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LEARNING MEDIA DESIGN USING SMART APPS CREATOR (SAC) IN THE AGRIFISH LEARN APPLICATION

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Abstract

This study aims to design an interactive digital learning media called Agrifish Learn using flowchart and storyboard approaches. The media is developed to enhance freshwater aquaculture agribusiness literacy among vocational students. The method used is Research and Development (R&D) with the ADDIE approach. Flowcharts were used to design the application's navigation, while storyboards guided the visual and audio elements of each screen. The application was developed using Smart Apps Creator software. The final product features "Kolam Materi" and "Kolam Quiz," integrating visual materials and interactive quizzes. Trials with vocational students confirmed the media's usability and relevance for learning.

Abstrak

Penelitian ini bertujuan untuk mengembangkan media pembelajaran digital interaktif bernama Agrifish Learn yang dirancang khusus untuk siswa SMK pada kompetensi agribisnis perikanan air tawar. Aplikasi ini dibuat menggunakan Smart Apps Creator (SAC) dengan pendekatan flowchart dan storyboard untuk merancang navigasi serta tampilan visual dan audio. Model pengembangan yang digunakan adalah ADDIE, meliputi tahap analisis kebutuhan, desain antarmuka, pengembangan konten, implementasi, dan evaluasi melalui uji coba kepada sepuluh siswa SMK. Media yang dihasilkan terdiri atas dua fitur utama: Kolam Materi dan Kolam Quiz, yang menyajikan materi dan evaluasi secara interaktif. Hasil uji coba menunjukkan bahwa media ini mudah digunakan, menarik, dan membantu siswa memahami materi dengan lebih baik.

Katakunci: Aplikasi Interaktif; Media Pembelajaran; Navigasi

Introduction

Education is constantly evolving, particularly in the development of media, approaches, tactics, and learning procedures that are more engaging, stimulating, enjoyable, demanding, and inspiring for students (Stai et al., 2023). Advances in science and technology impact nearly every aspect of life, including schools. The impact on education is, in fact, one of the most significant. One factor driving this shift in how educators approach teaching is the ease with which students can access a wide range of knowledge from around the world simply by using a smartphone."One finger" (Nurzannah MIN & Serdang, 2022).

Rahma Atillah et al. (2024) argue that learning media have several advantages, such as increasing learning motivation, clarifying information delivery, and enabling two-way communication between students and the media. Visual-based learning materials are particularly important in specialized fields such as fisheries and agribusiness, which require knowledge of biological and technical processes (Torralba-Burrial & Dopico, 2023). In reality, traditional approaches that do not utilize digital technology continue to dominate the learning process. Therefore, students have difficulty understanding

complex material presented only orally or through text, such as fish feed management or water quality.

Innovation in digital learning media that can present information in an interesting, interactive, and visual way is needed to overcome this problem. Smart Apps Creator(SAC), an application development tool that allows users to create learning media without requiring programming knowledge (Amrina et al., 2021)

Agrifish is a digital learning tool created through this research. The aim of this media is to storyboard and flowchart to present freshwater fisheries agribusiness content interactively. The application's navigation flow is structured using a flowchart, and the visual display and audio components are methodically designed using a storyboard (Li, 2022). Agrifish Learnwill provide a fun and successful learning experience for students with this strategy.

Research methods

This research is a development research (Research and Development) with the ADDIE model (Analysis, Design, Development, Implementation, Evaluation) to produce interactive digital learning media, Agrifish Learn using Smart Apps Creator(SAC) (Khasanah & Rusman, 2021). The analysis was conducted to identify the learning needs of vocational high school students in freshwater fisheries agribusiness. The application design was developed through a flowchart and storyboard depicting navigation, visual displays, and audio elements. The media was developed using SAC, which allows the integration of text, images, audio, and interactive quizzes without programming, assisted by Canva (Kim et al., 2022). Implementation was conducted through a limited trial with ten vocational high school students, and evaluation using a simple questionnaire assessing the presentation, ease of use, and appeal of the material.

Research Results and Discussion

Flowcharts are highly effective visual aids in education because they are able to summarize and structure complex information into structured, easy-to-understand steps. In a learning context, flowcharts help organize material, enhance understanding, and facilitate retention and recall of information. Research shows that the use of flowcharts in the classroom can improve material integration, conceptual understanding, and overall knowledge, and function as a tool for decision-making and problem-solving (Chinogo et al., 2024).

