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From Close Reading to Algorithmic Reading: Literary Pedagogy in the Digital Age

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Abstract: Literary education has historically developed within a predominantly print-based culture. Within this environment, literary works have generally been treated as stable textual objects. One of the most influential practices has been *close reading*, namely the careful and intensive reading of the formal and linguistic elements of a literary work. Digital technologies, however, have transformed the medium through which literature is presented, as well as the processes of literary creation, authorship, reading, distribution, and reception. Literature now takes a wide variety of forms, including e-books, web fiction, fan fiction, electronic literature, digital poetry, interactive narratives, multimodal works, social media literature, and works produced or assisted by artificial intelligence. This paper argues that digital literary pedagogy should not be understood merely as the use of digital devices in literature education; rather, it requires a conceptual expansion of literary reading itself. *Close reading* remains important, but it needs to be complemented by *media-aware reading*, *multimodal reading*, *algorithmic reading*, and *creative digital production*. Students need to be taught to understand not only what a literary work says, but also how its medium, interface, platform, algorithms, and mechanisms of distribution shape the literary experience. This paper proposes a Five-Layer Digital Literary Pedagogy model consisting of: (1) *close reading*, (2) *media-aware reading*, (3) *multimodal reading*, (4) *algorithmic reading*, and (5) *creative digital production*.

Keywords: digital literary pedagogy, literature education, electronic literature, digital reading, multimodality, algorithmic reading, artificial intelligence.

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A. INTRODUCTION

Literature education is a field with a long pedagogical tradition (Nussbaum, M. C., 1997; Rosenblatt, L. M., 1982; Bruner, J., 1996). For centuries, literary education has developed various ways of introducing literary works to students: reading texts, discussing themes, analyzing narrative structures, understanding literary style, relating works to social and historical contexts, and conducting critical interpretation.

In the development of modern literary education, one of the most influential methods has been *close reading* (Love, P., 2010). Love states that "Close reading is at the heart of literary studies … and the foundation of literary pedagogy." Through this method, students are trained to read texts carefully by attending to word choice, sentence structure, metaphor, symbolism, narrative, point of view, characterization, irony, rhythm, and other formal elements. Such practice positions the text as an object requiring detailed attention and enables readers to discover complexities of meaning that may be lost through overly rapid reading. This tradition developed within a cultural environment predominantly shaped by print texts.

Books functioned as relatively stable material objects. They had pages, sequences, beginnings and endings, and physical forms that could be touched, stored, marked, collected, lent, and reread. Within print culture, the relationships among authors, texts, publishers, and

readers could also be relatively clearly mapped (Darnton, R., 1982). Today, however, this situation has changed significantly. The development of digital technologies has produced an increasingly complex literary ecosystem by blurring traditional boundaries among texts, authors, and readers (Foxman, 2023). Hayles (2008) explains that electronic literature takes highly diverse forms, including hypertext fiction, network fiction, interactive fiction, locative narratives, installation pieces, codework, generative art, and Flash poetry. She also emphasizes that electronic literature encompasses forms derived from literary traditions in print as well as genres that emerge specifically from networked and programmable media.

These changes correspond to broader transformations in literacy practices. OECD (2021) shows that reading in the twenty-first century involves the ability to understand texts, navigate digital information environments, evaluate sources, integrate information from multiple sources, and construct knowledge critically. Digital environments transform both the tools of reading and the competencies required of readers (Reiber-Kuijpers, M., Kral, M., & Meijer, P., 2021). The central argument of this paper is that literary pedagogy in the digital age should not replace *close reading*, but rather expand it. Students need to learn not only to read texts, but also to read media, multimodality, platforms, algorithms, and the technologies increasingly involved in literary production.

1. From Print Culture to Digital Culture

One misconception that needs to be avoided is the assumption that the transition from a printed book to a screen is merely a change in format. A novel that is printed and subsequently converted into a PDF can indeed be read through a digital device. In such a case, however, digital technology essentially changes only the medium of access. A different situation occurs with works designed from the outset for digital environments. In the study of electronic literature, the digital medium may become part of the structure of the work itself. Hayles (2002) demonstrates that the material form of a work and the technology through which it is presented cannot be completely separated from the reading experience. In other words, readers do not encounter "content" that is entirely independent of its medium; the material way in which a text is presented also influences how that text is experienced.

This becomes increasingly apparent in works that employ hyperlinks, animation, sound, programming, or interactivity. Hayles (2012) subsequently extends this discussion by showing that digital media do not merely provide a new channel for texts; they also transform how humans think, read, and interact with information. There is therefore an important distinction between the **digitization of literature** and **literature that is digital from the outset**. This distinction has significant implications for pedagogy. If students read a printed novel in PDF format, conventional *close reading* remains highly relevant. However, if students read an interactive work that changes according to the reader's choices, then the object of analysis is no longer limited to words.

Students must ask: Why does the work use hyperlinks? What is the function of sound? Why does the reader have to click? How does page design influence meaning? Why does the story have several possible endings? Who controls the sequence of the story? In digital

literature, the medium is not merely a container for the text; the medium may become part of the text that needs to be read. The medium does not simply carry the text; it also helps shape the text (Hayles, 2008). The use of technology in a literature classroom alone is therefore insufficient to constitute digital literary pedagogy. For example, a lecturer may provide students with a printed novel and then ask them to read it in PDF format. This represents the digitization of learning materials, but it does not necessarily constitute a pedagogical transformation.

