

INNOVATION IN CURRICULUM AND MATERIAL DEVELOPMENT IN THE GLOBAL ERA

**Ikhwanul Hakima, Yashinta Dewi Larasati,
Aprilia Afifatur Rahmawati**

Master's Program of English Education, Faculty of Language
and Arts, Universitas Negeri Semarang

ikhwanulhakima@students.unnes.ac.id

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ABSTRACT

The rapid advancement of technology, globalization, and sociocultural transformation has influenced educational systems worldwide. In English language education, these changes demand innovative approaches to curriculum design and materials development to prepare learners for the challenges of the global era. This paper explores the concept of innovation in curriculum and materials development, emphasizing the integration of digital technologies, global competencies, and Sustainable Development Goals (SDGs) as guiding frameworks for educational transformation. It also discusses the shifting role of educators from sole knowledge providers to facilitators. Furthermore, this paper highlights critical challenges, including cultural integration of SDGs, unequal digital access and infrastructure, teacher readiness, and assessment alignment, which create disparities in access to quality education. This paper reviews relevant literature and argues that innovation in curriculum and materials development should be culturally suitable, digital, and technologically informed, and aligned with global and national educational programs to ensure an even and meaningful learning experience in the global era.

Keywords: Curriculum Innovation, Global Era, SDGs

INTRODUCTION

The global era has transformed various aspects of the world, including trade, laws, and education. In the context of English language teaching (ELT), this movement creates a shift in curriculum from traditional models of curriculum and materials development that focus primarily on knowledge delivery to educational systems that are increasingly expected to cultivate critical thinking, creativity, collaboration, digital literacy, and intercultural competence (OECD, 2018).

This transformation is significant since English not only functions as a subject of study but also as a global lingua franca in academic, professional, and digital communication (Crystal, 2019). As a result, the curriculum and materials development of the English program must move beyond textbook approaches toward more communicative, authentic, digital, and technologically proficient learning experiences.

One of the United Nations' Sustainable Development Goals (SDGs) is SDG 4 (Quality Education). This point provides a global framework that emphasizes inclusive, equitable, and lifelong learning opportunities for all (United Nations, 2015). Since the SDGs are a global effort, this means that learners should be equipped with global competence while maintaining their local and cultural values. For developing countries such as Indonesia, aligning curriculum innovation with the SDGs is both an opportunity and a challenge. While the Indonesian government has introduced reforms such as *Kurikulum Merdeka* (Emancipated Curriculum) to support flexible and student-centered learning, disparities in digital infrastructure remain a significant barrier (Ministry of Education, Culture, Research, and Technology [MoECRT], 2022).

Many regions in Indonesia, particularly in rural and remote areas, continue to experience limited internet connectivity, insufficient access to digital devices, and a lack of technical support for teachers and students (World Bank, 2020). These conditions create a gap between expectations of the global era and classroom realities. Therefore, it is crucial to examine how innovation in curriculum and materials development can be designed to answer these challenges.

Other challenges in developing innovative curricula and materials include aligning the SDGs with local cultural values and ensuring teacher readiness. The first challenge warrants a deeper examination, as cultural values vary significantly across different regions of the world. The second challenge is related to educators' competence, which needs to be evaluated periodically. It requires government rules and regulations to maintain the proficiency of educators.

This paper aims to explore the concept of curriculum innovation in the global era, analyze the principles of effective materials development, examine the implications of the SDGs, analyze challenges that may arise in implementing the concept of curriculum innovation in the global era, and examine implications for teachers and curriculum developers in English language education.

THEORETICAL FOUNDATIONS

1. Curriculum In the Global Era

Curriculum is derived from the Latin word "currere," meaning "to run" or "race course." By the 17th century, the University of Glasgow referred to its course of study as a "curriculum", producing the first known use of the term in English in 1633 (*Oxford English Dictionary*, "Curriculum," 152). However, in contemporary educational theory, curriculum is no longer viewed as a static document but as a dynamic, evolving process shaped by social, cultural, political, and technological contexts (Pinar, 2012). This means the curriculum should incorporate innovation in line with the demands of its users.

