



EMPOWERING EDUCATION: DEVELOPING AN E-LEARNING COURSE FOR INTRODUCTION TO COMMUNICATION STUDIES AT UMN

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ABSTRACT

This study aimed to explore the development of e-learning at Universitas Multimedia Nusantara (UMN), using a qualitative research method. The study collected data through interviews with key stakeholders involved in the development of e-learning at UMN. The findings suggest that the development of e-learning at UMN is necessary to improve the quality of learning and expand access to quality learning materials. The study also found that the ADDIE model was used in the development process, and three new types of content were created: virtual lightboards, scenario-based content, and gamification content. These types of content were designed to enhance student engagement and improve learning outcomes. The study concludes that the development of e-learning is essential in the current educational landscape and can benefit both students and institutions alike.

Keywords: UMN Online Learning Program, Communication Studies, e-Learning, Distance Learning

1. INTRODUCTION

Industry 4.0 is an era of transformation in various aspects of industry marked by the development of information and communication technology, especially the internet, resulting in the process of industrial digitalization (Benešová & Tupa, 2017; Mian et al., 2020). This industrial development also affects the readiness of human resources. According to World Economic Forum (2023), there are three abilities needed in the future until 2030, namely; cognitive skills, soft skills, and technology skills. Capability in the field of technology is one of the main requirements that must be possessed by every human resource in facing global competition. The field of education is one of the fields disrupted by the development of technology and communication. Moreover, the Covid-19 Pandemic situation that has hit Indonesia since the beginning of 2020 has also had a very significant impact on the education sector in Indonesia and "forced" the government to change learning policies in universities to elementary schools from face-to-face learning systems to online learning (in the network) or commonly called electronic-based learning or e-learning (Adedoyin & Soykan, 2020; Alvin & Dewi, 2022; Mujiono & Susilo, 2021).

E-learning underwent a significant metamorphosis during the pandemic (Astawan et al., 2021). Initially, e-learning was conducted as a temporary solution in overcoming emergency conditions to reduce the spread of Covid-19. However, in the implementation process, innovations in e-learning continue to be carried out starting from creating teaching materials or modules that are able to display material in the form of text, images, videos and animations accompanied by interaction, to the use of various software to increase the effectiveness of learning (Alvin, 2023). With the widespread availability of internet connectivity and affordable devices such as smartphones and laptops, students can access learning materials and participate in virtual classes from the safety of their homes. This has enabled students to continue their studies while adhering to social distancing protocols. E-

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learning has enabled students to continue their education without having to physically attend school, reducing the risk of infection (Rizkinaswara, 2021; Widyanuratikah, 2020). Running linearly with the development of technology and communication, the field of communication science also experienced significant development and became one of the clumps of science that is of interest to the younger generation today. The process of how to utilise technology in information dissemination becomes two sides of a coin that cannot be separated. The utilisation of e-learning platform as a method to learn communication science is the background of making digital module of Introduction to Communication Science (PIK).

PIK is a course that discusses the nature, function, characteristics, scope of communication, levels of communication process, communication principles, communication models, perception, verbal communication and nonverbal communication as well as interpersonal communication, group communication, organisational communication, intercultural communication and mass communication. From this description, it is assumed that PIK can be more effective if it is made into a digital module because in addition to being able to provide applicative examples, the module can also be made interactively. However, one of the main challenges of e-learning is the potential for a lack of engagement and interaction between students and lecturers or tutors. In traditional classroom settings, students can interact with instructors and peers in real-time, allowing for more dynamic and personalized learning experiences. In e-learning environments, learners may feel isolated or disconnected from the learning community, which can impact motivation and performance. Therefore, the development of a digital e-learning module is needed. Based on the explanation above, this research seeks to dissect in detail and specifically about how to develop a digital PIK module at UMN? UMN was chosen as the object of research because it is one of the private universities that received a very good predicate for the implementation of distance learning using the e-learning system (Caesaria, 2023; Heriani, 2020; Purwadi, 2023).

