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E-learning Innovation for Generation Z in Higher Education

Lamijan Hadi Susarno[1], Utari Dewi[2], Khusnul Khotimah[3], Alim Sumarno[4], Andi Kristanto[5], Atan Pramana[6*], Hirnanda Dimas Pradana[7]
[1,2,3,4,5,6,7] Teknologi Pendidikan, Universitas Negeri Surabaya, Surabaya, Indonesia

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ABSTRAK

Penelitian pengembangan pembelajaran daring pada mata kuliah Pengembangan Media Foto OBE untuk mendukung pelaksanaan pembelajaran kampus merdeka yang telah dicanangkan oleh Menteri Pendidikan dan Kebudayaan RI. Tujuan penelitian ini adalah mengembangkan bahan ajar online mata kuliah pengembangan media foto OBE berbasis RPS. Pengembangan ini menggunakan model pengembangan ADDIE. Tahapan pengembangan meliputi Analisis, Desain, Pengembangan, Implementasi, dan Evaluasi. Pengembangan ini menghasilkan Bahan Ajar Online pada mata kuliah Pengembangan Media Foto yang memenuhi kaidah dan ketentuan bahan ajar berbasis RPP OBE. Subjek penelitian ini adalah mahasiswa program studi Teknologi Pendidikan Universitas Negeri Surabaya. Analisis data menggunakan metode wawancara dan angket. Dari hasil produk dilakukan validasi oleh ahli desain pembelajaran, ahli materi, dan ahli media untuk mengetahui kesesuaian RPP OBE bahan ajar online. Hasil penelitian menunjukkan bahwa setelah dilakukan uji kelayakan diperoleh hasil uji ahli media sebesar 91,67% dan ahli materi sebesar 100%. Hasil tes mata pelajaran pada siswa Kurikulum dan Teknologi Pendidikan diambil dari uji coba individu dan kelompok kecil. Tiga orang siswa pada praktek pribadi dan uji coba kelompok kecil oleh enam orang siswa memperoleh hasil masing-masing sebesar 90% dan 95%. Hasil uji kelayakan menunjukkan bahwa bahan ajar online berbasis RPP OBE pada mata kuliah Pengembangan Media Foto dinyatakan layak.

ABSTRACT

Research into the development of online learning for the OBE Photo Media Development course to support the implementation of independent campus learning, which the Indonesian Minister of Education and Culture has proclaimed. The purpose of this research is to develop online teaching materials for RPS-based OBE photo media development courses. This development uses the ADDIE development model. Development stages include Analysis, Design, Development, Implementation, and Evaluation. This development produces Online Teaching Materials for the Photo Media Development course that meet the rules and regulations of OBE lesson plan-based teaching materials. The subject of this research is a student of the Education Technology study program of Universitas Negeri Surabaya. Data analysis using interview and questionnaire methods. From the results of the product, validation was carried out by learning design experts, material experts, and media experts to determine the suitability of OBE lesson plan online teaching materials. The results of this research show that after carrying out a feasibility test, the test results obtained by media experts were 91.67% and material experts were 100%. The results of subject tests on Curriculum and Educational Technology students were taken from individual and small group trials. Three students in personal practices and small group trials by six students obtained respective results of 90% and 95%. The feasibility test results show that the online teaching materials based on the OBE lesson plan in the Photo Media Development course are declared feasible.

1. INTRODUCTION

Education is an effort that is well planned and optimal so that students are able to compete actively in Students have the legal right to receive educational services, and it is the responsibility of the administrators of higher education institutions to ensure that this right is honored. The provision of student learning services necessitates incorporating some elements of technological advancement in tandem with the escalating rate of progress seen in the development of communication and information technology. The university established an online learning program (Ouyang & Scharber, 2017; Teodorescu et al., 2021). However, students should be aware that not all classes offered by the university's various departments feature online lectures (Kong et al., 2022; Resmayani & Widaswara, 2022). Aside from that, development is required to support the internationalization of the Educational Technology study program, which is currently being carried out across universities with similar study programs at home and abroad. This internationalization of the Educational Technology study program is presently being carried out. Therefore, the development of this feature is significant so that students can easily access it and make it easier to study online (Mentzakis et al., 2020; Muzaffar et al., 2021). The conflict analysis in

** Corresponding Author: Atan Pramana: atanpramana@unesa.ac.id*

this research is the aim of the photo media development course for students to be able to produce photo media in learning according to photography rules. However, the reality in the field is that students have difficulties in creating photo media that conforms to the principles of photography. So that innovation is needed for Educational Technology students to be able to create good photos for learning.

