Need Analysis for the Development of Artificial Intelligence-Based Learning Models to Improve Indonesian Correspondence Skills

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Abstract. A major challenge in correspondence learning is the limited development of effective learning models, primarily due to the lack of innovation in instructional design and insufficient integration of digital technology, which in turn constrains dynamic interaction between lecturers and students and reduces the alignment of learning content with learners' characteristics. This study aims to analyze the need for developing an effective Indonesian correspondence learning model in the digital era. A descriptive qualitative approach was employed, with data collected through interviews, observations, and documentation studies involving 85 students and two lecturers. The findings reveal three main requirements for model development: (1) the integration of digital technology into the learning environment, (2) the enhancement of dynamic interaction between lecturers and students, and (3) the development of adaptive learning content that reflects learners' characteristics. Furthermore, 78% of the respondents expressed a preference for a blended format combining printed materials with digital platforms, and 85% emphasized the need for responsive feedback mechanisms. This needs analysis provides a sound foundation for designing correspondence learning models that systematically incorporate integrated digital technologies, align with learners' needs, and support the improvement of students' academic skills.

Keywords: Needs analysis, learning model, Indonesian correspondence

1 Introduction

The 21st century is understood as a global era marked by the advancement of science and technology [1] This era of scientific and technological progress is actually a momentum to further improve the quality of human resources. In the 21st century, the world of education faces significant challenges in preparing human resources that are able to adapt to rapid and complex technological

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developments. In the field of education, the 21st century itself is marked by rapid social and technological changes. Education no longer focuses only on content mastery but also on developing skills relevant to the current needs of [2].

Technology-based decision support systems can help in selecting the right instructors to improve the quality of learning. However, this also reveals the gap in access and quality of teachers, especially in learning institutions where the distribution is uneven [3]. This gap reflects the urgent need to develop learning models that are not only pedagogically effective but also adaptive to the various conditions and resources of students and educational institutions.

In the context of teacher competency development, it is very necessary for teachers' ability to utilize AI, such as ChatGPT, Gemini, and so on to develop learning media that is more interesting and relevant [4]. Teachers who are competent in using AI can create interactive and adaptive learning materials and evaluate learning outcomes more quickly and accurately. This not only improves the quality of teaching but also motivates students to be more active and creative in the learning process. Thus, the role of AI is not only as a technological tool but also as a support for the transformation of the role of teachers into learning facilitators who are able to integrate technology optimally.

Indonesian correspondence throughout the course, plays an important role in equipping students with effective written communication skills. However, changing educational dynamics and technological advances demand the development of learning models that are more adaptive and responsive to the needs of today's students. This research aims to analyze

the need to develop an Indonesian correspondence learning model, with a focus on technology integration, learning interaction, and content adaptation.

Learning Indonesian correspondence is an important aspect in the development of students' written communication skills, especially for professional and academic needs. Along with the rapid development of information and communication technologies, conventional learning models that rely on printed materials and one-way communication are beginning to show weaknesses, especially in terms of flexibility, interactivity, and learning effectiveness. Correspondence learning, which previously prioritized face-to-face teaching, with little use of digital technology, now needs updates that are in line with the demands of the times. Digital technologies, which include the use of e-learning, multimedia, and internet-based communication platforms, offer a great opportunity to create more interactive, flexible, and relevant learning for today's students [5].

So far, the correspondence learning model in many Indonesian universities still relies on teaching materials in the form of print or email communication, which is limited in providing quick and in-depth feedback. This causes students to feel that they lack effective guidance in developing their writing skills. In addition, this learning model also cannot accommodate the needs of students who increasingly want more independent learning and can be accessed anytime and anywhere [6].

Although several previous studies have addressed the use of technology in Indonesian language learning, research specializing in the development of digital technology-based correspondence learning models is still very limited. There is not much research that explores in depth how technology can be integrated in an effective way in improving the quality of learning Indonesian correspondence. Therefore, this research aims to fill the research gap by developing a correspondence learning model that integrates digital technology and can meet the learning needs of students who are more flexible and interactive [7].

