

---

## A MULTIFACETED FRAMEWORK FOR CRITICAL DIGITAL LITERACY IN TRANSFORMING HUMAN RESOURCES

Eka Fadilah

Widya Kartika University, Indonesia

(ekafadilah@widyakartika.ac.id)

---

Received: 16<sup>th</sup> April 2023; Revised: 7<sup>th</sup> August 2023; Accepted: 30<sup>th</sup> December 2023

---

### ABSTRACT

This study endeavors to reinvigorate the concept of critical digital literacy within the framework of English language teaching in Indonesia. Employing a desk study methodology, a nexus analysis was conducted, encompassing theoretical frameworks, empirical research, political-ideological considerations, governmental and global institutional policies, and pedagogical possibilities related to the integration of critical digital literacy with digital technology in education. The data analysis involves the systematic deconstruction and synthesis of existing literature frameworks to establish emergent categories. These categories were subsequently thematized into a model, serving as a heuristic framework that spans the multifaceted domains of digital text, digital reader, digital task, and digital values. The framework underscores the imperative to prioritize human transformation and empowerment over a sole focus on digital technology utilization. It emphasizes the collaborative efforts required among stakeholders in English language teaching practices.

**Key Words:** critical digital literac; human resource transformation; English language teaching; transmedia; cyber-linguistics

### ABSTRAK

*Penelitian ini berupaya untuk menyegarkan kembali konsep literasi digital kritis dalam kerangka pengajaran bahasa Inggris di Indonesia. Dengan menerapkan metodologi desk study, analisis nexus diterapkan dengan menggabungkan kerangka teoritis, penelitian empiris, pertimbangan politik-ideologis, kebijakan pemerintah dan lembaga global, serta peluang-peluang pedagogis terkait integrasi literasi digital kritis dengan teknologi digital dalam pendidikan. Analisis data melibatkan dekonstruksi sistematis dan sintesis terkait dengan kerangka literatur yang ada untuk membentuk kategori-kategori yang muncul. Dari kategori-kategori tersebut kemudian di bentuk menjadi tema yang kemudian dikembangkan sebuah model yang berfungsi sebagai kerangka heuristik yang mencakup domain-domain beraneka bentuk, seperti teks digital, pembaca digital, tugas digital, dan nilai-nilai digital. Kerangka ini menekankan pentingnya untuk memberikan prioritas pada transformasi dan pemberdayaan manusia dibandingkan dengan fokus semata-mata pada pemanfaatan teknologi digital. Penekanan diberikan pada upaya kolaboratif yang diperlukan di antara para pemangku kepentingan dalam praktik pengajaran bahasa Inggris.*

**Kata Kunci:** literasi digital kritis; transformasi sumber daya manusia; pengajaran bahasa Inggris; transmedia; linguistik siber

**How to Cite:** Fadilah, E. (2023). A Multifaceted Framework for Critical Digital literacy in Transforming Human Resources. *IJEE (Indonesian Journal of English Education)*, 10(2), 463-486. doi:10.15408/ijee.v10i2.32036.

---

*Corresponding author*

*IJEE (Indonesian Journal of English Education)*, 10(2), 2023, 463-486

P-ISSN: 2356-1777, E-ISSN: 2443-0390 | DOI: <http://doi.org/10.15408/ijee.v10i2.34208>

This is an open access article under CC-BY-SA license (<https://creativecommons.org/licenses/by-sa/4.0/>)

## INTRODUCTION

Ubiquitous digital technology has reshaped and shifted language learning experiences towards becoming more collaborative, trans-disciplinary, and borderless. In the Indonesian context, through the enactment of the national literacy movement (*Gerakan Literasi Nasional/GLN*), the exigency to integrate digital technology into teaching pedagogy has resonated across different levels of education, from elementary to higher educational levels (Kemdikbud, 2017; Novianti et al., 2020).

Digital technologies offer valuable opportunities for language learners to access rich linguistic repertoires and enhance their intercultural competence (Tour, 2020). Various apps, such as Edmodo, corpora, Duolingo, Langroo, quizzes, and others, are widely utilized to foster English proficiency. Additionally, e-books with audio recordings provide easily accessible learning materials. Social media platforms like Facebook, YouTube, and Twitter, along with virtual learning apps like Zoom and Microsoft Teams, create new environments for super-sociocultural communication, identity formation within specific groups, autonomous learning, and encouraging willingness to communicate (Fadilah, 2018a; Gee, 2015).

The adoption and adaptation of digital technologies in the context of ELT are aimed at leveraging and sustaining English learners' competence and skills. However, the result of a Program for International Learners Assessment (PISA 2018) reveals that Indonesian learners ranked in the 10<sup>th</sup> lowest score of 79 countries assessed (Puspendik, 2019). Low literacy in interpreting and comprehending English digital texts posited Indonesian learners in the 62<sup>nd</sup> of the countries participating (OECD, 2019). In this case, there should be a comprehensive and multifaceted approach to increase learners' digital literacy levels by incorporating digital platforms into ELT pedagogy. This is aimed to encourage learners to become more autonomous and less dependent on teachers. Of critical importance is empowering them to hone critical literacy skills (Novianti et al., 2020) that fit the Indonesian religious and socio-cultural values. ELT pedagogy thus needs to develop learners' digital literacy incorporating the values of (multi/inter) culturalism.

The central aim of this article is to propose a multifaceted framework of critical digital literacy by emphasizing human resource empowerment and transformation, that is, for teachers and learners to sustain digital-based ELT practices and lifelong learning. My proposed framework encompassed 1)

digital text, 2) digital reader, 3) digital task, and 4) digital values. Although there has been a considerable focus on how to incorporate digital literacy in the ELT context, there are still limited rigorous practical guidelines and theoretical frameworks to help English teachers develop learners' digital literacy comprehensively and systematically. Likewise, the extant literature framework emphasizes the sophistication of digital platforms rather than the transformation of human capability to empower themselves (Coiro, 2021).

