in which learners construct knowledge through meaningful communication rather than passive observation.

C. Individual Differences Beyond Learning Styles

While learning preferences provide useful pedagogical insights, effective EFL teaching should also consider broader individual differences among learners. These include:

- Language proficiency levels
- Learning motivation
- Self-confidence
- Cultural background
- Cognitive abilities
- Previous educational experiences
- Learning strategies
- Digital literacy

Gardner's (1983) Theory of Multiple Intelligences further emphasizes that learners possess different intellectual strengths, including linguistic, logical-mathematical, spatial, musical, interpersonal, intrapersonal, bodily-kinesthetic, and naturalistic intelligences. Recognizing these diverse abilities enables teachers to design richer instructional experiences that encourage all learners to participate successfully.

Similarly, Dörnyei (2005) highlights the importance of learner motivation in second-language acquisition. Highly motivated students are generally more willing to communicate, take risks, and persist despite linguistic difficulties. Consequently, effective EFL instruction should not only accommodate learner preferences but also foster curiosity, confidence, and intrinsic motivation.

D. Adapting Instruction to Learner Diversity

Because EFL classrooms include learners with diverse characteristics, teachers should employ differentiated instructional strategies rather than relying on a single teaching method. Differentiated instruction allows educators to modify content, learning activities, instructional materials, and assessment methods according to learners' needs and abilities.

➤ *Practical Strategies Include:*

- Presenting information through multiple media.
- Offering learners different activity choices.
- Combining individual, pair, and group work.
- Using flexible assessment methods.
- Providing scaffolded learning support.
- Integrating digital learning technologies.
- Encouraging collaborative learning.
- Allowing students to progress at different learning speeds.

These practices create inclusive classrooms in which every learner has opportunities to succeed regardless of individual differences.

E. The Role of Technology in Supporting Diverse Learners

Digital technologies have significantly expanded teachers' capacity to accommodate learner diversity. Modern educational platforms integrate videos, interactive exercises, speech-recognition software, adaptive quizzes, online collaboration tools, and gamified learning environments that appeal to various learner preferences simultaneously.

Artificial Intelligence further enhances this personalization by analyzing learner performance and recommending instructional resources that correspond to learners' strengths and areas requiring improvement. Rather than limiting students to predetermined learning styles, AI encourages flexible learning pathways that evolve according to individual progress.

Technology also increases learner autonomy by allowing students to review lessons independently, repeat difficult activities, monitor their own progress, and access learning resources beyond the classroom. Consequently, digital learning environments contribute to greater learner engagement, self-regulation, and academic achievement.

F. Critical Perspectives on Learning Styles

Although learning styles remain popular among educators, recent research recommends interpreting them cautiously. Numerous scholars argue that there is insufficient scientific evidence to support the claim that matching instruction exclusively to a learner's preferred style consistently improves academic performance (Pashler et al., 2008).

Instead, contemporary educational research advocates the use of multimodal instruction, where teachers intentionally combine visual, auditory, textual, collaborative, and experiential learning activities within the same lesson. Such an approach exposes learners to multiple ways of processing information while developing flexibility and transferable learning strategies.

For EFL teachers, this means that the primary objective is not to classify students into fixed categories but to create rich learning environments where every learner can interact with English through varied communicative experiences.

IV. CONCLUSION

Learning styles continue to provide valuable insights into learner diversity, particularly when they are viewed as flexible preferences rather than permanent learner characteristics. Effective EFL instruction recognizes that students possess different strengths, motivations, and educational backgrounds that influence language acquisition.

By integrating varied teaching strategies, differentiated instruction, collaborative learning, and digital technologies, teachers can create inclusive classrooms that accommodate diverse learner needs while promoting communicative competence, learner autonomy, and lifelong learning. When combined with multimodal pedagogy and Artificial Intelligence, attention to learner diversity becomes an essential component of modern EFL education, preparing students to communicate effectively in increasingly complex and technology-rich environments.

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