

Analyzing the Needs of Pre-service Teacher Education Students for Flipbook Learning Resources: Enhancing Understanding and Engagement with Educational Materials

Siti Dewi Maharani¹, Laihat², Budiansyah³, Rahmi Susanti⁴, Siti Swasti Eka Dewie⁵, Sabrina Ramadhani⁶, Anik Sundari⁷

¹ Universitas Sriwijaya, Palembang, Indonesian; maharani.sitidewi@gmail.com

² Universitas Sriwijaya, Palembang, Indonesian; laihat@fkip.unsri.ac.id

³ Universitas Sriwijaya, Palembang, Indonesian; Budiansyah@fkip.unsri.ac.id

⁴ Universitas Sriwijaya, Palembang, Indonesian; rahmi_susanti@fkip.unsri.ac.id

⁵ Universitas Sriwijaya, Palembang, Indonesian; sitiswastieka31@gmail.com

⁶ Universitas Sriwijaya, Palembang, Indonesian; sabrinaramadhani57@gmail.com

⁷ Universitas Sriwijaya, Palembang, Indonesian; aniksundari06@gmail.com

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ABSTRACT

In today's rapidly advancing landscape of information and communication technology, the adoption of technology-based learning tools such as Flipbooks is increasingly essential for optimizing educational experiences. Commonly known as flipping books, Flipbooks offer a dynamic way to engage with learning materials. This study investigates the specific needs of pre-service elementary school teacher education students (batch 2) from the Faculty of Literature and Education at Sriwijaya University regarding the use of Flipbook learning resources. The focus is on how these resources can enhance students' understanding of course content and improve interaction with educational materials. Employing qualitative research methods, including interviews and questionnaires, the study involved 36 participants. Findings indicate a substantial demand, with 94% of the respondents expressing a need for Flipbook-based teaching modules that cater to courses on student understanding and learning materials. These results underscore the potential benefits of integrating digital learning resources in teacher education, aiming to meet student needs effectively and enhance educational outcomes.

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Corresponding authors:

Siti Dewi Maharani

Universitas Sriwijaya, Palembang, Indonesian; maharani.sitidewi@gmail.com

1. INTRODUCTION

Technological advances have changed paradigms from various aspects, including in the field of education. Students must have a variety of skills in the era of modern technology. Technology's ability to create new learning spaces can help streamline and meet teaching needs (Zubaidah, 2018). In addition, technology is able to provide individuals with a variety of ways to learn and access educational resources outside of educational institutions. Utilizing technology makes learning more dynamic. Teachers, students as learners can integrate technology into teaching because of the potential use of technology in the learning process and must replace traditional learning methods with more sophisticated facilities. Innovative and creative teachers are able to keep up with global developments by utilizing technology to provide a better quality of learning (Mastroleo et al., 2020).

In the era of rapidly developing information and communication technology like today, the development of technology-based learning, such as Flipbook makes it possible to optimize learning. Flipbooks are grammatically referred to as flipping books According to Ghavifeks The term "flipbook" (Ilham Setiadi et al., 2021). comes from a toy for children that contains a series of different pictures, but if opened one by one on its pages, appears as if the picture is moving (Ristanto et al., 2020). Utilizing technology can provide a dynamic teaching and learning environment. In line with that, as educators and prospective educators who take advantage of the potential use of technology in the learning process, it is necessary to integrate technology in teaching and replace traditional methods with more modern tools and facilities.

The course of understanding students and their learning in the Pre-service Teacher Professional Education study program is one of the courses that must be mastered by Pre-service Teacher Professional Education students The obstacle found from the process of data mining in the field is the difficulty of obtaining learning resources related to the specific course in accordance with the RPS, of course, less optimizing the provision of information and the lack of stimulus given to Students in utilizing technology optimally in acquiring knowledge and implementing it as the urgency of education in the era of revolution 5.0. Technology makes it easier for students to take advantage of new learning spaces such as digital learning resources designed in the form of flipbooks (Pangestics & Alfarisa, 2015). Equipped with guides, guidelines, and digital formats and equipped with learning videos that suit student needs.

This Flipbook learning resource has hypermedia characteristics with animation, music and video features making it much more interesting than printed books. (Yulaika et al., 2020) This digital flipbook is expected to help overcome current learning challenges for Pre-service Teacher Professional Education students and can be accessed anytime and anywhere, thus providing great opportunities for learning in student understanding courses and learning. Therefore, this study aims to determine student needs for (Argentina & Agustina, 2018) Flipbook-Based Digital Learning Resources in the Student Understanding and Learning Course for Pre-service Teacher Professional Education Students of the Faculty of Teacher Training and Education University of Sriwijaya.