Bennis (2024), in discussing literature teaching in the digital age, emphasizes the importance of taking changes in the technological environment and students' learning habits into account when reconceptualizing literary education. The issue is that technological change affects how students interact with texts and how teachers or lecturers design reading experiences. Digital literary pedagogy is therefore not simply a matter of technology and literature teaching; it takes technology into account as part of the material, aesthetic, social, and epistemological conditions of literature. *Close reading* remains a fundamental foundation of literary education. It is a central practice in literary studies and "the foundation of literary pedagogy" (Love, 2010). There is no reason to abandon it simply because students are reading through screens. Students still need to understand language, style, metaphor, narrative, character, symbolism, and structure.

However, in digital environments, *close reading* needs to be expanded into **media-aware reading**, namely the ability to read with an awareness of the medium. Hayles (2002) demonstrates that textual materiality constitutes an important part of the reading experience. Therefore, when the medium changes, the reader's experience and the possibilities of interpretation may also change. In conventional reading, students may ask: *What is the meaning of the metaphor in this poem?* In media-aware reading, the question may be expanded: *Why is this metaphor presented through a combination of text, image, sound, and animation?* Or: *How does the shape of the screen influence the way readers experience this poem?* The object of analysis consequently becomes broader. Students no longer read only:

word → sentence → paragraph → text

but also:

text → medium → interface → platform → reader

2. Digitalization and the Expansion of the Concept of Literary Text

Digitalization also expands the concept of the "text." In print culture, literary education has primarily been oriented toward verbal language. In digital environments, works may combine words, images, sound, music, color, video, typography, animation, space, movement, and interactivity. Kress (2010) explains that contemporary communication is increasingly multimodal, meaning that meaning is constructed through multiple modes operating simultaneously. Language remains important, but it is no longer the only mode through which meaning is conveyed. This has important implications for literary education. Students need to learn to read images in the same way that they read metaphors. They need to understand sound in the same way that they understand rhythm. They need to analyze typography in the

same way that they analyze word choice. They need to understand interface design in the same way that they understand narrative structure. Literature is developing into multimodal literature, in which different modes work together to produce meaning.

Digitalization not only changes how literary works are produced, stored, distributed, and read, but also expands the concept of what can be considered a "text." In print culture, literary texts are generally understood as verbal constructions that rely primarily on language as the medium of meaning-making. Novels, short stories, poems, and plays are read through words, sentences, paragraphs, dialogue, narrative, and various linguistic devices that constitute the structure and aesthetics of a work. Digital environments bring a fundamental transformation to this understanding. Texts no longer need to appear as linear arrangements of words. They may instead be constructed through combinations of words, images, sound, music, color, typography, animation, video, space, movement, links, and interactivity.

This transformation can be understood through the concept of **multimodality**. Kress (2010) explains that contemporary communication increasingly occurs through multiple modes that jointly produce meaning. Language remains one important mode, but it is no longer the sole source of meaning-making. Images, layout, color, sound, movement, and various visual and material elements possess their own semiotic capacities. A digital text should therefore be understood as an **ensemble of meaning**, namely a configuration of multiple modes operating simultaneously and complementing one another in constructing experience and meaning.

In literary contexts, this development produces important epistemological and pedagogical consequences. If literary texts are no longer entirely verbal, literary reading can no longer be limited to the ability to understand language. Readers need to develop the ability to read and interpret the various modes present in a work. An image, for example, does not merely function as an illustration; it may become part of the narrative and construct a particular perspective. Sound can create atmosphere, emotion, and rhythm. Color can function symbolically. Typography can create emphasis, tension, or particular meanings. The movement of text can transform the reader's temporal experience, while hyperlinks and navigational structures can alter the relationship between one part of a story and another.

Literary literacy in digital environments therefore needs to move from verbal literacy toward multimodal literary literacy. Students need to learn not only how to read metaphors, symbols, plots, characterization, point of view, and literary style, but also how to read images as they read metaphors; understand sound as they understand rhythm; interpret color as they interpret symbols; read typography as they analyze word choice; and understand interface design and navigational structures as they understand narrative structure. This transformation demonstrates that literary reading competence in the digital age is fundamentally a competence for interpreting relationships among modes.

The expansion of the concept of text is also related to changes in literary media. Bolter (2001) demonstrates that digital media do not simply replace print media; rather, they engage in remediation, that is, the reshaping of practices and genres that previously developed within print culture. In literary contexts, this process can be seen in the transformation of books into

e-books, novels into hypertext fiction, poems into kinetic poetry, and stories into interactive forms that allow readers to determine particular pathways through the reading experience.

Digitalization therefore does not merely produce "digital versions" of printed literary works; it also opens possibilities for literary forms designed for digital environments from the outset. At this point, it is important to distinguish between literary works that are merely digitized and literature that is intrinsically digital. A printed novel that is scanned and stored as a PDF essentially retains the logic of print-based text. By contrast, works that employ animation, sound, hyperlinks, algorithms, interactivity, or computational possibilities as part of their aesthetic construction possess different characteristics.

Hayles (2008) uses the term *electronic literature* to refer to works that are born digital and that make use of the distinctive characteristics of the computer medium as an important part of their existence. In this sense, the medium is no longer merely a container for a literary work; it becomes part of the way the work generates meaning. The development of digital literature should therefore be understood not as diminishing the role of language, but as expanding the ecology of signs within literature. Language remains fundamental, but it operates together with other modes within a multimodal configuration. Digital literature thus demonstrates that literary meaning does not always reside exclusively in words. Meaning may emerge through relationships between words and images, text and sound, narrative and movement, writing and space, as well as between readers and interactive systems that enable the work to be experienced.

