

## Negotiating Conflict, the Need Analysis of Developing Digital-Based English Teaching Materials for Midwifery Students

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### ABSTRACT

This study aims to analyze the need of midwifery students to develop digital-based English for midwifery teaching materials. The data collection technique used was a questionnaire to analyze the needs for developing digital teaching materials which was developed based on analysis indicators at the ADDIE development model stage. The questionnaire was analyzed using descriptive analysis based on the results from respondents which included (a) learner characteristics (b)resources analysis, and (c)learning objectives. Meanwhile, the results of resource analysis show that 87.03% of students know that the substance of teaching material content is available in journals, books, and sources related to lecture material, 100% of students have laptops/gadgets that can support the use of digital teaching materials, and 100% of students have an understanding of the use of digital technology in learning.

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## **INTRODUCTION**

As time goes by, the development of science and technology is growing rapidly. To keep pace with these developments, competent human resources are needed and have intelligent competitiveness. The main strategy for creating competent human resources can be pursued through education. The quality of education is expected to be able to produce the next generation who can compete in the international arena. The various efforts made to improve the quality of education in Indonesia cannot be separated from the empowerment of supporting factors for educational success which are always developing and sustainable.

One form of education that follows the development of science and technology in the current 4.0 era is digital education, where digital education has created an educational revolution in this digital era. With the rapid development of technology, digital education provides promising new opportunities for future education. Digital education refers to the learning process that uses digital technology and the internet. This involves the use of technological devices such as computers, tablets, and smartphones, as well as access to the vast internet. Through digital education, students and teachers can connect online, access digital learning resources, and participate in collaborative learning activities. Digital education has experienced significant development in the last few decades. In the past, education was limited to the physical classroom environment and the use of textbooks as the main source of learning. However, with the advent of the internet and advanced technological devices, education has gone beyond the boundaries of the classroom.

The process of digitizing education in Indonesia, if seen from the existing potential, will soon be realized due to several supporting factors, namely the high level of use of computer science technology and the increasing development of digital-based businesses in Indonesia (results of a survey by the Indonesian Internet Service Users Association (APJII) in 2018 shows that mobile phone ownership in Indonesia is 355 million and the number of internet users is 171 million). These two factors will support the realization of the digitalization of education because the education system in Indonesia requires a digital-based touch. Currently, we are heading towards the era of Society 5.0, an era which is the 5th form of industrial development which will make it easier for human life to interact and transition to the digital era. Thus, the use of digital technology for every aspect of life, especially the education sector, is very necessary because it will reflect the level of competitiveness of a country. In this case, the participation of all parties, including teachers, will play a very important role in efforts to realize the digitalization of education in Indonesia. Of course, making this happen requires hard work and strong enthusiasm from all parties, so that the digitalization of education in Indonesia can have an impact on all students.

One way to implement digital education is to create digital-based learning, one of which is teaching materials, where teaching materials are an important part of learning. With the advent of the digital era, the approach to developing teaching materials has of course undergone a significant transformation. Educators and curriculum developers must continue to innovate to create learning materials that are not only informative but can also attract the attention of the digital generation. Digital teaching materials are learning materials delivered via electronic media such as computers, tablets, or mobile devices. This teaching material can be in the form of text, images, audio, video, or a combination of these. Digital teaching resources, according to Kosasih, are computer-based and include additional multimedia capabilities. Because it can mix two or more media, including text, graphics, animation, video, audio, and others, it is referred to as a multimedia device (Kosasih, 2021).

According to Prastowo, digital teaching materials are those that integrate many learning media, such as text, audio, video, and graphics, to control commands from a presentation (Sunarti & Rusilowati, 2021). In both virtual and in-person learning environments, teachers and students can communicate with one another through the use of digital teaching resources. When used for independent learning, digital teaching resources allow students to continue learning even when they are not in the company of an instructor (Mella et al., 2022). Regretfully, the researcher's earlier research revealed that while digitally based English teaching resources for midwifery were suitable, engaging, successful, and efficient, their implementation was limited (Nuranisa et al., 2023). From the description above, the problem arises as to whether students need digital-based English teaching materials. Therefore, researchers will research to determine students' needs for digital teaching materials in English for midwifery students at the Midwifery Study Program, Faletihan University.