Based on the results of the needs analysis for students of Pre-service Teacher Professional Education, Faculty of Teacher Training and Education, University of Sriwijaya, especially in the course of Understanding students and learning, students only use reference materials from the Ministry of Education and Culture in the form of PDF, besides that it is difficult to obtain learning resources related to the specific course in accordance with the Semester Learning Plan, Of course, it does not optimize the provision of information and the lack of stimulus given to students in utilizing technology optimally in obtaining knowledge. Based on the results of interviews with students of Teacher Professional Education, Faculty of Teacher Training and Education University of Sriwijaya, they are very interested and support the existence of this Flipbook-based Digital learning resource.

Several studies show that the use of digital learning resources packaged in the form of Flipbooks has a positive impact on improving the quality of learning processes and outcomes, improving students' logical thinking skills, being able to prepare new skills that are relevant in the 21st century Based on the various descriptions above, digital learning resources are intended for students and college students, there are no

specific learning resources for student comprehension courses and learning, it is important to innovate in the learning process, especially to produce Flipbook-based digital learning resources in the Student Understanding and Learning Course (Tambunan & Sundari, 2020).

The course of understanding students and their learning in the Pre-service Teacher Professional Education study program is one of the courses that must be mastered by Pre-service Teacher Professional Education students to make it easier for students to take advantage of new learning spaces that utilize the necessary technology Digital learning resources designed in the form of Flipbooks. Flipbook learning resources have hypermedia characteristics with animation, music, video features so that they are much more interesting than printed books (Asrizal et al., 2018). Digital flipbooks are expected to help overcome learning challenges in students by accessing anytime and anywhere, especially in student understanding and learning courses. The scheme chosen in this study is a grant from the Pre-service Teacher Professional Education Personnel Education Institution, a grant for developing innovative learning resources because the researcher is a lecturer in Pre-service Teacher Professional Education with the position of associate professor. (Mastroleo et al., 2020). Using digital learning resources has also been researched in his research entitled "Discovery Learning: Application in science learning in the form of interactive digital learning resources to improve student achievement". The results of this study show that the application of interactive digital teaching materials with the discovery learning model has a significant influence on student achievement. Thus, the use of interactive digital learning resources with discovery learning models can be used by teachers to accommodate students' cognitive abilities so that student learning achievement can increase (Khamidah et al., 2019).

Research on the development of E-module Flipbook in his research entitled "The Importance of Developing Flipbook-Based Interactive E-Modules in High School". The result of the study is that as many as 89% of students want learning resources that contain videos and animations that can support the understanding of animal tissue. It can be concluded that 92% of learners voted in favor if researchers develop flipbook-based interactive e-modules on animal tissue material. Furthermore, his research entitled "The Effect of Using Flipbook-Based E-Modules on Student Learning Outcomes" in this study will determine the effect of flipbook-based e-modules on transverse wave material. Based on the results of the tests that have been carried out, namely the results of the paired samples t-test, a significance of 0.000 is obtained, representing the relationship between two paired groups. Thus, it is concluded that the flipbook-based e-module of wave courses has a relatively moderate influence on the learning outcomes of Physics Education students of FKIP Sriwijaya University Palembang (Sriyanti et al., 2020).

The Use of Flipbook Learning Media has also been investigated in his research entitled "The Use of Flipbook Learning Media to Improve Student Learning Activities and Outcomes" which aims to determine the improvement of student learning outcomes and activities theme 8 sub themes 1 and 3 in learning 3 and 4 using online-based flipbook learning media for grade IV students. Based on the results of testing, there is an increase in learning outcomes that can be known through the results of learning evaluation at the end of the learning process. Before the action, the average score of all students was 68.4 with learning completeness of 39.4%. In cycle I the average score increased to 72.9 with learning completeness of 66.6%, and in cycle II the average score increased again to 81.8 with a percentage of learning completeness of 81.8% (Setiadi et al., 2018).

The difference between this research and previous studies is that this study was conducted to determine the need for learning resources in Student Development and Learning materials for Teacher Professional Education students in the Elementary School Teacher Education Study Program. Based on the background, these problems can be formulated, namely: How is the analysis of the needs of the E-module of student understanding and learning for students of Pre-service Teacher Professional Education, Faculty of Teacher Training and Education, Sriwijaya University?

