



Higher Education Standard Policy with Effectiveness of Using E-Module Through Learning Management System

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Abstract. This study aims to describe the existing policy standards in higher education with the use of effective e-modules through an interactive and attractive learning management system for students in the application of teaching and learning activities. The researcher uses the literature review method with a systematic descriptive approach which is carried out after the stages in the research have been carried out. The stages in the design of this research are knowing the topic to be raised, selecting literature, validating criteria, description of results, and conclusions. There are four research results from the effectiveness of using e-module, among others as follows: (1) Reading materials; (2) Interactive teaching videos; and (3) Structured assignments.

Keywords: Higher Education Policy · E-Module · Learning Management System

1 Introduction

The development of information technology and learning management systems is currently growing quite rapidly especially at the international level, as is the direction of education development in Indonesia which leads to smart education. Efforts to establish and implement smart education go hand in hand with the development of society 5.0 where there is a change in people's behavior patterns that take advantage of and optimize the use of modern technology to access all forms of information [1]. In the era of society 5.0, universities also experienced changes in the realm of teaching and learning activities that must be integrated with learning innovations using information technology according to university policy standards [2,3].

The existence of a trend society 5.0 can have an indirect impact where the Indonesian people who are seen as developing countries also have the right to participate and play an active role in preparing for the future trend society 5.0. Higher education is one of the educational institutions that has its own policy standards in managing its organization [4]. Overall, it means that universities must be able to contribute to being able to compete professionally with other higher education institutions and be able to adapt in the face of threats that await or opportunities in the trend society 5.0 in the world of education [5].

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B. B. Wiyono et al. (Eds.): ICEMT 2022, ASSEHR 727, pp. 285–294, 2023.

https://doi.org/10.2991/978-2-494069-95-4_34

Ways to be able to contribute and participate optimally in relation to the creation of smart education where in these learning activities can include three important elements that attract each other and need each other [6]. The elements of smart education are educators, students, and modern technology. To start and start it can be done by following the characteristics of the trend society 5.0, namely the implementation of learning technology that leads to the use of an interactive learning management system and utilizes multimedia features effectively and efficiently [7,8]. Policy standards for the university level in the realm of learning can take advantage of the effectiveness of the implementation of e-modules to facilitate learning activities [9].

E-modules are considered as the best solution to overcome the phenomenon and trend of society 5.0 in the world of international universities. E-modules become best practices that can make people smarter and in the future they will be able to face the challenges of 21st century skills well [10]. The strategy of implementing e-modules in the learning management system is quite important and needed by universities to be able to face the era of society 5.0 which is increasingly visible in smart education [11].

Reference to policy standards for universities in relation to the trend society 5.0 also requires a comparison of the relationship between information technology innovation and learning activities in the 21st century [12]. Universities must be able to continue to adapt to the educational environment comprehensively and periodically so that they can become educational institutions that inspire the community in the era of society 5.0 and smart education [13]. Based on this explanation, it can be said that the purpose of this research is to describe the standard of higher education policies with the effective use of e-modules through a more interactive and interesting learning management system to be applied in teaching and learning activities of educators and students.

2 Methods

This study uses a literature review method with a descriptive approach. Literature review is literature from various research articles or literature studies that are considered more relevant to use at this time [14]. The literature review was carried out in an effort to explain the topics discussed, to propose previously observed categorizations for this literature, the main topics discussed in scientific studies, and also to answer the research questions posed in this field [15].

A literature review can analyze a better understanding because it provides details about everything about the latest research on the use of digital media to determine the amount of knowledge [16]. In this research, a systematic descriptive approach will be carried out after all stages in the research have been carried out. The stages in the design of this research are knowing, selecting literature, validating criteria, description results, and conclusions.

An explanation of the stages of research design that begins with knowing, namely the researcher does some knowing about the topic of the problem raised in the scientific study. The second stage is to carry out literature selection so that the sources of the articles or journals obtained are well selected. After the validation of the criteria is carried out based on the indicators in the criteria. The criteria for the literature review include: (a) research articles that focus on the topic raised; (b) The year of publication of the article

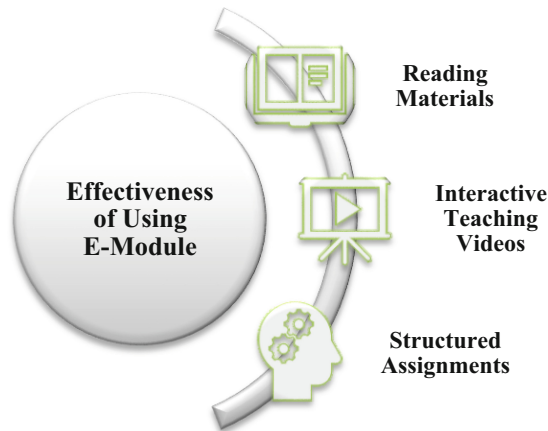


Fig. 1. Effectiveness of Using E-Module

must not be less than 2019; and (c) The level of research articles can be national or international. Then if the criteria validation process has been met, then proceed to the description of the results and drawing conclusions.