2. LITERATURE REVIEW

Learning Media

Quoted in the book "Learning and Learning Theory", Gagne defines learning as a careful arrangement of events with the intention that learning occurs and makes it effective (Siregar & Hartini, 2010). According to Barron et al (2015), learning is a planned effort and activity by optimising learning resources so that the learning process occurs in students. Module according to Sitepu (2006) is the smallest unit of learning material that contains a concept as a whole so that it can be studied separately from other parts without reducing its meaning. The module contains a set of learning experiences that are packaged as a whole and systematically, so that learners can be helped to access the material independently and specifically. Furthermore, Winkel (2009) argues that modules are teaching materials used to assist students in learning material independently. All learning activities are arranged in the module, the learning series is arranged in the module.

E-Modules or electronic modules are modules in digital form, consisting of text, images, or both that contain digital electronics material accompanied by simulations that can and should be used in learning. According to laili et al (2019) digital modules are modules with electronic formats that are networked with computers. Modules in digital



form can display text, images, animations, and videos through using electronic devices such as computers, and with the advancement of technology access to digital modules is also possible through smartphones. In determining the selection of learning media, the step taken is to map the form of material based on its nature in the form of facts, concepts, principles and procedures in accordance with the effectiveness of conveying the nature of the material. Based on the theory of digital media selection criteria, video and animation forms will be selected in the process of developing digital module innovations.

ADDIE Development Process

The model used in the digital module development process is the ADDIE development model. The ADDIE model is a very simple learning model compared to other models (Gani, 2015). All stages in the model are structured and systematic so that it is easy to learn and use in learning, especially very relevant in the module development process. Based on the results of research that has been done, it shows that development using the ADDIE model can produce quality products and learning. Furthermore, according to research conducted by Martins et al (2013) on the development of interactive multimedia products with the ADDIE model, it concluded that the results of products developed with the ADDIE model can increase the effectiveness of student learning outcomes. In line with this research Azimi et al (2015) on the survey of the effectiveness of the use of instructional design methods in the development of multimedia skills to play futsal, from the survey results it was found that the use of the ADDIE model in learning multimedia products to learn key skills to play futsal obtained a high performance value compared to traditional methods.

3. RESEARCH METHODS

Qualitative research methods are used to gain a comprehensive understanding of individuals' or groups' experiences, perspectives, and beliefs. Unlike quantitative research methods, which are primarily concerned with statistical analysis, qualitative research methods seek to examine and grasp complex phenomena (Patton, 2014). By giving deep, complete insights into the experiences and perspectives of individuals or groups, qualitative research can provide ideas or hypotheses for further exploration. Qualitative research may be a useful technique for examining social media marketing since it may provide detailed insights into social media users' experiences and perspectives, as well as how they interact with marketing content. In this study, the case study design is applied. Yin (2018) defines a study case as an empirical investigation into a current occurrence in its real-life environment. The study case should be chosen based on its ability to give insights into the research subject or topic under consideration, such as relevance, representativeness, and originality. The data for this investigation was gathered through interview, active observation, and digital artefacts. Data collection was carried out at the learning centre department at UMN. In addition to observation, interviews were also conducted with Content Development Coordinator Bayu Febriawan and Instructional Designer Team Leaders Ahmad Arif. Following data collection, researchers analysed the data using the pattern-matching technique, which involves comparing the data to a theoretical framework or model to identify patterns or themes.

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4. RESULTS AND DISCUSSION

ADDIE Implementation in UMN

1) Analyse

The initial stage in this development model is to conduct a needs analysis. The analysis consists of analysing the needs of learners and analysing learning materials. The analysis phase begins by conducting a documentation study of the lecture material of the communication science introduction course that has been done before, by looking at the value results and learning activities that have been carried out through e-learning before. Furthermore, researchers also conducted interviews with lecturers teaching the course related to the conditions and problems that occurred during the learning process. In addition to lecturers, researchers dug up information related to learning needs in the conditions of the Covid-19 pandemic, by distributing questionnaires to communication science students at UMN. The next stage is to analyse the content, this content will be developed into an interactive multimedia module that is used independently by students. The first step is for the researcher to discuss with the lecturer to determine the material that is suitable for development, based on the program plan and semester learning activities (RPKPS) that the lecturer already has. After selecting the most suitable material and as needed, researchers analysed the learning objectives and indicators.