2. METHOD

This research employs a qualitative methodology to analyze data, synthesize findings, and formulate conclusions within the context of a single study focused on the needs analysis for E-modules. The study was carried out at the Faculty of Teacher Training and Education, Sriwijaya University, located in Palembang City, South Sumatra. The primary subjects of this research were pre-service teachers specializing in Early Childhood Education at the Faculty of Teacher Training and Education, Sriwijaya University. The study also included an examination of lecturer needs concerning E-modules as educational resources. The methods of data collection involved conducting interviews and administering questionnaires via Google Forms (Setiadi et al., 2021). These instruments were designed to gather comprehensive insights into the requirements for virtual museum tour learning resources. The analysis process included data condensation, data presentation, and the drawing of conclusions, aiming to provide a thorough understanding of student and lecturer needs in deploying E-modules.

This study focuses on pre-service Teacher Professional Education students specializing in Early Childhood Education at the Faculty of Teacher Training and Education, Sriwijaya University. The course under investigation, Student Understanding and Learning, is identified as highly suitable for the development of E-module-based learning resources. These digital learning resources, designed as Flipbooks, will be supplemented with comprehensive guides, guidelines, and digital formats, all tailored to meet the specific needs of the students. Additionally, the Flipbooks will include learning videos to enhance the educational experience by leveraging new technological learning spaces. This approach underscores the relevance and necessity of integrating advanced digital tools into educational resource development for modern teaching environments.

3. FINDINGS AND DISCUSSION

After conducting a needs analysis on 36 Pre-service Teacher Professional Education students from the Elementary School Teacher Education program at the Faculty of Teacher Training and Education, Sriwijaya University, structured interviews were held. These interviews consisted of 12 questions designed by the researchers to identify obstacles in finding learning resources. Each student was interviewed individually in one day, and the process was conducted in Indonesian.

The interviews revealed a significant gap in the course "Understanding Students and Learning." The students mainly relied on reference materials from the Ministry of Education and Culture in PDF format. They faced difficulties in obtaining additional learning resources that aligned with the Semester Learning Plan. This reliance on limited materials did not fully optimize information provision or encourage students to use technology effectively to acquire knowledge. Further analysis was conducted through questionnaires distributed to the 36 respondents, focusing on their need for digital learning resources.

The needs analysis data were collected via a Google Form questionnaire in June 2023. The results highlighted the necessity for learning resources related to student development and learning courses. Students expressed a need for Flipbook-based digital learning resources that encompass student development and learning materials. These findings underscore the importance of developing more comprehensive and accessible digital resources to support the educational needs of pre-service teachers. The detailed data from this needs analysis is presented in the following table.

Table 1. Results of Student Needs Analysis

No	Question	Result	Information
1.	Do you want to understand the material of learner comprehension and learning? <ul style="list-style-type: none"> ● Yes ● Not 	1. 86% or 31 students Answer Yes 2. 13.8% or 5 students answer no	From the results, it can be seen that many students need learning resources in the form of E-modules.
2.	Do you think the student comprehension and learning course is important to learn? <ul style="list-style-type: none"> ● Very important ● Important ● Less important ● Not important ● Very unimportant 	1. 69% of students Answering is very important 2. 31% of students answered important	From the results, it can be seen that students are very important to learn student understanding and learning courses.
3.	If you think it's important, briefly explain why!	1. As many as 88% or 31 students Answering as part of the educator must know the science of understanding students 2. As many as 12% or 5 students answer As part of increasing knowledge	From the results it was obtained that students important to learn learners' understanding.
4.	Do you need innovative and creative learning resources to understand the material learners comprehension and learning? <ul style="list-style-type: none"> ● Desperately need ● Need ● Kurang butuh ● No need ● Very unnecessary 	1. As many as 66% or 24 students answered that they really need it 2. 34% or 12 students answered that they needed to	From the results, it was found that students really need innovative learning resources to Understand the material understanding of students in the Teacher Professional Education course
5.	In the learning process whether you have applied the use of technology in accordance with developments nowada ys? <ul style="list-style-type: none"> ● Very often ● Often ● Sometimes ● Never ● Absolutely never 	1. 58% or 46 students answered very often 2. 42% or 15 students answered often	From result It was found that Teacher Professional Education students often apply the use of Appropriate technology with development Nowadays

