Implementing Sustainable Models in the Digital Era for English Language Learning in the Medical Record Study Program

Santy Christinawati[1], Wahyu Trimastuti[2],

Politeknik Piksi Ganesha Bandung

santy.christinawati@gmail.com[1]., trimastutiw@gmail.com[2],

Abstract

This research journal explores the integration of sustainable models into English language learning (ELL) within the context of a Medical Record Study Program, with a focus on leveraging the opportunities offered by the digital era. Sustainability in education is increasingly necessary, not only from an environmental standpoint but also in terms of creating socially responsible and economically viable teaching and learning practices. This journal examines the role of digital tools in promoting sustainable learning models, reducing resource consumption, and fostering an interdisciplinary approach that enhances the learning of medical terminology in English. The findings indicate that sustainability-driven ELL not only improves language proficiency but also aligns students' education with the global health industry's growing demand for sustainability, preparing them for future challenges in medical record management.

Keyword : **Sustainable Learning Models**, **Digital Tools in ELL**, **Medical Terminology Education.**

Introduction

In the healthcare field, proficiency in English is crucial, especially for medical record professionals who need to interact with international standards, communicate with diverse stakeholders, and manage global data systems. Simultaneously, the medical field is under increasing pressure to adopt sustainable practices, both in patient care and in administrative functions, such as medical record management. This dual demand places the Medical Record Study Program in a unique position to incorporate sustainability into English language education, making use of digital tools to foster both language skills and awareness of sustainable practices in healthcare.

English, being a global language, is in high demand, and the use of digital tools has increasingly become an essential component of English language education. Digital technologies, ranging from mobile apps to learning management systems (LMS), provide unprecedented opportunities for learners to engage with the language in interactive and personalized ways.

This research focuses on how sustainable models can be integrated into the ELL curriculum in the Medical Record Study Program, using the digital era's technological advancements to support both environmental and educational sustainability.

Literature Review

Sustainability in Higher Education

Sustainability in higher education aims to create learning environments that are socially responsible, environmentally sustainable, and economically viable. In medical education, the integration of sustainability aligns with broader healthcare initiatives aimed at reducing waste, conserving resources, and improving patient outcomes through efficient management systems (Cortese, 2003). For medical records professionals, understanding these issues is critical, especially in international settings where sustainability is linked to ethical medical practices.

Digital Learning and English Language Education

The digital revolution has significantly impacted language learning, offering new avenues for students to acquire language skills. In the medical field, digital platforms enable access to medical databases, electronic health records (EHR), and global research articles, all of which require strong English proficiency (Hafner & Miller, 2011). By leveraging digital tools such as medical terminology software, online courses, and simulations, educators can reduce reliance on paper-based materials while fostering an interactive, sustainable learning environment.

The use of digital tools in language learning has gained traction due to their capacity to provide learners with accessible, flexible, and dynamic learning environments (Godwin-Jones, 2015). According to Warschauer and Healey (1998), digital tools in language learning promote collaborative learning, enable authentic language use, and provide opportunities for practice that were not possible in traditional classrooms.

Learning management systems such as Moodle, Blackboard, and Canvas provide a structured, online environment for language learning, where students can access learning materials, submit assignments, and engage in discussions (Wong & Looi, 2011). Virtual classrooms, often integrated within these systems, allow students and teachers to communicate and collaborate in real-time through video conferencing, further enhancing the learning experience.

Mobile applications have become increasingly popular in ELL, offering learners immediate access to language learning resources. Apps such as Duolingo, Memrise, and Babbel use gamified learning to keep users motivated, while platforms like Google Translate and Grammarly offer real-time language support (Kukulska-Hulme, 2012). These apps often focus on vocabulary building, grammar exercises, and speaking practice, making them effective tools for language learners on the go.

The use of multimedia resources, including videos, podcasts, and interactive exercises, allows students to engage with authentic language materials, improving listening and comprehension skills. Research by Herrington and Oliver (2000) suggests that digital tools which incorporate multimedia provide students with contextually rich language experiences, bridging the gap between classroom learning and real-world application.

Sustainable Models in English for Specific Purposes (ESP)

English for Specific Purposes (ESP) focuses on teaching English that is directly related to students' fields of study. In the Medical Record Study Program, ESP can be applied to teach medical terminology, patient communication, and record-keeping procedures, all of which are key components of healthcare sustainability (Hutchinson & Waters, 1987). Sustainable models in ESP involve the integration of real-

world scenarios, digital case studies, and virtual learning environments that simulate medical record situations, reducing the need for physical resources while offering comprehensive language practice.

