

## Linguistic Intelligence as Epistemic Practice: Language Awareness and Academic Writing in Digitally Mediated Higher Education

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**Riassunto:** L'articolo esamina l'intelligenza linguistica come risorsa epistemica fondamentale nei processi di apprendimento, sostenendone la rinnovata centralità nei contesti educativi contemporanei sempre più caratterizzati dalla mediazione digitale e dalla comunicazione multimodale. Oltre la competenza comunicativa o la mera padronanza tecnica della lingua, l'intelligenza linguistica è interpretata come la condizione cognitiva e simbolica attraverso cui la conoscenza viene costruita, interpretata e socialmente negoziata. Muovendo da prospettive socio-costruttiviste e funzionali, lo studio evidenzia come l'impegno riflessivo sulle pratiche linguistiche favorisca lo sviluppo del pensiero critico, della metacognizione e del posizionamento epistemico negli ambienti accademici.

In questa prospettiva, la Language Awareness (LA) è presentata come un quadro pedagogico capace di operationalizzare l'intelligenza linguistica attraverso le dimensioni cognitive, affettiva, sociale e critica dell'uso linguistico. Promuovendo una riflessione esplicita su forme linguistiche, significati e implicazioni ideologiche, la LA ridefinisce l'educazione linguistica come processo di costruzione di significato situato nelle pratiche disciplinari, sostenendo agency, inclusione e partecipazione nelle comunità discorsive accademiche.

Il focus empirico riguarda l'Academic Writing (AW) nell'istruzione superiore, considerato come spazio privilegiato di produzione e legittimazione della conoscenza. Nei contesti didattici digitalmente mediati, la progettazione didattica informata dalla LA valorizza strategie multimodali volte a rendere esplicite e cognitivamente accessibili le convenzioni disciplinari. Pratiche quali lettura guidata ad alta voce, annotazione visiva, mappatura concettuale e strutturazione retorica tramite codifica cromatica sono discusse come strumenti metacognitivi a supporto dello sviluppo argomentativo e della costruzione dell'identità autoriale.

Integrando i contributi del multimedia learning e della cognitive load theory, l'articolo analizza inoltre i vincoli cognitivi che caratterizzano l'insegnamento sincrono online dell'AW. Sebbene gli ambienti multimediali amplino accesso e partecipazione, essi possono incrementare il carico cognitivo estraneo quando la progettazione didattica non è allineata all'architettura cognitiva umana. Lo studio propone pertanto un quadro pedagogico orientato al design, capace di sostenere la Language Awareness e promuovere una literacy accademica riflessiva nell'istruzione superiore digitalmente mediata.

**Parole chiave:** Intelligenza linguistica, Language Awareness, Scrittura accademica (Academic Writing), Apprendimento digitalmente mediato, Progettazione didattica multimodale.

**Abstract:** The article examines linguistic intelligence as a foundational epistemic resource in learning processes, arguing for its renewed centrality in educational contexts increasingly shaped by digital mediation and multimodal communication. Beyond communicative competence or technical proficiency, linguistic intelligence is framed as the cognitive and symbolic condition through which knowledge is constructed, interpreted, and socially negotiated. Drawing on socio-constructivist and functional perspectives, the study highlights how reflexive engagement with language fosters critical thinking, metacognition, and epistemic positioning within academic environments.

Within this perspective, Language Awareness (LA) is presented as a pedagogical framework operationalising linguistic intelligence through cognitive, affective, social, and critical dimensions of language use. By promoting explicit reflection on linguistic forms, meanings, and ideological implications,

LA redefines language education as situated meaning-making within disciplinary practices, supporting agency, inclusivity, and participation in academic discourse communities.

The empirical focus concerns Academic Writing (AW) in higher education as a key site for knowledge production and legitimisation. In digitally mediated teaching environments, LA-informed instructional design emphasises multimodal strategies that render disciplinary conventions explicit and cognitively accessible. Practices such as guided reading aloud, visual annotation, conceptual mapping, and colour-coded rhetorical structuring are discussed as metacognitive tools supporting argument development and authorial identity formation.

Integrating multimedia learning and cognitive load theory, the article also examines cognitive constraints in synchronous online AW instruction. While multimedia environments expand access, they may increase extraneous cognitive load when poorly designed. The study therefore proposes a design-oriented pedagogical framework supporting Language Awareness and fostering reflective academic literacy in digitally mediated higher education.