There are five drivers of innovation in ELT curricula in the global era: rapid technological advancement, globalization, the demand for 21st-century skills, flexible learning, and problem-based learning. These five variables are interconnected and shape how curriculum innovation will unfold in the global era.

2. Rapid Technological Advancement

Technological advancements have already begun to change our lives. Recently, the Industrial Revolution 4.0, a term popularized by Klaus Schwab in 2016, has demonstrated that we are facing significant changes in technology, including

artificial intelligence, gene editing, and advanced robotics. Furthermore, we are also witnessing the emergence of Society 5.0, a term coined by the Cabinet Office's Council for Science, Technology, and Innovation in Japan to describe a society that utilizes digital transformation technologies to address social problems and enhance the quality of life.

In innovating the curriculum, especially in ELT, this context should be given attention. The use of AI in everyday life generates a new demand for suitable lectures, and digital natives will produce needs in using technological devices to assist the teaching-learning process. These are some examples of why technological advancements relate to innovation in curriculum for the global era.

3. Globalization and Interconnectedness

The connection between human beings in the global era is inevitable. The internet has given us the possibility to connect in real time and create numerous opportunities. This also affects the ELT: before, we could only learn in the classroom; nowadays, we create a virtual class where we can learn and connect. This will impact how the curriculum, particularly in ELT, operates in the global era.

4. 21st Century Skills

In the global era, the curriculum is expected to have a strong, foundational basis, with an emphasis on skills beyond traditional knowledge. Some key competencies, such as critical thinking, communication, collaboration, creativity, and digital literacy, are essential for preparing learners to navigate complex information, participate in diverse societies, and solve real-world problems. These competencies will have a significant impact on designing and innovating materials for the curriculum in the global era.

As scholars argue, effective ELT in the 21st century requires a pedagogical shift toward skill-based, learner-centered approaches that prepare students for lifelong learning and global participation (Trilling & Fadel, 2009). Thus, incorporating 21st-century skills into the curriculum is essential for ensuring relevance and quality in the global era.

5. Flexible and Adaptive Learning

Flexible and adaptive learning is made possible by the

technological advancements we use today. The traditional method of learning has evolved into a new approach to gaining knowledge. Flexible learning expands opportunities for learners to choose when, where, and how they learn, while adaptive learning personalizes instruction based on real-time data and learner performance.

Allowing learners to progress at their own pace reflects a global commitment to preparing learners for increasingly complex social and economic environments that require autonomy, digital competence, and lifelong learning habits. Moreover, the need for flexible and adaptive learning aligns with global calls for curricula that cultivate 21st-century skills, promote interdisciplinary thinking, and encourage collaboration across physical and virtual spaces (Trilling & Fadel, 2009).

6. Project and Problem-Based Learning

Project and problem-based learning have emerged as a new pedagogical approach that aligns with today's global era. These methods shift the focus from passive knowledge reception to active, inquiry-driven learning in which learners investigate real issues, collaborate with peers, and construct meaningful solutions.

KEY INNOVATIONS IN ELT CURRICULUM AND MATERIALS

The rapid changes of today present some key innovations for reshaping English Language Teaching (ELT) applications in response to the demands of globalization, digital transformation, and diverse learner identities. The curriculum and materials suggested to emphasize some key innovations below:

1. Competency-Based Curriculum (CBC)

A competency-based curriculum (CBC) emphasizes aspects of knowledge, skills, and attitudes (Thipatdee & Goachagorn, 2021), focusing on skill-based communicative competence, intercultural awareness, and transferable skills such as collaboration and critical thinking, within the context of lifelong learning. The implementation of CBC helps students integrate and apply real-world language use in their learning process and outcomes, serving as a tool for effective

communication.

2. Globalized Curriculum Design

Designing curriculum implemented global and local perspectives that allow students to engage with global issues—such as technology, sustainability, or cultural diversity—through locally relevant topics. Through this, revealing glocalization in ELT curricula enhances intercultural competence by encouraging students to negotiate meaning between global and local values (Rose & Galloway, 2019), while also acknowledging learners' lived experiences and cultural identities.

