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The Feasibility of Online Module with ICARE Learning Model Flow Based on Ubiquitous Learning Class

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ABSTRACT

Online learning started with the emergence of Internet technology and has been increasingly used during the COVID-19 pandemic. However, it has raised many problems, such as limitations in presenting material (monotonous and uninteresting), building activeness, and difficulty creating interaction between lecturers and students and between students. Moreover, online learning is more stressful than regular classroom sessions because students have to study alone. The absence of clearly structured learning steps makes it difficult for them to focus. Therefore, this research aims to develop an independent online learning module based on ubiquitous classrooms with a structured and systematic flow called Introduce, Connect, Apply, Reflect, and Extend (ICARE). Furthermore, it determines the eligibility of the module using an ADDIE design for education, which consists of analysis, design, development, implementation, and evaluation. All stages resulted in an eligible online module with an u-learning class ICARE flow in the Learning Media course.

***Keywords*:**

Feasibility; Online Module; ICARE Learning Model; U-Learning Class.

ABSTRAK

Munculnya teknologi internet memulai pembelajaran online, yang semakin populer selama pandemi COVID-19. Namun demikian, pembelajaran daring menyebabkan banyak masalah. Beberapa di antaranya adalah penyampaian materi yang monoton dan tidak menarik, kurangnya aktifitas yang dibangun, dan kesulitan membangun interaksi antara guru dan siswa. Selain itu, karena siswa harus belajar sendiri, pembelajaran daring lebih menegangkan

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dibandingkan dengan kelas konvensional. Mereka juga sulit untuk fokus karena tidak ada langkah-langkah pembelajaran yang terstruktur dengan baik. Oleh karena itu, tujuan penelitian ini adalah untuk menciptakan kelayakan modul pembelajaran daring mandiri dengan alur terstruktur dan sistematis yang disebut Introduce Connect Apply Reflect Extend (ICARE), yang berbasis kelas ubiquitous (u-learning). Penelitian ini juga akan mengevaluasi kesesuaian modul dengan desain ADDIE untuk pendidikan, yang mencakup analisis, desain, pengembangan, penerapan, dan evaluasi. Semua langkah-langkah tersebut menghasilkan modul daring yang sesuai dengan alur pembelajaran ICARE berbasis online pada mata kuliah Media Learning.

***Kata kunci*:**

Kelayakan; Modul Online; Model Pembelajaran ICARE; Kelas U-Learning.

1. Introduction

Learning systems worldwide, including Indonesia, were forced to change completely during the Covid-19 pandemic. Before the pandemic, certain schools, colleges, and training institutions rarely conducted online learning (Arasaratnam-Smith and Northcote 2017; Vrasidas et al. 2010). However, this changed during the pandemic because schools and universities have implemented many online-based learning policies (Basilaia and Kvavadze 2020; Taha et al. 2020) This is a quick response to minimize COVID-19 transmission. The economic, social, and educational spheres have all felt the effects of the COVID-19 pandemic (Chang, 2020). The Minister of Education and Culture released Circular Letter No. 4 of 2020 Concerning the Implementation of Education Policies during the Emergency Period for the Spread of Corona Virus Diseases-19 as a direct result of the pandemic's effects on the educational system.

The government suggests canceling classes and switching to online education to stop the spread of the virus. The government has mandated online education to curb the spread of the COVID-19 virus. This online learning is considered very effective in inhibiting the spread of the COVID-19 virus (Barrot, Llenares, & Del Rosario, 2021). In its broadest sense, the concept of online media refers to the various forms of media formats that are exclusive to the Internet and serve as a form of online communication (Hidayat, 2022). These formats may include text, photographs, videos, and audio. On the other hand, the singular comprehension of online media is characterized as a medium within the context of mass communication. This policy must then be obeyed by higher education actors and closely monitored for the duration of the pandemic (Apandi, et al. 2023).

Online learning is practical and flexible because it is conducted anywhere (Kadek Suartama, Setyosari, et al. 2020; Suartama et al. 2019, 2020). However, it causes many unique problems for lecturers and students during the pandemic. Most lecturers and students are not ready for online learning because they are unfamiliar with its technology and strategies (M. Churiyah, S. Sholikhan, F. Filianti, and D. A. Sakdiyyah, 2020). Irfan (2020) stated that the challenges faced in online learning include limitations in material presentation (monotonous and uninteresting), building activeness, and

creating interaction between lecturers and students and among students. Moreover, it is more stressful than regular classroom sessions because students have to study alone. The absence of structured and systematic learning steps makes focusing difficult (N. Yusnilita, 2020). Online content is theoretical and mediocre, not allowing students to practice and study effectively (S. Dhawan, 2020). Furthermore, mastery learning cannot be completed online M. (Adnan, 2020).