**Keywords:** Linguistic intelligence, Language Awareness, Academic Writing, digitally mediated learning, multimodal instructional design

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## 1. Introduction

In the contemporary educational landscape, linguistic intelligence emerges as a dimension requiring renewed theoretical and pedagogical attention. As a constitutive component of human subjectivity, it cannot be reduced to its communicative or instrumental function. Language operates indeed as a fundamental cognitive and symbolic resource through which individuals construct knowledge within social and educational contexts (Vygotsky, 1978; Bruner, 1996; Halliday, 1993). Remarkably, linguistic intelligence supports learning processes while acting as their generative medium, enabling reflexivity and epistemic positioning.

Current educational environments are increasingly shaped by digital technologies and online learning spaces. While these developments have expanded access to information and diversified modes of participation, they have also contributed to a tendency to treat language primarily as a functional interface for information exchange. Such a reduction risks obscuring the symbolic, interpretive, and critical dimensions of language that are central to meaningful learning. Against this background, reaffirming the formative and epistemic role of linguistic intelligence becomes a pedagogical priority.

From an educational perspective, linguistic intelligence should not be framed exclusively in terms of communicative competence or technical language skills. Rather, it must be understood as a foundational condition that makes knowledge a meaningful educational experience (Bruner, 1996). The capacity to interpret texts, construct arguments, negotiate

meaning, and reflect on language itself plays a decisive role in the development of critical thinking, metacognition, and reflexive learning processes. Consequently, the quality of learning is closely linked to the extent to which educational practices are able to cultivate the reflective and symbolic dimensions of language.

Within this framework, Language Awareness (LA) offers a particularly relevant theoretical and pedagogical lens. LA can be defined as explicit knowledge about language combined with a conscious sensitivity to its forms, functions, and meanings, as well as to its role in individual and social life (Donmall, 1985; Svalberg, 2007). More broadly, LA represents an educational articulation of linguistic intelligence, as it foregrounds language not only as an object of learning, but also as a medium through which thinking, knowledge construction, and social relations are shaped (Halliday, 1993; James & Garrett, 1991).

Building on foundational conceptualisations, LA encompasses multiple interrelated domains, including cognitive, affective, social, critical, and performance dimensions (James & Garrett, 1991). Language learning and meta-linguistic competence, thus intended as the ability to enable learners to recognise the role of language in constructing and negotiating meaning within institutional and disciplinary contexts (Fairclough, 1992; Cummins, 2000), involves a deep intellectual engagement; it fosters sensitivity to linguistic and cultural diversity and supports critical reflection.

Through sustained reflective engagement with language, LA contributes to the development of metacognitive and critical capacities that are widely recognised as core objectives of contemporary education.

When LA is considered as a concrete expression of linguistic intelligence in educational settings, it is possible to reconfigure language education beyond traditional skill-based approaches. It promotes a holistic view in which linguistic, cognitive, cultural, and symbolic dimensions are integrated within meaningful learning experiences.

Such an approach is particularly relevant in educational contexts increasingly characterised by the hybridisation of languages, media, and academic practices, where the risk of reducing language to a purely instrumental function remains significant. In these contexts, academic writing (AW) represents a specific site where linguistic skills are explicitly mobilised in the production and legitimisation of knowledge, thus occupying a central position.

Particularly in higher education, the relevance of LA becomes evident in AW. Academic discourse is characterized by specialized genres, implicit rhetorical structures, and discipline-specific conventions that often remain opaque to learners. An LA-informed approach makes these conventions visible and open to reflection. It enables students not only to reproduce formal structures but to understand the epistemic rationale underlying them.

In light of these considerations, this article examines the role of linguistic intelligence in learning processes through the lens of LA, focusing on its epistemic and formative potential. Specifically, it explores how LA-informed educational practices may support the development of academic literacy and AW in higher education, fostering a more reflective, critical, and meaningful engagement with academic language. Particular attention is devoted to digitally mediated instructional contexts, where the design of learning materials becomes an integral component of the epistemic experience itself.

## **2. Language Awareness as an Educational Framework for Linguistic Intelligence**

LA has developed as a pedagogical and theoretical framework aimed at fostering a reflective and critical relationship with language in educational contexts. Rather than focusing exclusively on language acquisition or communicative proficiency, LA emphasizes learners' conscious understanding of how language functions, how meanings are constructed, and how linguistic choices are embedded within social, cultural, and institutional practices (Donmall, 1985; James & Garrett, 1991; Svalberg, 2007).

