

AGRIMATION as Agribusiness Learning Media for Senior High School Students

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ABSTRACT

The objective of this research is to develop ICT (Information and Communication Technology) based educational media in the field of agribusiness for use with high school students. Given the ongoing decline in student interest in the agricultural sector, this research aims to develop an attractive, informative, and technologically advanced media platform that will engage and educate young people about this important field. The methodology employed is that of research and development (R&D), utilizing the ADDIE model, which comprises five stages: The phases of the research process are as follows: analysis, design, development, implementation, and evaluation. Data were collected via questionnaires, expert validation, and trials involving students and teachers. The results demonstrated that the developed media exhibited a high degree of validity, with material validation scores reaching 91% and media validation reaching 88%. These findings indicate substantial approval from experts and users. The ICT-based media successfully incorporates interactive elements and multimedia content, thereby facilitating comprehension of agribusiness concepts and enhancing their appeal to students. The findings indicate that this media has the potential to serve as an effective instrument for fostering student interest in agribusiness and enhancing the quality of education in this domain. Further refinements are recommended to optimize the effectiveness of the media and enhance user engagement.

Keywords: Learning Media; Agribusiness; AGRIMATION, Senior High School

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INTRODUCTION

Agribusiness education at the high school level plays a key role in shaping the future of the agricultural sector. Agribusiness is not only about farming, but also includes aspects of business, management, technology, and innovation that support the sustainability and growth of the sector (Rasmikayati et al., 2017). With the rapid advancement of technology and information, the educational media available to high school students in the field of agribusiness is still not optimal. Appropriate and relevant learning media are needed to engage students' interest and improve their understanding of complex agribusiness concepts (Rahmah, 2024).

There has been a notable decline in the interest of high school students in pursuing careers in agriculture in recent years. Notwithstanding the pivotal role that agriculture plays in the economy and food security, a considerable number of students currently evince diminished interest in pursuing a career in this field (Makabori & Tapi, 2019). A variety of factors contribute to this decline in interest, including a lack of exposure and socialization regarding career opportunities in agriculture and the perception that this field is less modern compared to other sectors (Solihin et al., 2023). Consequently, the younger generation may be deprived of the opportunity to engage with the innovations and advancements that can be made within the agricultural sector. To address this issue, it is necessary to implement strategic initiatives that enhance students' awareness and interest in agriculture. These initiatives should include educational programs, practical training activities, and the dissemination of information about the potential and benefits of pursuing a career in this field.

The creation of efficacious educational media may prove an effective solution to this challenge. Well-designed educational media serve not only to convey information, but also to inspire and motivate students to explore the field of agribusiness (Anwar et al., 2022; Hafidz & Nashihin, 2024). By employing innovative methodologies, educational media can assist high school students in comprehending the interrelationship between theoretical and practical knowledge in the field, and in developing the competencies necessary to address authentic challenges within the domain of agribusiness. The integration of technology, interactive learning methods, and practical examples from the real world enables educational media to facilitate students' comprehension of the fact that agriculture is not merely the cultivation of crops; it encompasses a multitude of intriguing and potentially lucrative facets of business, innovation, and technology (Noperman, 2022; Suryani, 2024).

This article will examine the evolution of agribusiness education media for high school students, with a particular emphasis on methodologies, techniques, and strategies that can be employed to develop effective and engaging educational media. The creation of educational media in the field of agribusiness makes optimal use of information and communication technology (ICT), employing a method known as AGRIMATION (Agribusiness in Animation). It is hoped that the creation of suitable educational media will better prepare high school students to contribute to the development of a sustainable and competitive agribusiness sector.

METHOD

This research employs the Research and Development (R&D) research method with the ADDIE procedure, which is a widely utilized approach for the development of effective educational products or programs. The Research and Development (R&D) method is a research approach that is utilized to develop new products or to enhance existing products through a series of systematic

stages. This method is not solely concerned with the creation of products; it also entails the validation and testing of these products in a genuine context prior to their extensive implementation (Judijanto et al., 2024; Mesra, 2023).