The flowchart in the application Agrifish Learner is designed to describe the user's thought process from opening the application to completing the learning or quiz. Flowchart. It consists of three main sections: the main menu navigation, the material menu, and the quiz menu. On the main menu, users are greeted with an opening page containing a button, “Start Now,” which then leads to two main options: Material Pool and Material Pool Quiz. This design aims to provide a flexible learning experience according to students' needs.

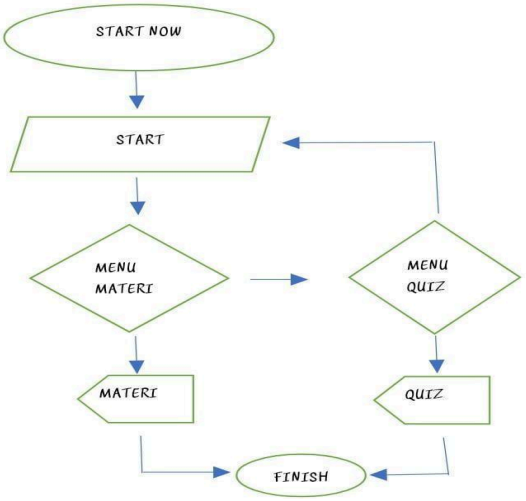


Figure 1. Flowchart of Main Menu

The materials menu displays four main subtopics for users to choose from: Freshwater Fish Characteristics, Fish Breeding, Fish Feed, and Water Quality and Pests, and Diseases. Each subtopic is complemented by visual and audio content. This flowchart supports systematic material organization and makes it easier for students to choose which topics they wish to study first.

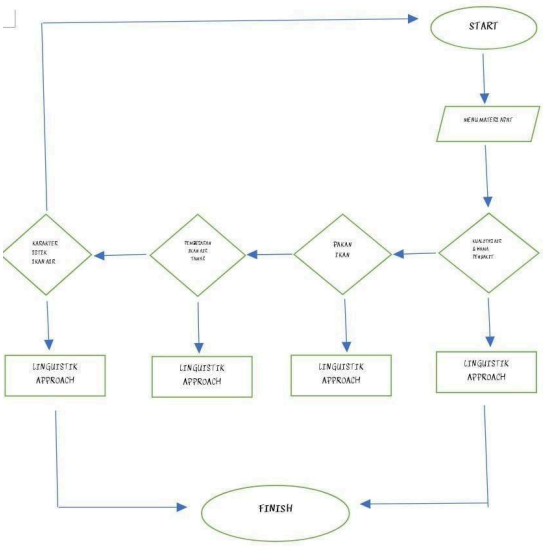


Figure 2. *Flowchart* Material Menu

Flowchart menu quiz presents a path to three types of evaluation: Fact/Myth, Guess the Picture, and Mitest. All three provide immediate feedback on user answers. This clear structure provides an intuitive and easy-to-understand application flow structure, and strengthens the interactive and user-friendly aspects, such as user-friendliness from the digital learning media developed.

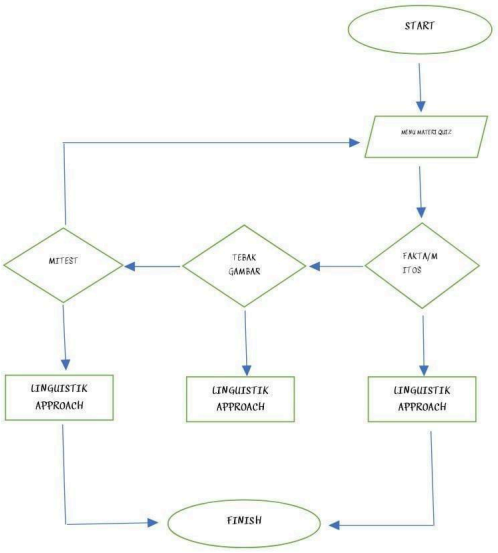


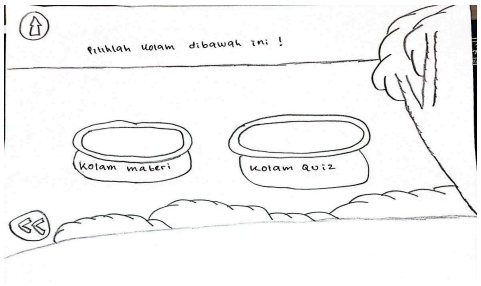
Figure 3. *Flowchart* Quiz Menu

Storyboard in the application Agrifish Learn serves as a visual and audio guide in designing each application interface display. By using a storyboard, Developers can systematically design display elements, such as text, images, colors, navigation buttons, and background sounds used in the application.