## METHOD

This study employed qualitative research through a desk study, involving a thorough re-evaluation of existing theoretical frameworks and prior research through secondary analysis of amassed data (Moore, 2006). The rationale acknowledges that not all research endeavors require collecting novel, primary data, and significant progress can be achieved through analyzing existing datasets. Those datasets were extracted through a systematic step commencing with the identification of papers within academic journal databases. An initial screening phase involved assessing the inclusion and exclusion of the papers obtained from the database. Additionally, the

relevant papers, aligned with the research objective, were then extracted. A subsequent assessment of information quality and relevance was accomplished through a synthesis of the extracted data.

## Data collection

To comprehensively capture relevant literature, an exhaustive search was conducted across key academic databases including, but not limited to Scopus, Web of Science, and Sinta. Additionally, to fortify the credibility and reliability of the investigation, the data were also sourced from established literature reviews within international reputable journals e.g., TESOL Journal, System, Applied Linguistics; national reputable journals e.g., TEFLIN Journal; Indonesian Journal of Applied Linguistics; Indonesian government policies e.g., *Gerakan Literasi Nasional (GLN)*, and official global organizations e.g., OECD, Digital transformation expert panel that concern with the domain of digital literacy.

A meticulously crafted search strategy systematically extracted key components—main findings, discussions, conclusions, and recommendations—from the existing literature framework, ensuring alignment with the study's objectives. This strategy encompassed a diverse set

of keywords, including but not limited to "digital," "literacy," and "technology." The utilization of Boolean operators such as "critical AND digital AND literacy", "technology OR human AND transformation", and "technology transformation OR human transformation AND critical digital literacy" facilitated a nuanced exploration of relevant literature, reflecting a strategic combination to enhance precision and inclusivity in the search process.

### **Data analysis**

A nexus analysis methodology was employed to amalgamate these diverse data sources, thereby delineating a cohesive overarching theme (Mariapesch, 2022). In accordance with Moore's (2006) conceptual framework for desk studies, the analytical process involved a meticulous deconstruction and synthesis of existing data, employing segmentation into codes, which were subsequently amalgamated to form meaningful categories. Furthermore, a systematic and critical comparative analysis was conducted, giving rise to emergent categories that were subsequently expounded upon in the ensuing themes. From those themes, a heuristic model of digital literacy emphasizing human transformation and empowerment was developed. This

model is intentionally designed to seamlessly integrate with English Language Teaching (ELT) practices.

## **FINDINGS AND DISCUSSIONS**

### **Reinvigorating critical digital literacy in English language teaching practices**

Various educational orientations and purposes have led to diverse conceptualizations of literacy, particularly concerning its integration into ELT practices. A significant turning point in this integration occurred with the emergence of the social turn, which entwines sociocultural theory and literacy, signifying a crucial milestone in linking literacy and language holistically (Tour, 2020). Within this framework, literacy is not solely perceived as a cognitive aspect, but rather as encompassing a broad spectrum of historical, sociocultural, and institutional dimensions (Gee, 2015). Consequently, literacy is considered a collection of social activities, encompassing both generic reading and writing skills (Loewus, 2016). It is essential to recognize literacy and language practices as social activities intricately tied to how individuals use language within specific contexts. According to this perspective, literacy constitutes "the situated and contextualized use of written language," with people engaging in interactions

within social institutions and spaces (Bloome & Green, 2015, p. 20).

The second transformation in incorporating literacy into ELT arises from the emergence of digital technologies as facilitative tools (Knobel & Kalman, 2016). The ubiquity of the internet has given rise to digital literacy, encompassing a broader scope than just literacy (Loewus, 2016). Digital literacy aims to empower and transform individuals with skills and knowledge to use language effectively through digital technologies, requiring not only technical expertise but also contextual understanding encompassing behaviors, interactions, values, beliefs, and knowledge (Gee, 2015, p. 44). The third significant shift involves the convergence of critical digital literacy skills, encompassing a set of values through "Transcendental critique" (Pangrazio, 2016, p. 8). This shift aims not only to equip English learners with the necessary knowledge and skills to access, communicate, and create on various digital platforms but also to foster critical thinking, contextual message interpretation, information decontextualization, and adaptability of language skills for diverse purposes and audiences.

Building upon the meticulous review presented earlier, I advocate for an investigation into critical digital

literacy. This inquiry would focus on digital values, equipping learners with the capacity to apprehend, scrutinize, and deconstruct digital texts within the contextual parameters of language identity, ideology, and power dynamics. The intention is to address a spectrum of sociocultural, economic, and religious contexts, thereby fostering inclusivity and relevance. These values should guide teachers in designing digital tasks that enrich learners with linguistic and non-linguistic repertoires, multimodal semiotics, cyber-pragmatics, and critical discourse analysis competence. This area of inquiry has been overlooked in existing literature, which tends to focus on general digital literacy (Coiro, 2021) or critical literacy (Novianti et al., 2020). The emphasis is not solely on specific technologies but on employing a critical framework rooted in individuals' underlying beliefs to foster active and critical practices using diverse digital platforms in ELT.

### **A bid for heuristic-multifaceted critical digital literacy model**

The heuristic multifaceted digital literacy framework in ELT necessitates collaboration among various disciplines, including applied linguists, sociolinguists, psycholinguists, ethnolinguists, forensic linguists, and others. This framework extends and

adapts the previous models of critical literacy, incorporating aspects like curriculum, standards, students' experiences, local social issues, and text selection (Novianti et al., 2020), as well as digital literacy, focusing on text, reader, and activity (Coiro, 2021). The proposed critical digital literacy model is anchored in "digital values," serving as a novel domain. These values align closely with the Douglas Fir Group's (2016) transdisciplinary framework, representing macro-level ideological structures of second language acquisition (SLA), rooted in Bronfenbrenner's ecological framework for human development.