The implications for literary education are profound. Literature teaching is no longer sufficient if it merely teaches students to read works in verbal form; it must also prepare them to engage with a multimodal and digital literary ecosystem. Students need to be positioned not only as readers of texts, but also as readers of multiple modes of meaning-making. They should also be encouraged to become producers of multimodal texts capable of combining language, visuals, sound, movement, and digital technology critically and creatively. Literary education in the digital age therefore does not lose its literary identity. On the contrary, it expands our understanding of how literature works, how meaning is constructed, and how readers interact with literary works.

From this perspective, literature is developing into an increasingly multimodal form of art and meaning-making practice. Different modes do not function merely as decorative additions; they work together to construct the structure, experience, and meaning of a work. The shift from verbal texts to multimodal texts is therefore not merely a technological change, but a transformation in how we understand texts, read literature, and teach literature.

3. Digital Natives and the Myth of Digital Proficiency

The concept of the digital native needs to be critically reconsidered. Younger generations are often assumed to possess digital competence automatically because they have grown up with smartphones, social media, online video, and various digital platforms. However, the ability to use technology is not synonymous with critical digital literacy. OECD (2021) demonstrates that twenty-first-century readers need the ability to evaluate multiple sources,

recognize bias, integrate information, and navigate complex digital information environments. Access to technology does not automatically produce digital literacy.

A student may be highly proficient in using social media yet unable to evaluate the credibility of academic sources. They may be very quick at searching for information through search engines but unable to distinguish scholarly sources from unreliable sources. The same applies to literature. Students may consume large quantities of digital content while continuing to experience difficulty with close reading. Students should therefore not be treated as a group that is "already digitally proficient." Discussions of education in the digital age often begin with a seemingly simple assumption: contemporary students are digital natives. They are assumed to have grown up with computers, smartphones, social media, search engines, online videos, communication applications, and various digital platforms, and therefore to possess a natural capacity to adapt to technology.

This assumption produces particular pedagogical consequences. Because students are considered already "digitally literate," education is often positioned merely as a process of making use of digital competencies they supposedly already possess, rather than as a process of developing those competencies critically and systematically. Such an assumption needs to be questioned. The term digital native, popularized among others by Prensky (2001), is based on the idea that generations growing up after the development of digital technologies possess learning characteristics and technological abilities fundamentally different from those of previous generations.

Subsequent research, however, has demonstrated that the relationship among age, generation, and digital competence is considerably more complex. Bennett, Maton, and Kervin (2008), through a critical review of the debate surrounding digital natives, show that claims about a generation that automatically possesses high technological competence cannot simply be accepted. They argue that empirical evidence concerning the uniform characteristics of digital natives remains limited and that the term tends to generate overly broad generalizations.

Helsper and Eynon (2010) reinforce this critique. Based on a representative survey in the United Kingdom, they show that generation is one factor associated with a person's level of interaction with the internet, but it is not the only factor, nor is it always the most determining. Experience, breadth of technology use, education, and types of digital activities also play important roles. A person therefore does not become digitally competent simply because they were born during a period in which digital technology was available. Digital competence is more appropriately understood as something developed through experience, education, practice, and the social context in which technology is used.

This distinction is important because technology use and digital literacy are two different things. A student may be highly active on Instagram, TikTok, YouTube, WhatsApp, or other digital platforms, but such activity does not automatically demonstrate the ability to evaluate information critically. Likewise, the ability to use search engines quickly does not necessarily mean that an individual can assess source quality, compare information, recognize bias,

understand the context in which information is produced, or distinguish scholarly knowledge from information that cannot be adequately verified.

In other words, there is a distinction between being digitally connected and being digitally literate. The former concerns access to technology and the intensity of its use, whereas the latter concerns the ability to use technology to search for, understand, evaluate, produce, and communicate knowledge critically. More mature forms of digital literacy also require an awareness of how technologies and digital platforms shape what users can see, discover, share, and trust.

Within this context, twenty-first-century literacy should not be understood merely as the ability to access information, but also as the ability to construct and validate knowledge. OECD (2021) emphasizes that twenty-first-century readers face a considerably more complex information environment because digital technologies enable different kinds of information to circulate rapidly and extensively. Readers need to be able to distinguish facts from opinions, recognize biased or misleading information, connect multiple sources, and navigate complex information environments. OECD also emphasizes that access to and experience with technology vary across students and social contexts. Access to technology, therefore, does not automatically produce digital literacy.

This issue becomes increasingly important in literary education. Students may live in environments saturated with digital content, but the abundance of media consumption does not necessarily correspond to depth of reading. Students may read thousands of posts, watch hundreds of videos, follow numerous accounts, and interact with different forms of digital narrative, yet still struggle when confronted with a literary work requiring sustained attention, patience, interpretation, and deep reading.

It is therefore necessary to distinguish between digital consumption and literary reading. Digital content consumption often occurs rapidly, fragmentarily, and through constant movement from one item to another. Literary reading, by contrast, requires the ability to sustain attention, notice details, examine relationships among textual components, recognize ambiguity, interpret symbols, understand narrative structures, and connect parts of a text to its overall meaning. Thus, the ability to operate digital devices does not automatically produce the ability to engage in close reading.