3. Multimodal & Digital Genre-Based Learning

Multimodal is used to move beyond the traditional textbook into digital, genre-based learning that integrates textual, visual, auditory, and other rich elements. Multimodality expands learners' interpretive and productive capacities beyond written language, contributing to their critical awareness and ability to navigate digital 21st-century literacy (Apriani et al., 2024). Moreover, this innovation helps students produce authentic digital genres through activities such as creating vlogs and reports, thereby increasing engagement and involvement, and providing a multiliteracies pedagogy to support learning outcomes and learners' participation in global digital communication practices.

4. Task-Based Language Teaching

TBLT was integrated into the curriculum and materials of the ELT class to emphasize the meaningful task experience for students as a core unit for communication (Mumtaza et al., 2025). TBLT requires students to use language for authentic communicative purposes through interaction, negotiation of meaning, and learner engagement, achieved through activities such as discussions, community building, problem-solving, and simulations. During implementation, TBLT can also be emphasized through digital activities. Thus, TBLT is related to learner-centered and competency-based approaches, as it prioritizes outcomes and performance over explicit grammar instruction.

5. Critical and Culturally Responsive Materials in Textbooks

Critical and culturally responsive textbooks promote inclusivity in ELT materials. It encourages learners to critically examine cultural representations, question stereotypes, and reflect on their own identities and respect characteristics. It emphasizes the importance of critical activities and pedagogy through comparative tasks and local perspectives, especially for multilingual and multicultural learners. The innovation lies in its use, which involves supplementing, critiquing, and comparing content. Here, these innovations helped students learn to value and respect differences when interacting and cooperating with peers from diverse cultural backgrounds to complete language learning tasks (Nguyen, 2025).

SDG AND ELT INNOVATION: CORRELATION AND INTEGRATION

The implementation of innovation in the ELT curriculum and materials field is related to SDG issues. Innovations that can be applied, such as content-based curriculum (CBC), multimodal learning, and digitalization, incorporate the development of language competencies and 21st-century skills in students, particularly enhancing their critical thinking and collaboration. Curricula in this global era must be aligned with the SDGs and evolve in response to social and technological demands to provide materials that are relevant to global development and address the world's challenges. This strategy enables students to become active, productive, and cooperative global citizens (Barber, 2023). Thereby, it is to create meaningful and up-to-date learning experiences for students.

In addition, innovations in technology-based ELT curricula and materials help teachers create interactive and flexible learning in terms of access and quality of the teaching process, as required by SDGs issues. Through the innovations mentioned earlier, it is hoped that they will increase students' language skills, motivation, digital literacy, and awareness (Sofiana & Haryati, 2025). This innovation prepares students to become global citizens who can communicate across cultures while maintaining their local identities. Therefore, this

innovation and collaboration among students and teachers maintain English as a tool for contributing to global well-being, addressing issues, and promoting advancement. Thus, the integration of the SDGs into language teaching is used as a means to achieve quality education (SDG 4) (Nahdi et al., 2024).

PREPARING LEARNERS FOR THE GLOBAL ERA

In today's global world, especially in English Language Teaching (ELT), students need to acquire essential skills to succeed in a connected world. Here are some key competencies:

- 1. Intercultural Communication Skills:** Students should develop the ability to communicate effectively across cultures, understanding and respecting diverse perspectives, customs, and social norms. This includes being aware of cultural nuances in language use and non-verbal communication (Balakrishnan et al., 2021).
- 2. Digital Literacy:** Proficiency in using digital tools and platforms is essential for students. They should be able to access online resources, collaborate virtually, and utilize technology for language learning and communication (Alakrash & Abdul Razak, 2021).
- 3. Creativity and Critical Thinking:** In 21st-century learning, creativity and critical thinking become key competencies to master (National Education Association, 2012, as cited in Park et al., 2021). Students should have the ability to think creatively and critically in their learning activities, as this contributes significantly to improving cognitive learning skills, which are vital for academic and professional success in the 21st century (Park et al., 2021).
- 4. Critical Global Problems Awareness:** Teachers need to integrate the global framework of the SDGs to help students develop a consciousness and awareness of global issues. It is also essential to link these global issues with their own local situation to connect with the worldwide context and be socially aware (Mambu, 2022).