Based on the above analysis, this study aims to analyze the need for an Indonesian Correspondence learning model that is integrated with digital technology that can increase dynamic interaction between dodsen and digital platform students and develop learning content that can be adjusted to the characteristics of students who have different preferences.

2 Research Methods

This study was conducted using a descriptive qualitative approach, aimed at exploring, understanding, and describing the phenomena in depth without emphasizing numerical data or statistical analysis. This approach was considered appropriate for research concerned with the development of learning models, particularly in correspondence education. Data were collected through three main techniques: in-depth interviews, observations, and documentation studies. In-depth interviews were carried out with 85 students and 2 lecturers who teach Indonesian correspondence courses. The data obtained from these interviews were used to identify the main needs for developing a more effective and digitally supported correspondence learning model.

Observations were conducted to examine the implementation of correspondence learning in existing classes, with a focus on the interaction patterns between lecturers and students and on the use of existing learning technologies during instructional activities. In addition, a documentation study was carried out to analyze the learning materials used in teaching Indonesian correspondence at the higher-education level, including printed modules, online materials, and other instructional resources.

After the data were collected, they were analyzed using thematic analysis techniques to identify recurring patterns and core themes that could serve as the basis for the development of a new learning model. The analysis revealed three main needs: (1) the integration of digital technology into the learning environment, (2) the enhancement of interaction between lecturers and students, and (3) the development of adaptive learning content that aligns with learners' characteristics. These themes were then used to guide the design of an improved Indonesian correspondence learning model for the digital era.

3 Results and Discussion

3.1 Integration of Digital Technology in Correspondence Learning

The analysis of the data reveals that 78% of respondents expressed a preference for a combination of printed materials and digital platforms in Indonesian correspondence learning. Students reported that printed materials were still considered important for providing a stable and familiar reference source, especially for learners who preferred reading on paper or who had limited access to reliable internet connections. At the same time, it was indicated that digital platforms were perceived as necessary for enhancing flexibility, self-paced learning, and accessibility beyond the constraints of physical location and fixed schedules [8].

Digital platforms were described as enabling students to access learning materials anytime and from various locations, which supports the independent and self-regulated nature of correspondence learning. The integration of digital tools—such as learning management systems, mobile applications, and web-based portals—was reported to allow students to revisit recorded explanations, download updated materials, and participate in asynchronous discussions at times that best suited their individual routines. This flexibility was considered crucial for students who combined their studies with full-time work, family responsibilities, or other commitments [9].

It is therefore concluded that a correspondence learning model that integrates digital technology can facilitate easier access to learning resources and allow learning activities to be conducted in a more personalized manner, in accordance with students' individual needs and learning speeds. The integration of digital media was also perceived to support repetition and review, which can strengthen content retention and deepen understanding. This finding is consistent with previous studies, which have shown that the integration of digital technology in distance and correspondence education can enhance student engagement, motivation, and perceived control over the learning process by providing interactive, multimedia-rich, and learner centered experiences [10].

From an institutional perspective, the combination of printed and digital materials was viewed as a practical compromise between maintaining stability and embracing innovation. Printed materials were considered useful for standardized core content, while digital platforms were seen as more suitable for dynamic updates, supplementary resources, and interactive components. This blended approach was expected to reduce the risk of digital exclusion for students with limited technological access while still allowing those with better connectivity to benefit from more advanced learning tools [11].

3.2 Dynamic Interaction between Lecturers and Students

The results indicate that 85% of respondents emphasized the need for faster and more responsive feedback mechanisms in correspondence learning. Students reported that feedback was often

delayed or limited, which made it difficult for them to correct errors, adjust their learning strategies, and feel connected to their academic environment. The absence of frequent interaction was perceived to reduce students' confidence and to create a sense of isolation, particularly in a context where face-to-face contact is minimal or absent [12], [13].