On storyboard main menu displays the app's opening page with a fisherman's background and the Agrifish Learn logo. This page displays interactive buttons.“Start Now" takes users to two main options: the Material Pool and the Quiz Pool. The visual design is simple yet informative, supported by a friendly, cartoon-themed soundtrack.

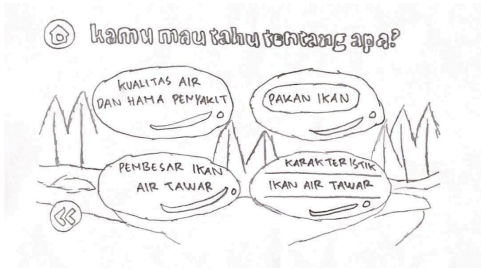
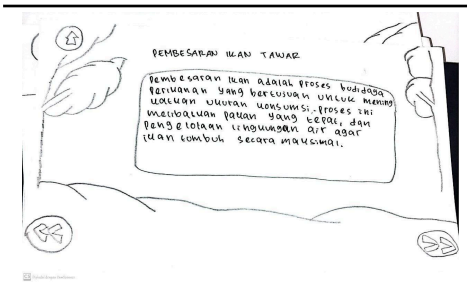
Table 1. *Storyboard* Main Menu

Figures	Activities	Visual
	Menu main Application AGRIFISH LEARN	Displaying the main menu“START NOW” which contains the name of the application“AGRIFISH LEARN, and with a background of fisherman carrying fish from their catch in the lake.
	Display the menu to start playing the application “AGRIFISH LEARN”	Displaying elements“START” to start playing the application, and the text "Come on, get to know each other." Agribusiness Fish Air Bid!!!"

	Displays the menu option between “Material Pool” and "Pool Quiz”	Displays an image of a pool containing the words "Material Pool" and "Pool Quiz”

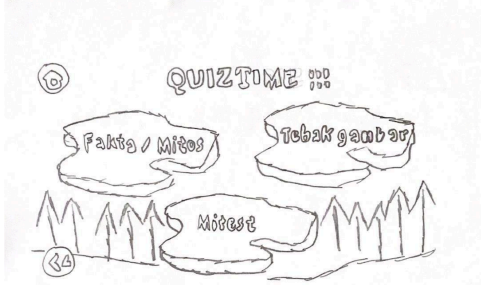
The material menu features four pond icons, each representing a learning topic. Each pond can be clicked to open materials such as Freshwater Fish Characteristics, Fish Breeding, Fish Feed, Water Quality & Pests, and Diseases. The visuals are designed using illustrations that support the content, accompanied by explanatory text and audio to support understanding.

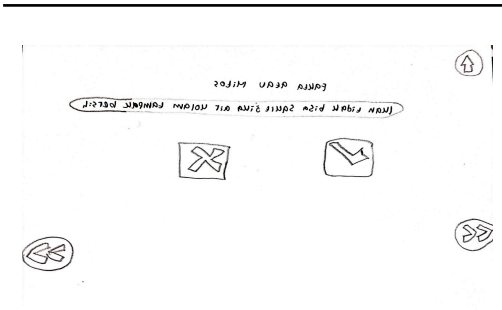
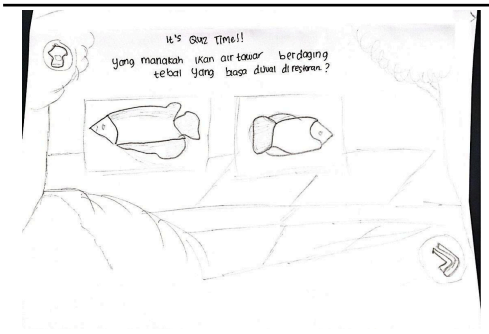
Table 2. *Storyboard* Learning Menu

Figures	Activities	Visual
	Displaying a Selection of Materials regarding Agribusiness Aquatic Fisheries Bid	Displaying a water bubble element containing a selection of materials in the application "Water Quality and Pests and Diseases", "Enlargement" Fish Air Freshwater Fish, “Fish Food, and “Characteristics of Freshwater Fish”.
	Showing Material Magnification Fish Air Bid	Displays a square element with content material about "Enlargement" fish freshwater".