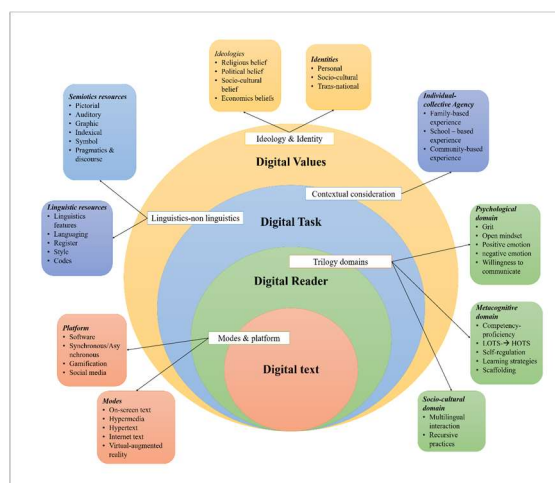


Figure 1. Heuristic-Multifaceted Framework of critical digital literacy

The framework (Figure 1) illustrates the intricate and multilayered complexity of digital literacy, categorizing it into four interconnected and interdependent levels. **The first**

**layer**, represented by the smallest concentric circle, pertains to digital text. This encompasses various digital platforms such as software applications, synchronous and asynchronous interaction, gamification, and social media usage. Additionally, this layer includes different modes of use, such as on-screen text, hypermedia, hypertext, internet text, and augmented reality, extending beyond traditional print text. **The second layer** of the framework encompasses diverse digital reader domains, which can be further categorized into three main sub-domains: metacognitive (cognitive), psychological (affective), and socio-cultural (motoric) domains. Each of these sub-domains plays a distinct role in shaping the digital reader's engagement and interaction with the digital text, encompassing cognitive processes, emotional responses, and social-cultural influences.

**The third layer** of the framework represents digital task activities that involve a broad spectrum of linguistic proficiencies (linguistic repertoires) and non-linguistic skills (semiotics repertoires), along with individual and collective agency that shapes social structures. Individual agency allows learners to utilize their linguistic and non-linguistic abilities to integrate, comprehend, analyze, evaluate, and create within digital tasks. On the other

hand, collective agency involves collaborative and cooperative digital activities, facilitating communication and support among learners. These activities are heavily influenced by the learners' background and significant experiences derived from interactions within their family, school, and broader community beyond the school environment.

**The fourth layer**, represented by the largest concentric circle, comprises digital values, which encompass language ideology and identity. Within this layer, ideology encompasses a wide range of beliefs, including religious, political, social-cultural, and economic beliefs, which influence how individuals navigate and protect themselves from any misinformation or abuse they encounter in digital technology. On the other hand, identity represents the behavioral patterns and actions displayed by digital users as they interact with digital technology.

### Digital text

A text is characterized as a cohesive passage that constitutes a "unified whole" (Halliday & Hasan, 1976). It extends beyond mere adherence to strict grammatical rules or lexical choices and encompasses the communication act it serves. Digital text, being a unified

whole, encompasses various modes and platforms within digital spaces.

### Modes

The digital text represents an expansion of traditional printed text, incorporating multiple modes. Coiro (2021) introduces a blending and overlapping of distinct types of modes, including traditional modes such as literary, informational, hybrid, multimedia, and multimodal texts, as well as refined modes like on-screen text, hypertext, hypermedia, internet text, and virtual-augmented reality text. According to this viewpoint, on-screen text serves as an extension of literary and informational texts, while hypertext and hypermedia extend from hybrid and multimedia texts. Similarly, multimodal text finds its extension and manifestation on the internet and virtual-augmented reality texts.

Hypertexts serve as an alternative to traditional paper documents and find use in education as information systems. In this format, the contents are organized as an interconnected network, with documents represented as nodes and the relations between them represented as links (Salmeron, Canas, Kintsch, & Fajardo, 2005, p. 171-172). The use of hypertext facilitates reading comprehension for learners, as it allows them to navigate information and apply

cognitive and metacognitive skills (Moos & Marroquin, 2010). Additionally, the flexibility offered by hypertext empowers learners to select and adapt their learning materials, granting them the freedom to search and navigate hyperlinked texts across various pages.

Hypermedia, on the other hand, is an extension of hypertexts, incorporating audio-video and animation elements that offer readers a non-linear type of information (Ketabi et al., 2012). While hypertexts link textual materials and ideas within internet texts, hypermedia expands to digitally networked texts that connect to the organizational digital environment, such as digital libraries, digital storybooks, and digital institutional profiles, among others. Both hypertexts and hypermedia operate as closed systems within a hyperlinked digital structure, equipped with navigational buttons that transform hypertext into hypermedia, resembling a digital version of multimedia (Moos & Marroquin, 2010).

For instance, Imagine an English language classroom where the teacher is using hypermedia to teach vocabulary related to a specific topic, such as "travel." The hypermedia content includes interactive audio and video elements, such as virtual tours of famous

travel destinations and interviews with travelers sharing their experiences. Students can access the hypermedia content on their devices and navigate through the multimedia resources at their own pace. They can click on different hyperlinks to explore various travel-related topics, such as packing tips, language phrases useful for travel, and cultural customs in different countries. Through this hypermedia-based approach, students are actively engaged in the learning process, and they have the flexibility to choose the content that interests them the most. The interactive nature of hypermedia encourages students to practice their language skills in real-world contexts and fosters a deeper understanding of the vocabulary and cultural aspects associated with travel.

Additionally, virtual-augmented reality serves as a valuable multimedia teaching aid in the context of machining and manufacturing engineering education (Antonietti, Imperio, Rasi, & Sacco, 2001). It empowers foreign language learners to personalize their training and learning interactions, providing immediate evaluation of their individual actions. According to Antonietti et al. (...), they argue that virtual-augmented reality is not complete without incorporating hypermedia, which enables the integration of textual and visual tools of



information. For instance, creating GPS locations using platforms like Google Earth to depict historical and conservative places such as temples or historical buildings requires a diverse array of multimedia elements, including texts, audio, video, and webpages, to be seamlessly integrated. English learning can incorporate GPS locations by using virtual-augmented reality platforms, like Google Earth, to create immersive language learning experiences. Learners can explore and interact with historical and conservative places, such as temples and historical buildings, through multimedia elements like texts, audio, video, and webpages, enhancing their language skills and cultural understanding.

### **Platform**

The integration of computer/mobile-assisted language learning (C/MALL) applications and software has become widespread in ELT pedagogy. Gamification, for example, has proven to be effective in enhancing learners' linguistic competence and creating an intercultural communication environment. This approach is rooted in socio-cultural theory (SCT) and emphasizes collaboration and lifelong learning, bridging the gap between classroom and real-world language use (Reinder, 2012, p. 1).

