

PRACTICALITY OF USING E-MODULES TO IMPROVE STUDENTS ' FINANCIAL LITERACY AND ENTREPRENEURSHIP

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Abstract

The Open University (UT) continues to encourage the development of technology-based learning services as an implementation of its vision of "UT at the Forefront of Innovation in Distance Learning" in its 2021–2025 Development Master Plan. One form of this innovation is the development of contextual and interactive digital learning media. This research aims to develop an e-module based on a contextual approach to improve financial literacy and entrepreneurship skills among UT students. The development was carried out using the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model, involving students as test subjects. This e-module is designed as a stand-alone medium to deliver applicable and engaging material and support independent distance learning for students. Initial findings indicate that this medium can practically improve students' understanding of financial management and motivate entrepreneurial interest. This research supports the strengthening of UT's learning media innovation and has the potential to produce outputs in the form of learning products that are feasible and proven to be practical for use.

Keywords: Practicality; E-Module; Financial Literacy; Entrepreneur; Distance Learning

1 INTRODUCTION

The increasingly rapid development of digital technology requires students to have financial skills and an entrepreneurial spirit in facing the dynamics of the digital economy. Huston (2010) explains that financial knowledge is an integral part of financial literacy, but is not sufficient to fully describe it. Pratiwi (2020) identifies four main aspects of financial literacy: budget management, savings, loans, and investments. Amid the rise of online lending platforms, digital payment systems, and the rise of crypto and stock investment trends among students, the ability to sort through financial information and make informed financial decisions is crucial.

Unfortunately, the financial literacy of Indonesian students remains relatively low. A 2022 Financial Services Authority survey revealed that the 18–25 age group has the lowest financial understanding compared to other age groups. This results in poor financial decision-making quality and a lack of awareness of risks and long-term financial planning (OJK, 2022). Research (Herawati et al. 2020) confirms that low financial literacy among students is significantly correlated with consumptive behavior and weak financial planning skills. Another study by Susanti & Saputro

(2020) also stated that students tend to be less critical of financial risks because they are not accustomed to being trained in the real context of money management.

On the other hand, interest in entrepreneurship among students is increasing with the development of the digital ecosystem. However, many still lack a grasp of basic aspects such as business models, capital management, and business sustainability strategies. According to Gustiani S (2019), one of the main obstacles in entrepreneurship education is the lack of contextualized and relevant learning materials for today's business world. To address this challenge, higher education needs to provide content that is applicable, technology-based, and easily accessible independently. Universitas Terbuka (UT), as a pioneer of distance learning in Indonesia, has made digital media innovation a development priority for the 2021–2025 period (UT, 2021).

One potential medium is e-modules based on a contextual approach, which enable more flexible and relevant learning. Mishra (2024) demonstrated that interactive e-modules can significantly improve student understanding and learning engagement. Similarly, Amagir et al. (2022) stated that financial literacy integrated into the curriculum has a positive impact on financial decision-making. Furthermore, De Beckker et al. (2021) confirmed that digital media supports the effectiveness of entrepreneurship education among the digital generation. Rodriguez-Raga & Martinez-Camelo (2022) also noted that interactive elements enhance understanding of complex business concepts. Furthermore, a study by Nasution (2024) showed that a contextual approach encourages critical and reflective thinking in entrepreneurship learning. Research by Suprpto & Hidayati (2022) further supports these findings, stating that locally based contextual e-modules encourage students to more easily understand the application of knowledge in everyday life. Furthermore, Wulandari (2023) demonstrated that digital learning media is also effective in increasing students' awareness of the importance of financial planning.

This research aims to develop an e-module based on a contextual approach integrated with financial literacy and entrepreneurship. The development process uses the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model and involves students as the primary target. This module is expected to be a self-directed learning solution relevant to current student needs, while also supporting UT's vision as a pioneering cyber university in Indonesia. In addition to improving student competency, the output of this research is also targeted to produce a ready-to-use e-module product that has the potential to be protected by intellectual property

rights and published in national or international scientific journals (Branch, 2009; Gustiani, 2019).

2 METHODOLOGY

This research is a research and development (R&D) using the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model by Dick and Carey (2005). The objective of the research is to develop a contextual-based e-module to improve financial literacy and entrepreneurial spirit among Open University (UT) students. The research was conducted over two years. The first year focused on needs analysis, design, and media development, with trials conducted on 350 UT students through field tests. The research instrument included a practicality questionnaire. Data analysis was conducted descriptively. This research is part of the UT RIP 2021–2035 roadmap that supports the development of technology-based learning innovations at UT.