The ADDIE procedure is an acronym for the five principal stages in this process, namely:

- a. The initial stage of the process is to undertake a comprehensive analysis of the needs and objectives of the product or program that is to be developed. At this juncture, the researcher identifies the problem, the needs of the target users, and the environment in which the product or program will be implemented.
- b. Design: Subsequent to the analysis stage, the design of the product or program is undertaken. In this phase, the specifications and features of the product are developed based on the findings of the preceding analysis. The design may assume the form of a curriculum, learning tools, or evaluation instruments.
- c. Development: The development stage represents the phase during which the design is transformed into a tangible, operational product. This may entail the creation of learning materials, software, or evaluation tools.
- d. Implementation: Once the product has been developed, the subsequent stage is the implementation of the product in an actual environment. At this juncture, the product is subjected to a trial run with the intended users to ascertain its functionality in a practical setting.
- e. The final stage is evaluation, whereby the efficacy of the product or program is gauged. This evaluation may be formative (conducted during the development process for improvement) or summative (conducted after implementation to assess the overall success of the product).

The trial design employed in this study is the result of a validation questionnaire assessment conducted by experts in the media and material sciences. The objective of this stage is to obtain an assessment, criticism, and suggestions from the validator so that the level of validity and practicality of the product that has been developed can be determined. This will then inform the material that is used in making product revisions. The validation assessment was carried out using a Likert scale. The results of the analysis of quantitative and qualitative data are used as the basis for assessing the feasibility of the media developed. The formula used is as follows:

$$P = \frac{f}{N} \times 100\%$$

P = Percentage of goods

f = Collected score/observed frequency

N = Number of cases/expected frequency

After validation, the results can be seen on a Likert scale to evaluate the media that has been designed. The following is a Likert scale table used as a reference for media assessment.

Table. 1
Likert Scale Table as a Reference for Assessment

Percentage Score	Category
81% - 100%	Very good
61% - 80%	Good
41% - 60%	Fair
21% - 40%	Not good
≤ 20%	Poor

RESULT AND DISCUSSION

Need Analysis

The student population at PGRI 2 Jombang high school has not received any form of socialization related to agriculture and agribusiness. Consequently, their comprehension of this domain remains constrained, and their prospective inclination towards agribusiness has not been fully actualized. The dearth of information and educational resources pertaining to agriculture and agribusiness results in students being less informed about potential career pathways and the significance of this sector within the broader economy. It is therefore imperative that special efforts be made to provide comprehensive socialization, with the aim of fostering interest and encouraging students to consider agribusiness as a potential career path.

The results of the questionnaire indicated that 90.1% of students strongly agreed that they have access to media that can provide an understanding of agriculture and agribusiness. This indicates that there is a considerable interest and demand among students to gain more comprehensive knowledge about these subjects. The majority of students indicated that educational media specifically designed to educate them about agriculture and agribusiness would be beneficial in broadening their horizons and opening up new opportunities in fields they may not have considered previously. This substantial endorsement substantiates the necessity for the creation of educational media that are pertinent and captivating for students.

Design

The objective of the agribusiness education media design stage is to create a storyboard that will subsequently be utilized in the media development phase. The storyboard functions as a comprehensive visual and narrative guide to the sequence of events, content, and graphic elements to be utilized in the educational media. The utilization of a storyboard facilitates a more directed and structured approach to the media development process, thereby ensuring that each planned element is aligned with the educational objectives established during the analysis stage. Furthermore, the storyboard serves to facilitate collaboration between designers, developers, and other stakeholders, thereby ensuring the efficacy and suitability of the produced media for its intended users.

