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Development of E-Modules with Sigil Software in Basic Women's Fashion Subjects Based on Entrepreneurship

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Abstract

Currently digital modules (E-modules) are a solution for learning in the digital era. The aim of this research is to create an e-module that can provide knowledge and experience in fashion business management, and make basic women's fashion, analyze the feasibility level of e-module development and analyze the level of student response to the development product, namely an entrepreneurship-based basic women's fashion e-module. The method in this research is research and development, with the ADDIE development model. The product of this development is an entrepreneurship-based basic women's fashion e-module created with Sigil software, with data collection techniques, namely: unstructured interviews and closed questionnaires. The results of the trial on students obtained a response of 81%, in the very good category, namely students liked the layout of the e-module and the material presented was very relevant to their needs. And students feel satisfied and interested in studying the e-module. The result of the development is an e-module for making basic level women's clothing combined with entrepreneurial knowledge in the fashion sector. From the results of data analysis, it is concluded that this e-module can be used in madrasah aliyah plus fashion skills.
Keywords: *E-Modul, Software Sigil, ADDIE, Women's fashion, Entrepreneurship*

Introduction

One of the priorities in education is the relevance of education to the needs of skills in the world of work (Romadin et al., 2021; Tirtaraharja & La, 2005; Yoto, 2014). The suitability (link and match) of education programs with the business world and the world of work is needed to facilitate school graduates to be more absorbed into the world of work (Disas, 2018; Yoto & Widiyanti, 2017). This is in line with the opinion of (Abele et al., 2015; Baker et al., 2017; Jianyu et al., 2012) who states that the relevance of education to labor market needs is the key to increasing employment opportunities for school graduates.

Based on this explanation, this research will be conducted at Madrasah Aliyah Negeri (MAN) 1 Malang. The research location was chosen because MAN 1 Malang is the only MA plus skills in Malang Regency that has fashion skills subjects. Based on an initial survey conducted in the form of several questions to students taking fashion design subjects at MAN 1 Malang, it was found that the allocation of face-to-face hours for fashion design lessons was considered very insufficient, namely only 4 face-to-face hours per week. In addition, there is no module or textbook for fashion design as an independent learning reference.

The importance of developing this learning media lies not only in improving students' technical skills in fashion, but also in developing entrepreneurial skills (An & Park, 2021; Bustanil S et al., 2019). Entrepreneurship education in high school, as expressed by (Mardikaningsih et al., 2023; Melliani, 2023; Romadin, 2021), can equip students with the ability to innovate, take measured risks, and manage businesses more effectively. Thus, the designed e-module does not only focus on the technical aspects of making clothes, but also integrates entrepreneurial

concepts so that students can understand how to start and manage a fashion business independently.

The development of this e-module is also in line with digitalization efforts in education that have been widely encouraged by the government and various educational institutions in Indonesia (Dewi et al., 2022; Mahardika et al., 2021; Ningrum & Ambarwati, 2022; Sanova et al., 2022). According to the Ministry of education and Culture (bestary, 2018; kemdikbud, 2017), digitizing education is one of the strategic steps to improve access and quality of education. E-modules with multimedia content, such as video tutorials, can increase student engagement in the learning process and provide a more interactive and in-depth learning experience (Alfaro et al., 2019; Mufidah et al., 2023; Najwa, 2022). In addition, with modules that can be accessed online, students can learn anytime and anywhere, making it more flexible and in accordance with the learning needs of each student (Nurfuadiah et al., 2024; Nurhayati, 2020).

This problem is supported by the results of research that limited learning resources and minimal face-to-face time can hinder the achievement of student competence (Anugrahana, 2020; Saraswati & Mertayasa, 2020; Vu Anh & Le Quoc, 2019). Therefore, it is necessary to develop learning media or modules that not only contain material, but also video tutorials on fashion making, reflection, and evaluation of the level of skill achievement or student understanding. The existence of this research aims to provide convenience for students to be able to learn independently with flexible time.