Social media platforms offer users an opportunity to express their identity, share thoughts, and showcase their existence using audio-visual modes (Reinhardt, 2019). This social turn has prompted changes in L2 teaching, requiring instructors to adapt and adjust their strategies. Social media also holds potential for teacher professional development (PD) as it opens new avenues for sustainable PD and lifelong learning, moving beyond traditional one-time workshops (Alberth et al., 2018, p. 299).

Moreover, the effective use of available synchronous applications and software (e.g., Zoom, Google Meet) and asynchronous ones (e.g., email, Google Classroom), or a combination of both (e.g., Google Docs), has been highlighted in research to foster social relations and accelerate language skill proficiency in learners (Fadilah, 2018a; Ortega, 2019; Shintani & Aubrey, 2016). Fadilah (2018a) reported that incorporating Facebook as a mode of English learning increases learners' willingness to communicate (WtC) and reduces anxiety and shyness. Similarly, Shintani and Aubrey (2016) found that utilizing both synchronous and asynchronous modes through Google Docs enhances learners' linguistic development and encourages collaborative joint construction among them. This collaboration is facilitated by the

provision of corrective feedback (i.e., scaffolding) to accommodate individual differences, such as varying levels of proficiency, anxiety, and self-regulatory capabilities.

### Digital reader

Becoming a digital reader provides a wider range of new experiences in digital platforms. However, it requires a wider range of competence and skills to critically comprehend hypertexts/media accessed through such platforms. *Critical digital readers* are demanded to generate their own structural adjustments to fit their reading purposes and to reconfigure the organization of those texts. As such, this process requires high-order critical thinking skills (HOTS) to navigate and evaluate the source of information. In other words, critical digital readers are strongly demanded to evaluate the credibility of sources and predict the suitability of content from a series of screens and displays based on hints e.g., links, surrounding text, and URLs (OECD, 2015).

One of the important features of digital information is its nonlinearity (Coiro, Castek, & Guzniczak, 2011) which enables the learners to modify texts (e.g., select, add, and omit) based on their own intentions and needs. Consequently, the nonlinearity exerted

in e.g., hypermedia or hypertext usually requires more cognitive load to process and evaluate (Lim & Jung, 2019). In a meta-analysis of digital readers' behavior, Reiber-Kujipers, Kral, and Meijer (2020) revealed the characteristics of digital readers encompass the level of reading proficiency, reader perception, and types of prior knowledge to comprehend digital texts. Gilbert (2017) reported that the participants in his study focused their digital reading activities more on doing research i.e., employing critical thinking skills than merely on reading pleasure.

Indeed, critical digital readers engage in more than just processing mental representations to understand and comprehend texts (Akyel & Erçetin, 2009). They also possess the ability to deconstruct and critically evaluate the digital texts they consume, create, and share. Considering the context, I propose a trilogy of domains essential for a critical digital reader, which includes interwoven *metacognitive, socio-cultural, and psychological domains*. These domains collectively empower individuals to navigate and critically engage with digital texts, fostering a deeper understanding of the information and its broader implications. By actively engaging with the text in these domains, the critical digital reader can deconstruct and critically evaluate the social media post.

They can discern the reliability of the information, consider the potential biases and motives behind it, and make informed judgments about the political issue. This empowers them to have a deeper understanding of the information and its broader implications, enabling them to be more discerning and responsible digital consumers and sharers of information.

### **Metacognition**

The metacognitive domain encompasses a diverse set of knowledge, competencies, and skills that digital readers utilize in the process of making meaning. This domain can be extended to include meta-cognitive or meta-language strategies, which aid in interpreting and comprehending information, promoting high-order critical thinking skills (HOTS). The non-linear nature of hypermedia, with its embedded links, requires metacognitive skills to restructure, reconfigure, and evaluate the texts, enabling readers to navigate and process the information effectively.

Metacognition, as defined by Flavell (1976, p. 232), refers to one's awareness and knowledge of their own cognitive processes and products, including learning-relevant properties of information. This concept involves metacognitive monitoring, which

includes knowledge, experiences, goals, and strategies related to one's thinking. Anderson (2012) supports the idea that metacognition leads to critical thinking, promoting reflection and evaluation of one's own thinking processes. In reading comprehension, metacognition plays a crucial role, as successful readers possess self-awareness and utilize their own learning strategies while managing their emotions effectively.

### **Socio-cultural domain**

Socio-cultural domain encompasses multilingual interaction encounters by a reader either in a real-world life (i.e., offline modes) or virtual ones (i.e., online modes). Such an interaction constitutes a recursive and compelling experience brought up in understanding and comprehending a text. Multilingualism is continuous, gradient, and probabilistic (Ortega, 2019) that enables intercultural interaction by invoking a deep understanding of the recursive practices shaping and being shaped in the socio-cultural construct. It enables the scaffolding under the framework of Vygotsky's (1978) socio-cultural theory (SCT) emphasizing human mental functioning through the interactions of 'participation in cultural, linguistic, and historical forms setting' (Lantolf & Poehner, 2015, p.207).

Zhou and Lam (2019) highlighted some problems encountered by learners in using and accessing online reading. For example, elementary learners were found to face difficulties in systematically planning to search for appropriate digital materials on the internet, and junior and senior high learners found problems in defining and locating exact information to fit their learning *needs, wants, and gaps*. While university learners were described more experience in searching for information needed for their academic purposes. These examples highlight a scaffolded learning environment anchored at SCT at different levels of education. University learners seem to more benefit from employing their metacognitive scaffolding i.e., a self-regulatory system to control, monitor, and evaluate their own learning than the two former levels of education. In other words, a metacognitive scaffolded environment in supporting the different levels of learners to support online searching, evaluating, synthesizing, and accomplishing online tasks is evidently potent.

### Psychological domains

The psychological domain is subdivided into grit, an open mindset, positive and negative emotions, and willingness to communicate. The

constructs constitute affective domain or non-linguistic features that are reported to be potential and influential aspects in leveraging the learners' second language acquisition (Fadilah et al., 2019; Fadilah, 2018b, 2018c; MacIntyre, et al., 2019).