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|--|---|--|
| <p>6. What kind of technology is used by you in the learning process. ?</p> <ul style="list-style-type: none"> ● Laptop ● Tablets ● Handphone | <p>1. 72% or 26 students answered mobile phones</p> <p>2. 27% or 10 students answered Laptop</p> | <p>From the results it was obtained that the mobile phone used by educators in Learning Process</p> |
| <p>7. What learning resources do you usually access for activities learning in Teacher Professional Education lectures?</p> <ul style="list-style-type: none"> ● Textbooks ● Module ● Internet ● Video | <p>1. 30% or 11 students answered the textbook</p> <p>2. 33% or 12 students answered the module</p> <p>3. 27% or 10 students answered the internet</p> <p>4. 8% or 3 students answered the video</p> | <p>From the results, it was found that the learning resource that students usually access is the internet</p> |
| <p>8. What is the reason why you prefer these learning resources?</p> | <p>1. 30% or 11 students answered the textbook more fully</p> <p>2. 33% or 12 students answered the module quite complete</p> <p>3. 27% or 10 students said the internet is easily accessible, but sources are inaccurate</p> <p>4. 8% or 3 students answered the video</p> | <p>From the results it is obtained that the internet is easily accessible, but must be with accurate and complete sources.</p> |
| <p>9. Do you think there is a need for <i>E-modul</i> learning resources that discuss student understanding and learning?</p> <ul style="list-style-type: none"> ● Yes ● Not | <p>1. 94% or 34 students said yes</p> <p>2. 6% or 2 students answered no</p> | <p>From the results, it was obtained that students need <i>E-module</i> learning resources on student understanding and learning materials</p> |
| <p>10. If so, name an internet-based learning resource that you like?</p> <ul style="list-style-type: none"> ● Website ● Blogspot ● E-book ● E-module | <p>1. 12% or 4 students answered the website</p> <p>2. 13% or 5 students answered blogspot</p> <p>3. 19% or 7 students answered the e-book</p> <p>4. 56% or 20 students answered the e-module</p> | <p>From the results it is obtained that E-modules are the preferred learning resource</p> |

<p>11. Do you need E-module-based learning resources that come with video features in them?</p> <ul style="list-style-type: none"> ● Desperately need ● Need ● Enough need ● No need ● Very unnecessary 	<p>1. 88% or 32 students Answer very much need</p> <p>2. 11% or 4 students</p>	<p>From the results obtained that students really need E-module-based learning resources that are equipped with video features in it</p>
<p>12. Do you need E-module-based learning resources that have solid and easy-to-understand information?</p> <ul style="list-style-type: none"> ● Desperately need ● Need ● Enough need ● No need Very unnecessary 	<p>1. 86% or 31 students Answer very much need</p> <p>2. 13% or 5 students said they needed</p>	<p>From the results obtained that students really need based learning resources E-module that Have solid and easy-to-understand information</p>

Source: primary data processor, 2023

Based on the results of the needs analysis above, it can be concluded that students need E-modules for student understanding and learning materials. This is evidenced by the results of the questionnaire, namely as many as 61% of students need to learn student understanding and learning materials, as many as 86% of students need E-modules as a guide in the Pre-service Teacher Professional Education course, student development and learning materials.

The process of getting presenters, processed from some of the questions above, then accumulated into graphics in order to determine the percentage of student needs for digital sources. How students answer from the answer choices with the answer choices provided. The following are the results of the data obtained from the questionnaire that has been distributed:

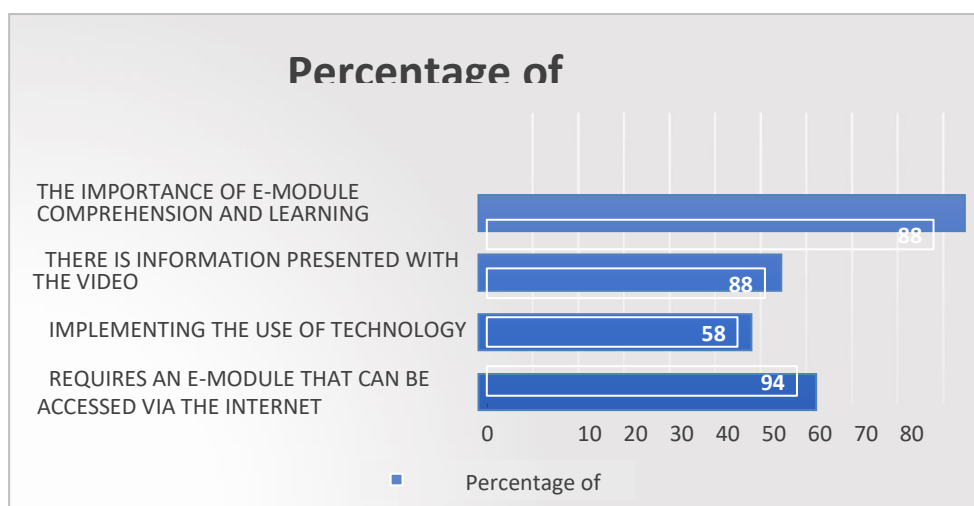


Figure 1. Percentage of Student Characteristic Analysis Results

Source: Primary Data Processing, 2023

Based on this explanation, it can be concluded that students need learning resources that can be accessed anywhere and anytime and really need material that learns about student understanding and learning. Therefore, researchers develop E-module learning resources for student understanding and learning is one of the alternatives needed by students in making it easier to understand learning material and can be accessed anywhere and anytime.