English for Specific Purposes (ESP) focuses on teaching English tailored to the needs of learners in specific disciplines, such as medicine, engineering, or business. The specialized nature of ESP makes it an ideal platform for integrating sustainability principles, especially as industries around the world seek to adopt environmentally and socially responsible practices.

English for Specific Purposes (ESP) is a subfield of language education that focuses on teaching English according to the specific needs of learners in professional or academic contexts. In the case of medical record students, ESP focuses on the specialized language required for documenting, managing, and understanding medical records. This includes medical terminology, patient data interpretation, and knowledge of healthcare documentation systems that are often written in English.

With the increasing use of electronic health records (EHRs) and the global nature of healthcare, medical record professionals must be proficient in English to manage these records accurately. However, ESP for medical record students is not limited to language acquisition; it also includes teaching cultural competence, ethical practices, and sustainability principles, which are becoming critical in the field of healthcare.

Language Needs in Medical Record Management

Medical record professionals need to understand and produce specialized texts such as patient summaries, diagnostic reports, insurance documents, and data coding. Mastering these documents requires knowledge of technical language and the ability to interpret complex medical information. Research by Dudley-Evans and St John (1998) emphasizes the importance of tailored ESP programs that meet the specific needs of learners in various fields, including healthcare.

Digital Tools in ESP for Medical Records

Digital tools are playing an increasingly important role in ESP instruction, particularly in the medical field. EHR systems, online medical databases, and software tools such as coding programs are frequently used in hospitals and clinics. ESP courses designed for medical record students should incorporate these tools to prepare them for real-world tasks (Gruba & Hinkelman, 2012).

Sustainability in Healthcare

Sustainability in healthcare involves not only environmental concerns but also ethical and social responsibility. Medical record professionals need to be aware of data privacy regulations, patient confidentiality, and the responsible use of digital resources in healthcare. Incorporating these topics into ESP programs helps prepare students to handle medical records sustainably and ethically (Sterling, 2010).

Methodology

This research employs a case study approach to investigate how sustainable models are being implemented in the ELL curriculum of Medical Record Study Programs in polytechnics. Data was collected through a combination of surveys, interviews, and classroom observations from three polytechnic institutions that have adopted digital tools for ELL in their Medical Record Study Programs.

1. Surveys: A survey was administered to 150 students and 25 teachers in the Medical Record Study Program. The questions focused on the use of digital tools, familiarity with sustainable practices, and the integration of sustainability topics into English lessons.

2. Interviews: In-depth interviews were conducted with English language instructors to explore how they have incorporated sustainability into their lessons and the challenges they face.
3. Classroom Observations: Observations were made in English language classes to assess the practical use of digital resources, including medical record simulations and terminology software, to promote sustainable learning practices.

Results

1. Use of Digital Tools

The survey results showed that 90% of students and 85% of teachers regularly use digital tools in their English language classes. Medical record simulations, e-learning platforms, and digital quizzes are widely used to teach medical terminology and record-keeping practices in English. The transition to digital resources has significantly reduced the use of paper and physical teaching materials, promoting environmental sustainability in the classroom. The interviews with instructors highlighted the growing use of digital tools in ESP instruction. All the instructors reported using EHR software and online medical databases to familiarize students with the types of digital resources they will encounter in their professional roles. These tools allowed students to practice entering and interpreting medical data, which improved their understanding of medical English in context. However, instructors noted the need for more advanced training in using these digital tools effectively.

2. Sustainability Awareness

Most students (75%) reported that sustainability-related topics, such as efficient healthcare data management, reducing resource waste, and global health initiatives, were integrated into their English lessons. Teachers used case studies on sustainable healthcare practices, online healthcare documentation platforms, and medical terminology relevant to sustainable practices to enhance students' language skills while raising awareness about sustainability in healthcare.

3. Challenges and Opportunities

Teachers indicated that one of the primary challenges is finding balance between teaching language skills and covering complex medical sustainability concepts. Around 40% of students also mentioned that while digital tools were beneficial for language learning, they occasionally found it difficult to navigate the technical terminology related to medical sustainability. However, the use of digital simulations and interactive platforms was found to be a highly effective way to engage students with both language learning and sustainability. One of the primary challenges was balancing the teaching of language skills with the technical aspects of medical record management. Another challenge was ensuring that students could apply their language skills in real-world contexts, particularly in digital environments where EHR systems and medical coding software are prevalent. Furthermore, while instructors were eager to incorporate sustainability topics into their lessons, many felt they lacked the resources and training to do so effectively.