This situation indicates that literary education faces a dual challenge. On the one hand, literary education needs to acknowledge transformations in media ecology and the multimodal characteristics of literary works. On the other hand, literary education should not simply assume that students already possess adequate digital competence. Precisely because students live within digital environments, education needs to teach them how to become critical readers within those environments. From this perspective, digital literacy needs to be expanded into critical digital literacy. Critical digital literacy is not merely the ability to use devices or platforms, but also the ability to question how information is produced, who produces it, what interests may lie behind it, how algorithms and platform design influence the visibility of information, and how users themselves participate in the production and circulation of meaning.

Jenkins et al. (2009), for example, demonstrate that new media literacy within participatory culture is not limited to media consumption, but also involves the capacities to paricipate, collaborate, create, and distribute content responsibly. In literary education, critical digital literacy has a more specific dimension. Students need to learn not only how to locate literary works digitally, but also how to determine the quality of sources, understand publication contexts, evaluate the authority of authors or publishers, compare different versions of texts, recognize changes that occur when works move from print to digital media, and understand how digital platforms can influence the reading experence.

Thus, the question "Where did I find this text?" needs to be followed by questions such as: "Who provides this text?", "In what context was this text produced?", "How is this text mediated by the platform?", and "What changes in the reading experience when the text moves from one medium to another?" Furthermore, the concept of the digital native may generate pedagogical errors when used uncritically. If students are assumed to be digitally proficient from the beginning, lecturers may overlook their need for explicit instruction in digital literacy.

Students may know how to access a platform without knowing how to use it for academic purposes. They may be able to find an article through a search engine without being able to read an abstract critically, evaluate a journal's credibility, understand research methodology, or use sources ethically. Research on students described as digital natives has even shown that the ability to use technology for everyday purposes does not necessarily mean familiarity with educational technology or the ability to use technology for learning. Higher education therefore needs to move beyond the simplistic opposition between "non-digital lecturers" and "digital students." Such an opposition is unproductive because digital competence is not determined solely by age. What matters more is the type of competence that education seeks to develop.

A lecturer with strong critical digital literacy may possess greater competence in evaluating information, reading data, using academic sources, and interpreting media than a student who is highly active on social media but has limited evaluative skills. For literary education, the implications are important. Students should not be treated as a group that is "already digitally proficient," but as learners with diverse digital experiences. Some may be highly skilled in content production; others may be more proficient in information searching; while others may have limited experience because of social, economic, eductional, or technological-access factors.

Even among students who use digital devices every day, their ability to use technology for reading and learning literature may vary considerably. A more appropriate approach is therefore not to ask whether students are digital natives, but rather: What digital literacies do they already possess? What digital literacies do they not yet possess? What literacies need to be developed so that they can become critical readers of literature? These questions shift attention from generational categories toward actual competencies. This change in perspective also transforms the role of the lecturer. Literature lecturers no longer function merely as transmitters of knowledge about literary works; they also become mediators of critical digital

literacy. Lecturers need to help students move: from consumption toward interpretation, from access toward evaluation, from searching toward verification, and from using technology toward critically understanding technology.

Within the context of digital and multimodal literature, these abilities become increasingly complex. Students need to read not only texts but also the media through which those texts are presented. They need to understand that a digital work does not exist in a vacuum. It exists within a particular platform, interface, algorithm, navigation system, visual design, and social environment. Reading digital literature therefore means reading the text, medium, platform, and context simultaneously. Ultimately, criticizing the concept of the digital native does not mean denying the fact that younger generations have extensive experience with technology. What needs to be rejected is the assumption that such experience automatically produces literacy.

Digital experience provides an initial resource, but education remains necessary to transform that experience into reflective, critical, ethical, and academic competence. In literary education, the ultimate goal is not to create students who are merely "good at using technology," but students who are capable of reading critically within a digital ecology. They must be able to confront information abundance without losing their ability to evaluate; engage with multimodality without losing interpretive depth; and use technology without losing critical thinking. The challenge of literary education in the digital age is therefore not simply how to make literature more digital, but how to ensure that digitalization strengthens the quality of reading, interpretation, and critical thinking. It is also insufficient to simply conclude that younger generations "do not read." What has actually changed is the ecology of reading. Students now read instant messages, comments, online news, social media posts, articles, web novels, fan fiction, digital comics, academic texts, e-books, subtitles, and many other forms of text.OECD research indicates that reading practices have changed in connection with the increasing use of digital devices. At the same time, access to printed books is also influenced by social conditions and family environments (Ikeda & Rech, 2022). The issue is that printed books are no longer the sole center of the literacy ecosystem. Within digital environments, books must compete with video, music, games, social media, messaging, and various other forms of entertainment.

4. Deep Reading and Networked Reading

Clinton (2019), through a systematic review and meta-analysis comparing reading from paper and reading from screens, identifies certain differences in reading performance across the two media. These findings do not mean that digital reading is always inferior; rather, they indicate that the medium itself may be one variable that needs to be considered in the reading process. For information retrieval, digital reading can be highly effective. Digital media are also extremely useful when readers need to work across multiple sources. However, reading a novel or poem in depth may require different strategies. Digital literary pedagogy therefore needs to cultivate two capacities: deep reading and networked reading. Deep reading refers to the ability to remain with a single text for a sustained period, read slowly, interpret ambiguity, and attend to detail. Networked reading refers to the ability to move among multiple texts,