3 Result and Discussion

Higher education standard policy in the era of society 5.0 develop a concept that is formed from a super smart society [17] and has optimal behavior patterns utilizing modern technology, such as a learning management system as a solution for a better community life through the implementation of e-modules to be able to bridge educators, students, and technology. As for the value of effectiveness in the use of the e-module itself, the findings obtained in this scientific paper can be seen in Fig. 1.

Based on Fig. 1, it can be seen that the findings of this study cover various values of effectiveness from the use of e-modules through the learning management system, including reading materials, interactive teaching videos, and structured assignments.

The use of technology, especially for learning management systems, can have a positive impact on teaching and learning activities in higher education, so that learning outcomes for students are also increasing and the quality of learning continues to grow rapidly [18]. The three findings can be a reinforcement for educators who want to make their students as superior individuals in higher education in the era of society 5.0. It also does not escape the honing of 21st century skills which are currently being strengthened and deepened, so that in the future the world of education will be more successful [19].

Reading materials are a collection of reading texts that contain the contents of teaching materials that are displayed with interesting visualizations which can be used as a practical way to introduce learning materials [20]. Reading materials in the e-module are equipped with pictures that attract the attention of readers, because they are presented beautifully according to the context of the learning materials in each subject taught to students in higher education. The choice of words in the e-module also needs to be considered carefully so that it can be conveyed informatively and communicatively to

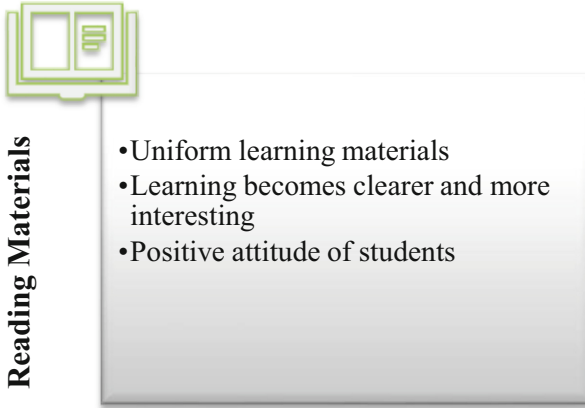


Fig. 2. Reading Materials

all readers of the content of the material [21]. The words used must use standard formal words in accordance with the use of appropriate language, so that readers can understand the content or intent of the learning material in the e-module.

Learning management system is a place for every educator who wants to create or display e-modules for students [22]. The visible appearance of the e-module can be adjusted to the needs of the choice of learning materials. Reading materials in e-module are able to provide significant benefits for readers or students who want to access materials wherever and whenever they want. It can be said that the effectiveness of using e-modules is becoming more flexible, because students only need devices such as smartphones, tablets, and laptops [23].

Reading materials in e-module can answer the challenges of trend society 5.0 where students can gain knowledge and social skills quickly through internet networks and the use of information technology. Students become more independent in accessing learning materials through e-modules, so there is no reason not to be able to obtain information related to lecture materials at universities [24]. Reading materials in e-module bring new nuances and interesting experiences for every student in smart education [25]. The details of effectiveness with e-module that provides reading materials can be seen in Fig. 2.

Based on the details from Fig. 2 regarding reading materials in the effectiveness of using e-modules, it can be said that it has a positive impact, including: (a) Uniform learning materials; (b) Learning becomes clearer and more interesting; and (c) Positive attitude of students.

Interactive teaching videos can be widely used in the provision and assessment of teaching material content that has been neatly arranged in a series of e-modules [26]. The effectiveness of using e-modules for interactive teaching videos can be integrated with the use of learning management systems in higher education. Students can learn at their own pace and learning style independently [27]. Educators can review each material according to the requests and needs of students if it is needed in the teaching and learning process.