Within this perspective, LA can be understood as a pedagogical articulation of linguistic intelligence. It foregrounds language as a cognitive and symbolic resource that enables learners to interpret reality, organise experience, and participate meaningfully in knowledge-building processes. Linguistic intelligence, in this sense, is not conceived as an innate or static ability, but as a capacity that develops through reflective engagement with language across contexts and disciplines.

James and Garrett (1991) conceptualise LA as encompassing several interrelated domains, including cognitive, affective, social, power-related, and performance dimensions. These domains highlight the multifaceted nature of language learning, which involves not only analytical understanding of linguistic forms, but also emotional

engagement, sensitivity to linguistic diversity, and awareness of the ideological and power-laden nature of discourse. Such an understanding aligns with educational approaches that view learning as a process of meaning-making rather than mere information transmission.

From a LA perspective, learning is inherently reflexive: learners are encouraged to think about language while using it, to examine how meanings are constructed, and to recognise how language shapes and is shaped by disciplinary practices. This reflexivity plays a crucial role in the development of metacognitive skills and critical thinking, particularly in academic contexts where language functions as the primary medium through which knowledge is constructed, evaluated, and legitimised.

In higher education, LA assumes particular relevance in relation to academic literacy and AW. Academic discourse is characterised by specialised genres, implicit conventions, and discipline-specific norms that are often opaque to students. An LA-oriented approach to AW seeks to make these conventions visible and open to reflection, enabling learners to understand not only how academic texts are structured, but also why certain linguistic and rhetorical choices are valued within specific disciplinary communities.

By promoting explicit reflection on academic language, LA supports learners in developing a more agentive and critical relationship with writing. Rather than positioning students as passive recipients of prescriptive norms, it frames AW as a socially situated practice in which linguistic intelligence is exercised through interpretation, meaning negotiation, and epistemic positioning. In this way, LA contributes to more inclusive and meaningful forms of academic literacy, capable of addressing cognitive, affective, and socio-cultural dimensions of learning in higher education.

The teaching of AW, particularly in English for Specific Purposes (ESP), constitutes a training challenge of considerable complexity, further intensified by the increasingly widespread adoption of fully online teaching modalities. The production of scientific texts does not involve technical and rhetorical skills alone; rather, it activates a plurality of integrated processes, including linguistic–textual competences (morphosyntactic, lexical, and pragmatic), disciplinary competences (content knowledge, selective and analytical reading skills), and metacognitive competences related to planning, monitoring, and revision (James & Garrett, 1991). In digital and asynchronous learning environments, this

complexity is further amplified. Physical distance, screen-mediated interaction, and the potential digital divide may increase learners' perceptions of opacity and inaccessibility of academic conventions. Within this context, anxiety and low motivation often emerge as paralysing affective factors that hinder students' active engagement and learning progress (Gomez Paloma et al., 2017).

AW requires learners to engage simultaneously with disciplinary knowledge, genre-specific conventions, and epistemic norms, while reflecting on language as a tool for meaning-making and knowledge construction. From a LA perspective, AW instruction can thus be reconceptualized as an educational space in which linguistic intelligence is actively cultivated through reflective, critical, and context-sensitive engagement with academic discourse.

### **3. Designing Academic Writing Instruction in Digitally Mediated Contexts**

The challenge of teaching AW online cannot be addressed solely through the enhancement of technological tools. Rather, it requires careful attention to the cognitive and epistemic conditions under which learners engage with complex disciplinary discourse in digitally mediated environments. In synchronous and asynchronous online contexts, students must simultaneously process verbal explanations, visual materials, and written texts while planning and constructing their own arguments. The quality of instructional design therefore becomes a central pedagogical variable.

This approach finds a particularly fertile field of application in pursuing the goals of LA (James & Garrett, 1991), a theoretical framework that promotes conscious language development across three interrelated dimensions: the metalinguistic level (reflection on linguistic forms), the critical level (reflection on power and ideology), and the social level (reflection on language use within communities of practice). In ESP contexts, where specialized language may be perceived as alien or intimidating, structured multimodal strategies function as mediating tools that render disciplinary conventions more transparent and cognitively manageable.