The Industrial Revolution 4.0 has brought changes in various aspects of human life technologically from the current generation and the traditional methods used in teaching and learning; educators at all levels will find it more difficult to improve the teaching and learning experience in the classroom (Dwivedi et al., 2023). The development of technology, information, and communication in the 4.0 revolution can help in learning activities, which provide a new atmosphere for change activities (Javaid et al., 2022; Javed et al., 2021). The learning process influences achievement in education because learning is a process of interaction between students and learning resources in a learning environment. The existence of learning resources has an important role in achieving student learning goals (Wahyuningsih et al., 2021). Learning resources are various or all sources in the form of data, people, and certain forms that students can use in learning activities, either separately or in combination, making it easier for teachers to achieve their learning goals (Darling-Hammond et al., 2020). Therefore, teachers must be more creative and innovative in teaching materials for the current learning process (Mawaddah, F., & Usmeldi, 2024).

The previous studies are a reference for overcoming the obstacles lecturers, and students face in online learning to make it more interesting and meaningful. Lecturers must innovate in new learning methodologies they did not prepare before by integrating technology as one of the main tools to convey knowledge into strategies and teaching materials (A. Almonacid-Fierro, R. et al., 2021). Also, pedagogy is a determining factor in intentions, behavior, and success in online learning. It includes clear and structured learning strategies, richer content or teaching materials, and an environment that improves student performance (S. Hao, V. P. Dennen, and L. Mei, 2017). Students learn in different ways with various modalities. Providing students with various media options and clear learning steps ensures they continue learning (N. Dhaliwal, F. Simpson, and A. Kim-Sing, 2018). However, systematic planning is needed to determine and define these pedagogical aspects in a module design.

The educational resources in learning modules are structured appealingly and methodically. To attain the required abilities, they consist of assessment tools, techniques, and content for independent application (I. Anwar, 2010). There are now three categories for learning modules. The traditional, tangible instructional resources, such as books and other printed materials, make up the first group. The electronic instructional materials in the second category can be accessible via electronic devices, including laptops, PCs, tablets, and cellphones that store the module. Online instructional resources are included in the third category and can be accessible via electronic devices at any time and location if there is an internet connection (J. A. Phillips, 2015), (Zhu and Liu, 2022).

Online learning modules consist of systematically organized educational resources that are measurable, visually appealing, and simple for users to understand. If there is an internet network, they can be utilized and accessed anywhere, at any time. (David, L., & Weinstein, N., 2023). As a result, devices like laptops, PCs, and tablets are used to access them. Furthermore, various

purposefully integrated resources are used to create online learning materials (M. Hill, M. D. Sharma, and H. Johnston, 2022). Accordingly, online modules make interactive learning, assessment, and adaptive feedback possible (J. A. Phillips, 2015). In various settings, they are intended to assist students' autonomous learning (M. A. Al Mamun, G. Lawrie, and T. Wright, 2020). The shift from in-person to online learning presents challenges because instructors are no longer in the classroom to monitor and guide students' learning in real-time. As a result, the effectiveness of online learning heavily depends on how well modules are organized, how easily understood the written material is, and what steps students must take to complete the material (C. A. Cobb, C. T. Watson, and S. R. Ellis, 2018). Modules must be designed with structured or systematic steps to be used in large classes, and they must encourage and enable students to reflect on the material before expressing their ideas in private.

The learning approach known as Introduce, Connect, Apply, Reflect, and Extend (ICARE) outlines structured and methodical learning processes. According to P. Siahaan, E. Dewi, and E. Suhendi (2020), this model can encourage and direct students to actively participate in their education and draw conclusions from their teachings. Additionally, it ensures that students put what they have learned into practice, increasing the significance of learning (A. Latifa, R. Nur, and A. Rizal, 2020). The Ubiquitous Learning Class (u-Learning) develops online modules (N. Dhaliwal, F. Simpson, and A. Kim-Sing, 2018). According to Matthew Perkins J. P. (2006), u-Learning allows instructors to send assignments, lesson plans, announcements, and other educational materials. Because u-learning improves students' engagement with online learning and fosters innovation and critical thinking, it is used in this research (K. Georgouli, I. Skalkidis, and P. Guerreiro, 2008); (S. Chootongchai and N. Songkram, 2018).