Based on the research focus above, the objectives of this study are as follows: (1) Creating an e-module that can provide knowledge and experience in managing a fashion business and making basic level women's clothing independently for madrasah aliyah students, (2) Analyzing the feasibility level of developing an entrepreneurship-based basic level women's fashion e-module for madrasah schools, and (3) Analyzing student responses to entrepreneurship-based basic level women's fashion e-modules at MAN 1 Malang.

Method

This research is research and development, namely a research method used to produce certain products and test the effectiveness of these products (Romadin, 2023; Russman et al., 2015; Ulfatin, 2015).The development model used is the ADDIE model. This model has five stages that are easy to understand and implement, namely: 1) Analysis, 2) Design, 3) Development, 4) Implementation, and 5) Evaluation. Use of the ADDIE Model as in Figure Describing events in the field, the behavior of people and certain activities is the purpose of this research.

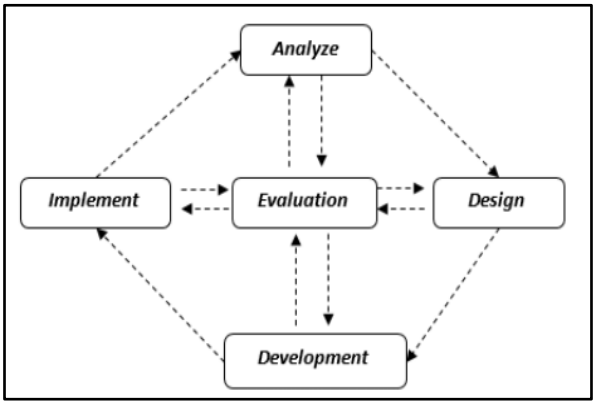
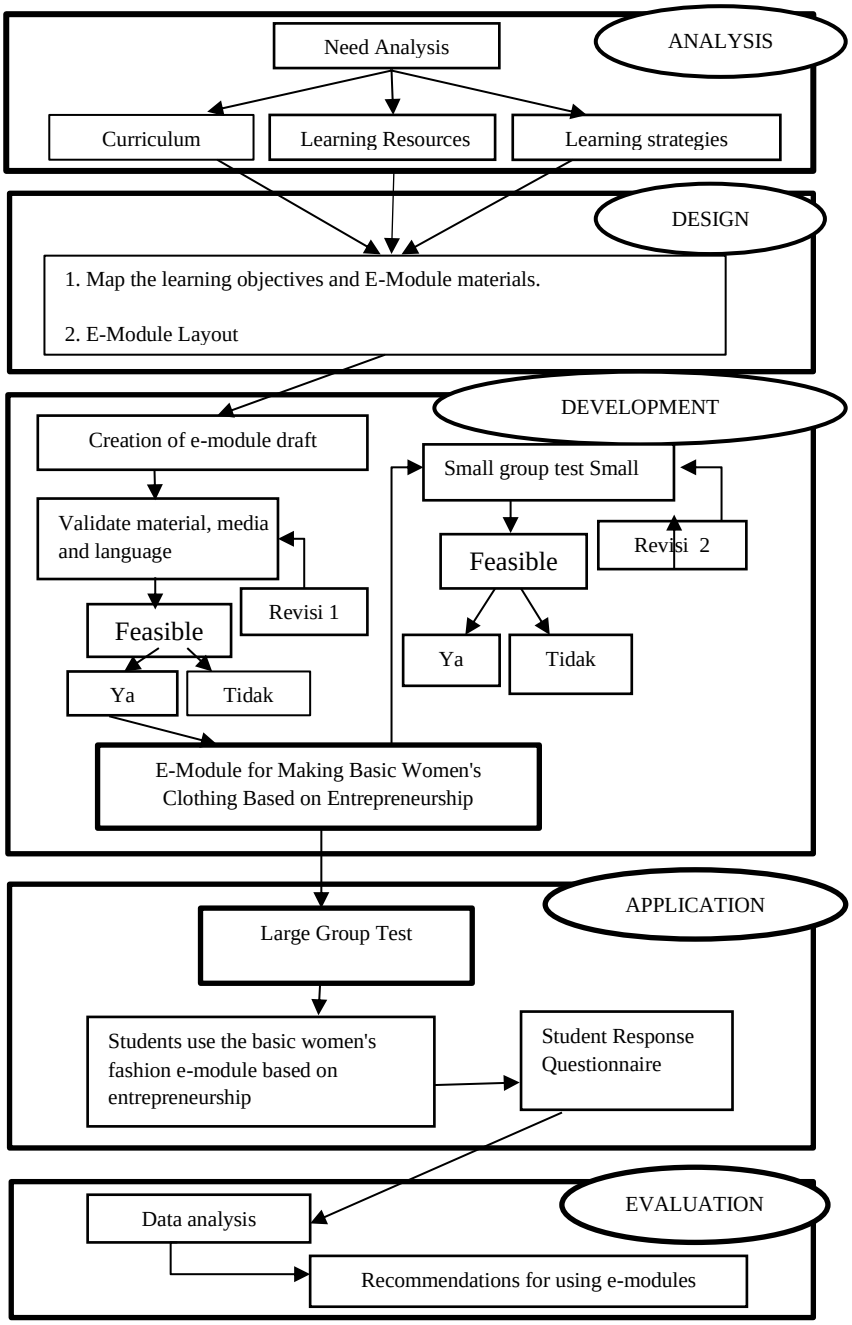