In AW instruction, multimodality aims at the coordinated distribution of information across cognitive channels (Mayer, 2009). Reading aloud, for instance, allows students to internalize rhythm, complex syntactic structures, and the “sound” of academic register, engaging auditory and dimensions. Similarly, transforming textual analysis into a graphical activity through visual

annotation, concept mapping, or the tracing of logical relationships supports the explicit recognition of argumentative architecture and enhances structural awareness.

The intentional use of colors, icons, and other visual elements further contributes to facilitating interpretation and text planning. Associating abstract textual functions (such as “thesis,” “evidence,” or “transition”) with specific visual codes enhances structural awareness and supports memory. The application of a traffic-light schema offers an intuitive visual framework for analyzing and designing texts (Lopres et al., 2023). Likewise, linking rhetorical functions provides immediate visual cues that support the recognition and conscious use of argumentative strategies.

This latter strategy is particularly significant. Color coding is not merely a highlighting technique, but rather a genuine metacognitive tool. It guides students in critically deconstructing texts during reading and analysis, and in pre-constructing their own arguments during the planning phase, making the logical structure visible and therefore manageable. Externalizing textual organization, it reduces ambiguity and enhances learners’ perceived control over the writing process.

Ultimately, in dialogue with LA, this pedagogical orientation supports a higher educational goal: enabling students not only to produce formally correct academic texts, but also to develop a conscious, critical, and affectively meaningful relationship with the language of their discipline. What is at stake is the construction of an authorial identity in which students perceive themselves as legitimate participants in a disciplinary discourse community, rather than as outsiders mechanically complying with imposed norms, which is an essential prerequisite for genuinely transformative learning.

If LA foregrounds language as a medium of knowledge construction rather than mere communication, AW becomes its most demanding educational expression. In higher education, knowledge is produced, validated, and disseminated through writing. Therefore, fostering linguistic intelligence requires explicit engagement with the discursive structures of academic texts. However, when AW is taught in digitally mediated environments, instructional design itself becomes part of the epistemic experience. The way information is presented through multimedia can either support or obstruct the development of LA.

#### 4. Cognitive Constraints in Multimedia Learning for Synchronous Online Academic Writing Instruction

The concept of media refers to any means of communication and information transmission, which may occur in visual, auditory, audiovisual, or multimedia forms. In educational contexts, media play a central role by supporting teachers in presenting content and facilitating learners' comprehension. Multimedia, in turn, involves the combined use of multiple modes such as text, graphics, animations, images, video, and sound to convey information (Kurniasih et al., 2023). As a learning instrument, multimedia is usually integrated with technology. When the information is presented digitally using various hardware and software tools, it engages learners through dynamic content and user participation (Mayer, 2009). It is adaptable to different subjects, age groups, and educational contexts, ensuring accessibility (Mayer, 2009; Schindler et al., 2017). It enhances understanding and memorization (Ceken & Taskin, 2022). In the context of language learning, multimedia has proved to enhance engagement and provide students with authentic examples of language use (Abdulrahman et al., 2020; Kurniasih et al., 2023).

Despite the benefits of integrating multimedia materials into instruction, research indicates that they can cause the risk of cognitive overload (Bali et al., 2026; Ayres & Sweller, 2014). This becomes a critical problem in the context of AW teaching and learning. While multimedia environments increase exposure, flexibility, and authenticity, they also intensify informational density and place substantial demands on learners' working memory, particularly in L2 AW contexts, where students already have to manage multiple cognitive processes simultaneously: writers constantly switch between generating ideas, organizing them, and revising to transform knowledge rather than just telling it (Flower & Hayes, 1981). In multimedia-rich online settings, these recursive writing processes must compete with simultaneous visual, auditory, and interactional demands, increasing the likelihood of extraneous cognitive load. Thus, the pedagogical value of multimedia integration depends not on technological richness but on alignment with human cognitive architecture.

Within the realm of multimedia learning, Mayer and Moreno (2003) identify five cognitive processes required for meaningful learning: learners must select relevant verbal and visual information, organize it into coherent verbal and pictorial mental models, and integrate these

models with each other and with prior knowledge. These processes occur in working memory and are therefore constrained by the architecture of the human cognitive system.