## **THEORETICAL REVIEW**

### **Digital Teaching Material**

A collection of educational resources that have been methodically organized and presented on digital devices – such as computers, laptops, tablets, smartphones, notebooks, and the like – is known as digital teaching materials. Digital teaching resources, according to Kosasih (2021, p. 251), are instructional materials that are based on computers and include additional multimedia tools integrated. Because it can integrate two or more media, such as text, graphics, animation, video, audio, and others, it is referred to as a multimedia device. As to Prastowo's statement in Sunarti & Rusilowati (2020, p. 285), digital teaching materials are those that integrate many learning media, including text, audio, video, and graphics, to enable control over a presentation's command.

Utilizing digital instructional resources can give educators and students insight into the design. Meanwhile, Romiszowski (1986) in (Kosasih, 2021) revealed the criteria for good digital teaching materials, namely material that has been validated by material experts, material that provides benefits for students, presents concepts clearly, examples and practice questions that are appropriate to the material or learning goals.

### **English for Midwifery Students**

English for midwifery students is one of the general subjects taken by midwifery study program students. The existence of English language courses for midwifery students is to support the ability of midwifery students to graduate so they can compete in the world of work. Based on BNP2TKI data, there is a surplus of Indonesian nurses and midwives. Finding employment is a challenge for many graduate students studying nursing and midwifery. The government is assisting graduate students in finding employment in other nations in an attempt to find a solution to this problem. The quality and competency of postgraduate health students still fall short of what the world needs. One of the difficulties is that students who wish to work overseas must be proficient in both target languages and English. Thus, to close this gap, the government encourages students studying health, particularly those studying midwifery, to enhance their English language proficiency. For midwifery students to compete in the global market, proficiency in English is essential (Susanto & Latief, 2016).

The topic of midwifery students and English for Specific Purposes (ESP) are closely intertwined. Since the General English (GE) course does not adequately address the needs of students, one branch of ESP focuses on teaching English to midwifery students (Saliu & Hajrullai, 2016). According to Otilia (2015), it is focused on "the teaching and learning of English for specific purposes and areas." The courses cover particular topics and are taught in English using pertinent terminology, vocabulary, and other materials (Chung & Chang, 2017; Saliu & Hajrullai, 2016). The basis for this is the unique circumstances and requirements of the students (Otilia 2015; (Arquitectura et al., 2015) Adhabiyya et al. 2014). The goal is to prepare students for their future careers. It will be simpler for students to locate employment that fits their study program if they learn English based on their field research. It is thought that students who study subjects and literature linked to their field of study or employment are more motivated to learn. The learner, the language selected, and the learning setting are the three ESP teaching aspects that must be considered to achieve this (Chung & Chang 2017). These elements have to do with requirements analysis.

### **Need Analysis**

Needs analysis is the stage where the process of collecting data and information is carried out which will be used as a means of supporting and supporting the creation and development of teaching materials. A needs analysis is very important for Midwifery students to carry out before learning English. This is the basic principle of ESP (Robinson in (Boroujeni et al., 2013);(Kothalawala et al., 2001)). This is to assess students' communicative needs and techniques for achieving certain teaching goals (Otilia 2015). Needs analysis is the basis for learning plans, syllabus design, evaluation and material development, as well as learning design and assessment development ((Widodo, 2017). Additionally, according to Hutchinson & Waters (1987, 54), target and learning needs are included in the needs analysis. What students must do in the goal setting is known as the target needs. Students must then fulfill their learning demands. Needs analysis requires considering wants, lacks, and necessities (Haseli Songhori, 2008).

What students need to know to perform well in the intended scenario is what must be understood. The term need can also refer to a person's desire for commercial success. Furthermore, as stated by Allwright (1982, referenced in West, 1994), desires are abilities that learners believe are pertinent to their own lives. A businessperson might have to comprehend business correspondence, speak clearly in sales meetings, get information from sales catalogs, and so forth. He might also need to be aware of the discourse, functional, structural, and lexical language elements that are frequently employed in the circumstances that have been noted. To comprehend the needs of the learner, it is crucial to first observe the scenarios in which the learner must operate and then break those situations down into their component elements.