Grit constitutes a relatively new formulation in the foreign/second language domains and positive and negative psychological paradigms. It encompasses theories of passion and perseverance (MacIntyre, et al., 2019) that become a fundamental aspect in language learning. Duckworth and Quin (2009) maintain that grit is a self-directed and non-academic formative trait that pervades the persistence of interests and perseverance in efforts. L2 learners with high linguistic competence and scores in their examination are not guaranteed to use language communicatively which eventually hinders their success in English learning (Fadilah, 2018c). Similarly, Gregersen and MacIntyre (2016) claim that even a talk-active student with an excellent English test prefers to keep silent during classroom discussion due to his/her non-linguistic trait e.g., not being considered dominating or dominated. The important thing drawn from this phenomenon is that sole linguistic competence is not sufficient to foster L2 learners to use their language communicatively.

Because grit has a long-lasting impact (Duckworth, 2016) on language learners, it is strongly necessary not to see the learners' process of language learning partially i.e., summative assessment but the whole academic and non-academic trajectory they encountered during the language learning process. This trajectory could be assessed dynamically e.g., formative assessment involving linguistics and non-linguistic competence, positive and negative emotions, learner-teacher scaffolding, learner-learner interaction, socio-cultural environment, and others.

### Digital task

Empirical studies have demonstrated the effectiveness of implementing task-based language teaching in enhancing learners' linguistic proficiency (e.g., Fadilah et al., 2021; Fadilah, 2018b) and eliciting their positive and negative emotions (Fadilah et al., 2019; Fadilah, 2018c). However, these task-based activities were primarily conducted in offline modes. The growing demand to integrate digital technology into task-based activities has been emphasized (e.g., Thomas & Reinders, 2010) to further enhance language learning outcomes.

Thomas and Reinders (2010) present a comprehensive exploration of integrating technology and task-based language teaching (TBLT) through theoretical frameworks and empirical studies from various SLA scholars and researchers. They view TBLT as a continuum, encompassing task design and adoption in classroom practice, as well as the development of task-based language syllabi and curricula. Digital task activities challenge readers to comprehend word and sentence meaning across single and multiple texts (Britt, Goldman, & Rouet, 2012). These activities enable learners to work individually, cooperatively, and collaboratively (Yasuda, 2017). Yasuda (2017) further highlights the potential of integrating genre-task-based activities using electronic mail (*E-mail*), reporting how this task-technology integration enhances learners' lexico-grammatical awareness and strengthens their re-meaning ability in paraphrasing and summarizing. The integration of digital tasks in TBLT proves to be a valuable approach to promoting language acquisition and development.

### Linguistic repertoires

Linguistic repertoires encompass multi-discursivity, linguistic diversity, and multimodality, intrinsically woven into living languages as a 'dialogue of

languages' (Busch, 2017). Gumperz (1964, as cited in Busch, 2017) linked linguistic repertoires to the notion of a verbal repertoire, which includes all accepted ways of conveying messages in everyday communication. Language users choose from this array of language choices to convey specific meanings, and these choices become ingrained in their linguistic abilities once internalized. It is important to note that linguistic repertoires should not be confused with the mastery of multiple languages as seen in the concepts of multilingualism or *poly-languaging*. Instead, they are concerned with how linguistic variation is used to construct a sense of belonging or difference and how such constructions can be experienced by speakers as inclusions or exclusions based on language use.

One potential instructional task is to incorporate and manipulate corpus data, such as the British National Corpus (BNC), Brown Corpus, Corpus of Contemporary American English (COCA), and Open American National Corpus (OANC). These corpora contain authentic materials representing various English dialects, styles, registers, codes, and routines found in everyday interactions. Learners can actively engage in constructing word concordances using the corpora, which enhances their awareness of real language varieties, including idiolects

and sociolects used in daily communication (Priyono, 2011). This approach moves away from an overreliance on standard grammar or prescriptive grammar in instructional tasks, instead providing learners with a broader linguistic repertoire, including spoken grammar with diverse conversational backgrounds.

### **Semiotic repertoires intelligence**

The term "repertoires" is based on the work of Gumperz and Hymes, who introduced the concept of the verbal repertoire, which refers to the complete set of linguistic resources available to specific communities, encompassing both invariant forms and variable elements (Busch, 2017). Kuster (2021) further expands on this idea, defining semiotic repertoires as the totality of semiotic resources used by people during communication, such as speech, images, text, gestures, signs, gazes, facial expressions, postures, and objects (p. 183). These semiotic repertoires encompass both written and spoken language, gestures, body postures, indices, haptics, and other elements related to social semiotics (Jewitt, 2014), serving as carriers of sociocultural patterns and knowledge (Wertsch, 1994).

The totality of semiotic resources can be observed when a teacher uses a multimodal approach to instruction. By leveraging diverse semiotic repertoires, the teacher enhances students' understanding and promotes a more comprehensive learning experience. Goebel (2020) examines the semiotic landscape of Indonesia through the analysis of signage, which includes text and image placement. These signs not only represent properties for sale but also convey various levels of status, historical, economic, power, and sociocultural information. Understanding signs, especially in digital advertisements, requires comprehension of the relationships between signage and the signs that constitute them. Additionally, Goebel emphasizes the significance of societal values and their connection to political, cultural, economic, and social regimes. Isnaini, Setyono, and Ariyanto (2019) explore the visual semiotic values present in Indonesian English textbooks, which emphasize respect and appreciation for other cultures. These visual signs reflect sociocultural and religious norms associated with Indonesian identity and beliefs. For example, problem-solving tasks may involve local festivals and their signs, such as symbols, icons, and indices, showcasing the diversity of Indonesian

tribes, languages, and cultural norms that can be shared globally.

### **Digital pragmatics and discourse**

Discourse involves both semantics and pragmatics in the process of meaning-making, and they should not be seen as isolated but as interconnected and continuous in interpreting texts. Pragmatics deals with how speakers and listeners create meaningful conversations using verbal and non-verbal language (González Lloret 2013). Analyzing pragmatics in digital platforms demands higher competence compared to physical interactions (Yus, 2011). Cyber-pragmatics emerged to study cognitive pragmatics in internet-mediated communication. It helps to understand that digital communication may differ from literal meanings (Yule, 2017). For instance, on digital platforms like *YouTube*, learners can explore various aspects of pragmatics, such as implicatures or conversational analysis, by examining how language is used in video comments or interactions between users. They can also investigate how different Maxims, like the Maxim of Quantity or Quality, are applied in online conversations or how implicatures are implied through non-verbal cues in videos. This analysis helps learners become more aware of the subtleties of language use in digital

communication and enhances their overall pragmatic competence in English.