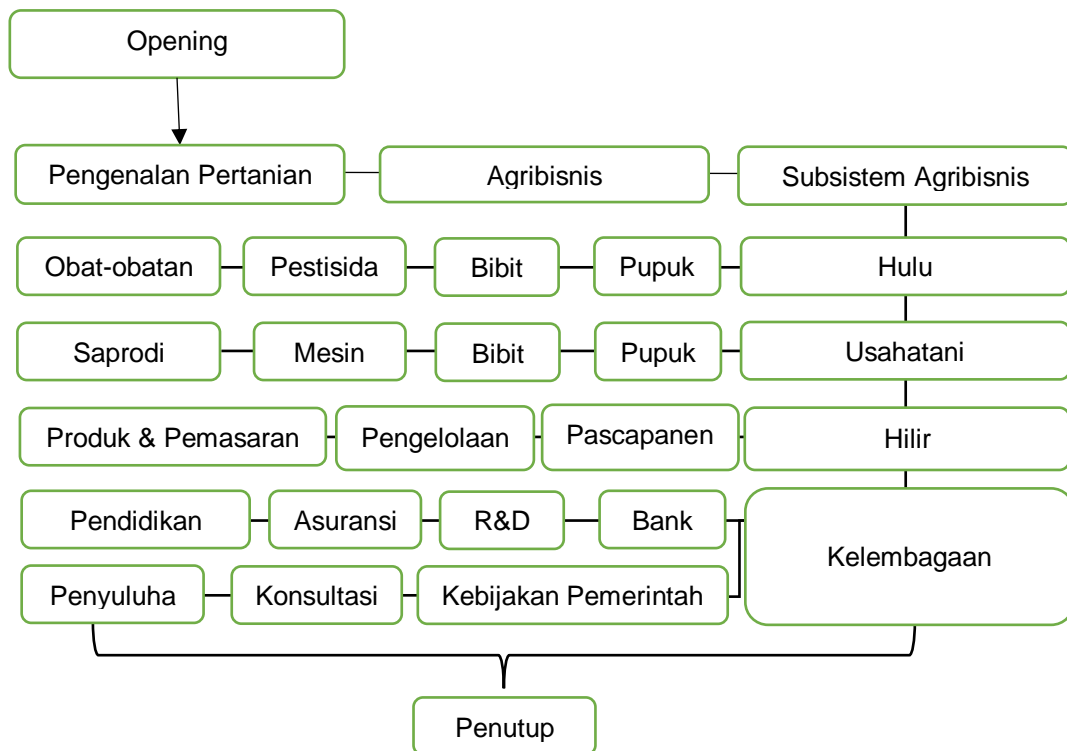


Figure 1
Storyboard of the Media

Development

In the development phase, researchers utilized the storyboard created in the preceding phase as the primary reference point for the creation of this agribusiness educational media. The storyboard serves as a comprehensive guide, ensuring that all visual elements, content, and flow are accurately represented in the final media product. Adherence to the storyboard enables researchers to maintain consistency and quality in the media, while ensuring alignment with the established learning objectives. Furthermore, the utilization of storyboards serves to reduce the likelihood of errors and to facilitate the collaborative process between teams in the creation of effective and attractive educational media.

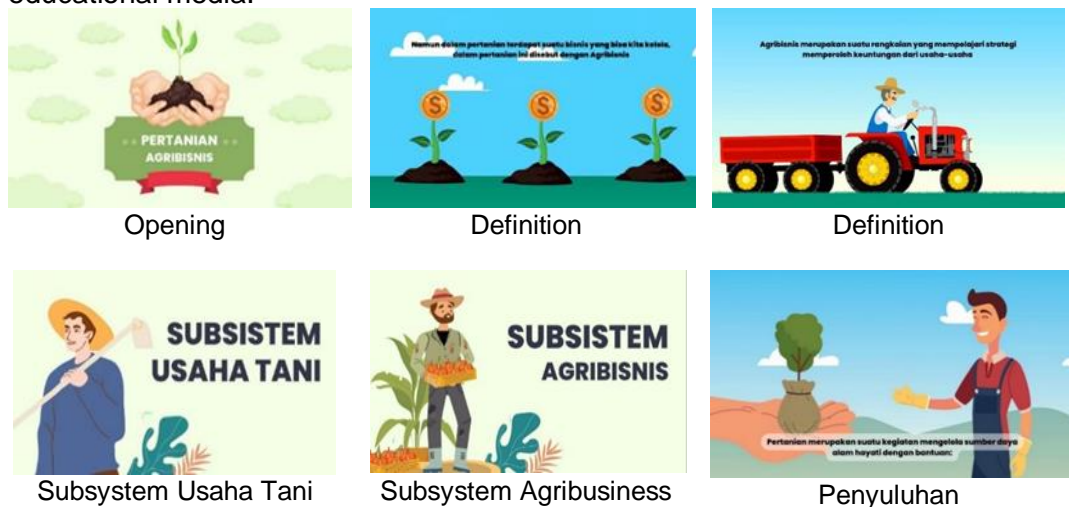


Figure 2
The Preceding Phase

To ensure the optimal efficacy of the developed media, it is then subjected to rigorous validation by both material and media experts. This validation process is crucial for guaranteeing the veracity, relevance, and alignment with learning objectives of the content presented in the agribusiness education media. The responsibility of material experts is to assess the accuracy and depth of information, while media experts evaluate the visual aspects, interactivity, and ease of use of the media. The validation process allows for the identification and correction of any shortcomings or errors before the media is disseminated to users, ensuring the production of effective and high-quality educational media.