3 FINDINGS AND DISCUSSION

3.1 Research Participant Description Data

The development of this entrepreneurship literacy e-module follows the steps in the ADDIE development model, namely Analysis, Design, Development, Implementation, and Evaluation. In the *analysis stage*, the learning needs of Open University students as independent learners are identified, including an analysis of the socio-economic context and 21st-century skills (Fitria Hidayat (2021)). The *design stage* produces a draft of the module structure, material flow, and technology integration such as QR Code. Next, in the *development stage*, the e-module begins to be developed using interactive digital devices by referring to the design results. After that, the *implementation stage* is carried out through limited trials on students as end users, to obtain an overview of usability and ease of use. Finally, the *evaluation stage* is carried out through expert validation and student practicality tests, to assess the quality of the content, design, and effectiveness of the module as a learning medium (Udayanthi 2018).

This study involved a practical group of 350 students from various universities in Indonesia, both public and private. Of these, 253 students came from public universities and 97 students from private universities. Based on gender, the majority of respondents were female (87.9%), while 12.1% were male.

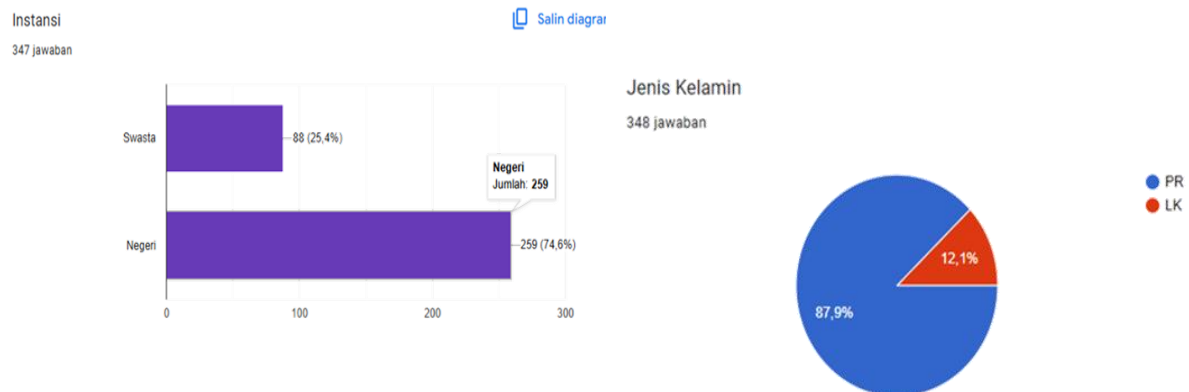


Figure 3.1. Respondents' Agencies and Gender

All participating students were from non-teaching study programs and had taken courses related to financial literacy or entrepreneurship. Students participated in a practical test of the e-module by assessing its ease of access, readability, visual appeal, material relevance, effectiveness of the QR code feature, and learning motivation. The test results showed that the e-module received a positive response from the majority of students, who found it easy to use, clear in content, and engaging.

The diversity of respondents' backgrounds, both in terms of profession, region, and culture, provides a strong foundation for this research's findings. This ensures that the developed entrepreneurship literacy e-module is not only valid in terms of content and design, but also contextual and relevant for learners with various characteristics in Indonesia (Sari A 2024) .

3.2 Product Overview

The following will describe the characteristics of the E-Module designed by the researcher.

a. Homepage

The homepage contains the e-Module cover. The homepage design for e-Module development can be seen in Figure 3.15.



Figure 3.2 . E-Module Design

b. Introduction Section of E-module

Contains author information, a description of the e-module, learning objectives and outcomes, and how to use the e-module. The preliminary design can be seen in Figure 3.4.

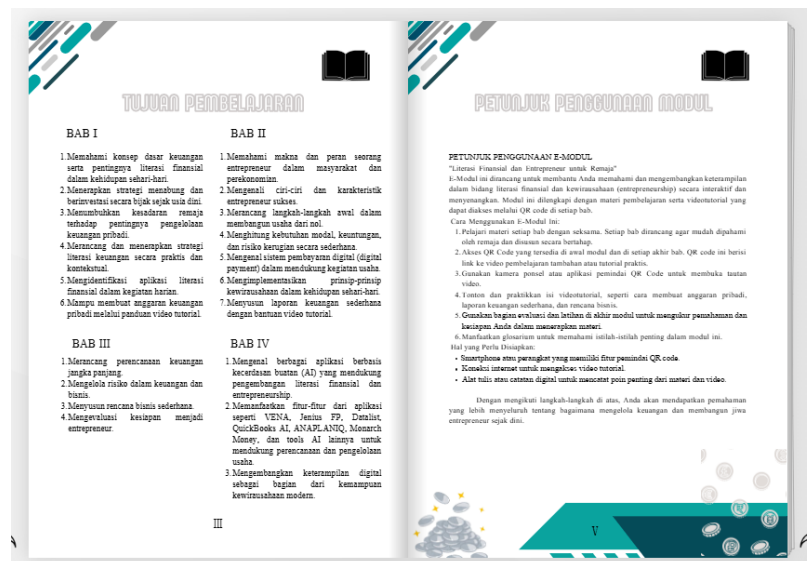


Figure 3.3 . Introduction to E-module

c. E-module content section

Contains material on financial literacy and entrepreneurship. The e-module content design can be seen in Figure 3.4.