Pragmatics and discourse are essential components of the communicative competence framework proposed by scholars in applied linguistics. According to Jones, Chik, and Hafner (2015), discourse in digital technology refers to the social practices through which people interact and perform specific roles in particular social groups using semiotic systems. Digital discourse analysis involves examining how people construct and manage their social worlds using various semiotic systems. Gee (2015) further emphasizes that the meaning of words, phrases, sentences, and their sequences is contextually determined by the actual contexts of use and social practices.

In gamification, for instance, digital discourse analysis can be applied to examine how learners construct and manage their social interactions within the gaming environment. For example, in a language learning game where players communicate with each other to achieve specific goals or solve language-related challenges, the use of words, phrases, and sentences is contextually determined by the game's objectives and social practices within the gaming community. Through digital discourse analysis, language teachers can observe

how learners negotiate meaning, employ different linguistic strategies, and adapt their language use to fit the gaming context. They can analyze the types of language learners use when giving instructions, providing feedback, or collaborating with other players. This analysis allows teachers to identify areas where learners may need additional support or practice in using English effectively in specific communicative situations. By leveraging digital discourse analysis in gamification, teachers can tailor language learning experiences to address individual learners' needs and promote more meaningful and authentic language use.

### Digital values

Digital text, reader, and task are intertwined with a set of values that govern and guide their use, behavior, and impact in the digital realm. These values encompass religious, political, socio-cultural beliefs, and symbolic power that influence how individuals engage with digital content. Critical digital literacy becomes essential in understanding and evaluating how language use shapes knowledge, social relations, identity, and ideology within the digital context (Darvin, 2017). Labbo et al. (1998) emphasize the importance of critical digital literacy in recognizing, interpreting, and evaluating underlying



ideologies in various forms of linked information presented through digital sources.

Moreover, digital values are closely linked to users' identity and ideology, rooted in sociocultural, religious, political, and economic norms prevalent in their respective communities (Gee, 2012). Identity not only reflects and represents individuals but also empowers social agencies as members of digital communities. As people and their ideas transcend transnational borders, utilizing fluid linguistic-semiotic repertoires, new social representations and constructs of socialization emerge, shaping personal and institutional agencies within the realm of digital citizenship (netizens).

Norton (2013) remarks that identity is the way an individual being understands his/her relations to the world that is constructed across spatial-temporal domains. Linguistics and linguistics feature we use in digital space, for instance, indicate who we are across individual and social identities. For instance, uploading and posting status in e.g., social media are among examples of how digital users exhibit their identity by locating geographical representation and blocking the boundaries between offline and online realities. The language variation (e.g., slang, millennial, and others) also marks

their identity to make a distinction to the others.

English teachers can design activities that highlight the rich linguistic and cultural heritage of the country. For instance, exploring the various ethnic languages spoken in Indonesia, such as Javanese, Sundanese, Balinese, and many others. Students could learn basic greetings, phrases, and expressions in these local languages, alongside their English language learning. The teacher could also introduce Indonesian traditional music, dance, and folktales in English-translated versions. Students can listen to traditional Indonesian songs, watch cultural dance performances, and read folktales from different regions of Indonesia. This exposure to the country's cultural expressions not only enhances their English language skills but also instills pride and appreciation for their own cultural heritage. By incorporating multicultural elements into the English language classroom, students can embrace their own cultural identities while developing English proficiency fostering an inclusive learning environment where students from various backgrounds come together to celebrate their unique cultures and build cross-cultural understanding and respect.

## CONCLUSIONS AND SUGGESTION

Human transformation extends beyond mere technological integration. It emphasizes the imperative for the workforce to develop both digital competencies and human-centric skills in response to the demands of digital technologies and automation (Digital Transformation Expert Panel, 2021). This iterative process involves augmenting knowledge, skills, attitudes, and behaviors through engagement with digital technology, fostering critical digital literacy. The multifaceted transformation includes acquiring critical thinking abilities, adaptability, and shaping values and beliefs that impact the creation, interpretation, and interaction with digital elements (Coiro, 2021). Ultimately, it equips individuals to navigate the digital landscape adeptly, critically evaluate information, and actively contribute to the evolution of digital content and online communities.

In considering the critical aspects of digital literacy for human transformation in the realm of English Language Teaching (ELT), several recommendations emerge. Firstly, adopting a strategy of providing learners with digital multiple texts, specifically hypertext with transmedia intertextuality, facilitates seamless movement between various media,

allowing learners to access a plethora of internet information tailored to their English language skill enhancement needs. Secondly, the focus should extend beyond mere mastery of digital tools to empower learners with high-level competences, particularly complex reasoning. This transformation is crucial for fostering critical, systemic, scientific, and innovative thinking. Achieving these competences requires active and collaborative engagement among various stakeholders, including teacher-educators, government entities, and parents. Thirdly, ELT teachers are encouraged to design digital tasks that provide opportunities for active engagement beyond the confines of the conventional classroom. Assigning learners tasks such as creating creative content challenges them to develop materials while adapting systematically and critically to digital technology. Similarly, assigning tasks that involve reporting experiences in gamification, such as interacting with players from diverse cultural backgrounds, presents unique challenges and learning opportunities. Lastly, digital values emerge as a paramount consideration. As learners engage with digital platforms, they contribute significantly to the formation of online communities and subcultures. Their evolving identities, ideologies, and social practices play a pivotal role in shaping

and disseminating digital values. Indeed, the advancements in Artificial Intelligence (AI) and machine translation constitute routine language learning. ELT teachers face the imperative of equipping learners with competences in e.g., pragmatics and critical discourse analysis. These skills are essential for contextual interpretation, a facet where machines lack proficiency. Therefore, teachers must prioritize nurturing human sense-making and real-time meaning negotiation, recognizing the irreplaceable role of human cognition in these critical aspects of language learning.