The main limitation of the previous research challenges of ubiquitous learning classes; despite its many benefits, ubiquitous learning class also faces several challenges, such as Difficulty in accessing technology: Not all students have adequate access to devices or the internet, dependence on technology: Learning that relies heavily on digital devices can leave students feeling less connected to conventional learning experiences, challenges in time management: students must be able to manage their learning time well so as not to be overwhelmed by the amount of material available (M. A. Al Mamun, G. Lawrie, and T. Wright, 2020). Ubiquitous learning class has great potential to improve the quality of education in a more flexible, efficient, and personalized way. However, attention must be paid to technology access and management to be implemented effectively (Yusrisham et al., 2024).

Researchers developed the concept of ICARE learning design integrated with u-learning. The problem to be answered in this study is how is the Feasibility of Online Modules with the ICARE Learning Model Flow Based on Ubiquitous Learning Classes in the Learning media course.

2. Methods

2.1. Research Design

This study creates an online learning module and assesses eligibility using the Research and Development (R&D) for Education approach W. R. Borg and M. D. Gall, (1983). The procedures

used to create the module using an ICARE flow based on u-learning classes were modified from the Lee, WW, & Owens (2004) development model. They comprise the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) phases. This model is utilized because of its simplicity, completeness, and testing history. Figure 1 shows the process of implementing research.

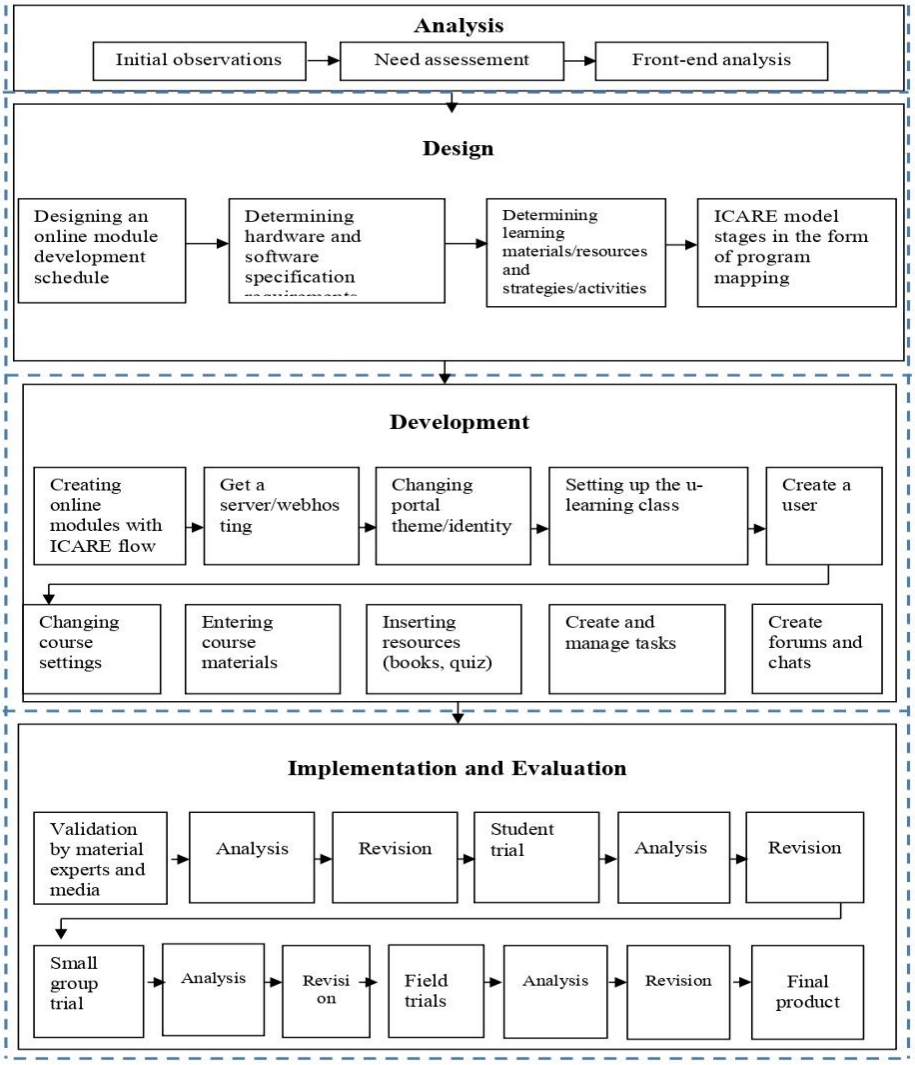

Figure 1. Research Flow Charts Development of Online Module With ICARE Learning Based on U-Learning Class

2.2 Procedures

Referring to the research design and development models selected, the procedure for developing an u-learning class-based online module with ICARE flow is described in Table 1.