According to Allwright (1982, referenced in West, 1994), lack is the discrepancy between a student's present competency and the intended competency. Additionally, English for Specific Purposes books focus on what students already know, allowing teachers or facilitators to identify the needs that students are missing based on weaknesses (Hutchinson, Waters, and Breen, 1979, page: 56). Allwright (1982), cited in West (1994), states that desires are necessities that students prioritize more highly when they have limited time. Furthermore, the notion of want, according to Hutchinson and Waters (1987), is what students perceive as their subjective needs. It also implies that students must be aware of what they hope to learn. Students will use different strategies to get what they desire as a result of this circumstance.

Therefore, the issue of the need for English-based teaching materials for midwifery students has not been studied much, and there is still little relevant information. Therefore, this research seeks answers to the following questions: (1) What are the target needs of midwifery students regarding digital-based English language teaching materials? and (2) What are the learning needs of midwifery students regarding digital-based English language teaching materials?

## **METHODOLOGY**

This research uses a research and development (R&D) model design. The procedures or development steps use a development model with the ADDIE approach (Branch, 2010). The ADDIE development model has a procedure that includes several steps including (a) analysis, (b) design, (c) development, (d) implementation, and (e) evaluation. In the research, researchers focused on needs analysis which was developed based on the first stage of the ADDIE development model, namely analysis. The main aim of this research is to find suitable products to be developed according to student needs and problems found in learning, especially in the English for Midwifery course. This research was conducted in August 2023. The research subjects were taken from 54 midwifery study program students at Faletihan University.

The data collection technique used was a questionnaire to analyze the need for developing digital-based English teaching materials for midwifery students which were developed based on analysis indicators at the ADDIE development model stage. Respondents received the questionnaire through Google Forms. Based on the quantity of responses provided by respondents, descriptive analysis was used to examine the collected data. This research uses a research and development (R&D) model design. The procedures or development steps use a development model with the ADDIE approach (Branch, 2009). The process for the ADDIE development model consists of the following steps: analysis (a), design (b), development (c), implementation (d), and evaluation (e).

## **RESULTS**

Development research is grounded in field needs. These needs represent a gap between idealized and actual conditions, and filling this gap requires raising the standard of instruction through needs analysis exercises. In order to increase the quality of learning, the research analyzes the requirement for digital-based English teaching materials for midwifery students. This analysis aims to identify the kinds of teaching materials that midwifery students require. To create effective instructional materials, a needs analysis that gathers data and examines student needs must come first.

Respondents to questionnaires about needs in the field were surveyed to get data on needs for product development in the form of digital English teaching materials for the English for Midwifery course. As the first stage in creating a product in the form of digitally based English teaching materials for the English for Midwifery course in the Midwifery study program at Faletihan University, all student demands were described and analyzed based on the questionnaire responses. Analyzing learner characteristics, resources, and learning objectives are three crucial aspects of the ADDIE development model that require examination. The following information was gathered based on the findings of the needs analysis that the researchers conducted.

### **Learner Characteristics Analysis**

Utilizing a Google Form questionnaire, the analysis of learner characteristics includes a look at students' starting material knowledge, perspective, motivation, initial abilities, prospective presentation system, learning style, and group characteristics. Students are allowed to select their responses on the disseminated questionnaire based on the content of learner characteristics. Respondents select one of the available answer options after receiving an integrated link to the Google form. Table 1 presents the findings from the comprehensive needs analysis that was conducted for the students.

**Table.1 Analysis of the Learner Characteristics**

No	Variables Analysis	Learner Characteristics	Percentage
1	Content Knowledge	Know the use of digital teaching materials in learning	87.03%
2	Content Perception	Have a positive mindset toward the use of digital resources for instruction in learning	94.44%
3	Ability Level	Have a habit of using digital resources in daily life	100%
4	Motivation	Have an interest in using digital teaching materials in learning	100%
5	The Potential of Presentation Systems	Has an interest in digital teaching materials to foster independent learning	94.44%

To analyze learner characteristics, respondents were given questionnaires. According to the findings, 87.03% of students are aware that digital teaching materials can be used for learning, 94.44% of students have a positive view of the use of digital teaching materials, and 100% of students consistently use digital resources in everyday life. Today, 100% of students are interested in using digital teaching materials in learning and 100% of students are interested in electronic teaching materials to foster learning independence.