Online learning or online learning today is the latest development in distance education. It began in the mid-1990s with the spread of the internet. It generally uses a Learning Management System, defined as an E-Learning platform that provides integrated tools (including chat, discussion forums, number books, e-mail, and content storage such as digital drop boxes) to online teachers and students. Online learning began in the mid-1990s with the spread of the Internet. According to previous study students are encouraged to critically examine their own assumptions, struggle with social issues, and take part in social action through online learning, a form of transformative learning or transformative pedagogy (Almelhi, 2021). The author offers five suggestions to prepare the online environment for transformative pedagogy. The following steps should be taken: (a) create a safe and inviting environment; (b) encourage students to think about their experiences, beliefs, and biases; (c) employ teaching strategies that encourage student engagement and participation; (d) raise real-world problems that address social inequality; and (e) assist students in implementing action-oriented solutions (Baran et al., 2011; Sa'ida, 2021). Four fundamental qualities are essential to the success of online instruction, and they are as follows: (1) the learner is required to be actively engaged throughout the entirety of the lesson; (2) group participation can assist in the accomplishment of learning objectives; (3) frequent interaction between students and lecturers can alleviate feelings of isolation; and (4) the learning content must relate to the real world to increase meaning for participants (Fluck & Dowden, 2011; Liu et al., 2017).

To prepare the online environment for transformative pedagogy, the following steps should be taken: (a) create a safe and inviting environment; (b) encourage students to think about their experiences, beliefs, and biases; (c) employ teaching strategies that encourage student engagement and participation; (d) raise real-world problems that address social inequality; and (e) assist students in implementing action-oriented solutions. Four fundamental qualities are essential to the success of online instruction, and they are as follows: (1) the learner is required to be actively engaged throughout the entirety of the lesson; (2) group participation can assist in the accomplishment of learning objectives; (3) frequent interaction between students and lecturers can alleviate feelings of isolation; and (4) the learning content must relate to the real world to increase meaning for participants (Almelhi, 2021; Jukic et al., 2019). The following qualities are essential to successful online education, according to the author of the book "The Tool for Successful Online Teaching," who identifies them as follows: (1) relevant and well-designed challenging activities; (2) adequate and timely feedback from the instructor; (3) adequate and timely interaction between students; (4) active engagement in knowledge construction with an easy-to-use and robust navigation system; (5) deep learning is encouraged through question design and links to source-proposed thinking; (6) student learning can progress themselves according to students' needs; and (7) student learning can progress themselves according to students' interests (Su et al., 2021; Winarni et al., 2022). And finally, number seven, student autonomy is emphasized because students are held accountable for their educational progress.

Every student majoring in Educational Technology at UNESA must take the Photo Media Development course. It is a study program course that is worth a total of 4 credits. A synopsis of the Photo Media Development course, which is designed to educate those who work in the field of education technology about the following topics: (1) an examination of the historical progression of photography and the nature of photo media to support educational endeavors; (2) the application of the exposure triangle, which consists of the aperture, the shutter speed, and the ISO; (3) how to use a digital single-lens reflex camera to create photo media; (4) how to design composition, lighting, and editing in photography; and (5) how to develop (Greenier & Moodie, 2021; Nurhikmah et al., 2021). Theoretical knowledge is complemented by practical experience in photo media production, which encompasses various aspects related to the medium, such as principles, characteristics, presentation, and the validation of findings obtained through scientific study.

Students are encouraged to learn effectively through independent study and in the classroom by mandating that lecturers be required to make learning more innovative. This improvement to the learning process is one way to improve it. The Educational Technology Study Program of the Faculty of Education Universitas Negeri Surabaya (UNESA) is an educational institution that aims to produce competent Human Resources in Educational Technology. The program's full name is the Educational Technology Study Program of the Faculty of Education Universitas Negeri Surabaya (UNESA). Since Photo Media Development is a practical learning course, it necessitates using learning resources to foster students' more significant sense of initiative and autonomy. The Educational Technology Study Program is designed to facilitate the development of students' potential abilities into actual abilities that can be used mainly to find solutions to educational problems and to aid in the learning process.