2) Design

After the analysis, the next step is to make a design or design which consists of 5 activities, among others: (a) mapping the material / chunking and compiling it into a lesson plan that is in accordance with the online learning strategy for pedati adaptation, (b) collecting material and compiling a draft media map that will be developed into a digital module, (c) making storyboard and layout designs based on material mapping, (c) preparing character and background design designs for modules, (e) compiling assessment and evaluation instruments in learning.

3) Development

In the development stage is the stage of assembling the design that has been designed into the form of a product or multimedia, as for the development stage there are several steps; (a) doing the recording or filming process, (b) editing videos or animations with supporting software such as adobe premiere, adobe after effect, camtasia studio, articulate storyline 3, adobe illustrator 2021, coreldraw 2021, (c) compiling a course site which becomes a page to be accessed by lecturers and students, After the site has been prepared, the material is uploaded and arranged in the LMS, (c) make revisions or improvements based on the media that has been made, improvements are made from the delivery of animation, writing errors, visual aspects and layout, (d) the last step in the development process is to edit the module on the LMS platform.

4) Implementation

After revising product improvements and uploading on the LMS platform, the implementation step is carried out to test the use of digital modules in the learning process.

5) Evaluation

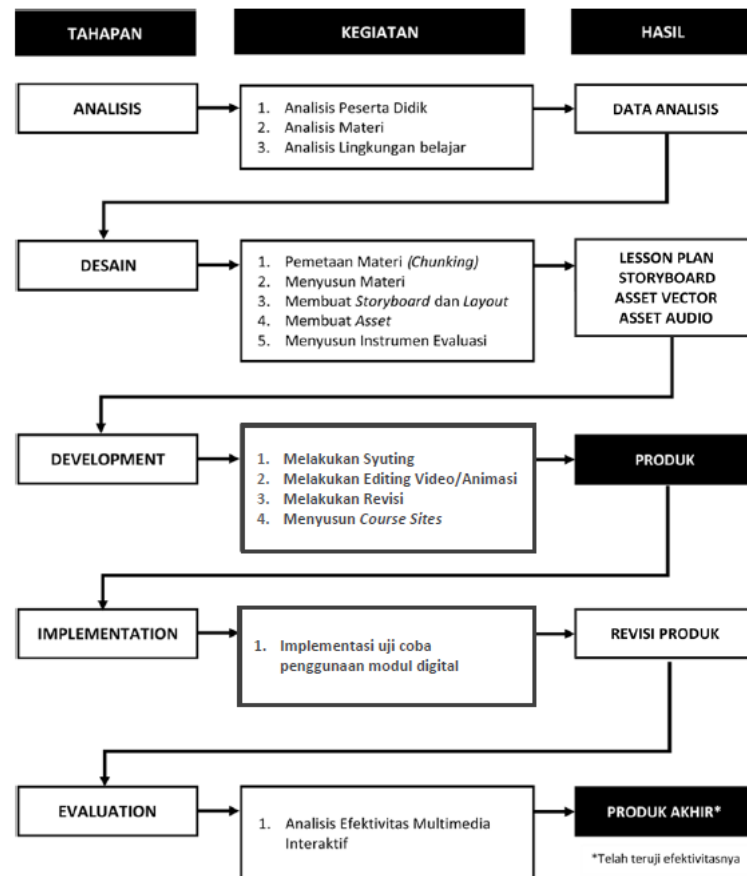
The last stage in the development process is to conduct an evaluation stage. The evaluation stage is carried out to see the products produced have been successful and in



accordance with the expectations in this development. The evaluation instrument used is in the form of questions that have been arranged in a series of topics.

