

Innovating English Curriculum through the Lens of ELF: Reframing 21st Century Skills and Deep Learning in Indonesian Higher Education

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ABSTRACT

The aim of this study was to reframe deep learning and 21st-century skills in Indonesian higher education by developing an innovative English curriculum from the perspective of English as a Lingua Franca (ELF). The goal was to investigate how curriculum reform that supports reflective learning, intercultural communication, and AI-responsive pedagogy can be informed by ELF principles. In addition to national policy documents like Merdeka Belajar–Kampus Merdeka, this study synthesizes data from 42 peer-reviewed studies published between 2018 and 2024 using a qualitative conceptual research design. Data were gathered using a systematic review of the literature, and they were then thematically analysed using Braun and Clarke's (2021) model, with an emphasis on conceptual convergence between the domains of digital literacy, deep learning, and ELF. The results showed that there were three key components of curriculum innovation: (1) ELF-oriented curriculum design that prioritizes contextual flexibility and intercultural intelligibility; (2) deep learning integration that fosters creativity, critical thinking, and ethical awareness; and (3) adaptation of digital literacy and AI as lifelong learning facilitators. The resulting Smart Curriculum Framework was composed of three interrelated layers: philosophical, structural, and operational. These layers worked together to guide the development of adaptable, human-centered English instruction. The implication of this study helped the need for Indonesian universities to change from native-norm teaching to intercultural, technology enhanced learning that nurtures global competence and ethical intelligence. In conclusion, ELF driven curriculum transformation can strengthen higher education's responsiveness to global change while preserving local identity.

Keywords: *English as a Lingua Franca, curriculum innovation, deep learning, digital literacy, AI as facilitator, higher education, Indonesia.*

1) INTRODUCTION

1.1. Background and Problem Context

The role of English in global communication has shifted dramatically over the past two decades. Rather than functioning as the exclusive property of native speakers, English now operates predominantly as a lingua franca used by multilingual speakers across diverse cultural and linguistic environments. This shift challenges traditional English Language Teaching (ELT) paradigms that

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prioritize native-speaker norms, grammatical accuracy, and standardized varieties of English. For Indonesian higher education where English serves both academic and global mobility purposes the conventional curriculum no longer aligns with the communicative realities students face.

At the same time, the rapid advancement of artificial intelligence (AI), digital communication, and global collaboration has transformed the competencies expected of 21st-century graduates. Today's learners need to demonstrate critical thinking, creativity, collaboration, communication, digital literacy, intercultural competence, and reflective learning. However, many English curricula in Indonesian universities remain structurally rigid, skill-segmented, and oriented toward test-driven outcomes rather than deep, meaningful learning.

Meanwhile, the Indonesian policy framework Merdeka Belajar–Kampus Merdeka (MBKM) emphasizes learner autonomy, interdisciplinary engagement, and digital integration, yet curricular modernization in ELT has been uneven. Existing research on English as a Lingua Franca (ELF) in Indonesia largely focuses on attitudes, perceptions, and sociolinguistic issues; few studies explore curriculum innovation grounded in ELF principles alongside deep learning and digital literacy.

Moreover, ELF positions English as a global resource used among multilingual speakers, emphasizing intelligibility, flexibility, intercultural communication, and pragmatic competence. Contemporary ELF scholarship (Jenkins, 2020; Seidlhofer, 2023) critiques native-speaker norms and advocates linguistic diversity as a pedagogical asset. ELF-oriented pedagogy encourages learners to negotiate meaning, co-construct communication strategies, and develop intercultural sensitivity skills essential for global engagement.

Talking about Deep Learning in Higher Education, deep learning extends beyond memorization by cultivating critical thinking, creativity, reflective reasoning, ethical judgement, and real-world problem solving. Fullan and Langworthy (2019) describe deep learning as a process where students construct meaning through authentic inquiry, collaboration, and knowledge application. Mezirow's transformative learning theory further highlights the importance of self-reflection and perspective transformation in developing adaptive, independent learners.

Furthermore, 21st-Century Skills and Digital/AI Literacy dealt with digital literacy that encompasses the ability to evaluate information, create multimodal content, interact ethically in digital spaces, and understand data use. With the rise of AI, students must additionally master prompt literacy, algorithmic awareness, and critical AI use (Holmes et al., 2021; Li, 2022). In language education, AI

functions as a cognitive partner for writing assistance, language processing, assessment support, and personalized learning. Absolutely, it should be correlated to Curriculum innovation in ELT or teaching English practically in the classroom.