Based on the description above, the Photo Media Development course is one of the courses that still needs RPS OBE-based teaching materials (Muhammad Noor Sehabudin et al., 2020; Perdana et al., 2018). Education focused on the outcomes that must be achieved rather than simply the content that must be covered is known as

outcome-based education (OBE). The term "teaching materials" refers to objects that are used in the classroom by either the instructor or the students to aid in the teaching and learning process (Tegeh & Kirna, 2013; Zulkarnaini et al., 2022). The SIDIA UNESA LMS, an online lecture facility, has yet to be used to its full potential, so lecturers have been using teaching materials compiled from various books and other sources. These materials must be optimally organized and developed (Nasbey & Raihanati, 2022; Widiantari & Irwansyah, 2021). At the moment, lecture activities are still conducted in the traditional manner, face to face, using a wide variety of references and other pertinent sources according to the skills intended to be acquired. The realization that students have the skills they need depends on their success in completing each class.

The most recent finding from this study is that researchers have yet to investigate the creation of online teaching materials for RPS-based OBE photo media development courses to support the internationalization of educational technology study programs. Aside from that, most of the lecturers at UNESA still need to develop the RPS OBE-based teaching materials intended for use by students with the SIDIA learning management system in the most effective way possible. This research aims to develop online teaching materials for RPS-based OBE photo media development courses. The novelty of this study is to support the internationalization of educational technology study programs by using exciting and challenging media to enliven the learning environment. As a result, the learning design for the Photo Media Development course must be compatible with the course description, learning outcomes, student characteristics, advancements in technology and information, and the most recent reference sources pertinent to learning outcomes. In light of the preceding, this investigation aims to develop an online learning platform for the Photo Media Development Course.

2. METHOD

The research method includes development models, development procedures, and product trials as part of its parts. During this time, participants in the product trial talked about the trial design, trial subjects, data types, data collection instruments, and data analysis techniques (Dimas Pradana et al., 2022). The ADDIE model is utilized in developing online educational opportunities (Branch, 2009; Kristanto et al., 2021). The production of a teaching material product is a process that is both systematic and procedural in nature. The procedure at the beginning will affect the outcomes of the entire process, so each step must be carried out accurately. Because the ADDIE model is so commonly used to describe a methodical strategy for developing instructional programs, it was decided to use this model. Aside from that, the ADDIE model is a general learning model appropriate for use in research on development (Mardikaningsih & Kurniasari, 2019, 2021). This term is practically synonymous with the process of developing instructional systems. This process is considered sequential when it is used in action, but it is also interactive. The evaluation results of each stage can bring learning development to the scene before it. The completed product from one step will be the basis for the one after it. The ADDIE model is show in Figure 1.

Figure 1. ADDIE Model

Figure 1 shows that the ADDIE framework is a cyclical process that develops over time and is continuous throughout the instructional planning and implementation process. Five stages comprise the framework, each with its own distinct goals and functions in the development of instructional design (Megawati et al., 2022). The following is a description of the stages of the ADDIE development model: first, Analysis; this analysis stage is the initial stage of development activities. In this stage, a needs analysis activity is carried out to find out the root of the problem by conducting.

This instrument for data collection is utilized in the process of collecting the necessary data for research. Several methods can be used to manage the data required for this research. Some examples of these methods include interviews, questionnaires, and documentation (Navida et al., 2021; Pujiati et al., 2022). On the other hand, the technique used in this research was a questionnaire. A questionnaire is a collection of written questions used to collect information and responses from respondents. The questionnaire method determines the degree of practicability of the product under development. A test can be thought of as either a tool or a procedure used to objectively measure students' learning outcomes. This experiment was carried out to determine whether or not there was a difference or an improvement in students' learning outcomes both before and after the implementation of online learning. As a result, the developer uses data collection methods such as pre-testing and post-testing.

The measurement scale used by researchers is the Guttman scale. With this type of scale, you will get clear answers, namely "yes-no," "true-false," "never-never," and "positive-negative" (Ardiansah & Miftakhi, 2020; Umar, 2015). The formula used to calculate student questionnaire data, learning design experts, media experts, and material experts as show in Table 1.

Table 1. Product Revision Criteria Eligibility Level

Percentage	Criteria	Information
81% - 100%	Very well	No revision
61% - 80%	Good	No revision
41% - 60%	Pretty good	Revision
21% - 40%	Not good	Revision
0% - 20%	Not very good	Revision

3. RESULT AND DISCUSSION

Result

There are several procedures for developing online teaching materials; researchers use the ADDIE model broken down below the first analysis; this stage includes activities to find out problems that occur in learning, explicitly analyzing student competencies, analyzing student characteristics regarding capacity learning; analyzing material by the demands of course learning outcomes; and analyzing other related aspects. Teaching materials based on RPS OBE in photo media development courses to support the internationalization of educational technology study programs have yet to be available; as a result, they need to be developed in digital format. These results are based on the observations obtained by researchers and the consequences of their studies.