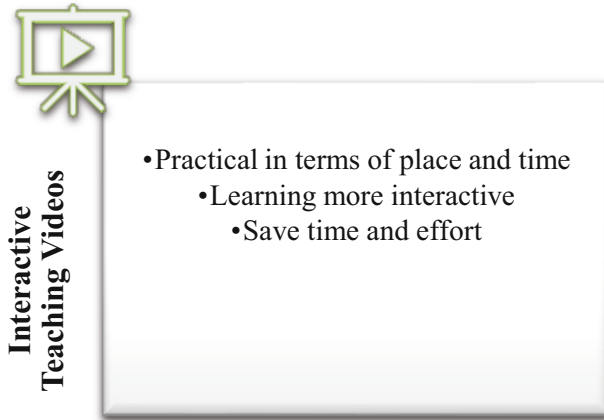


Fig. 3. Interactive Teaching Videos

E-module that facilitates a variety of content regarding interactive teaching videos is considered capable of illustrating various tutorials or simulations that require more practice in learning [28]. The effectiveness of the e-module makes students more creative, innovative, and can improve learning skills directly, because there is real support from interactive teaching videos that are already listed in it. Learning management system is a good alternative for the continuous application of interactive teaching videos accompanied by interesting and easy-to-understand guidelines for students when they will practice each step in the video tutorial or learning simulation independently or in groups [29].

Implementation of e-module for practical courses is considered very helpful for educators and students in the process of teaching and learning activities [30]. In the interactive teaching videos, compatible features can also be added, such as adding information from each material that has been presented in video form. This makes students' understanding and memory more prolonged, because in addition to teaching materials they indirectly record in memory every procedure that is in the learning video show [31].

Interactions that occur in the e-module will greatly impact the sustainability of students to remain consistent and continue to be active without boredom that overshadows their minds when learning to use learning technology [32]. The psychomotor skills of students in relation to 21st century skills in the era of society 5.0 also increase regularly, because the context of smart education has been well realized [33]. Their learning experience is also more enjoyable, because the interactive teaching videos contain strong edutainment elements, so they are considered appropriate if applied to various kinds of lecture materials in higher education. The details of effectiveness with e-module that provides interactive teaching videos can be seen in Fig. 3.

Based on the details from Fig. 3 regarding interactive teaching videos in the effectiveness of using e-modules, it can be said that it has a positive impact, including: (a) Practical in terms of place and time; (b) Learning more interactive; and (c) Save time and effort.

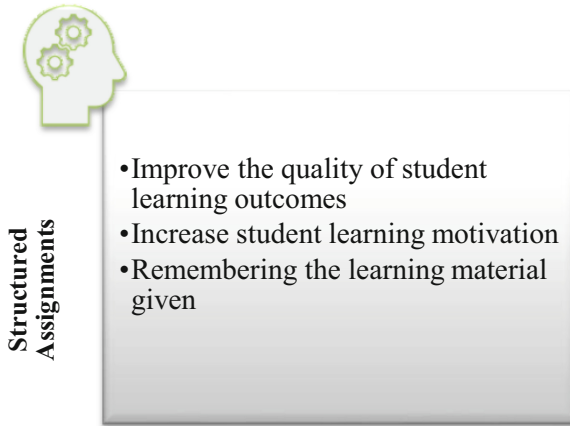


Fig. 4. Structured Assignments

Learning management system that facilitates the effective performance of the e-module always provides a learning place that is equipped with teaching materials, interactive videos, and of course educators can also evaluate their students by providing structured assignments. To be able to find out the learning outcomes and achievements obtained by each individual, it is necessary to have a learning assessment system that can show its performance during class lectures [34]. Based on this, the e-module given to students must contain structured assignments content where they can do it according to the deadlines that have been scheduled by the educator [35].

Structured assignments contained in the e-module allow educators to map their students in depth, so that this learning technology innovation is becoming increasingly popular in the world of education [36]. Structured assignments provided also vary depending on how educators want to assess their students. E-modules provide an amazing learning experience when compared to regular modules that do not take advantage of modern technology [37]. The 21st century skills for students are increasingly honed with varied assignments, such as essays, multiple choice, true and false, drag and down, quizzes, crosswords, etc.

In the era of society 5.0 with the context of smart education, higher education has strengthened the learning standards applied to students, so that they will not be left behind in national and international education [38–40]. Structured assignments can build communication, collaborative power, critical thinking, creativity, problem solving skills, and professional competitiveness among students [41]. The spirit of learning in students will also increase, because it is accompanied by an e-module which is considered quite interactive and supports teaching and learning activities [42]. The details of effectiveness with e-module that provides structured assignments can be seen in Fig. 4.

4 Conclusion

Higher education in the era of society 5.0 have educational policy standards that can combine various elements of best practice in smart education where institutions can implement learning technology, such as e-modules properly. Effectiveness of using e-modules through learning management system can be used as content material for teaching materials provided by educators to students, able to display interactive learning videos as memory boosters and practice simulations from students, and can provide assignments to students in a structured manner according to the teaching materials provided already summarized in the e-module. Learning management system is considered capable of being a place to be able to apply e-modules effectively and efficiently, so that higher education standard policy based on 21st century skills in the era of society 5.0 can be realized optimally.

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