Discussion

The findings of this study indicate that the integration of sustainable models into English language education in the Medical Record Study Program is both feasible and beneficial. The use of digital tools

not only reduces environmental impact by minimizing paper use but also creates a more dynamic, interactive learning environment. The focus on sustainability topics such as efficient data management, ethical record-keeping, and global healthcare standards provides students with relevant language skills while preparing them for the increasing emphasis on sustainability in the medical field.

The use of mobile apps, multimedia resources, and virtual classrooms not only enhances language proficiency but also promotes autonomous learning, a key aspect of modern education. However, the successful implementation of these tools is contingent on several factors. First, accessibility is a crucial issue, particularly for students from disadvantaged backgrounds who may lack access to the necessary digital infrastructure. To address this, educational institutions must ensure that all students have access to the required technology.

Second, teacher training is essential to maximize the benefits of digital tools in ELL. While many teachers are open to using technology in their classrooms, they require ongoing professional development to stay updated with the latest educational technologies and methodologies. Moreover, teachers need to be trained in integrating digital tools into their lesson plans in a way that complements, rather than replaces, traditional teaching methods.

Finally, digital literacy among both students and teachers plays a significant role in the effective use of these tools. Ensuring that all participants have the necessary digital skills to use educational technologies effectively will improve outcomes and reduce the potential for frustration.

However, there are challenges that need to be addressed. Both teachers and students require further support in effectively navigating the overlap between complex medical concepts and English language learning. Providing additional training for teachers and developing user-friendly digital platforms that cater to various language proficiency levels would help overcome these challenges.

Conclusion

The integration of sustainable models into English language learning in the Medical Record Study Program offers numerous benefits, particularly when combined with the digital tools of the modern era. By reducing material waste and promoting sustainability in healthcare, polytechnic institutions can prepare students for the evolving demands of the medical field, where language proficiency and sustainable practices are increasingly intertwined.

As the world becomes increasingly digital, the integration of technology in language learning is no longer optional but necessary for keeping pace with educational advancements. Future research could explore the long-term effects of digital tool use on language acquisition and investigate strategies for overcoming the digital divide in education.

However, to fully realize the potential of these sustainable models, there is a need for continuous professional development for teachers and the refinement of digital tools to ensure they are accessible to all students. Future research could explore the long-term impact of sustainable English language education on medical record professionals' career readiness and their ability to implement sustainable practices in healthcare.

The growing use of EHRs and the global nature of healthcare mean that medical record professionals must be proficient in English and able to manage medical documentation in a sustainable and ethical manner.

Future research should explore the development of more comprehensive ESP curricula that integrate sustainability into the language learning process for medical record students. This could include case studies on the environmental impact of digital medical records, as well as practical training in using EHR systems in ways that align with sustainability goals.

References

Cortese, A. D. (2003). "The critical role of higher education in creating a sustainable future." *Planning for Higher Education*, 31(3), 15-22.

Dudley-Evans, T., & St John, M. J. (1998). *Developments in English for Specific Purposes: A multi-disciplinary approach*. Cambridge University Press.

Ferguson, G. (2013). "English for Medical Purposes." *In The Handbook of English for Specific Purposes*. Wiley-Blackwell.

Gruba, P., & Hinkelman, D. (2012). *Blended technologies in second language classrooms*. Palgrave Macmillan.

Godwin-Jones, R. (2015). "Emerging technologies: The evolving roles of language teachers: Trained coders, local researchers, global citizens." *Language Learning & Technology*, 19(1), 10-22.

Hafner, C. A., & Miller, L. (2011). "Fostering learner autonomy in English for science: A collaborative digital video project in a technological learning environment." *Language Learning & Technology*, 15(3), 68-86.

Herrington, J., & Oliver, R. (2000). "An instructional design framework for authentic learning environments." *Educational Technology Research and Development*, 48(3), 23-48.

Hutchinson, T., & Waters, A. (1987). *English for Specific Purposes: A learning-centred approach*. Cambridge University Press.

Kukulska-Hulme, A. (2012). "Language learning defined by time and place: A framework for next generation designs." *In WorldCALL: International perspectives on computer-assisted language learning*.

Christinawati, Santy. "The importance of English proficiency to face revolution industry 4.0." *TEXTURA* 6.1 (2019): 40-49.

Christinawati, Santy and Wahyu Trimastuti. “ICT FOR LEARNING AND TEACHING ENGLISH”. *Jurnal Sastra - Studi Ilmiah Sastra*, Vol. 10, no. 1, July 2020, pp. 56-61, http://45.118.112.109/ojspasim/index.php/sastra/article/view/178.

Sterling, S. (2010). "Transformative learning and sustainability: Sketching the conceptual ground." *Learning and Teaching in Higher Education*, (5), 17-33.

Warschauer, M., & Healey, D. (1998). "Computers and language learning: An overview."