Table 1. Steps for Development of Online Module with U-learning class-based ICARE flow

No.	Step	Activity

1.	Analysis	a. Need assessment, identifying problems causing unoptimal learning processes and outcomes b. Front-end analysis, identifying student characteristics, infrastructure, and facilities as online learning supports and environment conditions c. Conducting instructional analysis, including mapping of competencies or learning objectives to be mastered by students
2.	Design	a. Determining the need for computer equipment (hardware and software) b. Determining learning materials or resources and strategies or activities c. Designing and mapping the resources and activities in the u-learning class into the ICARE stage in the form of a program mapping
3.	Development	a. Creating an online module This step consists of: (1) Creating a portal by obtaining a server or Webhosting, choosing a category, and creating and elevating user status (2) Creating a Learning Media course with steps: 1) create and change course settings, 2) enter resources (Page, Label, File, Book, Folder, IMS Content Package, URL), and 3) create an activity (Lesson, Chat, Forum, Assignments, Feedback, Choice, Database, Glossary, Quiz, Survey, Wiki, Workshop, SCORM, LTI/External Tool) b. Product validation by material or content and media experts c. Conducting product revision
4.	Implementation	Conducting trials on students
5.	Evaluation	Final revision and product evaluation

2.3 Product Validation and Trial

One media expert (with a doctorate in educational technology) and one material or content expert (teaching a Learning Media course) validate the generated product. Additionally, sixty Universitas PGRI Argopuro Jember students enrolled in the Learning Media course are used to test the product. The generated product is then refined or enhanced by analysis of the data gathered from the validation and testing activities.

2.4 Data Collection

The actions for product validation and trial involved the use of a questionnaire. With high-quality tools that probe intended outcomes, the appropriate data were collected. The quality instruments were acquired by document analysis, specification table creation (grid), expert consultation (material and media), peer consultation, and instrument writing.

The questionnaire filled out by the material expert is prepared based on the theory of principles and perspectives for designing learning software (D. F. Walker and R. D. Hess, 1984). Furthermore, the questionnaire filled out by the media expert adapts to comprehensive standards or rubrics for online learning design (M. Debattista, 2018). Meanwhile, the questionnaire filled out by students in the trial activity is prepared based on assessing the material and media experts. This involves selecting the statements or questions relevant to students of the developed product users. This questionnaire has open-ended and closed-ended questions or statements. The material expert designed the

questionnaire using principles and perspectives for learning software design (D. F. Walker and R. D. Hess, 1984).

In addition, the media expert's questionnaire complies with extensive guidelines or criteria for online learning design (M. Debattista, 2018). In the meantime, a questionnaire that students complete for the trial activity is created by evaluating the content and media professionals. This entails choosing the questions or comments pertinent to the users of the generated product, who are students. Both closed-ended and open-ended questions and statements are included in this questionnaire. Open-ended questions solicit feedback on the generated product from professionals and students; closed-ended statements are prepared on a 5-point Likert scale. The media and material specialists' instrument grids are shown in Tables 2 and 3.

Table 2. Grid of Learning Material Assessment Instrument

Assessed aspect	Indicator
Material Aspect	- Suitability of the material with the competency formulation - Concept truth - Order of material presentation - Suitability of the given example - Adequacy/completeness of materials - Material updates
Learning Aspect	- Clarity of learning objective formulation - Accuracy of learning indicators - Giving motivation - Giving training - Suitability of images and videos to clarify the material
Language Aspect	- Suitability of language with student development level - Spelling and grammar accuracy - Accuracy of terms - Language simplicity - Ability to arouse students' curiosity

Table 3. Grid of Online Learning Media Assessment Instrument

Main Standards	Specific Standards	
Course opening	- Description - Behavior - Role - Accessibility	- Integrity - Technical competences - Ownership
Instructional resources for teaching and learning	- Openness - Provision - Entitlement	- Application - Variety - Academic integrity
Interaction and community	- Peer learning - Fostering	- Management
Learner support	- Academic - Instructional	- Administrative - Technical
Technology design	- Interface - Access	- Investment - Authentication

	- Centricity	- Management
Course closing	- Conclusions - Archiving	- Resolution
Assessment of learning	- Measurement - Grading	- Management - Feedback
Instructional design cycle	- Academic	- Administrative - Technical

2.5 Data Analysis

In addition to quantitative data, such as scores from individual instrument items, the research employed qualitative data, including validators' and students' criticisms, inputs, and suggestions for product improvements. The descriptive statistical analysis technique yielded the value or quality of the developed online module, and the scores were totaled, averaged, and converted using a 5-scale criterion-referenced test table (Sukardjo, 2010), as indicated in Table 4.