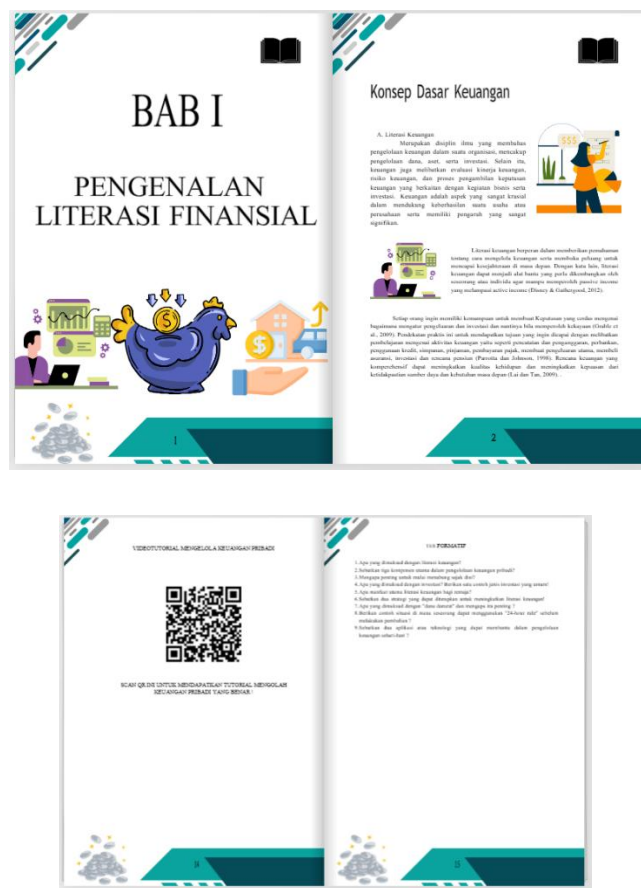


Figure 3.4. E-Module content design

3.3 Practicality Test Results by Students

A total of 350 students were involved to test the practicality and usability of the e-module in the learning process. The students involved came from 253 state institutions or universities and 97 private institutions, consisting of 87.9% women and 12.1% men. To demonstrate the practicality of the e-module, Table 4.4 presents the results of student use of the e-module.

Table 3.1. Practicality of E-Module

No.	Aspect	STS	TS	S	SS	Criteria
1	E-modules are easily accessible using devices (laptops/gadgets)	5.7%	4.3%	20.6%	70.9%	Very Practical
2	The e-module display is attractive, in accordance with the character of the students	5.1%	4%	26.6%	65.7%	Very Practical
3	The process of opening and running the e-module does not take long	5.1%	6.3%	28%	61.7%	Very Practical
4	Navigation (buttons, links, QR Code) is easy to understand.	5.7%	4.3%	30.3%	60.3%	practical
5	Content is presented concisely, clearly, and relevant to student needs.	6%	3.1%	20%	71.4%	Very Practical
6	questions, material is easy for students to understand.	6.6%	2.9%	25.7%	66%	Very Practical
7	Images, colors, and other visual media are used well to support learning.	5.2%	2.9%	19.2%	73.4%	Very Practical
8	The layout of the pages is neat and tidy, making it easy to understand.	5.1%	3.1%	21.4%	71.4%	Very Practical
9	E-modules help students understand the concepts of financial literacy and entrepreneurship.	6%	3.4%	26.6%	64.6%	practical
10	QR Codes linked to videos support strengthening understanding of the material in each chapter.	5.1%	3.7%	25.4%	66.9%	practical
11	Media supports active learning	5.4%	3.1%	18.3%	73.7%	Very Practical
12	The use of e-modules motivates students to learn financial literacy and entrepreneurship.	5.1%	3.7%	24.3%	68.3%	Practical
E-Module Practicality		Very Practical				

Based on the results of the practicality assessment of the e-module, it is known that the aspect with the **highest value** is *the media supporting active learning* , with a percentage of "Strongly Agree" of **73.7%** , while the aspect with **the lowest value** is that *the navigation (buttons, links, QR Code) is easy to understand* , which obtained a value of "Strongly Agree" of **60.3%** .