The material was validated by Mrs. Nerisa Agnesia, S.P., M.Si., an expert lecturer in the field of agribusiness, who awarded it a score of 91%. This suggests that the material presented in this medium is highly valid. This high score indicates that the content presented has met the expected quality standards, both in terms of information accuracy and relevance to the learning objectives. Given the high validation score, it can be concluded that this media is suitable for use as a learning resource. This provides assurance that the materials developed will be effective in improving students' understanding of agribusiness. **Tabel 2**

Materials Validation Questionnaire

No	Aspects Assessed	Score
1	Suitability of material with basic competencies	4
2	Suitability of material with indicators	3
3	Cultivation of learning motivation	4
4	Actualization of the material presented	4
5	Sufficiency of vocabulary	3
6	Level of difficulty of vocabulary according to the material	3
7	Ease of learning to understand	4
8	Vocabulary in an accessible language	4
9	Accuracy of vocabulary use	4
Total Score		33
Percentage		91%

Tabel 3
Media Validation Questionnaire

No	Aspects Assessed	Score
1	The accuracy of the background selection	4
2	The accuracy of the layout proportions	4
3	The accuracy of the font selection	3
4	The accuracy of the font size	3
5	The accuracy of the text color	3
6	The suitability of the image with the material	4
7	The size of the image	4

8	The suitability of the video with the material	4
9	The placement of the video	4
10	The quality of the video	4
11	The accuracy of the audio with the video	3
12	The suitability of the sound effect with the button	3
13	The attractiveness of the packaging for the front cover	3
14	The appearance suitability with the content	4
15	The suitability with the user	3
16	The flexibility (data is used independently and guided)	3
Total Score		56
Percentage		88%

Moreover, the media expert, Moh, Anshori Aris Widya, M. Kom has been assigned a score of 88%, provided a valuable assessment of the media validation which falls within the valid range category. This indicates that the media has fulfilled the majority of the necessary criteria, although further modifications are still required in accordance with the recommendations provided by the expert. Following the implementation of the requisite revisions, this media will be better positioned to deliver material and provide users with an effective learning experience. Accordingly, the media was deemed suitable for utilization subsequent to the implementation of the requisite modifications, as per the recommendations proffered during the validation phase.

Implementation

Once the media has been designed, validated, and revised, the subsequent phase is implementation. A total of 25 students from Class X SMA PGRI 2 Jomabang were selected to participate in product testing. The researchers will subsequently upload the completed media to the YouTube platform in the form of animated videos and provide the students with the relevant video link, thus enabling them to access and comprehend the material in an easily digestible format. Subsequently, the researcher employed a questionnaire to assess the viability and practicality of the product.

The results of the questionnaire were utilized as a reference point for implementing improvements to enhance the product. The questionnaire employs a Likert scale for data collection. The results yielded a percentage of 83%, which categorizes the product as "very good." In light of these findings, the researcher concluded that students expressed enjoyment and interest in the introduction of Agribusiness media in the form of the aforementioned animated video.

Evaluation

The data obtained from the student questionnaires indicates that this product is a viable medium for supporting agribusiness learning. The animated media featuring agribusiness materials was evaluated by the validators to be of high quality, and respondents provided positive feedback on the presentation. This suggests that no further improvements are necessary at this stage. Nevertheless, this does not signify that the development of the media has reached a definitive conclusion. Instead, these outcomes serve as a preliminary foundation for further enhancement and advancement in the future. Further improvements can be made to this media in order to better meet the needs of agribusiness learning in an optimal manner.

CONCLUSION

The data obtained from the student questionnaires indicates that this product is a viable medium for supporting agribusiness learning. The animated media featuring agribusiness materials was evaluated by the validators to be of high quality, and respondents provided positive feedback on the presentation. This suggests that no further improvements are necessary at this stage. Nevertheless, this does not signify that the development of the media has reached a definitive conclusion. Instead, these outcomes serve as a preliminary foundation for further enhancement and advancement in the future. Further improvements can be made to this media in order to better meet the needs of agribusiness learning in an optimal manner.

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