sources, links, comments, media, and contexts. These two capacities are not alternatives. Both need to become competencies of the twenty-first-century literary reader. This is where the concept of algorithmic reading becomes important. In print culture, readers generally know who selects the books they read: lecturers, libraries, publishers, critics, mass media, or bookstores. In the digital world, however, readers increasingly receive recommendations from algorithms: "Recommended for you." "Because you read…" "You may also like…" "Trending." Readers may feel that they are freely choosing a literary work, while in reality their choices have already been mediated by recommendation systems. Manovich (2001) has long demonstrated that computational and database logics bring fundamental changes to the ways cultural objects are produced and consumed. In contemporary literary contexts, this logic is increasingly visible through platform-based systems of recommendation and curation. A new question therefore emerges in literary criticism: "Who determines which works I read?" The answer is not necessarily the author, teacher, librarian, or critic. Part of the answer may be the algorithm. This is why algorithmic reading becomes important. Students need to learn to read not only the text but also the conditions that determine the visibility of the text. Digitalization was initially often viewed as a process of democratization. Everyone could write. Everyone could publish. Everyone could become a reader. However, digitalization does not actually eliminate gatekeepers. It transforms the form of gatekeeping.

Spjeldnæs (2022) demonstrates that platformization has transformed the publishing industry and the relationships among publishers, authors, readers, and digital platforms. In the print ecosystem: publisher → editor → critic → bookstore → reader. In the digital ecosystem: platform → algorithm → recommendation → engagement → visibility → reader.

The platforms through which literature circulates therefore participate in determining how literature is produced, discovered, read, and evaluated. This constitutes a highly productive object of inquiry for literary education. Students may be asked to analyze why certain genres become more easily popular on particular platforms. They may compare the structures of popular stories with those of stories that receive relatively little attention. Such questions allow literary criticism to engage directly with media studies and platform studies. Digitalization also transforms the concept of authorship. In the conventional model of print literature, the relationship can be represented as: author → work → reader.

Within digital environments, however, a reciprocal relational pattern emerges: author ↔ reader ↔ platform ↔ community ↔ algorithm. Authors can receive readers' responses directly. Readers can post comments. They may even influence the development of a story. In fan fiction, readers can become authors. In interactive narratives, readers can determine how a story unfolds. The boundary between author and reader therefore becomes increasingly fluid. The development of digital technology further expands this issue. Hayles (2012) demonstrates that the development of digital media requires us to reconsider relationships among humans, technology, cognition, and textual production. Questions of authorship become increasingly complex with the emergence of generative AI. If a writer provides instructions to an AI system and the AI generates a poem, who should be regarded as the

author? This question concerns both technology and literature because it touches upon concepts of creativity, originality, style, authorship, and authority.

Generative AI has the potential to transform literary education significantly. AI can be used to produce poems, stories, dialogue, characters, translations, summaries, and even literary interpretations. However, there is a risk that students may use AI to avoid the processes of reading and thinking. A more productive response is therefore not simply to prohibit AI, but to develop critical AI literacy.

UNESCO emphasizes the importance of a human-centered approach to the use of generative AI in education and research, including attention to ethics, privacy, equity, safety, and educator capacity (Miao & Holmes, 2023). In literature teaching, for example, students may be asked to: read a poem; produce their own interpretation; ask an AI system to produce an interpretation; compare the two interpretations; identify errors in the AI interpretation; identify missing contexts; identify potential biases; revise the AI interpretation; and write a reflection on the role of the human reader. AI does not become a replacement for the reader. AI becomes an object of critical learning.

5. Five-Layer Digital Literary Pedagogy

The transformation of the literary ecology caused by digitalization requires more than simply adding technology to literature teaching. The use of learning management systems, e-books, search engines, social media, or digital applications in the classroom does not automatically produce digital literary pedagogy. What has changed is not only the tools used to teach literature, but also the objects being read, the ways texts are produced, the ways readers interact with texts, and the social and technological conditions that determine how a literary work is discovered, circulated, read, and given attention. On this basis, this paper proposes the Five-Layer Digital Literary Pedagogy model. This model is not intended as a hierarchy that replaces conventional literary reading, but as a gradual expansion of the competencies required to read and create literature within digital environments. Each layer adds a new dimension to the object of reading. Reading begins with the text as an aesthetic construction, moves toward the medium that carries it, then toward relationships among modes, the infrastructure of platforms and algorithms, and finally toward students' ability to produce literary works creatively and critically. The model can be formulated as follows: Layer 1 — Close Reading → Layer 2 — Media-Aware Reading → Layer 3 — Multimodal Reading → Layer 4 — Algorithmic Reading → Layer 5 — Creative Digital Production. The five layers are cumulative but not completely linear. Students may move back and forth among layers when they discover that changes in medium, multimodality, or platform mechanisms influence their interpretation of a text. The model is therefore better understood as a pedagogical spiral than as a staircase that ends at a particular level.

Layer 1: Close Reading

The first layer preserves the primary foundation of literary education: close reading. Digitalization does not eliminate the need for close reading. On the contrary, the more complex the digital environment becomes, the more important the ability to read deeply becomes. At this stage, students read word choice, metaphor, symbolism, imagery, narrative, character, point of view, structure, rhythm, dialogue, and style. They are trained to attend to textual details and construct interpretations based on evidence found within the work. The importance of close reading in digital literary pedagogy lies in preventing technology from replacing interpretation. Digital environments allow students to move rapidly from one text to another, conduct searches, open links, watch videos, and continuously receive content recommendations. Such speed may expand access, but it does not necessarily produce reading depth. Digital literary pedagogy therefore needs to preserve the ability to slow down the reading process and direct students' attention toward textual details. At this layer, the main pedagogical questions remain literary questions: What does the text say? How does the text construct meaning? How does language produce aesthetic effects? How do metaphor, symbolism, narrative structure, and character function within the work as a whole?