Although both remain in the “practical” to “very practical” category, this difference in scores indicates variations in student perceptions of the various features in the e-module.

The high appreciation for media aspects that support active learning may be due to the success of e-modules in presenting interactive and engaging learning content. Students feel that the use of visual media such as images, videos, color, and other multimedia elements can increase their focus and motivation to learn. This aligns with the characteristics of today's students, who are highly responsive to visual stimuli. Therefore, the presence of dynamic media can create a more active, enjoyable, and applicable learning experience.

In contrast, the navigation aspect, which includes the use of buttons, links, and QR codes, received the lowest "strongly agree" score. This is likely due to technical difficulties experienced by some students, such as unclear button functions, unresponsive links, or QR codes that are difficult to scan on certain devices. Other factors such as differences in device type and digital literacy levels can also affect the ease of navigating the e-module. Therefore, although the navigation features were generally considered good, improvements are still needed to optimize the e-module's accessibility and ensure equitable access across all user settings.

3.4 Discussion

The results of the assessment of the e-module's practicality showed that the aspect of ease of access using devices received a very positive response. As many as 70.9% of students stated that they strongly agreed that the e-module was easy to access via laptop or mobile device. This reflects that the e-module has been designed with compatibility with various types of devices in mind, which is a crucial factor in distance learning. The e-module's attractive appearance and its suitability to student characteristics also received high appreciation, with 65.7% of respondents stating that they strongly agreed. The visual design that aligns with the learning styles of the digital generation is a unique strength, as it can increase student engagement in the independent and online learning process.

Regarding the speed of opening and running the e-module, 61.7% of students stated that they strongly agreed. This indicates that the e-module has a fairly light and efficient working system, although a small number of students may still experience obstacles due to internet connection or the specifications of the device used. For aspects of the e-module navigation such as buttons, links, and QR codes, the percentage of "strongly agree" was 60.3%, which is the lowest among all assessment items. Although still in the practical category, these results indicate that the

navigation features still need improvement to be more easily understood by all users, especially those with varying digital literacy.

The item "Concise, clear, and relevant content presentation" received a "strong agreement" score of 71.4%. This indicates that the e-module has successfully simplified complex material into an easily understood presentation that directly addresses students' needs, particularly in financial literacy and entrepreneurship. The assessment of the ease of understanding of the questions and material showed that 66% of students strongly agreed. This reflects the success of systematically developing the material and focusing on students' level of understanding, particularly in integrating abstract concepts into real-world situations.

The item regarding the use of visual media such as images, colors, and other multimedia elements scored very high, at 73.4%. Engaging visualizations have been shown to strengthen understanding, maintain student attention, and make the learning process more engaging and meaningful. Regarding the neat layout of the pages, 71.4% of students strongly agreed. A consistent and uncluttered layout makes it easier for students to navigate the module content and better understand each section of the material.

Regarding the e-module's contribution to understanding financial literacy and entrepreneurship, the response rate reached 64.6% strongly agree. This figure indicates that the material in the e-module is contextual and applicable, although there is room for additional case studies and real-life examples for deeper understanding. The QR code feature linked to the learning video also received a positive response, with 66.9% of students strongly agreeing. The video was considered very helpful in strengthening understanding of the material, although technical aspects such as resolution and smooth video playback on all devices need to be considered.

The media item supporting active learning scored the highest, with 73.7% strongly agreeing. This indicates that students significantly benefited from the interactive elements provided in the e-module, such as activities, exercises, and other digital media that stimulate active participation. Finally, regarding motivation to learn through the e-module, 68.3% of students strongly agreed. This demonstrates that the e-module not only delivers informative material but also stimulates learning interest, particularly in financial literacy and entrepreneurship.

These findings support the research of Hayati & Syofyan (2021), which showed that the use of interactive digital media in e-modules can increase student interest and engagement. Furthermore, Arsib (2023) emphasized that developing e-modules that directly consider user needs will increase the effectiveness of technology-based learning.

4 CONCLUSION

The results showed that the e-module was considered very practical by the majority of students, with the aspects of active learning support media (73.7%) and visual display (73.4%) receiving the highest appreciation. This indicates that interactive design and the use of visual media successfully increased student engagement. However, navigation aspects such as buttons, links, and QR codes received the lowest percentage of "strongly agree" (60.3%), indicating the need for improvements in technical aspects and ease of access.

These findings imply that e-modules are highly suitable for distance learning because they can improve students' understanding, learning interest, and entrepreneurial skills. Consistent with research by Amagir et al. (2018) and Kusumawati et al. (2025), contextual digital approaches have proven effective. Therefore, it is recommended to improve navigation features and add reflective elements and case studies to make e-modules more optimal and adaptable for all users.

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