### **Resource Analysis**

Resource Analysis contains content resource analysis, technology availability, and technology comprehension. The resource's content is made available to students and appears as an option for responses to the questionnaire. Respondents select one of the available answer options after receiving an integrated link to the Google form. Table 2 presents the findings from the comprehensive needs analysis conducted for the students.

**Table.2 Resource Analysis**

No	Variables Analysis	Resource Characteristics	Percentage
1	Content Resource	Sources such as books, journals, and lecture-related materials include the content of the instructional materials.	87.03 %
2	Technology Availability	Students have devices such as laptops and gadgets that enable them to use digital educational resources.	100%
3	Technology Comprehension	Students comprehend how to use digital technologies for education.	100%

Surveys were given out to respondents to do resource analysis. According to the analysis's findings, 87.03% of students believe that the information in digital teaching materials should be accessible in books, journals, and other sources that deal with midwifery; all students own laptops or other devices that can support the use of digital teaching materials; and all students are aware of the benefits of using digital technology in the learning environment.

### **Learning Objectives Analysis**

Learning objective analysis contains an analysis of the learning outcomes students must take based on course content completed using a breakdown of standards for graduate competency. Table 3 below displays the comprehensive findings of the learning objectives analysis.



**Table.3 Learning Objectives Analysis**

<b>No</b>	<b>Variable Analysis</b>	<b>Descriptions</b>	<b>Explanation</b>
1	Understand the basic concepts of learning English for Midwifery	The comprehension of English in midwifery learning materials can be enhanced via instructional resources.	Suitable
2	Analyzing English for Midwifery Learning Models	Instructional resources can facilitate the assessment of English for Midwifery learning approaches.	Suitable
3	Developing learning devices	Teaching materials can aid in the development of English for Midwifery learning resources.	Suitable
4	Simulates English for Midwifery learning	English language learners can benefit from instructional resources when using midwifery simulations.	Suitable

The analysis of learning objectives reveals that the instructional materials created are anticipated to facilitate students' comprehension of English for Midwifery learning materials, assist in the analysis of English for Midwifery learning models, assist in the creation of English for Midwifery learning resources, and assist in the learning process.

## **DISCUSSION**

In the context of product development, needs analysis is a very important part and step. According to Branch (2009), in order to ensure that the product being developed deviates from the data derived from the initial needs analysis interpretation, development research must commence with a step in which the researcher conducts a needs analysis prior to initiating product development activities. Before deciding what kind of product to build, this activity is frequently seen as an initial research project. This means that needs analysis is an activity to collect information to make a priority decision, and to identify needs that are relevant to learning.

Based on the results of the analysis of the need for teaching materials, shows that students are more likely to be interested in teaching materials that can support online learning. This is due to the learning needs in the 4.0 era or the digital era, where learning leads to completely digital learning. The teaching materials developed refer to the development of digital teaching materials. Students believe that digital-based teaching materials will make their learning process easier because they can be done anytime and anywhere. Digital teaching materials allow students to carry out activities of receiving materials, directions, and various learning information anywhere and at any time without limitations of space and time. Digital teaching materials also train students to learn independently from the various sources provided (Göçen Kabaran & Uşun, 2021). According to (Göçen Kabaran & Uşun, 2021)., students who are proficient in technology will find it easier to engage with the information presented in digital teaching materials, and the learning experiences created with these resources will help them develop positive learning attitudes.