Digitalization therefore does not provide a reason to abandon the tradition of textual criticism. However, close reading in a digital context can be expanded into close reading of the digital text. Students read not only what is written, but also how the text materially appears on the screen. Thus, even at the first layer, there is already a possibility of connecting textual reading with the material form of the work.

Layer 2: Media-Aware Reading

The second layer shifts attention from the text toward the relationship between text and medium. Students begin to ask: What happens to meaning when a work moves from book to screen? What does the digital medium make possible, and what does it constrain? These questions are important because a text can never be completely separated from the materiality of its medium. Through the concept of remediation, Bolter (2001) demonstrates that new media do not simply replace old media, but reshape and re-present earlier media practices. From this perspective, transforming a novel into an e-book, for example, should not be understood merely as a change of format. A change of medium can influence how readers access pages, search for words, annotate passages, move between sections, and construct their reading experience. At this layer, students study concepts such as medium, remediation, interface, affordance, and textual materiality. They compare the experience of reading a novel in print with its digital version. They may observe differences in pages, navigation, text search, hyperlinks, screen size, typography, annotation, and possibilities for interaction. The literary question is therefore expanded from: “What does the text mean?” to: “How does the medium shape the possibilities of meaning within the text?”

A digital text is not merely a text transferred onto a screen. The screen, interface, device, and navigation system may become part of the interpretive experience. This layer also introduces an awareness that the medium is not neutral. Every medium has particular

affordances as well as limitations. Printed books enable certain experiences that are not identical to those enabled by digital screens. Conversely, digital screens enable search, animation, hyperlinks, sound, and interactivity that are not available in the same form in print. Literary education therefore needs to teach students to read not only the text but also the material conditions that enable the text to appear.

Layer 3: Multimodal Reading

The third layer moves students from text and medium toward relationships among multiple modes in meaning-making. Kress (2010) explains that contemporary communication is increasingly multimodal because meaning is constructed through multiple modes operating simultaneously. Language is one important mode, but images, color, layout, sound, movement, typography, and other visual elements also possess semiotic functions. In digital literary pedagogy, students therefore need to learn to read relationships among modes. They should not only ask what words mean, but also how words interact with images, sound, color, movement, music, and visual design. A change in color may create particular emphasis. Music may alter the atmosphere of a poem. Moving text may create a temporal experience. An image may provide information not stated by the narrator. Typography may become part of the structure of meaning. At this stage, multimodal reading should not be reduced to the activity of "looking at images in a text." What matters more is analyzing the relationships among modes. Students may ask whether an image reinforces, expands, contradicts, or even replaces verbal information. They may analyze how sound produces a particular emotion, how typography directs attention, or how movement changes the reading experience. This conception expands close reading into close multimodal reading. If students read word choice in verbal texts, they also read choices of color, font size, layout, sound, movement, and images as semiotic choices in multimodal texts. Literary literacy is therefore no longer merely the ability to read language; it is also the ability to read orchestrated meaning, namely meaning produced through the organization of multiple modes working together (Kress, 2010).

Layer 4: Algorithmic Reading

The fourth layer is one of the most important elements of this model. Once students are able to read text, medium, and multimodality, they need to understand that digital literary works do not appear in digital spaces neutrally. Works must be discovered, selected, circulated, recommended, ranked, and made visible to readers through platform and algorithmic systems. Students therefore need to develop the ability of algorithmic reading. At this stage, what is being read is not only the literary work, but also the algorithmic conditions that determine its visibility. The questions change: Why does this work appear before me? Why does another work not appear? Who determines what becomes visible? How do recommendation systems work? How do engagement, likes, comments, shares, views, and rankings influence the circulation of literary works? These questions take literary education into the field of platform studies and digital cultural criticism. Platformization is not merely the process of transferring cultural activities into digital applications. Nieborg and Poell (2018) explain that platformization affects the production, distribution, and circulation of cultural

content. Poell, Nieborg, and van Dijck (2019) further demonstrate that platformization involves the penetration of platform infrastructures, economic processes, and governance mechanisms into various areas of life, as well as the reorganization of cultural practices around platforms. In literature, the consequences are significant.

The popularity of a literary work on a digital platform is not necessarily identical to its aesthetic quality. A poem may receive thousands of likes because it fits the platform's distribution logic, while another aesthetically complex work may receive far less visibility. Students therefore need to distinguish between literary value and platform visibility. Algorithms become a new object of literary criticism. Students can examine how recommendation systems, personalization, ranking, and engagement metrics influence reading experiences. They can also compare search results or recommendations appearing on different accounts or devices in order to understand that what is described as a "popular work" may result from interactions among the work, readers, data, and algorithmic systems. This brings literary education into the domain of power. If traditional literary criticism asks who has the authority to determine the canon, digital environments allow the question to be expanded: Who or what determines literary visibility? Are editors, critics, publishers, teachers, and institutions still the only gatekeepers? Or do algorithms and platforms now also perform gatekeeping functions? Algorithmic reading thus becomes a form of literary literacy that enables students to read the infrastructure of power behind texts.