The cognitive processes underlying multimedia learning are grounded in three core assumptions. The Dual Channel Assumption (1) states that verbal and visual inputs are processed by separate channels. At the same time, each of these channels can process only a limited amount of information at a time, which is the Limited Capacity Assumption (2). And finally, according to the Active Processing Assumption (3), learning depends on deliberate cognitive engagement. These assumptions describe constraints that must be explicitly addressed by course designers, becoming the boundaries of the design and construction process. To translate these cognitive constraints into practice, a design framework is required that aligns learning outcomes, materials, and learner activity.

## **5. Adapting Multimedia Principles to Synchronous Online Academic Writing Courses**

Building on the cognitive constraints outlined above, multimedia principles were reconfigured for the temporal and cognitive constraints of synchronous academic writing instruction. Although originally formulated for asynchronous contexts, their application in live online teaching required structural adaptation rather than direct transfer. The design integrates live lectures, slides, and text-based materials, each assigned a distinct cognitive function.

### **5.1. Video Lectures in Synchronous Online Settings**

What distinguishes live online lectures from asynchronous ones is the absence of learner-controlled pacing. Students must process auditory and visual input in real time, without the option of pausing or revisiting segments. Under these conditions, multimedia principles must be conceptually adapted. The segmenting principle, originally grounded in self-paced processing, assumes learner regulation of cognitive load (Mayer, 2009). In synchronous instruction, segmentation becomes instructor-regulated. Rather than relying on navigation control, cognitive pacing is achieved through deliberate conceptual chunking and structured pauses. The responsibility for managing cognitive rhythm shifts from learner to instructor.

Similarly, the redundancy principle gains heightened relevance. When identical verbal information is presented simultaneously as speech and text, both streams compete within the

verbal channel, increasing extraneous load (Mayer & Moreno, 2003; Mayer, 2009; Ayres & Sweller, 2014). Therefore, oral explanations are designed to complement, rather than duplicate, on-screen content. Synchronization and signaling function not merely as attentional aids but as mechanisms of alignment between speech and visual structure. In real-time environments, signaling becomes a tool for stabilizing fragile mental representations.

### **5.2. Slide Design Principles**

Because synchronous lectures restrict learner control, slides function as cognitive stabilizers rather than parallel information streams.

Following off-loading and weeding principles, slides contain minimal text when visuals are present, with elaboration provided orally. This redistribution reduces verbal channel competition and preserves working memory capacity. Decorative or redundant elements are excluded to prevent extraneous load. Signaling and spatial alignment support integration by ensuring that labels and explanations are positioned close to corresponding visuals. Such alignment reduces split attention and strengthens visual–verbal mapping.

The assertion–evidence model (Garner et al., 2009), although not derived from CTML, aligns with its core assumptions. Assertion headlines paired with explanatory visuals externalize argumentative structure without overloading the verbal channel. Thus argumentation is displayed rather than verbally reiterated.

### **5.3. Text-Based Materials and Input Enhancement**

While live slides are deliberately minimal, text-based materials provide stable, learner-controlled representations that can be revisited outside synchronous sessions. They reintroduce learner pacing into an otherwise time-bound environment.

In written materials, signaling through typographical emphasis supports noticing (Mayer & Moreno, 2003). Color coding extends this principle into academic discourse, functioning as input enhancement. Highlighting rhetorical moves, grammatical structures, or essay components renders otherwise implicit disciplinary patterns perceptible. For example, Traffic Light Color Coding (Lopres et al., 2023) operationalizes this approach by associating essay components with distinct colors. When applied systematically and sparingly, it reduces cognitive effort during complex writing tasks while reinforcing structural awareness.

By complementing live explanations and slides, text-based materials create a temporally flexible processing channel. Together, these elements suggest that multimedia design in synchronous AW is less about technological enrichment and more about disciplined cognitive orchestration aligned with epistemic goals.

## 6. Conclusions

The teaching of AW in synchronous online contexts requires a reconfiguration that acknowledges the interplay between language epistemology and the cognitive constraints inherent in fully online environments. The discussion developed in this article positions synchronous AW courses as a distinctive educational setting in which epistemological assumptions, cognitive processes, and instructional design inevitably converge. In this perspective, the integration of LA and CTML principles offers a coherent and aligned pedagogical framework.