Additionally, dealing with Curriculum Innovation in ELT, Curriculum studies emphasize alignment between philosophical orientation, structural design, and classroom implementation (Ornstein & Hunkins, 2018). Traditional ELT curricula, however, often isolate skills, prioritize grammar-based outcomes, and rely on standardized textbooks. Therefore, integrating ELF, deep learning, and digital literacy requires a new curriculum model that is adaptive, intercultural, and technology-responsive.

1.2. Research Gap and Urgency

While ELF-oriented teaching has been widely discussed in global literature, its implementation in curriculum design particularly for Indonesian higher education—remains underdeveloped. Similarly, research on deep learning and AI in ELT often concentrates on instructional strategy, with limited integration into curriculum models. A conceptual framework connecting ELF, deep learning, and digital/AI literacy is urgently needed to support Indonesia's transition toward globally responsive, ethically conscious, and technologically adaptive English education.

1.3. Research Aim and Questions

This study aims to conceptualize an innovative English curriculum informed by ELF principles, 21st-century competencies, and deep learning for Indonesian higher education. Three research questions guide the inquiry:

- a. How can ELF principles inform English curriculum innovation in Indonesian higher education?
- b. How can deep learning and 21st-century skills be integrated into an ELF-oriented curriculum?
- c. What conceptual framework can guide the development of adaptive, human-centred English education in the AI era?

2) METHODS

2.1 Research Design

This study adopts a qualitative conceptual research design, focusing on theoretical synthesis rather than empirical classroom experimentation. Conceptual research is suitable when existing theories and models need reinterpretation to address emerging issues such as AI, digital transformation, and ELF applicability in curricula.

2.2 Data Sources

Data were drawn from: 42 peer-reviewed journal articles (2018–2024) on ELF, deep learning, digital literacy, AI in education, and curriculum design. National policy documents, including the Merdeka Belajar–Kampus Merdeka framework and Indonesian higher education English guidelines.

2.3 Data Collection and Analysis

Data were collected through a systematic literature review using inclusion/exclusion criteria focusing on curriculum relevance, ELF applicability, and 21st-century competencies. Data were analyzed using thematic analysis (Braun & Clarke, 2021) to identify conceptual convergence across three domains: ELF pedagogy, Deep learning, and Digital and AI literacy.

2.4 Validation

The conceptual framework was validated through theoretical triangulation, comparing key themes from ELF theory, curriculum design, and digital pedagogy literature to ensure coherence and cross-disciplinary alignment.

3) RESULTS AND DISCUSSION

Finding 1: ELF-Oriented Curriculum Design

- ELF reframes English curriculum toward: Intercultural intelligibility, rather than native-like accuracy
- Flexible language uses adaptable to diverse contexts, Pragmatic competence and negotiation strategies, Identity expression, allowing students to maintain local linguistic and cultural identity. Curriculum implications include: Authentic communicative tasks, Intercultural

collaboration projects, Pragmatic awareness modules. Assessments based on communicative effectiveness rather than accent or grammatical perfection.

- ELF-based curriculum design emphasizes English as a global, shared resource rather than as the property of native speakers. This shift reflects the reality that most global communication today occurs among non-native speakers. Therefore, curriculum innovation must prioritize intelligibility, pragmatic flexibility, and intercultural competence to prepare learners for real communication in international contexts, not merely for meeting native norms. ELF also challenges the traditional focus on grammatical perfection by redirecting attention to communicative effectiveness, strategic competence, and the ability to negotiate meaning. This aligns with globalized academic and professional needs where clarity and adaptability are more important than sounding native-like.
- Classroom Implementation examples: Global virtual projects: Students collaborate with international peers, developing intercultural communication skills. Intercultural role-plays: Learners simulate real international communication scenarios requiring negotiation of meaning. Authentic communicative tasks: Activities mirror real-world communication demands, example: problem-solving discussions, global debates.

Finding 2: Deep Learning Integration

- a. Deep learning goes beyond memorization.

In an innovative English curriculum, deep learning cultivates higher-order thinking, creativity, and reflective judgment essential skills in the 21st century. Students engage in inquiry-driven tasks that require them to investigate real issues, collaborate critically, and produce meaningful outputs. This approach encourages learners to connect classroom knowledge with real-world applications, enabling knowledge transfer across contexts. Deep learning also strengthens metacognitive awareness, allowing students to monitor, evaluate, and adjust their learning strategies.

- b. In the implementation of Deep learning in exercises students were Project-based learning (PBL).