After problem data has been identified in the initial stage of analysis, this phase involves carrying out media design-related tasks in preparation for its development. In light of the inquiries posed, the design of learning should primarily concentrate on the subsequent three endeavors: the selection of suitable material, implementation of effective learning strategies, establishment of competency demands, and consideration of forms and methods of assessment and evaluation. Furthermore, activities for developing course-aligned instructional resources, including the creation of RPS-based photo media to promote the globalization of educational technology study programs, comprise the development phase. Some of the resources gathered for these activities will consist of tasks such as typing, creating graphics, and other elements that will be incorporated into the online instructional materials.

As Photo Media Development is a course that emphasizes practical learning, it is imperative that students utilize learning resources that promote increased initiative and autonomy. In order to effectively accomplish learning objectives that extend beyond learning outcomes, a comprehensive grasp of the conceptual competency addressed in the Photo Media Development course is required. This is a matter that requires careful consideration.

The outcomes of this study will contribute to the development of instructional materials that are particularly beneficial for online learning. The ideal criteria take into account the results of validation tests conducted by professionals in the respective fields of materials and media. The validation test asserts that subject matter experts have provided results that are one hundred percent affirmative. The media professionals who provided input on the criteria assigned it an outstanding grade of 91.67 percent. Students enrolled in the Faculty of Education at Universitas Negeri Surabaya (UNESA) were given individual and small group assessments in order to collect the data utilized in calculating the subject test scores for Educational Technology students. The scores obtained for the individual assessments administered by three students and the group assessments done by six students were ninety and ninety-five percent, respectively. This suggests that pupils hold the RPS OBE-based online instructional materials in high regard. Products included of the SIDIA learning management system are instructional materials that are uploadable to SIDIA and can be utilized for online learning (also known as SIDIA). The result of the assessment to ascertain the feasibility of development is evident in Figure 2.

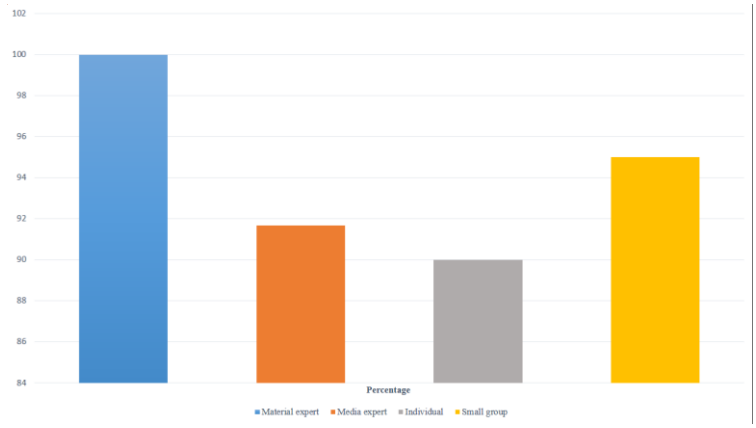

Figure 2. Feasibility Test Results Development Results

Furthermore, course descriptions, learning outcomes, student characteristics, technological and informational advancements, and the most recent reference sources pertinent to learning outcomes have been incorporated into this novel advancement. This particular item will be utilized in the online educational program known as SIDIA's photo media creation course. Due to the theoretical and practical nature of the picture media development course, educational materials must be designed to encourage students to engage more actively and independently in their comprehension of theory, as well as facilitate project-based learning. In the learning management system, one of the learning tools is utilized as the subject matter for each meeting. Additional educational resources consist of the course syllabus and the semester learning plan. The instructional resources include of PowerPoint presentations, instructional films, and teaching materials that provide tangible examples of photo media. The integration of learning tools within this learning management system would enhance students' proficiency as instructional technology developers, specifically in the creation of visual learning media, which is extensively employed across educational levels. The illustration depicts the book's front cover, which serves as an instructional resource for the development of photographic media in question Figure 3.