Table 4. Conversion of Scores into Values on a Five-Scale

Score		**Value/Category**
Formula	**Calculation**	
X > $\bar{X}_i$ +1,80 Sbi	X > 4,21	Very good
$\bar{X}_i$+ 0,60 Sdi < X ≤ $\bar{X}_i$ + 1,80 Sdi	3,40 < X ≤ 4,21	Good
$\bar{X}_i$ - 0,60 Sdi < X ≤ $\bar{X}_i$ + 0,60 Sdi	2,60 < X ≤ 3,40	Quite good
$\bar{X}_i$ -1,80 Sdi < X ≤ $\bar{X}_i$ - 0,60 Sdi	1,79 < X ≤ 2,60	Bad
X ≤ $\bar{X}_i$-1,80 Sdi	X ≤ 1,79	Very bad

Description:

Ideal mean ($\bar{X}_i$) = 1/2 x (maximum score + minimum score)
Ideal standard deviation (Sdi) = 1/6 x (maximum score - minimum score)
Maximum score = 5
Minimum score = 1
$\bar{X}_i$ = 1/2 x (5+1) = 3
Sdi = 1/6 x (5 – 1) = 0,67
X = Actual score

The following formula is used to find the mean score in assessing the developed product:

$$\bar{X}_i = \frac{\sum X}{n}$$

Description:

$\bar{X}_i$ = Mean score
$\sum X$ = Total score
n = Number of validators/respondents

A minimum "good" eligibility value is determined through assessment by the material and media experts. The developed online learning module is eligible for application when the final (overall) assessment receives a "good" score from the experts.

3. Results and Discussion

3.1 Online Learning Module Design

The online module design displays digital learning stages and materials using an ICARE flow based on the U-learning class. The ICARE model stages introduction, connection, application, reflection, and extend the learning steps. Documents (doc, pdf, xls, txt), presentations (ppt), images (jpg, gif, png), videos (mpg, wmv), sounds (mp3, au, wav), and animations (swf, gif) are among the materials available. When creating online modules, the learning processes and resources are organized as a program mapping for convenience and accessibility. According to I. K. Suartama, P. Setyosari, S. Sulthoni, and S. Ulfa (2020), program mapping is a table that includes learning processes and materials, with each component having a linked relationship. A description of the learning phases, types of materials, and u-learning class characteristics, which include resources and activities, are included in the program mapping of the online module with ICARE flow based on Moodle LMS, as indicated in Table 5.

Table 5. Program Mapping of Online Learning Module with ICARE flow based on The u-Learning Class

ICARE Flow	Type of Learning Material	u-Learning Features	
		Resource	Activities
Introduction - Providing an understanding of the lecture content to students. - This section explains the course objectives and what is to be achieved by the course.	- Document (pdf) - Presentation (ppt)	- Page - File	- Lesson - Forum
Connection - Connecting new teaching materials with something familiar to students. - Conducting simple brainstorming exercises to understand what students already know - Students tell what they remember from previous lectures or develop activities they can carry out themselves. - Lecturers connect students' prior knowledge with new information through presentations or simple explanations.	- Document (doc, pdf) - Presentation (ppt) - Picture (jpg, png) - Video (mpg)	- Book - File - URL	- Lesson - Assignments - Chatting - Feedback - Google meet - Messages - Assignments - Feedback
Application - Students are allowed to practice and apply new knowledge and skills. - Students work individually, in pairs, or groups to complete real activities or solve problems using the new information and skills acquired.	- Document (pdf) - Presentation (ppt) - Animation (SWF) - Video (mpg)	- File - URL - IMS content package	- Forum - Assignments - Chatting - Feedback - Google meet - Messages

	- Multimedia (exe)		- Assignments - Feedback
Reflection - Students make presentations or write about what they learned from the learning outcomes summary. - Giving exploratory quizzes/questions to students with several choices adapted to conditions	- Document (pdf) - Presentation (ppt)	- File - URL - Label - Page	- Lesson - Feedback - Workshop - Assignments - Quiz
Extend - Students read additional teaching materials, assignments, or exercises to strengthen and expand the completed subject matter.	- Document (pdf) - Presentation (ppt)	- File - URL - Label - Page	- Lesson - Feedback - Assignments
	-	-	-