Figure 2. Development Model

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The feasibility assessment of e-module products is carried out in 3 stages, namely: (1) Validation Stage, this e-module product validation activity was carried out by material experts, media experts and linguists; (2) Small group test, small group test is an e-module feasibility test conducted to 2-3 students of Fashion Management MAN 1 Malang class X; and (3) Large Group Test, large group test is an e-module feasibility test conducted to all students of Fashion Management MAN 1 Malang class X “on Thursday”, with a total of 10 students used as respondents.

Data collection techniques in this study used several methods. First, unstructured interviews were conducted with 3 teachers of the subject, which were used to explore problems and needs during the teaching and learning process of cosmetology in cosmetology students at MAN 1 Malang and during the field trial. Second, questionnaires were used during the validity test by media experts and material experts to get responses from students and for language checking

by linguists. The data collection instrument consisted of a questionnaire sheet containing several closed questions. The questionnaire sheet for material experts was used to obtain data on the feasibility of the content of the e-module for making basic women's clothing based on entrepreneurship.clothing based on entrepreneurship.

The data analysis in this research is descriptive qualitative, the data analysis stages in this research are as follows, data obtained from questionnaires from media experts and material experts to assess the feasibility of e-modules from each expert were analyzed by calculating the percentages as follows:

$$P = \frac{Tse}{Tsh}\ x\ 100\% = \cdots \%$$

Information:
P : Percentage
Tse : Total empirical score
Tsh : Maximum total score
100% : Constant

Table 1. E-module Validity Criteria

Percentage (%)	Validity Level	Information
81%-100%	Very Feasible	Very Feasible, very effective, very complete, can be used without improvement.
61%-80%	Feasible enough	feasible, effective enough, complete enough, can be used without improvement, but needs improvement.
41%-60%	Less Feasible	Not feasible, less effective, less complete, needs major repairs, recommended not to be used.
21%-40%	not feasible	Not feasible, ineffective, incomplete, cannot be used.

Then the data from all validators is processed using the following percentage formula:

$$V = \frac{V1 + V2}{2}\ x\ 100\% = \cdots \%$$

Information:
V : Validation
V1 : First validator
V2 : Second validator

Likewise, student response data was analyzed descriptively. To check the language, the description is directly based on the results of the questionnaire.