Layer 5: Creative Digital Production

The fifth layer transforms students from readers into creators. Whereas the previous four layers primarily develop interpretive and critical capacities, the fifth layer develops creative production. Students do not merely read digital literature; they create works that make use of the possibilities offered by digital media. Possible products include digital poetry, kinetic poetry, audio poetry, video poetry, interactive stories, hypertext fiction, digital comics, fan fiction, multimodal narratives, literary podcasts, and experimental works using artificial intelligence. However, digital production should not be understood merely as "creating literary works using an application." Production is the stage at which students apply all the awareness developed through the previous four layers. When creating a digital poem, for example, students need to consider language, medium, typography, images, sound, movement, interface, audience, platform, and possibilities for distribution. Production tasks can therefore simultaneously become forms of critical reflection. Students may be asked to explain why they selected a particular sound, why they used a particular color, why text moves at a particular point, why the work was placed on a particular platform, and how they considered the algorithmic possibilities of that platform. At this stage, literary production can also be directed toward critical making. Students do not simply create works to complete an assignment; they use the process of creation to understand how technology works. They learn that every technical choice has aesthetic, social, and political consequences. The issue of artificial intelligence becomes particularly relevant here. Students can use AI as an object of experimentation as well as an object of criticism. They can compare poems written entirely by

humans with AI-generated texts, edit AI-generated texts, identify stereotypes or biases within them, and question authorship, creativity, originality, training data, and ethical responsibility. In this sense, AI should not be positioned merely as a tool for accelerating text production. It can become an object of critical literary literacy. Students need to understand that AI-generated texts result from computational systems, data, models, instructions, and human decisions. The use of AI in literary production therefore needs to be accompanied by reflection on who is considered the author, how creativity is defined, and how aesthetic authority is constructed. The five layers ultimately form a broader competence. Students do not merely become readers of literary texts; they become readers of the digital literary ecosystem. They read text, medium, multimodality, platform, algorithms, and the production process itself.

The Five-Layer Digital Literary Pedagogy can therefore be understood as a pedagogical model moving from: reading the text → reading the medium → reading multimodality → reading the platform and algorithm → making digital literature. The model simultaneously preserves continuity with traditional literary education while opening space for new competencies. Close reading is not discarded; it becomes the foundation. Multimodality does not replace language; it expands the sources through which meaning is constructed. Technology does not replace interpretation; it becomes an object that also needs to be critically examined. Digital production does not replace literary appreciation; it becomes an advanced form of understanding how literary works function. From this perspective, digital literary pedagogy is not a pedagogy that merely "uses technology to teach literature." Rather, it is a pedagogy that teaches students to understand the relationships among literature, technology, media, platforms, algorithms, and digital culture.

6. Digital Literary Literacy

The transformation of the literary environment in the digital age ultimately requires an expansion of the concept of literary literacy. If literary literacy in conventional educational traditions primarily concerns the ability to read, understand, interpret, evaluate, and appreciate literary works, digital environments add several new layers. Readers no longer encounter only texts, but also media, interfaces, multimodality, platforms, algorithms, mechanisms of distribution, and technologies involved in literary production. On this basis, this paper uses the concept of Digital Literary Literacy to refer to the reader's ability to understand, interpret, evaluate, create, and circulate literary works with an awareness of the digital conditions that shape their existence. Digital Literary Literacy is therefore not simply digital literacy applied to literature. It constitutes a specific form of competence situated at the intersection of literary literacy, digital literacy, media literacy, multimodality, and awareness of platforms and algorithms. This concept is important because digitalization changes the fundamental questions involved in reading. Within print culture, readers primarily encounter questions concerning the text: Who is the author? What does it mean? How is its narrative structured? How is language used? What context lies behind it? Within digital environments, these questions remain important, but they need to be expanded.

Readers must also ask: Through what medium does the work appear? How does the interface organize the reading experience? What modes are used to construct meaning? How

does the platform determine the visibility of the work? How does the algorithm recommend it? How is the work produced and circulated? What changes when technologies such as AI become involved in its creation? Digital Literary Literacy therefore consists of at least seven dimensions of competence.

a. Textual Competence, The first is textual competence, namely the ability to conduct close reading of the language and structure of a work. Students must still master metaphor, symbolism, imagery, characterization, plot, point of view, style, structure, and other aesthetic devices. This remains a foundation that cannot be abandoned in the digitalization of literature.
b. Media Competence The second is media competence, namely the ability to understand the relationship between a work and its medium. Students need to understand that the form and experience of reading are influenced by the materiality of media, devices, screens, and interfaces. Bolter's (2001) concept of remediation helps explain that digital media reshape earlier media practices, so that changes in medium can produce changes in the reading experience.
c. Multimodal Competence, The third is multimodal competence, namely the ability to read and interpret multiple modes operating together within a work. Students must be able to understand that images, colors, sounds, music, typography, space, movement, and video can function as carriers of meaning. Kress's (2010) perspective on multimodality is important because it conceptualizes communication as a process of selecting and organizing multiple modes.
d. Platform Competence, The fourth is platform competence, namely the ability to understand how platforms shape the production, distribution, and reception of literary works. A platform is not merely a place where a work is uploaded. Platforms have rules, designs, engagement mechanisms, recommendation systems, moderation policies, and particular economic models. Students therefore need to understand that literary works they read or encounter online have already undergone processes of platform mediation.
e. Algorithmic Competence, The fifth is algorithmic competence, namely the ability to question how algorithms influence the visibility, recommendation, ranking, and circulation of literary works. At this stage, students need to understand that what appears before them is not necessarily a neutral representation of the entire literary ecosystem. Algorithms can organize attention by connecting content, users, data, and engagement metrics. Research on platformization demonstrates that algorithms and platform infrastructures play roles in reorganizing cultural practices and the production and circulation of content.
f. Critical Evaluative Competence, The sixth is critical evaluative competence, namely the ability to evaluate the quality, credibility, authority, and context of literary works or literary information encountered digitally. Students need to distinguish literary works, reviews, user comments, promotional materials, viral content, fan production, and

information without academic foundations. They also need to understand that digital popularity is not a single or sufficient measure of literary quality.