3.2 Final Product

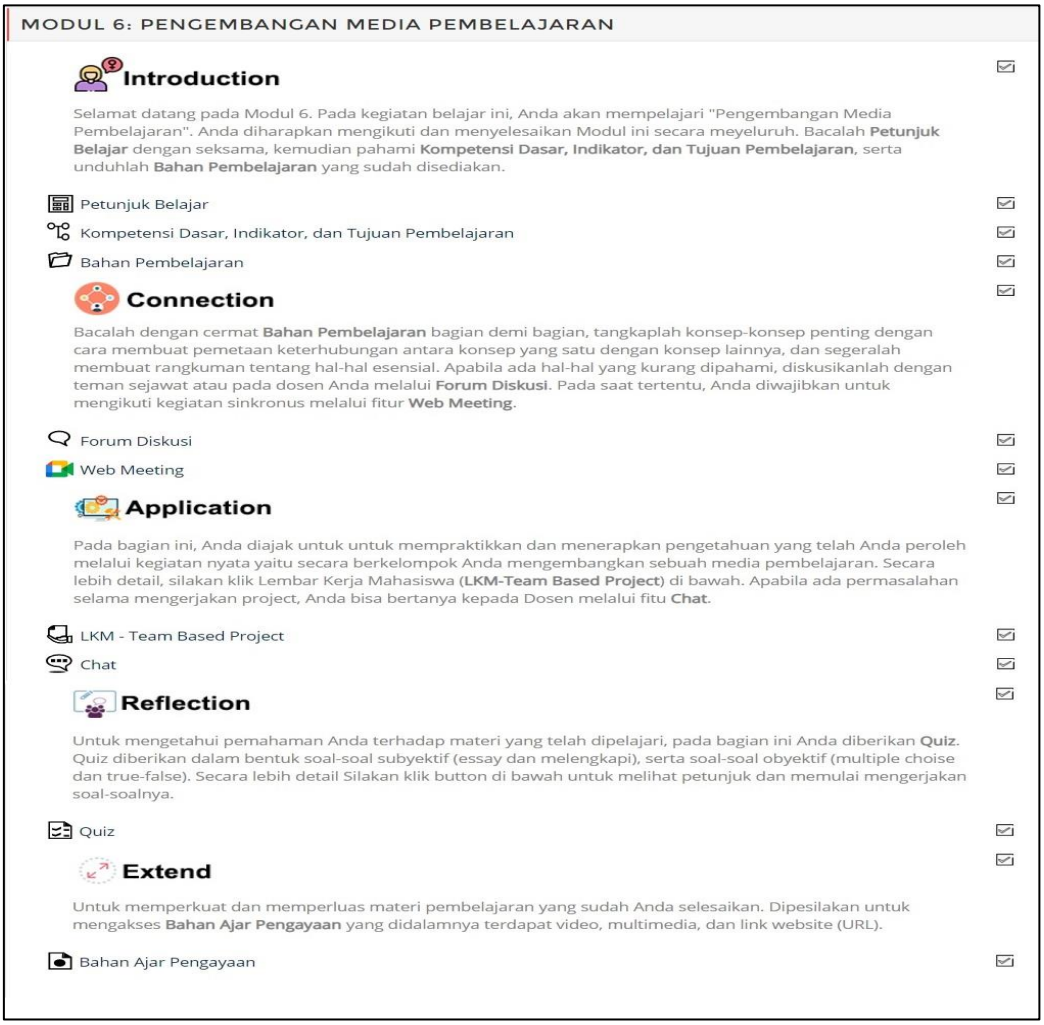

Figure 2. Display of Module 6

The development research culminates in an online module that may be accessible at https://u-learningclass.site/course/view.php?id=2. As a research object, the Learning Media course falls within the second semester's Educational Technology Study Program. Six modules covering various issues related to learning media comprise this course. They cover the fundamental ideas, categorization, traits, administration, choice, and creation of educational materials. Figure 2 displays the module 6 display.

Each module adheres to the methodical phases of the ICARE (Introduction, Connection, Application, Reflection, and Extend) flow, as seen in Figure 1. Instructions for learning, fundamental competencies, indicators, learning goals, and learning resources are all included in the **introduction**. It gives pupils knowledge about the subject matter of learning resources, the competencies that must be attained, and how to study. This introduction is constructed using the Lesson function of the u-learning class, which enables students to navigate each page routinely. The files (pdf, ppt, mpeg, swf, exe, etc.) in the learning resources section are arranged according to the topics covered in each module. A synchronous connection is made through the web meeting capability (video conference). This phase facilitates comprehension by linking novel instructional resources and students' existing knowledge. In this instance, establishing a connection entails asking students to list the key points from the last lecture and conducting a brief brainstorming session to gauge their level of understanding. The instructor then uses presentations or brief explanations to connect the new material and the students' past knowledge.