Table 2. Student Response Criteria

Percentage (%)	Validity Level	Information
21% - 40%	Less	Student response is poor so it is recommended not to use it

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41% - 60%	Good enough	The student response was quite good so it was suggested that it could be used with slight improvements
61% - 80%	Good	Student response is good so it can be used
81% - 100%	Very good	Student response is very good so it can be used

Results

Teaching Media Development

The development of teaching media in this research resulted in a product in the form of an electronic module with an EPUB extension with the title "E-Module for Basic Women's Clothing Based on Entrepreneurship", namely a textbook for making women's clothing in the basic phase combined with entrepreneurial knowledge, both theory and assignments, for use by MAN Fashion Students. Poor class X.

The e-module is ready to be opened on an Android cellphone or laptop receiver. If you open it on an Android cellphone, you must have the "Lithium" application installed (the best application that supports EPUB files with video media) and if you use a laptop, the software that supports it well is online EPUB software such as "fviewer.com".

The appearance of the e-module on an Android cellphone can be seen in the image below.

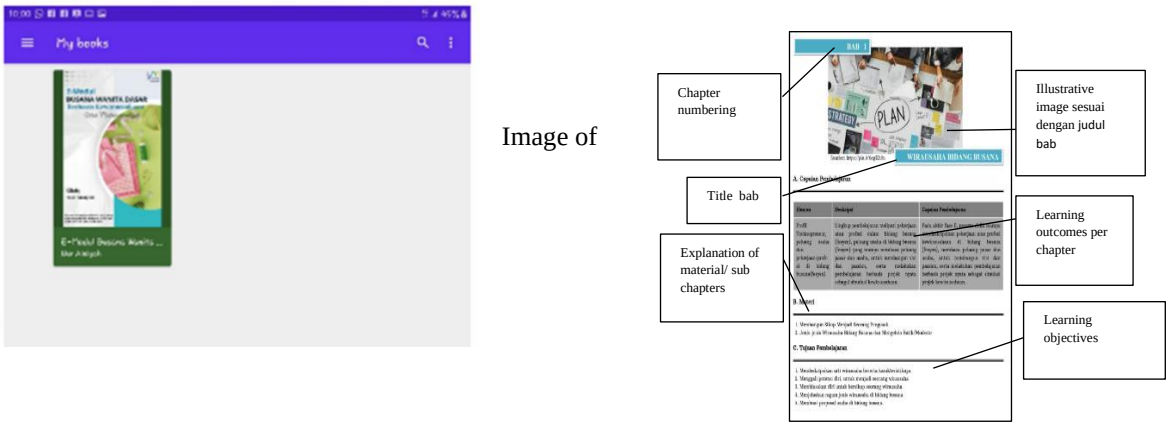


Figure 2. E-Module Cover Display On An Android

Feasibility Results

To test the feasibility of a basic women's clothing e-module based on entrepreneurship, there are 3 stages, namely expert validation testing, small group trials and large group trials. Material validation was carried out by Eka Prasetyaningsih Nurayati, S.Pd, Fashion Design teacher at MAN 1 Malang and by business actors in the fashion sector, namely Tri Wahyu Prihatini, S.Pd, owner of "Bunda Clothes" Malang.

Table 3. Material of Validation Results

No	Indicators	V1	V2	Amount %	Validity
1.	Material Coverage	75	83	83 %	Very Feasible
2.	Material Accuracy	75	88	82 %	Very Feasible
3.	Update	67	92	84 %	Very Feasible
4.	Stimulate curiosity	75	75	75 %	Feasible enough

5.	Contains productivity insights	75	75	75 %	Feasible enough
6.	Develop a sense of diversity	88	75	82 %	Very Feasible
Average amount		78	82	80 %	Feasible enough

From the data from the two validators, it was calculated that the average percentage was 80%, this means that the e-module in terms of the appropriateness of the material content is in the quite feasible category and the e-module can be used.

Media validation was carried out by Yuli Irawan, S.Pd as Art and Design teacher at MAN 1 Malang and Afrizal Nur, M.Med.Kom as Media and Communication expert at MAN 1 Malang City.