CHALLENGES AND CONSIDERATIONS

Despite the potential for innovation in curriculum and material development, aligned with 21st-century learning, several challenges and considerations arise, as follows.

- 1. Limited Supporting Facilities and Infrastructure:** One of the major obstacles is the lack of adequate technological infrastructure, including stable internet access and sufficient technological devices such as computers, laptops, or smartphones, particularly in rural areas. This limitation in the facilities and infrastructure can hinder the effectiveness of using digital-based teaching and learning, such as the Learning Management System (LMS) and interactive applications (Sulistiyorini et al., 2025).
- 2. Resistance to Change from Teachers and Students:** Some teachers may find it challenging to transition from previously teacher-centered or conventional methods to student-centered approaches and adapt to new methods, such as project-based learning and task-based learning. In addition, students are also accustomed to passive learning and may be uncomfortable and struggle to adapt to more student-centered, collaborative, and project-based requirements (Sulistiyorini et al., 2025).
- 3. Difficulties in Adaptation and Implementation:** Implementing the new curriculum into learning materials and aligning it with students' needs may encounter problems. Moreover, the new learning approach, such as Project-Based Learning, is often time-consuming and poses challenges for teachers who struggle to apply it optimally in the classroom. Additionally, a lack of teacher training on how to effectively utilize technologies in their teaching strategies also hinders the optimization of innovative curriculum implementation (Sulistiyorini et al., 2025).
- 4. Teacher Readiness and Training:** Teacher readiness is an essential factor. There is a need for a continuous training program for teachers to enhance their competence in following developments in digital technology and innovation in teaching techniques, and to

integrate these into their teaching methods (Sulistiyorini et al., 2025).

- 5. Government and Stakeholder Support:** Support from the government, schools, and the community is vital. This includes government policies that encourage the use of technology, adequate budget allocation for infrastructure, and community involvement to support the adaptation process (Sulistiyorini et al., 2025).

IMPLICATION FOR TEACHERS AND CURRICULUM DEVELOPERS

The innovation in curriculum and material development has several implications for teachers and curriculum developers, as follows.

- 1. Shifting to Student-Centered Methods:** Curriculum innovation in the global era primarily shifts teachers' role as facilitators of learning from the previously used teacher-centered approach. This student-centered approach can boost students' enthusiasm, promote communicative competence, and also encourage the students to become active learners (Ahmad Efendi et al., 2025).
- 2. Need for Continuous Professional Development:** With the innovation in curriculum development, there is an urgent need for professional development programs for teachers. The teacher's training should help them improve their English skills, teaching methods, and knowledge of modern approaches, such as the Scientific Approach, Communicative Language Teaching (CLT), and Genre-Based Approach (GBA) (Ahmad Efendi et al., 2025).
- 3. Practical Application of Curriculum:** A key issue is the gap between curriculum plans and actual teaching. Teachers require practical workshops and tools to implement these plans in everyday lessons (Ahmad Efendi et al., 2025).
- 4. Involve Teachers in Curriculum Development:** To minimize the gap between curriculum design and implementation, teachers should be actively involved in

the curriculum development process. This would allow them to share valuable insights from their practical and actual experience.

Practically, it is essential to address these issues to achieve the goals of curriculum changes and create a more engaging and enriching learning environment for learners.

CONCLUSION

Innovation in curriculum and materials development is essential for English language teaching (ELT) in the global era. Glocal, competency-based, multimodal, and task-based approaches enable learners to develop global skills while sustaining local identity. The integration of SDGs enriches curriculum relevance and connects language learning to real-world challenges. Addressing challenges such as digital inequality, teacher readiness, and assessment alignment is crucial for the effective implementation of these initiatives. Ultimately, innovative ELT aims to cultivate learners who can think globally, act locally, and make a positive impact on their communities and the broader world.

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