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Entrepreneurship-based Biotechnology Textbook; User Review

Muhammad Yusuf[1], Dian Arisandy Eka Putra Sembiring[2], Robi Hendra[3]

[1,2,3] Department of Biology Education, Jambi University, Jambi - Indonesia

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CORRESPONDENCE AUTHOR

*E-mail: yusufyahya@unja.ac.id

ABSTRACT

As a medium, textbooks certainly have a role in the learning environment of students, including in biotechnology lectures. This study aims to reveal the practicality of entrepreneurship-based biotechnology textbooks. The method used was descriptive analysis. Respondents consisted of students and lecturers. The data collection technique used is a questionnaire, and uses an instrument in the form of a user questionnaire sheet. Data analysis was carried out descriptively to determine the point of view of book users. The assessment results show that the textbook is categorized as very practical. The textbook is known to have fulfilled the aspects of usefulness, ease, and time of use. It is hoped that this textbook can be widely used, especially in biotechnology and entrepreneurship courses.

INTRODUCTION

The mandate of the law and higher education explains that education at this level is expected to produce graduates who not only have knowledge but also creative, skilled, and independent aspects. To realize this, it is essential to pay attention to the availability of learning facilities for students, one of which is textbooks. Some findings show that textbooks have benefits in increasing student creativity (Siahaan et al., 2021; Ardiansyah et al., 2021), and student learning independence (Saputri et al., 2016; Nurmala & Izzatin, 2018).

Textbooks are included in printed learning media. Apart from providing benefits in terms of independence and creativity, using textbooks also has other benefits. For example, shaping character, motivating students to learn, and influencing learning outcomes (Pratama et al., 2016; Pribadi, 2017; Wedyawati & Lisa, 2018; Safriana et al., 2023). If you look at the benefits arising from the use of textbooks, then textbooks should be facilitated in every lecture.

This study attempts to reveal the user response or practicality of entrepreneurship-based biotechnology textbooks. This textbook presents biotechnology material that is integrated with entrepreneurship. The aim is to realize a teaching method that can hone creativity, skills, and student independence. Textbooks in lectures can help students understand biotechnology material (Pambudiono et al., 2016). In addition, entrepreneurship education also has the benefit of changing mindsets to be more creative and fostering students' entrepreneurial interests (Ranto, 2016; Walter & Block, 2016).

Initial analysis showed that students need the textbook (Yusuf & Ahda, 2020). This is an empirical basis for developing entrepreneurship-based biotechnology textbooks. Other studies have

also started developing entrepreneurship-based biotechnology teaching materials in the form of modules (Aqil et al., 2021), Madrasah Aliyah learning tools (Fitriah, 2012), and high school student worksheets (Pratiwi & Isnawati, 2018). To determine the feasibility of the book before it is used in the real class, it is necessary to conduct a practicality test. Practicality is defined as the value of ease when the product is used (Plomp & Neiven, 2013). This practicality can be seen from three aspects: ease, time, and attractiveness of textbooks (Sukardi, 2011).

Therefore, this study will describe the practicality of entrepreneurship-based biotechnology textbooks. It is hoped that the study results can provide an overview of the feasibility of the book from the perspective of users, namely students and lecturers. Of course, input and constructive criticism are also considered to build better textbooks.

RESEARCH METHODS

Research Approach

The research method used is descriptive quantitative. This is done to present data clearly, concisely, and systematically to get a phenomenon's meaning (Sudijono, 2012).

Research Participants

This research involves students and lecturers as users of the products produced. They will be given time to use the product and provide an assessment after use. The assessment results obtained are used to improve the book.

Research Instruments

The instrument used is a user questionnaire (Table 1). The questionnaire was given to students and lecturers after using the book.

Table 1. Instrument of practicality

No.	Practicality Aspects
1	Ease of use of the book
2	Benefits of using the book
3	Time to use the book

Data Collection

This research data is primary data. Data was obtained directly from students and lecturers as book users.

Data Analysis

Data analysis was carried out descriptively. The assessment obtained is calculated using the following formula.

$$Value = \frac{Score\ obtained}{Maximum\ score}\ x\ 100$$

The calculation results are interpreted using validity criteria (Table 3), this will describe the book's suitability from the user's perspective (practicality).

Table 2. Criteria of product prcticality

Range	Category
0 – 20	Not Practical
21 – 40	Less Practical
41 – 60	Practical Enough
61 – 80	Practical
81 – 100	Very Practical

(Modified from Akdon & Riduwan, 2009)

RESULTS AND DISCUSSION

Result

The book's practicality was assessed through a questionnaire given to students and lecturers as users of entrepreneurship-based biotechnology textbooks. The results of the assessment are presented in Table 3.

Table 3. Results of the Practicality Textbooks

No.	Responden	Assessments Results (%)	Category
1	Lecturer	97	Very Practical
2	Stundetns	84	Very Practical
	Average	91	Very Practical

Discussion

Based on Table 3, it is known that entrepreneurship-based biotechnology textbooks are categorized as very practical by lecturers and students. This shows that the book is suitable for continued use in the real class. According to Plomp & Nieveen (2013), practical is when the product developed can be used, is useful, easy to use, and follows the researcher's objectives.

First, the aspect of ease of use. This book was developed not only by paying attention to aspects of biotechnology and entrepreneurship content but also by paying attention to aspects of ease of use. The book has been equipped with instructions that can be a reference for its users. Baburkin et al. (2016) explained that teaching materials can help lecturers prepare students for the next generation.

The second is the usability aspect. This book is known to contribute to building insight into biotechnology and entrepreneurship. In addition, this textbook also helps students build their entrepreneurial interest through entrepreneurship education. This follows Dewi et al. (2018) 's explanation that entrepreneurship education can influence entrepreneurial interest. Entrepreneurship education also fosters an entrepreneurial spirit (Utami, 2017). This will be even stronger if educators can present concrete examples of successful entrepreneurs (Boldureanu et al., 2020).

Third the time aspect. The entrepreneurship-based biotechnology textbook has also provided efficient use of time in lectures. This follows Susanto's (2013) explanation that teaching materials can function as a reading source and encourage students to learn independently. So that students are not dependent on being able to obtain information only in class but can develop it independently outside the classroom. In addition, using textbooks like this can also be a wise solution when teaching in large classes (Dorji, 2020).

CONCLUSION

Based on the results obtained, it was concluded that the entrepreneurship-based biotechnology textbook was declared very practical by its users. This book has fulfilled the aspects of ease of use, usefulness, and time of use. Hopefully, this textbook can positively contribute to students, especially in lectures in biology education. More complex development of biotechnology and entrepreneurship content is needed in the future. It is also necessary to develop the book into a digital format, thus encouraging mobility.

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