Table 4. Validation Results

No	Indicators	V1	V2	Jumlah %	feasibility
1.	E-module cover	80	85	83%	Feasible enough
2.	E-modul content	75	75	75%	Feasible enough
3.	Presentation technique	70	75	73%	Feasible enough
4.	Supporting the presentation of material	75	75	75%	Feasible enough
5.	Presentation of material	75	75	75%	Feasible enough
Amount		75	76	76 %	Feasible enough

From the data from the two media validators, it was calculated that the average percentage was 76%, this means that the graphic aspects and presentation of the e-module are in the quite feasible category and the e-module can be used.

Before the field test, the e-module was checked linguistically by Erwinda Sukma Safitri, M.Pd as an Indonesian language teacher at Madrasah Tsanawiyah Negeri 3 Malang, namely in terms of communicative, straightforward, coherent, dialogical and interactive language use, the results were "very good" ". In the item conformity with language rules, getting "good results" because there were typos, including; "risk" is written in the e-module "risk", "responsible" is written "responsible", the serial number on page 6 is not visible.

Feasibility test of a small group, namely 3 Class X Fashion Design students at MAN 1 Malang, to get student responses (responses and reactions). The three students are; Fatimah Mai Anggara, Zahra Aafiyah and Aulia Beta.

Table 5. Small of Group Test Results

No	Indicatorc	Answer Score (%)			Average amount (%)	Information
		R1	R2	R3		
	Response					
1.	Format	100	89	96	95	Very good
2.	Relevansi	75	75	92	87	Very good
Average number of responses					91	Very good
	Reaction					
1.	Interest	75	88	75	79	Good
2.	Satisfaction	63	63	69	65	Good

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No	Indicatorc	Answer Score (%)			Average amount (%)	Information
3.	Self-confident	88	88	88	88	Very good
Average number of reactions					77	Good
Average Number of Responses (responses and reactions)					84	Very good

The results of student responses from large groups were obtained from large group tests conducted on Thursdays, June 16, 2023 and June 23, 2023 on Fashion Management students of Class X "Thursdays" at MAN 1 Malang with discussion and question and answer methods, where previously they had studied independently with their respective e-modules.

Table 6. Results of large group student response

No	Indicator	Answer Score (%)										Average amount (%)	Information
		R1	R2	R3	R4	R5	R6	R7	R8	R9	R10		
	Response												
1	Format	89	86	100	93	71	75	86	75	75	96	85	Very good
2	Relevansi	92	75	75	83	58	75	92	92	75	83	80	good
Average number of responses												83	Very good
	Reaction												
1	Interest	75	88	75	88	63	88	75	88	75	100	82	Very good
2	Satisfaction	69	63	63	75	63	69	56	75	69	100	70	Good
3	Self-confident	88	88	88	100	75	75	75	75	88	100	85	Very good
Average Number of Responses (responses and reactions)												79	Good
Average Number of Responses (responses and reactions)												81	Very good

Based on table 6, it is presented that the students' response to the e-module of basic women's fashion based on entrepreneurship, obtained an average of 81% thanks to a very good category with a response value of 83%, including the format and relevance of the content of the e-module. For 79% student reaction which includes interest, satisfaction and confidence with the e-module.

Discussion

Basic Women's Clothing E-Module Products Based on Entrepreneurship

The e-module with the title "E-Module for Basic Women's Clothing Based on Entrepreneurship" is an e-module with an EPUB extension, namely an e-module that can be read on various digital devices, including cellphones and computers. This is in accordance with the characteristics of e-modules according to (Mataya, 2020; Putri et al., 2023) e-modules can be used by electronic devices, both cellphones and computers. This e-module consists of 7 chapters about learning to make basic women's clothing and business management in the fashion sector and is equipped with 14 video tutorials, so students can use the e-module independently, this is in line with the opinion of (Dinis, 2021; Ningrum & Ambarwati, 2022) that e-modules are designed to be used independently, optimized by providing support to students through content enrichment or methods of delivering module teaching material.