The quiz menu features three types of evaluative games: Fact/Myth, Guess the Picture, and Mytest. The visual design is colorful, complete with quiz icons and answer selection buttons. When students answer, an animated bear character appears, providing immediate feedback (correct/incorrect) with a whiteboard and background sound effects. All of this aims to maintain student engagement and motivation throughout the learning evaluation process.

Table 3. *Storyboard* Quiz Menu

Figures	Activity	Visual
	Showing Menu Options *Quiz*	Displays ice elements containing quiz options, namely, “Facts/Myths”, “Myths”, and “Guess”. Picture"

	Showing Quiz Guess Picture	The "Guess the Picture" quiz contains two pictures, which are different, and the questions.
	Showing Quiz of Facts or Myths	Contains a quiz, "Facts or Myths," which will have two checkbox elements, yes (facts) and false (myths)

Storyboard in the application Agrifish Learn serves as a visual and audio guide in designing each application interface display. By using a storyboard, Developers can systematically design display elements, such as text, images, colors, navigation buttons, and background sounds used in the application.

Conclusions and Recommendations

The research results show that the Agrifish Learn learning media developed using Smart Apps Creator (SAC) was successfully designed by utilizing flowcharts and storyboards as the basis for navigation and visual design. This application consists of two main features, namely the Material Pool and the Quiz Pool, which present freshwater fisheries agribusiness material interactively and engagingly. Based on the results of trials with vocational high school students, this media was deemed feasible, easy to use, and able to increase students' interest and understanding of the material.

Further development can be done by adding automated evaluation features, expanding the teaching materials, and integrating this media into project-based learning. Furthermore, larger-scale trials are needed to quantitatively measure the media's effectiveness in improving learning outcomes.

References

Amrina, N., Gazali, A., Mudinillah, G., Agustina, A., & Luksfinanto, A. (2021). Utility of the Smart App Creator Application as an Arabic Learning Media. *Izdihar : Journal of Arabic Language Teaching, Linguistics, and Literature*, *4*(3), 319–334. https://doi.org/10.22219/jiz.v4i3.176886

Chinofunga, M. D., Chigeza, P., & Taylor, S. (2024). How can procedural flowcharts support the development of mathematics problem-solving skills? *Mathematics Education Research Journal*. https://doi.org/10.1007/s13394-024-00483-3

Khasanah, K., & Rusman, R. (2021). Development of Learning Media Based on Smart Apps Creator. *AL-ISHLAH: Jurnal Pendidikan*, *13*(2), 1006–1016. https://doi.org/10.35445/alishlah.v13i2.549

Kim, J., Lee, H., & Cho, Y. H. (2022). Learning design to support student-AI collaboration: perspectives of leading teachers for AI in education. *Education and Information Technologies*, *27*(5), 6069–6104. https://doi.org/10.1007/s10639-021-10831-6

Li, J. (2022). Using A flowchart to Help Students Learn Basic Circuit Theories Quickly. *Sustainability (Switzerland)*, *14*(12). https://doi.org/10.3390/su14127516

Nurzannah MIN, S., & Serdang, D. (2022). Peran Guru Dalam Pembelajaran. In *ALACRITY : Journal Of Education* (Vol. 2, Issue 3). http://lpppipublishing.com/index.php/alacrity

Rahma Atillah, Yulda, Y., & Ahmad Satibi. (2024). Penggunaan Media Pembelajaran Alat Peraga Torso Ikan untuk Meningkatkan Hasil Belajar Siswa. *DIAJAR: Jurnal Pendidikan Dan Pembelajaran*, *3*(3), 381–387. https://doi.org/10.54259/diajar.v3i3.2946

Stai, E. K., Khez, D. R., Purwakarta, M., Edlina, M., Stai, M., Nada, S., Stai, L., Stai, U. N., Setiawan, U., & Khez, S. D. (2023). EVALUASI MEDIA PEMBELAJARAN. In *Journal of Student Research (JSR)* (Vol. 1, Issue 2).

Torralba-Burrial, A., & Dopico, E. (2023). Promoting the Sustainability of Artisanal Fishing through Environmental Education with Game-Based Learning. *Sustainability (Switzerland)*, *15*(17). https://doi.org/10.3390/su151712905