Below is the figure that explain process of learning media development following ADDIE

Figure 1. Learning Media Development Model using ADDIE



Source: Authors summary (2023)

The Development of PIK Digital Module at UMN

E-learning has become increasingly popular in recent years as a means of delivering educational content to learners in a flexible and accessible way. In UMN Distance Learning, one of the key features is the use of multimedia elements to enhance the learning experience. There are three specific types of multimedia elements that are commonly used in e-learning at UMN: talking presentations, animation content, and talk shows. Talking presentations involve the use of a speaker or narrator to deliver the content of the presentation. Animation content involves the use of animated graphics, characters, or images to convey information. Meanwhile, talk shows involve the use of a host or moderator to facilitate a discussion or interview on a particular topic. These elements can be used to convey complex information in a clear and concise way, simplify complex

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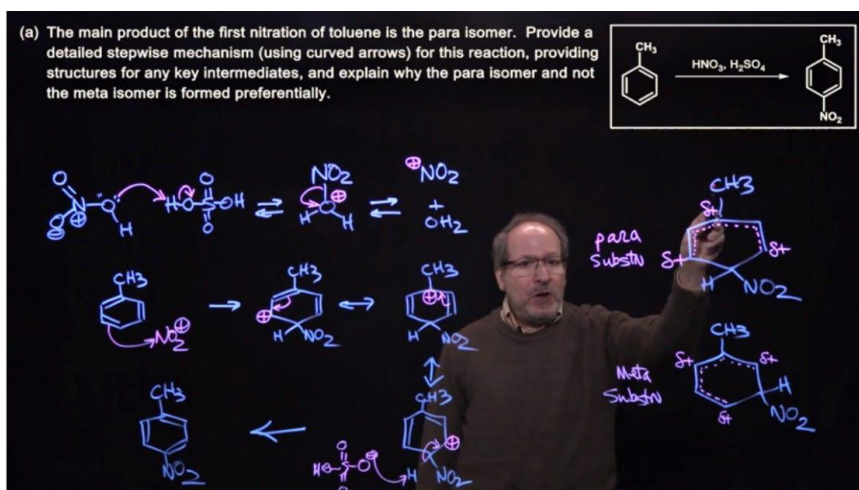
information, and engage learners in a conversation and promote critical thinking and analysis.

In an effort to improve students' experience and access to learning materials, there are several proposed innovations that will be carried out, including the following;

1) Virtual Lightboard Learning Video

Development of learning videos that use virtual lightboard. The use of virtual lightboard is felt to increase engagement in learning, especially in material that requires explanation in the form of images or graphs such as in communication model material which will discuss a lot of images related to elements in a communication. This development is modelled on the application at MIT Resources for Instructor.

Figure 2. MIT Lightboard Studio

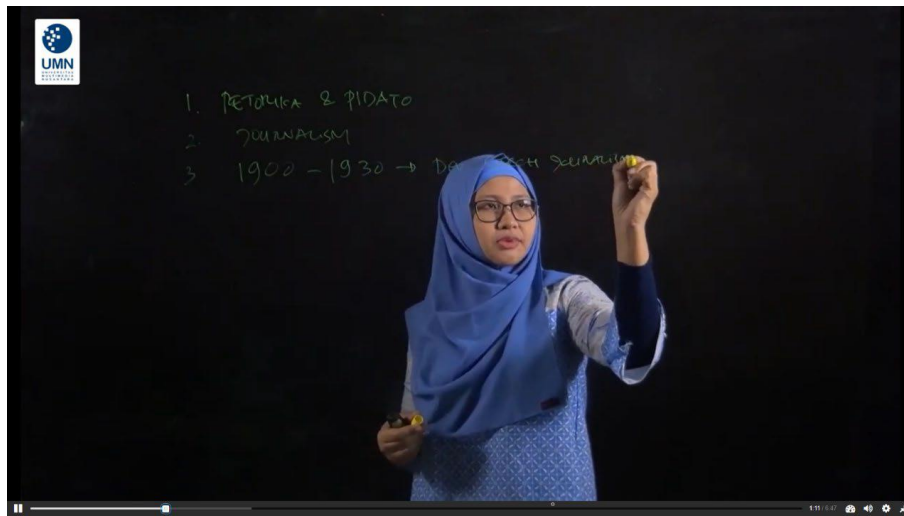


Source: Osubor (2021)