E-modules can be used as a solution to the lack of face-to-face time in training clothing making skills, especially if the learning conditions are offline or online, such as during the recent corona virus pandemic. E-module teaching materials can display interactive videos such as examples of tutorials for conducting practicums, this will overcome the limitations of the laboratory so that it increases insight into the material being studied (Mufidah et al., 2023; Sanova et al., 2022). E-modules can be used offline using each student's cellphone device, allowing the material to be studied anywhere and repeatedly, as (Lijana & Wahyuni, 2018; Mahardika et al., 2021) argue that e-modules are specifically designed to suit the learning material and can be used easily by students. This e-module was created with Sigil software. The advantage of the e-module assisted by Sigil software is that it has more complete features than similar software, including supporting the use of audio video media (Najwa, 2022).

The implications of the research results and discussion on "E-Module for Basic Women's Clothing Based on Entrepreneurship" show that the use of this EPUB-based e-module can be an effective solution in self-learning, especially in online learning situations or limited face-to-face time. The existence of 14 video tutorials that support the making of basic women's clothing and business management in the fashion sector provides a more interactive and practical learning experience for students. In addition, the e-module's ability to be used offline allows flexibility in learning the material anywhere and anytime. This is in line with the module development objective which is not only to fulfill academic needs but also to train entrepreneurial skills in the fashion industry. Using Sigil software, the e-module offers more features, including audio and video media support, which enriches the learning content and increases the effectiveness of digital skills education.

Feasibility of the Basic Women's Fashion E-Module Based on Entrepreneurship

The feasibility of the e-module here is a validation test carried out by experts, including material experts, media experts and language experts as well as a small group test before the e-module is tested in the field. Product validation is the process of examining and assessing a product to ensure it meets what is required. Examination of e-modules based on several characteristics, namely (a) can be used by users independently or for self-instruction; (b) the module content includes all material or is independent; (c) the module does not depend on other media or stands alone; (d) can be adapted to developments in science and technology; (e) can be used by users easily or is user friendly; (f) consistent module layout (margins, spacing, fonts); and (g) can be used by electronic devices, both mobile phones and computers (Alessandra & Brito, 2021).

From material experts, the average score is quite decent, this means that the material and learning activities in the e-module are in accordance with students' needs in learning fashion design, so the e-module can be used. Material criteria include coverage of material accuracy, up-to-dateness, containing productivity insights, stimulating curiosity, developing a sense of diversity, developing life skills (Mataya, 2020)

The material in the e-module is designed to suit the learning objectives of making basic women's clothing, including; taking measurements, making basic patterns and breaking patterns as well as knowledge of sewing techniques is quite appropriate, this is in line with the opinion of (Ningsih & Deswita, 2023; Novena et al., 2023)that making basic patterns is important knowledge and skill and must be mastered by someone in the fashion sector.

From media experts, on average the Media expert validation of the e-module was quite decent, this means that the presentation aspect of the e-module is quite attractive in terms of color layout, clarity of letter selection and writing form. The validity criteria according to Akbar (2017), namely if the percentage of results is in the range 21-40% then it is categorized as not

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feasible, in the range 41-60% it is categorized as less feasible, in the range 61-80% it is categorized as quite feasible and in the range 81-100% it is categorized as very feasible. .

From linguists for items on communicative, straightforward, coherent, dialogic and interactive language use, very good results were obtained, this is in accordance with the criteria in the module (Endaryati et al., 2023; Maghfiroh et al., 2023) that language use should be simple, easy to understand, and use common terms. used.Feasibility of e-module with small group testing including response and reaction items. Where the responses from students include the form and content of the e-module in the very good category, which means that students really like the basic women's clothing e-module based on entrepreneurship.

The students' reactions which include interest, satisfaction and self-confidence with the e-module are in the good category, namely students have a strong desire to learn using the e-module, especially in honing skills in making women's clothing and honing entrepreneurial knowledge, this is in line with the opinion of (Ead, 2021; Hongdiyanto et al., 2020) states that entrepreneurship education can develop the intention to start a business by influencing a person's attitudes, knowledge and skills.