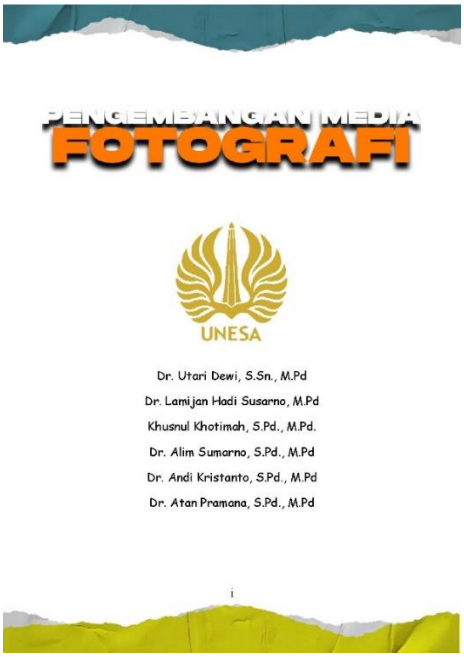

Figure 3. Book Cover

This development aims to make it easier for lecturers to carry out learning. In addition, this development can support the implementation of independent campus learning, which is currently being carried out across universities that offer study programs comparable to one another. Therefore, it is beneficial in facilitating students' access to online learning that is simple to use. It is easier to learn because it is not limited by space or time, and

students' success in taking each course allows them to realize the skills they already possess. Students can also easily access it, facilitating their online study.

Discussion

The outcomes of creating instructional materials that are utilized in the learning process are encompassed within the fourth stage of implementation. These findings provide insight into the impact of these instructional materials on the overall quality of education, encompassing the efficacy and appeal of the learning process (Jaya, 2018; Okwang & Mwesigwa, 2022). Formative and summative assessments are both components of the fifth and final evaluation, evaluation, which occurs at the conclusion of the process. The summative evaluation is the concluding phase of a class, and its objective is to ascertain the results or degrees of impact that the students have attained (Ade-Ojo et al., 2022; Elmahdi et al., 2018). To improve a product, formative evaluation is conducted at each stage to collect data. To successfully achieve learning objectives that are not solely based on learning outcomes, it is necessary to understand the conceptual competency covered in the Photo Media Development course. This is something that needs to be considered. It is hoped that students will be able to learn on their own based on the course description and the learning outcomes and that this will allow them to have skills after completing the course. According to previous study facts, concepts, principles, and procedures are the four categories into which learning materials can be sorted according to their functions (Malahayati & Zunaidah, 2021). Therefore, it is necessary to provide students with access to online learning, which can make it simpler for them to study independently by the course's learning outcomes (Delita et al., 2022; Wang, 2022). To put it another way, it is anticipated that learning the Photo Media Development course through online means will be easier and more fruitful.

This is relevant to research in substance (1) research by previous study entitled "The Effect of Using News Photo Media on the Short Story Writing Skills of Class Short Story (Susmita, 2022); (2) Other research, entitled "Improving Biographical Text Writing Skills Using the Group Investigation Model with the Use of Photo Media in Class by applying the group investigation model (Sisca et al., 2023); and (3) research, entitled "The Effect of Using Caricature Animation Photo and Video Media on Students' Ability to Understand Anecdotal Texts in Class caricatures for students in understanding anecdotal texts for class X SMA (Syarhoh et al., 2022).

This research has several important implications for the development of e-learning for Generation Z in higher education. First, the research results show that e-learning innovations based on interactive technology and multimedia can increase student engagement and learning motivation. This can encourage higher education institutions to adopt and integrate the latest technology in their curriculum. This research also has several limitations that need to be considered. First, this research is limited to a sample of students from one or a few specific higher education institutions, so the results may not be fully representative of the Generation Z population as a whole. Further research with larger and more diverse samples is needed to increase the generalizability of the findings.

4. CONCLUSION

Based on the research findings and the outcomes of the described conversations, it has been determined that the online instructional resources including RPS OBE for the Photo Media Development course are viable for use. The excellent standards take into account the results of validation tests conducted by professionals in the particular media and materials. The validation test asserts that subject matter experts have provided results that are one hundred percent affirmative. The students' results on the subject assessments pertaining to Curriculum and Educational Technology were decided through the implementation of individual and small group trials. The scores obtained for the individual assessments administered by three students and the group assessments done by six students were ninety and ninety-five percent, respectively. This suggests that students hold the RPS-based OBE online instructional resources in high regard. The utilization of RPS-based OBE online teaching resources in the Photo Media Development course is projected to streamline the instructional process for instructors and greatly assist in promoting accessible online learning for students. These expectations are applicable to both cohorts. Students have expedient access to it, so benefiting from its utility during their online studies. Because it is not limited by time or geography, it greatly simplifies the learning process.

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