Additionally, **application** is done to let students put their newly acquired knowledge and skills into practice. Using the knowledge and abilities they have gained, students work in groups, in pairs, or alone to finish tasks or find solutions to actual issues. Additionally, Student Worksheets employing the assignment u-learning class feature and case-based (module 2) and project-based learning (module 6) approaches are used to promote activities at this stage. **Reflection** is conducted to check or ensure what students have learned by presenting a learning outcome summary. This stage utilizes web conferences and gives students exploratory quizzes or questions with several choices adapted to conditions. The features used in the U-learning class are web meetings (video conference) and Quizzes. Subsequently, **Extend** is conducted to strengthen and expand the completed subject matter by reading additional teaching materials, assignments, or exercises using the URL u-learning class feature. One online lecture activity was conducted within seven days (for example, lectures are scheduled for Monday, and the range of activities is Monday to Sunday). Students were free to carry out activities, such as gathering assignments and conducting forums and quizzes, within those seven days. There was no scheduling of certain days and specific times to conduct online lectures between course professors and students. Activities in online learning are downloading teaching materials, forums, quizzes/training (weekly), and chatting; this activity is not required to be carried out by lecturers or students participating in the course; it is only a complement to activities in online learning (Suartama, I. K., et al., 2020).

The created online module has demonstrated the methodical and structured learning processes students use to study the content on their own time and according to their preferences. In addition,

kids become accountable for comprehending and broadening their knowledge by investigating the concepts they acquire from learning activities (D. Salirawati, E. Priyambodo, and M. Primastuti, 2020). This module's learning phases include an invitation to increase students' familiarity with the subject matter. Additionally, it encourages the development of a critical mindset toward the content. This indicates that ICARE supports various real-world applications for the subjects covered. It also gives assignments that call for students to use various resources to locate the solutions (J. Sinuraya, I. Wahyuni, and D. D. Panggabean, 2020).

3.3 Product Eligibility

After internal testing to ensure the product runs smoothly, it is evaluated through validation by material and media experts and trial to students. Figure 3 presents the expert validation and product trial results.

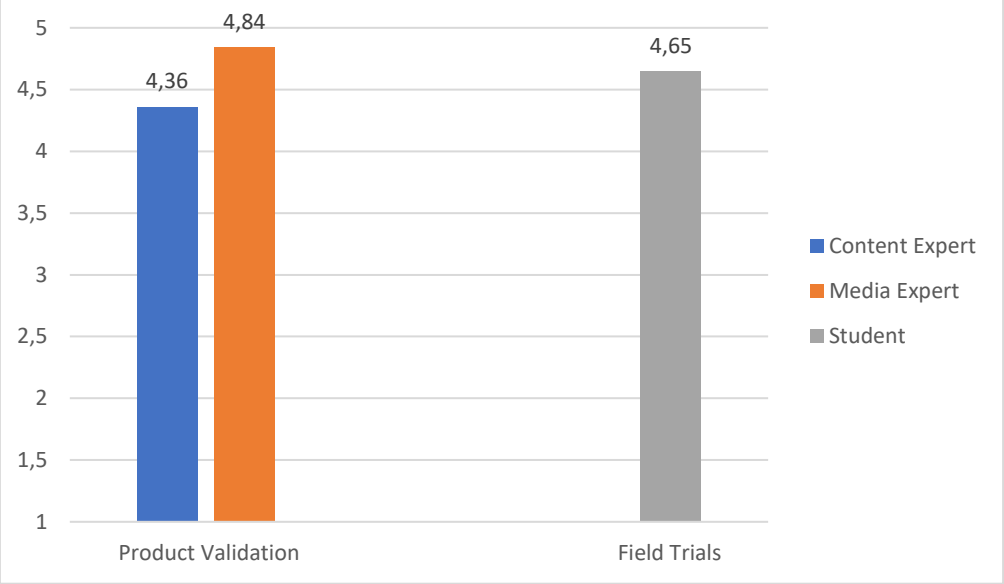

Figure 3. Results of Product Validation and Field Trials

The data shown in Figure 2 indicates that the material expert's mean score for the total product assessment is 4.36. The quantitative to qualitative data conversion table rates this figure as "Very Good" on a five-point rating. As a result, learning can make use of the developed material. Additionally, two changes or enhancements were made in response to the material expert's recommendations. Initially, by using learning tools, advanced material was included. Second, learning resources that are project- or problem-based were given to the pupils, encouraging critical and creative thinking.