Video with virtual lightboard is intended to make it look as if there is a blackboard in front of the screen when the lecturer explains the material. The development of the virtual lightboard model requires setting up tools such as a transparent whiteboard that has been modified with lights, coloured markers, black backdrops and a dark conditioned room with sufficient lighting on the board. In this innovation, a video with a virtual lightboard is developed on the material of the second meeting on the topic of the history and development of communication science. In the development process, of course, there are still some shortcomings such as dealing with several reflections of light, making organised images and so on. Below is an example of a learning video display that uses a virtual lightboard in UMN.



Figure 3. Virtual Lightboard e-Learning Content at UMN



Source: Authors Data (2023)

2) Scenario-based Learning Multimedia

Scenario-based learning is a learning method that uses realistic case studies as the main basis for learning by creating in-depth or specific instructions. The use of scenarios has high effectiveness when applied in the condition of applying a theory to a situation or phenomenon that occurs, this is because the learner is faced with a position to respond to the situation directly (real time). UMN took an example from the education consultant, EiDesign.

Figure 4. Scenario-Based Learning Content

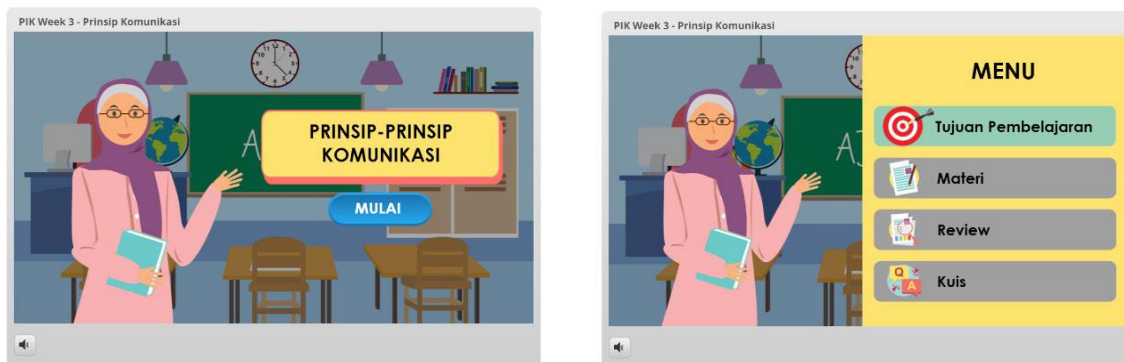


Source: EiDesign (2023)

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At UMN, to create a scenario-based digital module the developer uses authoring tools: articulate storyline, the tool is a recommended software because it has a very high level of accessibility and is an effective tool for creating digital materials that are aesthetic, interactive and compatible with various LMS. Scenario-based digital creation begins with the stages of preparing storyboards or scenarios, creating assets and compiling materials in Articulate Storyline. The results of the development of scenario-based materials are compiled on the topic of Communication Science Basics, below is an example.