Table 2. Student Needs Analysis

Percentage	Data Results
66%	Students need innovative and creative learning resources to understand the material, student understanding and learning.
94%	Students need E-module learning resources that discuss student understanding and learning materials.
88%	Students need E-module learning resources that have Video features
86%	Students need E-module-based learning resources that have solid information and are easy to understand

Based on the analysis above, students need the right solution in the form of digital learning resources that have video features. The learning resources needed must be in accordance with the needs of students in order to help them understand the material of student understanding and learning. Furthermore, from the analysis of the scope of facilities and infrastructure that has been carried out, researchers carry out the next rare task, namely identifying student waste. Based on student identification, it was carried out using Google Form for 36 students of Pre-service Teacher Professional Education, Elementary School Teacher Education, Faculty of Teacher Training and Education, Sriwijaya University. The results of the student identification analysis can be seen in Table 2 below:

Table 3. Analysis of Student Facilities and Infrastructure

No	Facilities and Infrastructure	Existing/None	Information
1.	Network	Exist	Stable
2.	Internet connection (<i>wifi</i>)	Exist	Connected
3.	<i>Smartphones</i>	Exist	Every student

Based on the results of the analysis of facilities and infrastructure owned by students, researchers found several learning resources to support learning, such as internet connection (*wifi*) on the campus of Elementary School Teacher Education, Faculty of Teacher Training and Education, Sriwijaya University was well connected. In addition to adequate facilities and infrastructure, students all have smartphones. It strongly supports the development and use of E-modules.

The results of this study are a reference for conducting subsequent research that will develop Flipbook-based E-modules on student development and learning materials for Teacher Professional Education students of the Elementary School Teacher Education study program, so the results of this study state that students need flipbook-based E-modules on the use of technology-based learning resources in supporting Pre-service Teacher Professional Education lectures in the course Student understanding and learning through solid E-modules are easy to understand, have barcodes, videos and practical that can be accessed anywhere and anytime. E-module based on Flipbook student comprehension material will be developed by researchers who aim to have a great influence on the needs and teaching and learning activities within the Faculty of Teacher Training and Education, Sriwijaya University and also make learning

more interesting for students so that they can more easily understand student understanding and learning material. In line with the Merdeka campus policy or curriculum where digital learning resources are currently needed in learning (Farhana et al., 2021)

The results of the student needs analysis research, namely the flipbook E-module as a digital learning resource, are needed for Pre-service PPG students who are already taking lectures, where student development and learning materials are compulsory subjects that students must master. The Flipbook-based E-module learning resources that will be developed have the characteristics of E-modules that are made as a whole with complete and easy-to-understand material to help achieve the expected learning goals. The E-module learning resources to be developed have characteristics including, first the source can be used independently in learning activities, the second has complete features, videos, images, and text in the learning resource, the last E-module learning resource is able to be used practically with easy access anywhere and anytime online. It is hoped that the existence of digital learning resources in the form of flipbook E-Modules with Student Development and learning materials can be an alternative for lecturers and students to be able to carry out learning on student understanding and learning materials. This statement is very in accordance with the results of the needs analysis distributed where as many as 36 students really need learning resources that discuss student understanding and learning material. This phenomenon can be seen from the results of the questioner given.

4. CONCLUSION

The needs analysis revealed that students in the Pre-service Teacher Professional Education program at the Faculty of Teacher Training and Education, Sriwijaya University, require E-modules for student understanding and learning materials. According to the questionnaire results, 61% of students expressed a need for learning materials on student understanding, and 86% indicated a need for E-modules as guides in their courses. The study highlights the necessity for innovative digital learning resources, specifically Flipbook-based E-modules incorporating audio, images, and videos, to enhance student comprehension in line with the Merdeka curriculum. These E-modules, accessible online, offer practical and effective independent learning solutions. However, the study's limitations include its focus on a single faculty and the requirement for internet access to use the E-modules. Additionally, these modules may lack social learning aspects and present dense material in a simplified manner. Future research should expand on these findings by developing more comprehensive flipbook-based learning resources for the Pre-service Teacher Professional Education program across Indonesia.

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