The media expert's mean score for the entire product evaluation is 4.84. The quantitative to qualitative data conversion table rates this figure as "Very Good" on a five-point rating. As such, the produced material can be used for educational purposes. Similarly, three changes or upgrades were implemented in response to advice from the media specialist. Initially, several educational materials were incorporated to suit the distinct learning styles of students. Second, instructions were included in every module to help students with their independent study. Thirdly, the addition of discussion

forums aimed to teach students how to think critically and creatively while encouraging teamwork and communication abilities.

The average score that students received on the learning media course's entire online module exam is 4.65. The quantitative to qualitative data conversion table rates this figure as "Very Good" on a five-point rating. As such, the generated product can be used for educational purposes. According to student feedback during the product testing, accessing online lessons at any time and from any location makes learning more flexible. Systematic learning procedures also hasten the comprehension of module information. Students acknowledged that additional resources offer a more comprehensive understanding of the topic. They assess their progress in learning based on the lecturer's instant feedback and grades. Online modules also make learning more effective because they are more accessible and easier to utilize.

The methods and factors considered and utilized in developing this online learning module led experts and students to rate it in the "Very Good" category. Five phases of development went into creating the online module for this Learning Media course that uses an ICARE approach based on a learning class: analysis, design, development, implementation, and evaluation. Because the procedure was predicated on pre-made plans and bolstered by the availability of the necessary components by the analysis's findings, it went quickly and without a hitch.

The activities carried out by previous researchers before implementing the ICARE learning design were orientation and preparation of learning designs using LMS. The orientation of the ICARE learning design was carried out by introducing it to the lecturer through discussion. From this discussion, it is expected that a shared understanding will be formed between the author and the lecturer as research collaborators, especially about ICARE learning and the preparation of the design to be implemented. The ICARE learning design developed in this study is a learning design that is integrated with the Learning Management System which aims to improve the effectiveness of learning in the Numerical Methods course of the Mathematics Education Study Program, Pancasakti University, Tegal. (Utami, Wikan Budi., et al, 2020).

The novelty of this study is that researchers developed an online module using the ICARE flow integrated with the U-learning class. This study aims to determine the feasibility of an online module with the ICARE learning model based on the Ubiquitous Learning Class in the Learning Media Course, learning technology study program, Universitas PGRI Argopuro Jember. The online module created with the ICARE flow has shown a methodical and structured learning process that students use to learn content at their own pace and according to their preferences. (Reuge, N., Jenkins, et al., 2021). In addition, children become responsible for understanding and expanding their knowledge by investigating the concepts they gain from learning activities (Gultom, D. S. H., Astra, I. M., & Raihanati, R., 2023). The learning phase of this online module includes an invitation to increase students' familiarity with the subject matter. In addition, this online module encourages the development of critical thinking patterns towards content. This shows that the design of the online module using the ICARE flow based on the u-learning class supports various real-world applications for the courses discussed (Pratiwi, M., Asyhari, A., Aulia, K. N., & Siahaan, P.,2024). This module also provides assignments that require students to use various sources to find solutions (J. Sinuraya, I. Wahyuni, and D. D. Panggabean, 2020).

The feasibility of an online module with an u-learning class-based ICARE flow in the Learning Media course is achieved because the presentation follows structured steps. These steps lead to maximum student activity in seeking and finding material (they become study subjects). The research results by Yudiawan et al. (2021) stated that an online learning system and environment designed with clear stages can guarantee learning success. Subsequently, students do not become passive recipients but construct their knowledge according to their pace in the learning process. Furthermore, all student activities involve seeking information and answers to their problems, fostering self-confidence, and developing higher intellectual abilities (Bada and S. Olusegun, 2015). Therefore, the online module with an u-learning class based ICARE flow in the Learning Media course minimizes negative activities in online learning. (Julianto, J., Wasis, et al., 2022) Furthermore, it presents choices of media or resources developed by the lecturers (learning resources by design) or using available materials (learning resources by utilization). These include a document (doc), presentation (ppt), animation (SWF), video (mpg), and multimedia (exe), which accommodate student modalities. Consequently, this allows students to learn in ways that suit them and promote their activeness (I. K. Suartama et al., 2021).

4. Conclusion

The feasibility of an nline module with an ICARE learning model flow based on Ubiquitous Learning classes has great potential to improve the quality of education in a more flexible, efficient, and personalized. In addition, the online module was evaluated on several topics, such as learning, community building, interaction, and instructional design. Ubiquitous learning class refers to the concept of learning that can be done anywhere and anytime, using various technological devices connected to the internet. This concept refers to learning not limited by space and time, allowing students to flexibly access learning resources and materials. With the development of digital technology and mobile devices, ubiquitous learning classes are becoming increasingly relevant in modern education. This product is suitable for use as indicated by the "very good" category findings.

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