Digital technology was identified as a key enabler of more dynamic interaction between lecturers and students. The use of email, discussion forums, messaging applications, and e-learning platforms was reported to allow two-way communication to occur in a shorter time compared with traditional correspondence methods, which relied heavily on postal services and paper-based assignments. Through these digital channels, students indicated that they could submit assignments electronically, receive comments in a more-timely manner, and clarify doubts without having to wait for extended periods [14]

E-learning platforms were considered particularly suitable for managing assignments, coordinating discussions, and delivering more structured and real-time feedback. Features such as automated grading for multiple-choice questions, inline comments on submitted documents, and threaded discussion boards were perceived to support clearer communication and more systematic interaction. Lecturers were reported to be able to monitor student participation, track progress, and provide timely guidance based on observable patterns of engagement and performance [15].

The availability of faster feedback and more responsive communication channels was found to create opportunities for more dynamic interaction between lecturers and students, thereby strengthening guidance and support. With timely feedback, students were able to revise their work, improve their understanding, and feel more involved in the learning process. For lecturers, the ability to provide clearer and more frequent feedback was seen as a way to enhance instructional effectiveness and to maintain a sense of presence despite the physical distance. This shift from delayed, retrospective feedback to more immediate, interactive communication was considered essential for improving the quality and relevance of Indonesian correspondence learning in the digital era.

3.3 Adaptive Content Development

Another important finding is the need for the development of learning content that is more adaptive to students' learning styles and learning characteristics. Respondents indicated that the current learning materials often did not fully match the needs of independent learners, who require clear, modular, and self-explanatory resources. Many students reported that some materials were perceived as dense, exam-oriented, or not sufficiently contextualized, which made it difficult for them to relate the content to their own experiences or future professional practice [16].

A well-designed correspondence learning model was expected to provide materials that could be accessed flexibly and adapted according to the learner's pace, prior knowledge, learning preferences,

and level of confidence. Students reported that they would benefit from content that was organized into manageable units, accompanied by clear learning objectives, examples, and self-assessment activities. The need for modular and step-by-step materials was particularly emphasized for learners who studied independently and did not have regular access to classroom explanations or immediate assistance [17].

Technology-based learning content was described as having the potential to support more adaptive and responsive instruction. The use of digital media allowed for the incorporation of multimedia elements-such as short videos, audio explanations, interactive simulations, and hyperlinked references-which were perceived to cater to different learning styles and preferences. For example, visual learners could benefit from diagrams and infographics, auditory learners from audio explanations, and experiential learners from interactive exercises or scenario-based tasks [18].

In addition, technology-supported content was considered suitable for enabling branching pathways and personalized learning trajectories. Adaptive features-such as diagnostic quizzes, recommended pathways, and optional enrichment materials-were reported to allow students to focus on areas where they needed more practice while skipping content they had already mastered. This form of adaptive learning was perceived to reduce cognitive overload and to provide a more efficient and meaningful learning experience [19].

When learning content is adapted to students' characteristics, it was perceived to support more effective and meaningful learning, as students can engage with material at an appropriate level of difficulty and with relevant examples. The development of adaptive content was therefore viewed as a critical component of an improved Indonesian correspondence learning model, particularly in the context of diverse student backgrounds, varying levels of prior knowledge, and differing levels of digital literacy. Overall, the integration of adaptive, technology-supported content is considered essential for improving the quality, accessibility, and relevance of Indonesian correspondence learning in the digital era [20].

4. Conclusion

Based on the results of the research, it can be concluded that the development of an Indonesian correspondence learning model that integrates digital technology has great potential to increase the effectiveness and flexibility of learning. This study identifies three main needs in the development of the model, namely the integration of digital technology in learning, increasing dynamic interaction between lecturers and students, and the development of adaptive learning content. Learning models that combine these three elements can provide a learning experience that is more relevant to the needs of today's students, as well as improve the quality of their written communication skills.

The implementation of a correspondence learning model based on digital technology will not only improve the quality of learning, but will also help students to learn more independently, flexibly, and effectively, which is in accordance with the times. Therefore, it is imperative for colleges to adopt digital technologies in correspondence teaching to create a better learning experience that is relevant to the demands of today's professional world.

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