Figure 5. Scenario-Based Learning at UMN



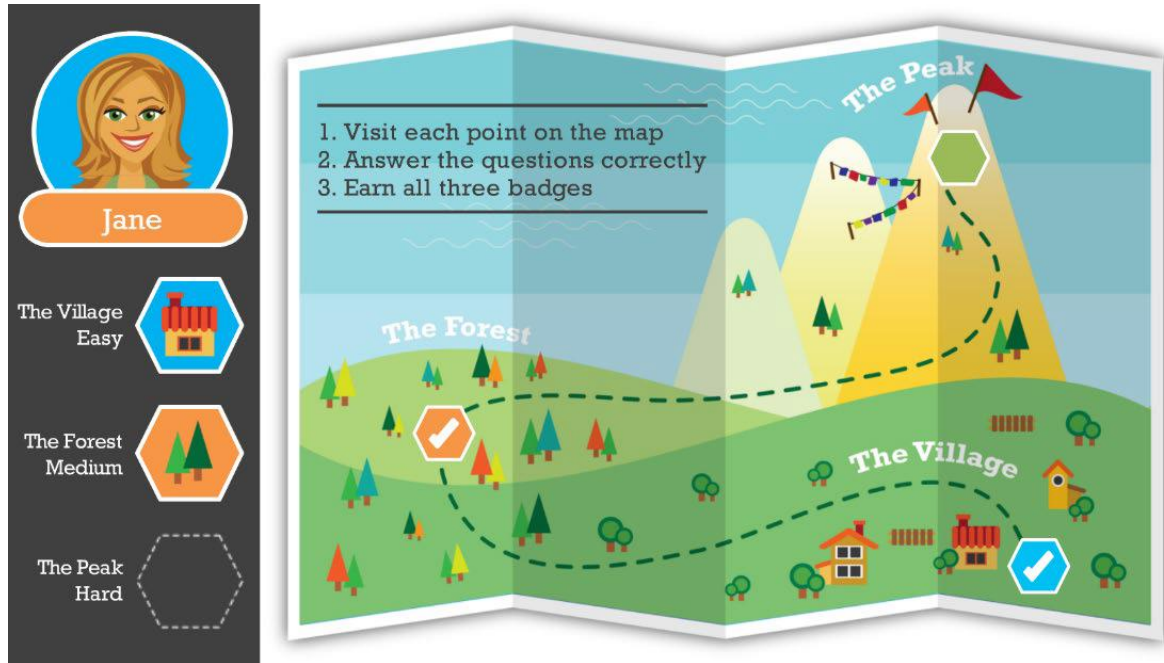
Source: Authors Data (2023)

3) Gamification-based Learning Multimedia

The gamification method is one of the most popular methods today. The use of gamification in multimedia is considered to be useful to increase the attractiveness of the material to be learned. With the gamification element, learning is expected to be informative and more fun with elements of games, achievements and competition. In UMN, this type of gamification content does not yet exist because it is still in the development stage. Gamification content for online learning requires a significant investment of time, resources, and expertise, but many organizations may not have the necessary personnel or budget (Alvin, 2022; Putri & Alvin, 2023). Additionally, instructional designers may face time constraints when developing gamification content, as it requires more time and effort to develop than traditional online learning materials. This can be a challenge for organizations with limited resources or tight deadlines.



Gamification content development in UMN will refer to <https://elearninguncovered.com/>. Below is the snapshot of the gamification content dedicated for education.



Source: elearninguncovered (2023)

The development of e-learning content is a response to the challenges posed by online learning. These include lack of engagement, limited interaction, technical issues, and accessibility (Guspatni, 2018; Plummer et al., 2021). To address these challenges, e-learning content has been developed to provide a more engaging and interactive learning experience. E-learning content can incorporate multimedia elements, virtual office hours, discussion forums, and live chat sessions, and can also be designed to be accessible to a wider range of learners. By developing high-quality e-learning content, instructional designers can help to overcome the challenges of online learning and provide a more effective and engaging learning experience for all learners.

5. CONCLUSIONS AND RECOMMENDATIONS

This research provides an academic contribution to distance learning, especially to overcome the problems and challenges in online learning where students are often constrained by boring content. Therefore, digital content development for e-learning is a necessity. In this research, UMN Distance Learning applies the ADDIE model. The ADDIE model is a structured approach to developing effective e-learning content. By following the ADDIE model, instructional designers can ensure that the e-learning content is tailored to the needs of the learners, well-organized and structured, engaging and interactive, effectively delivered, and continuously improved and updated. An interesting finding from this research was the development of content that centred more on the use of virtual lightboards modelled on MIT Open Learning, scenario-based content, and gamified content. Of the three development models, two have been implemented. Interactive

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multimedia modules are a new media used for communication science users or students taking PIK or introductory communications courses. Combining interactive multimedia with scenario-based learning can provide new and interesting learning experiences. Meanwhile, the development of gamification-based digital educational content is still under development due to human resources and time constraints.

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