In the satisfaction item, the result was 65%, because there were complaints that using e-modules on cellphones required a very large amount of space, so cellphones had to be cleaned of other existing applications. The amount of memory required to use this e-module is due to the large amount of video media contained in the e-module, namely 14 video tutorials.

Student Responses to the Entrepreneurship-Based Basic Women's Clothing E-Module

Student responses are the responses and reactions of MAN 1 Malang class X Fashion Design students based on the questionnaire that has been given. (Ekasari, 2023; Hidayat et al., 2023; Tambunan & Tambunan, 2023)stated, "Student response is the acceptance, feedback and activities provided by students during learning through the application of a guided discovery learning approach."

The student response to the entrepreneurship-based basic women's fashion e-module as per the results of the questionnaire given was very good. With a discussion of the results of each questionnaire item as follows:

In the response aspect, the average was very good, this means that students really liked the layout format on the cover and contents of the e-module and the material presented was deemed relevant to students' needs in learning to make clothes and about entrepreneurial knowledge in the fashion sector. .

In the reaction aspect, the average results are good, this means they are interested in studying the basic women's clothing e-module based on entrepreneurship and are optimistic about being able to make women's clothing and become entrepreneurs in the fashion sector. Students are satisfied with the existence of fashion design teaching media in the form of e-modules, but because the e-modules are equipped with many videos, the result is that not all videos can be accessed if their cellphone memory is low.

This student response is in line with the opinion of (Hermansyah & Pammu, 2023; Rungkat et al., 2023; Wijayanto & Utomo, 2023)namely that student acceptance of an e-module will be low if students feel less interested. This is also in line with the opinion of (Hidayah et al., 2024; Sujanen & Suwindra, 2023)that e-modules can be used as additional media to support learning that is felt to require additional hours outside the specified lesson hours.

The implications of the results of the research and discussion related to the responses of class X students of MAN 1 Malang Fashion Management towards the e-module “Basic Women's Fashion Based on Entrepreneurship” show that the use of this e-module can be very well received by students. This can be seen from the positive response to the layout and content of

the material that is relevant to their learning needs, especially in terms of dressmaking and entrepreneurship in the fashion sector. In addition, students' optimistic reactions to their ability to make clothes and become entrepreneurs indicate that this e-module is effective in increasing their interest and engagement in learning. Although there are technical constraints related to video access due to limited mobile phone memory, overall, this e-module serves as an additional learning medium that supports learning outside formal lesson hours. This supports the notion that e-modules can increase student participation and understanding when content is presented in an engaging and relevant way.

Conclusion

From the results of research and development, the following conclusions were obtained: The product of this research and development is an electronic module titled "Entrepreneurship-Based Basic Women's Clothing E-Module," a textbook for basic women's fashion making combined with entrepreneurial knowledge, covering cognitive, affective, and psychomotor aspects. This e-module has an EPUB extension, developed using Sigil software, allowing direct video display without changing screens, and can be accessed offline. The e-module can be read on a computer with online EPUB software like "fviewer.com" or on an Android phone using the Lithium application. The feasibility analysis of the e-module includes validation tests by material experts and media experts, both rating it as quite feasible. The language check results were excellent in terms of communicative, straightforward, coherent, dialogic, and interactive language use, and the small group feasibility test rated it as very good. Student responses to the e-module were also in the very good category, indicating that this entrepreneurship-based basic women's fashion e-module can be effectively used in fashion subjects at Madrasah Aliyah Plus Skills, providing students with knowledge and experience in making basic women's clothing and managing entrepreneurship in the fashion sector.

It is recommended that the “Entrepreneurship-Based Basic Women's Clothing” e-module be widely implemented in vocational schools, with training for teachers to ensure effective use. Further development and continuous evaluation are also needed to improve the accessibility of the videos as well as maintain the relevance of the materials to current educational and technological needs.

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