LA conceptualises AW as a reflective and socially situated practice, fostering metacognitive engagement and critical thinking while positioning students as active participants in knowledge construction rather than passive recipients of information. From a complementary perspective, cognitive design provides the operational conditions that enable such reflexive engagement in synchronous online learning environments. Although AW is already characterised by high cognitive complexity, digitally mediated instruction may introduce additional processing demands. The adaptations discussed in this article do not aim to eliminate the inherent challenges of synchronous teaching; rather, they reconfigure multimedia learning principles to stabilise cognitive processing within temporally constrained environments, recognising that real-time AW instruction requires deliberate management of attention, sequencing, and cognitive load.

The integration of these dimensions suggests that instructional effectiveness depends less on technological richness than on the coherence between pedagogical intention and cognitive design. Within this framework, AW instruction can be understood as a reflective and participatory educational practice, rather than a mere application of formal conventions. Future research should focus on empirically validating this theoretical framework across different disciplinary contexts and proficiency levels, systematically investigating the interaction between perceived cognitive load, linguistic awareness, and the development of authorial identity

**Bibliography**

Abdulrahman, M. D., Faruk, N., Oloyede, A. A., Surajudeen-Bakinde, N. T., Olawoyin, L. A., Mejabi, O. V., Imam-Fulani, Y. O., Fahm, A. O., & Azeez, A. L. (2020). Multimedia tools in the teaching and learning processes: A systematic review. *Heliyon*, 6(12).

Ayres, P., & Sweller, J. (2014). The split-attention principle in multimedia learning. In R. E. Mayer (Ed.), *The Cambridge handbook of multimedia learning* (2nd ed., pp. 206–226). Cambridge University Press.

Bali, C., Tasdelen, B., Bandi, S., & Zsidó, A. (2026). Understanding the cognitive cost of multimedia learning: Effects of visual load and language proficiency. *Cognitive Research: Principles and Implications*, 11(2), 1–17.

Bruner, J. (1996). *The culture of education*. Harvard University Press.

Çeken, B., & Taşkın, N. (2022). Multimedia learning principles in different learning environments: A systematic review. *Smart Learning Environments*, 9(1), 19.

Cumming, A., & Riazi, A. (2000). Building models of adult second-language writing instruction. *Learning and Instruction*, 10(1), 55-71.

Donmall, B. G. (Ed.). (1985). *Language awareness*. CILT.

Fairclough, N. (1992). *Discourse and social change*. Polity Press.

Flower, L., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition and Communication*, 32(4), 365–387.

Garner, J. K., Alley, M., Gaudelli, A. F., & Zappe, S. E. (2009). Common use of PowerPoint versus the assertion–evidence structure: A cognitive psychology perspective. *Technical Communication*, 56(4), 331–345.

Gomez Paloma, F., Ascione, A., & Tafuri, D. (2017). Embodied cognition: The role of body in didactics. *Formazione & Insegnamento*, 14(1 Suppl.), 75–88.

Halliday, M. A. K. (1993). Towards a language-based theory of learning. *Linguistics and Education*, 5(2), 93–116.

James, C., & Garrett, P. (Eds.). (1991). *Language awareness in the classroom*. Longman.

Kurniasih, E., Pusparini, R., Sumarningsih, S., & Fahri, F. (2023, March). Material development of multimedia-based classroom language for undergraduate students of English education study program. In *Proceedings of the International Joint Conference on Arts and Humanities 2022* (pp. 1886–1898). Atlantis Press.

Lopres, J. R., Placencia, M. C., Jr., Lopres, G. M., Tidalgo, G. M., Aguirre, M. M., Masongsong, J. M., & Sombrio, R. P. (2023). Strategies in teaching academic essay writing, level of effectiveness, and instructional barriers: The case of Filipino learners. *World Journal of English Language*, 13(6), 42–55.

Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press.

Mayer, R. E., & Moreno, R. (2003). Nine ways to reduce cognitive load in multimedia learning. *Educational Psychologist*, 38(1), 43–52.

Safdari, M. (2019). Input flooding, input enhancement and writing performance: Effects and percepts. *International Journal of Instruction*, 12(4), 281–296.

Schindler, L. A., Burkholder, G. J., Morad, O. A., & Marsh, C. (2017). Computer-based technology and student engagement: A critical review. *International Journal of Educational Technology in Higher Education*, 14(25).

Svalberg, A. M.-L. (2007). Language awareness and language learning. *Language Teaching*, 40(4), 287–308.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.