Innovative designed educational resources can support efficient, self-directed learning (Hobbs, 1987; Wilson, 2018) and assist students in developing the abilities necessary for learning (Busstra et al., 2008). Effective teaching resources can also help with blended learning, sometimes referred to as mixed-learning (Zwart et al., 2017), as students will find it easier to access and study these resources. Digital teaching materials provide several benefits, such as the ability to fully display different types of graphics, animation, audio, and video; they are also more flexible in their use, easier to access, and portable; they offer a more immersive learning environment; and they don't take up much room. or a designated area for its use and storage. Five minimum requirements are listed by Alessi & Trollip (2001) in (Kosasih, 2021) for digital instructional materials. These requirements are: (1) program introduction; (2) navigation instructions; (3) materials; (4) guidance for use; and (5) program menu end.

Information on students' hopes that digital teaching resources will help them learn at home was also gathered for this needs analysis. Students can study each learning material topic independently based on their skills and competences thanks to digital teaching materials. (Chang et al., 2006). Apart from that, learning with the help of digital teaching materials can enhance students' learning experience (Roskvist et al., 2020). Good teaching materials certainly contain the theory that students will study, a summary, and are equipped with various learning activities that students can do even if they do not meet directly with the lecturer. When developing learning needs assessments, educators should consider a range of student characteristics, including potential development, psychological health, and intellectual aptitude. (Afifulloh & Cahyanto, 2021).

Students' enthusiasm for using digital devices such as laptops and gadgets supports the development of digital teaching materials. As (Ekawati et al., 2022) said that one factor influencing students' interest and capacity to comprehend and analyze the subject being taught is the utilization of digital teaching materials in the classroom. Due to the availability of technologies that allow students to show the educational materials adequately, students have no trouble using or studying these materials. Additionally, by creating digitally based teaching resources, this can help instructors satisfy the demands of students enrolled in online courses. (Afifulloh & Cahyanto, 2021), If the teaching materials include learning activities that students can do to develop an individual experience even when they do not meet in person with the lecturer, the delivery of the subject will have greater relevance for the students.

With the existence of digital teaching materials, it is hoped that the availability of digital teaching materials will increase student competence, draw students' attention and interest so they are motivated to learn and prepare before studying in class, lessen the load on students by eliminating the need for them to carry printed materials, and reduce global warming by using less paper (Lilis, 2019). It is thought that using digital teaching resources effectively allows students to study independently even when they are not in the company of an instructor. (Mella et al., 2022).

## **CONCLUSIONS AND RECOMMENDATIONS**

Analysis of the needs for developing digital teaching materials in this research includes analysis of learner characteristics, resource analysis, and analysis of learning objectives. Analysis of learner characteristics relates to students' initial knowledge about content, perception of content, initial abilities, motivation, potential presentation system, learning style, and group characteristics. Resource analysis relates to content sources, technology availability, and learning facilities. Analysis of learning objectives is related to the analysis of learning outcomes that students must take.

The results of the analysis of learner characteristics show that 87.03% of students know the use of digital teaching materials in learning, 94.44% of students have a positive view of the use of digital teaching materials in learning, 100% of students have the habit of using digital resources in daily life. Today, 100% of students are interested in using digital teaching materials in learning, and 94.44% of students are interested in digital teaching materials to foster learning independence. Meanwhile, the results of resource analysis show that 87.03% of students know that the substance of teaching material content is available in journals, books, and sources related to lecture material, 100% of students have laptops/gadgets that can support the use of digital teaching materials, and 100% of students have an understanding of the use of digital technology in learning.

In addition, an analysis of learning objectives was carried out which showed that the product to be developed must meet several variables including (a) being able to support understanding of the English for Midwifery learning material, (b) being able to support the analysis of the English for Midwifery learning model, (c) being able to support the process development of English for Midwifery learning tools, and (d) can help students in the English for midwifery learning process. Overall, Based on the data gathered from the analysis of the needs for creating instructional materials, it can be concluded that, generally speaking, students are drawn to digital resources that are flexible in their use and contain thorough content—both theoretical and instructional—to aid in their understanding, particularly when learning online.

#### **FURTHER STUDY**

This study has limitations because it only focuses on analyzing the need of midwifery students to develop digital-based English for midwifery teaching materials. Therefore, future research efforts are expected to try to examine more deeply the need of midwifery students for developing digital-based English for midwifery teaching materials.

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