In sum, human transformation in critical digital literacy transcends the mastery of administrative and operational procedures in digital technology within ELT. It constitutes an ongoing process wherein individuals develop digital literacy, critical thinking skills, and socio-cultural awareness. This transformative journey shapes how digital text, digital readers, digital tasks, and digital values are experienced and utilized in the digital landscape. The challenges ahead include the incorporation of adaptive methodologies and appropriate assessments in digital literacy proficiency, with a focal point on human transformation and empowerment. It is crucial that digital technologies

effectively empower pedagogical and practical impacts to transform the competences, behavior, attitudes, and values of English teachers and learners; otherwise, human transformation remains incomplete.

## REFERENCES

- Akyel, A., & Erçetin, G. (2009). Hypermedia reading strategies employed by advanced learners of English. *System*, 37(1), 136-152
- Alberth, Mursalim, Siam, Suardika, I.K., and Ino, L. (2018). Social media as a conduit for teacher professional development in the digital era: myths, promises or realities? *TEFLIN Journal*, 29 (2), 293-306.
- Anderson N.J. (2012) Metacognition: Awareness of Language Learning. In: Mercer S., Ryan S., Williams M. (eds) *Psychology for Language Learning*. Palgrave Macmillan, London
- Antonietti, A., Imperio, E., Rasi, C. & Sacco, M. (2001). Virtual reality and hypermedia in learning to use a turning lathe. *Journal of Computer Assisted Learning*, 17(2), 142-155
- Bloome, D., & Green, J. (2015). The social and linguistic turns in studying language and literacy. In J. Rowsell & K. Pahl (Eds.), *The Routledge Handbook of literacy studies* (pp. 19-34). New York, NY: Routledge.

- Busch, B. (2017). Expanding the notion of the linguistic repertoire: on the concept of *Spracherleben* – the lived experience of language. *Applied Linguistics*, 38 (3), 340-358
- Cho, B.-Y. (2014). Competent adolescent readers' use of internet reading strategies: A think-aloud study. *Cognition & Instruction*, 32(3), 253–289.
- Coiro, J. (2021). Toward a multifaceted heuristic of digital reading to inform assessment, research, practice, and policy. *Reading Research Quarterly*, 56 (1), 9-31
- Coiro, J., Castek, J., & Guzniczak, L. (2011). Uncovering online reading comprehension processes: Two adolescents reading independently and collaboratively on the internet. In P.J. Dunston, L.B. Gambrell, K. Headley, S.K. Fullerton, P.M. Stecker, V.R. Gillis, & C.C. Bates (Eds.), *Sixtieth yearbook of the Literacy Research Association* (pp. 354–369). Oak Creek, WI: Literacy Research Association.
- Darvin, R. (2017). Language, ideology, and critical digital literacy. In S. L. Thorne & S. May (Eds.), Volume 9: *Language, Education, and Technology. Encyclopedia of Language and Education, 3rd Edition* (pp. 17-30). New York: Springer.
- Digital Transformation Expert Panel. (2021). The Learning Country. Digital Transformation Skills Strategy. <https://www.digitalskil> information.org.au/wp-content/uploads/2021/05/Digital-Transformation-Skills-Strategy-010521.pdf?v=2
- Douglas Fir Group. (2016). A transdisciplinary framework for SLA in a multilingual world. *Modern Language Journal*, 100 (Supplement 2016), 19–47.
- Duckworth, A. (2016). *Grit: The Power of Passion and Perseverance*. New York, NY:
- Duckworth, A. L., and Quinn, P. D. (2009). Development and validation of the Short Grit Scale (GRIT-S). *J. Pers. Assess.* 91, 166–174.
- Fadilah, E., Widiati, U., & Anugerahwati, M. (2021). Negotiated feedback, situated recast, and task-supported language instruction on the development of grammatical features. *The Journal of ASIA TEFL*, 18(4), 1071-1087.
- Fadilah, E., Widiati, U., Latief, M. (2019). Reading dynamic patterns of silence as a communication strategy and impediment in the EFL classroom interaction. *International Journal of Instruction*, 12(4), 183-200.
- Fadilah, E. (2018a). Perception, motivation, and communicative self-confidence of Indonesian students on willingness to communicate in L2 by using Facebook. *Journal of English*

- Education and Linguistics Studies*, 5(1), 23-48.
- Fadilah, E. (2018b). Rethinking the maintenance of CLT in Indonesia: A response to: Ariatna's (Vol. 7, No. 2, 2016) "The Need for Maintaining CLT in Indonesia". *TESOL Journal*, 9 (1), 224-236. doi: 10.1002/tesj.341
- Fadilah, E. (2018c). Oral corrective feedback on students' grammatical accuracy and willingness to communicate in EFL classroom: the effects of focused and unfocused prompts. *The Asian EFL Journal*, 20 (4), 57-85.
- Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist*, 34, 906-911.
- Gee, J.P. (2015). *Literacy and education*. New York: Routledge.
- Gee, J.P. (2012). *Social linguistics and literacies: Ideology in discourses (4th ed.)*. New York, NY: Routledge.
- Gilbert, J. (2017). A study of ESL students' perceptions of their digital reading. *The Reading Matrix: An International Online Journal*, 17(2), 179-195
- Goebel, Z. (2020). Semiotic Landscapes: Scaling Indonesian Multilingualism. *Humaniora*, 32(3), 191-205
- González-Lloret, M. 2013. "Pragmatics: Overview" in Chapelle, Carol, A. (general ed.) *The Encyclopedia of Applied Linguistics*. Vol. VIII. Oxford, UK: Wiley-Blackwell.
- Grabe, W., & Stoller, F. L. (2011). *Teaching and researching reading (2nd ed.)*. London: Routledge.
- Gregersen, T., MacIntyre, P., and Meza, M. (2016). "Positive psychology exercises build social capital for language learners: preliminary evidence" in *Positive psychology in SLA*. eds. P. D. MacIntyre, T. Gregersen, and S. Mercer (Bristol: Multilingual Matters), 147-167.
- Halliday, M. A. K. & Hasan, R. (1976). *Cohesion in English*. London: Longman.
- Harari, Y., N. (2018). *21 lessons for the 21st century*. London: Jonathan Cape
- Isnaini, F., Setyono, B., Ariyanto, S. (2019). A visual semiotic analysis of multicultural values in an Indonesian English textbook. *Indonesian Journal of Applied Linguistics*, 8, 545-553.
- Jewitt, C. (2014). *The Routledge Handbook of Multimodal Analysis*. London: Routledge.
- Jones, R. H., Chik, A., & Hafner, C.,A. (2015). *Discourse and digital practices: Doing discourse analysis in the digital age*. New York: Routledge
- Ketabi, S. Ghavamnia, M., & Rezazadeh, M. (2012). Hypermedia Reading Strategies Used by Persian Graduate Students in TEFL: A Think-Aloud Study. *The Reading Matrix*, 12(1), 39-49.