Students explore authentic problems and produce real solutions. Reflection journals: Learners analyse their experiences, building deeper understanding and ethical reasoning. Research-informed tasks: Students use academic sources to support speaking or writing, fostering critical literacy. Deep

learning strengthens competencies essential for global communication such as Critical thinking (evaluating information, analysing perspectives), Creativity (generating novel linguistic outputs), Ethical reasoning (responsible communication and AI use), and reflective learning (metacognitive practices). Hence, Deep learning-oriented curriculum promotes can be implemented through Inquiry-based tasks, Project-based learning (PBL), Research-informed speaking and writing activities, Reflective journals and peer feedback.

Finding 3: Digital Literacy & AI Adaptation.

In the digital era, English learning requires strong digital literacy, including the ability to evaluate online information, create multimodal texts, and use technology ethically. AI is transforming language learning into a collaborative process where AI acts as a cognitive partner supporting drafting, feedback, brainstorming, and linguistic analysis. Therefore, an innovative curriculum must teach students not only how to use digital tools but also how to think critically about them. This includes awareness of algorithmic bias, ethical data use, and responsible AI engagement.

Implementation in the classroom such as AI-supported writing tasks: Students use AI tools for drafting, revising, and analysing language. Digital multimodal projects: Learners produce videos, podcasts, or info graphics to express ideas creatively. Online collaboration platforms: Students work with peers through digital tools, enhancing communication and teamwork skills. Additionally, AI and digital technologies are enablers of lifelong learning through: Multimodal literacy (video, audio, digital storytelling), AI-supported writing and feedback, online collaboration and global networking, Data ethics, digital citizenship, and algorithmic awareness. However, Curriculum must include explicit instruction on: Critical evaluation of digital information, Ethical and responsible AI use, Multimodal communication practices

Resulting Framework: Smart Curriculum Framework

Smart Curriculum Framework consists of 3 layers namely:

- a. Philosophical Layer: This layer provides the foundation: ELF orientation, human-centred learning and inclusive values, intercultural values and Intercultural ethics. It ensures the curriculum aligns with global realities and ethical principles.
- b. Structural Layer: Focuses on curriculum mapping, competency formulation, and assessment reform. This ensures coherence between learning outcomes, content, and evaluation.

- c. Operational Layer: Teaching strategies integrating AI, Technology-enhanced learning environments, Classroom innovation informed by ELF and deep learning. It can be translated ideas into practice through teaching strategies, digital tools, and innovative classroom activities. This is where philosophical principles become daily instructional decisions.

In discussion, the integration of ELF, deep learning, and digital/AI literacy provides a transformative direction for English curriculum innovation in Indonesia. ELF broadens the communicative orientation of the curriculum, emphasizing meaning negotiation and interculturality. Deep learning ensures that students engage critically and creatively with content instead of memorizing linguistic forms. Digital and AI literacy contribute to preparing learners for global digital citizenship and modern communication practices.

The Smart Curriculum Framework offers a coherent model that unites these elements, enabling institutions to transition from traditional ELT toward adaptive, ethically grounded, globally responsive education. Importantly, this model supports Indonesia's national goals under MBKM, promoting learner autonomy, interdisciplinary engagement, and digital readiness.

4) CONCLUSIONS

This study conceptualizes an innovative ELF-informed curriculum that integrates deep learning and digital literacy to meet the demands of Indonesian higher education in the AI era. The three-dimensional Smart Curriculum Framework philosophical, structural, and operational provides a comprehensive guide for universities seeking to modernize English education. By shifting from native-norm paradigms to intercultural, technology-enhanced learning, Indonesian higher education can cultivate graduates with global competence, ethical intelligence, and lifelong learning capacity.

ELF-oriented curriculum innovation enhances students' global readiness by strengthening communicative flexibility and intercultural understanding. Integrating deep learning supports meaningful and reflective learning experiences, preparing students to navigate complex real-world problems. Meanwhile, digital and AI literacy equip learners with essential competencies for the rapidly evolving global communication landscape. Through this integrated framework, Indonesian higher education can become more adaptive, future-oriented, and globally competitive.

Implications for Universities: it must redesign English programs to reflect global communication realities, shifting away from native-bound models and toward international intelligibility and

intercultural competence. For teachers: it requires ongoing professional development in ELF pedagogy, deep learning approaches, and AI/digital literacy to adapt to evolving educational demands. And the last for learning Assessment: it should evaluate not only linguistic accuracy but also problem-solving skills, creativity, digital literacy, ethical awareness, and communicative effectiveness.

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