g. Creative and Ethical Competence, The seventh is creative and ethical competence, namely the ability to produce digital literary works creatively and responsibly. Students need to be able to use technology to create literary works while also understanding issues of copyright, attribution, privacy, representation, authorship, the use of materials belonging to others, and the use of AI. In the context of generative AI, this competence becomes increasingly important because the boundaries among reader, writer, editor, software user, and machine are becoming increasingly complex. These seven competencies demonstrate that Digital Literary Literacy cannot be reduced to the ability to read an e-book or use an application to complete a literary assignment. It constitutes an ecosystem of competencies that enables students to understand literature textually while also understanding the technological and social conditions that shape digital literary life.In this sense, an ideal digital literary reader should be able to move through increasingly complex questions: What does the text say? How does the medium shape what the text can do? How do different modes produce meaning? How does the platform make the text visible? How do algorithms shape its circulation and reception? How can I critically and ethically create new literary works within this environment? These questions demonstrate a shift from textual literacy toward ecological literary literacy. Readers no longer see literary works as isolated objects, but as parts of an ecosystem connecting authors, readers, media, devices, platforms, algorithms, data, the attention economy, and production technologies.

This concept also enables us to reconsider the "reading crisis" often associated with digital generations. The problem may not simply be that students do not read. They do read, but they read within a different ecology. They read stories on digital platforms, fan fiction, digital comics, poetry through social media, poetry in audio form, or narratives through videos and games. The more productive pedagogical question is therefore not merely whether students read, but: What do they read? How do they read it? Through what medium? Within what kind of platform conditions? And with what degree of critical competence? In Indonesia, this issue has particular relevance. The development of digital platforms has expanded spaces for the production and circulation of works that were previously highly dependent on publishing institutions, mass media, literary communities, and cultural institutions. Web fiction, fan fiction, digital comics, poetry on social media, online serialized stories, reader communities, and various user-generated literary practices demonstrate that literary practices have moved into more participatory spaces. However, expanding these spaces does not mean that all digital content should automatically be called literature. This is precisely where literary education acquires a new responsibility. Students need conceptual tools to distinguish popular content, everyday communication, personal expression, commercial products, and works possessing particular intentions, complexity, or aesthetic qualities. These boundaries are not always fixed, but their instability is not a reason to eliminate evaluative capacity.

Digital culture should therefore be positioned as a gateway to literature rather than a replacement for literature. Content that is close to students' everyday lives can become a pedagogical starting point for leading them toward more complex questions concerning language, narrative, aesthetics, representation, ideology, medium, and power. Fan fiction, for example, can provide an entry point for discussing intertextuality and authorship. Web fiction can be used to discuss seriality and narrative structure. Video poetry can open discussions about multimodality.

AI-generated works can be used to discuss creativity, authorship, and ethics. Through such an approach, literary education does not need to place "old" literature and digital culture in opposition. What is needed is an interpretive bridge between the two. The tradition of close reading can be connected with multimodal reading. Literary criticism can be connected with platform studies. The study of authorship can be connected with AI studies. Literary appreciation can be connected with creative digital production. Based on this discussion, Digital Literary Literacy can be defined as: the ability to critically read, interpret, evaluate, create, and circulate literary works by understanding the textual, medial, multimodal, social, platformic, algorithmic, and technological conditions through which literature is produced, encountered, interpreted, and received. This formulation positions digital literary literacy not as a technical ability to use devices, but as the ability to understand the entire set of conditions that allow digital literature to exist and become meaningful. The ultimate goal of digital literary education is therefore not to produce students who are merely capable of using technology to read literature. Its goal is to produce critical digital literary readers: readers capable of reading texts deeply, understanding media, interpreting multimodality, questioning platforms and algorithms, evaluating information, understanding transformations in authorship, using AI critically and ethically, and producing digital literary works creatively. Within this framework, digital literary literacy is an expansion rather than an elimination of literary literacy. Literature continues to require deep reading, interpretation, aesthetic sensitivity, and critical thinking. What changes is the awareness that contemporary literary works exist within a complex technological ecology. Teaching literature in the digital age therefore means teaching students not only how to read literature, but also how to read the digital conditions in which literature lives.

B. CONCLUSION

The transition from print culture to digital culture is a transformation far deeper than simply moving from books to screens. Digital technology has transformed the entire literary ecosystem: how works are produced, who is considered an author, how readers discover works, how works are read, how they are distributed, and how literary value is constructed. Literary education therefore also needs to change. Such change, however, does not mean abandoning older traditions. Close reading remains important. The ability to read language carefully remains the foundation of literary education. What needs to be done is to expand it. Students need to move from: close reading toward: media-aware reading then: multimodal reading followed by: algorithmic reading and ultimately: creative digital production. Through

this approach, students do not merely learn to read literary works. They learn to read the ecosystem that enables literary works to exist. The future of literary education is therefore not a victory of digital culture over print culture, but the emergence of readers capable of moving critically between print culture and digital culture.

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