- Knobel, M., & Kalman, J. (2016). *New literacies and teacher learning: Professional development and the digital turn*. New York, NY: Peter Lang.
- Kusters, A. (2021) Introduction: the semiotic repertoire: assemblages and evaluation of resources. *International Journal of Multilingualism*, 18 (2), 183-189,
- Labbo, L.D., & Reinking, D. (1999). Negotiating the multiple realities of technology in literacy research and instruction. *Reading Research Quarterly*, 34(4), 478-492.
- Lantolf, J., Thorne, S., L., & Poehner, M., E. (2015). Sociocultural theory and second language development. In B. van Patten & J. Williams (Eds.), *Theories in second language acquisition* (pp. 207-226). New York: Routledge.
- Lim, H.J., & Jung, H. (2019). Factors related to digital reading achievement: A multi-level analysis of international large-scale data. *Computers & Education*, 133, 82-93.
- Loewus, L. (2016, November 9). What is digital literacy? Education Week. Retrieved from <https://www.edweek.org/teaching-learning/what-is-digital-literacy/2016/11>
- MacIntyre, P. D., Gregersen, T., and Mercer, S. (2019). Setting an agenda for positive psychology in SLA: theory, practice, and research. *Modern Language Journal*, 103, 262-274.
- MariaPesch, A. (2021) Semiotic landscapes as constructions of multilingualism - a case study of two kindergartens. *European Early Childhood Education Research Journal*, 29 (3), 363-380.
- Moore, N. (2006). *How to do research: a practical guide to designing and managing research projects*. Facet Publishing: London
- Moos, D. C., & Marroquin, E. (2010). Multimedia, hypermedia, and hypertext: Motivation considered and reconsidered. *Computers in Human Behavior*, 26(3), 265-76.
- New London Group. (1996). The pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review*, 66(1), 60-93.
- Norton, B. (2013). *Identity and language learning: Extending the conversation*. 2nd ed. Bristol: Multilingual.
- Novianti, N., Thomas, A., & To, V. (2020). Addressing challenges in the practice of critical literacy in EFL classrooms: A new framework. *Indonesian Journal of Applied Linguistics*, 10(1), 206-217.
- OECD. (2019). Programme for International Students Assessment (PISA)- Results from PISA 2018, Country Note: Indonesia. [https://www.oecd.org/pisa/publications/PISA2018\\_CN\\_IDN.pdf](https://www.oecd.org/pisa/publications/PISA2018_CN_IDN.pdf) diunduh pada Desember 2019.

- OECD. (2015). *Students, computers and learning: Making the connection*. Paris, France: Author
- Ortega, L. (2019). SLA and the study of equitable multilingualism. *Modern Language Journal*, 103 (Supplement 2019), 23–38
- Pangrazio, L. (2016). Reconceptualizing critical digital literacy. *Discourse: Studies in the Cultural Politics of Education*, 37(2), 163–174.
- Perfetti, C. & Stafura, J. (2014). Word Knowledge in a Theory of Reading Comprehension. *Scientific Studies of Reading*, 18 (1), 22-37.
- Priyono (2011). Lexical analysis of the verb *cook* and learning vocabulary: a corpus study. *TEFLIN Journal*, 22 (2), 150-166.
- Pusat Penilaian Pendidikan. (2019). *Pendidikan di Indonesia Belajar dari Hasil PISA 2018*. Balitbang, Kemendikbud.
- Reiber-Kujipers, M., Kral, M., & Meijer, P.C. (2020). Digital reading in a second or foreign language: A systematic literature review. *Computers & Education*, 163(3), 104-115.
- Reinhardt, J. (2019). Social media in second and foreign language teaching and learning: Blogs, wikis, and social networking. *Language Teaching*, 52 (1), 1-39
- Salmerón, L., Canas, J.J., Kintsch, W., & Fajardo, I. (2005). Reading strategies and hypertext comprehension. *Discourse Processes*, 40(3), 171–191.
- Scolari, C.A. (2019). Transmedia is dead. Long live transmedia! (Or life, passion, and the decline of a concept). *LIS Letra. Imagen. Sonido. Ciudad Mediatizada*, 11, 69–92
- Shintani, N. & Aubrey, S. (2016). The effectiveness of synchronous and asynchronous written corrective feedback on grammatical accuracy in a computer-mediated environment. *Modern Language Journal*, 100(1), 296-319.
- Singer, L.M., & Alexander, P.A. (2017). Reading on paper and digitally: What the past decades of empirical research reveal. *Review of Educational Research*, 87(6), 1007–1041.
- Thomas, M. & Reinders, H. (2010). *Task-based language learning and teaching with technology*. New York: Continuum.
- Tim GLN Kemdikbud (2017). *Gerakan Literasi Nasional*. Jakarta: kemdikbud
- Tour, E. (2020). Teaching digital literacies in EAL/ESL classrooms: Practical strategies. *TESOL Journal*, 11(1). e458. <https://doi.org/10.1002/tesj.458>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

- Wertsch, J. V. (1994). The primacy of mediated action in sociocultural studies. *Mind, Culture, and Activity*, 1(4), 202–208
- Yasuda, S. (2017). Toward a framework for linking linguistic knowledge and writing expertise: Interplay between SFL-based genre pedagogy and task-based language teaching. *TESOL Quarterly*, 51 (3), 576-606.
- Yule, G. (2017). *The study of language sixth Edition*. Cambridge: Cambridge University Press
- Yus, F. (2011). *Cyberpragmatics: Internet-mediated communication in context*. Amsterdam & Philadelphia: John Benjamins
- Zhou, M., & Lam, K.K.L. (2019). Metacognitive scaffolding for information search in K-12 and higher education settings: A systematic review. *Educational Technology Research and Development*, 67(6), 1353-1384.