



The Development of Interactive Learning Media Through Flipbooks in Creative Products and Entrepreneurship Subjects for Grade XI

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ABSTRACT

The purpose of this project work is to develop flipbook interactive learning media in the subject of creative products and entrepreneurship in class XI. This project work uses the Research and Development (R&D) method, with the development model in this project work research ADDIE. The subjects of this project work include material experts, media experts, linguists. The subjects of the small-scale trial were 5 participants and 25 students of the field trial of class XI TKJ 1 SMK Pustek Serpong. Data collection was carried out using questionnaires, observasi and dokumentasi. The data analysis technique uses quantitative descriptive analysis. The results of the research show that the development of flipbook interactive learning media in the subject of creative products and entrepreneurship in class XI is suitable for learning activities for students of class XI TKJ 1 SMK Pustek Serpong. The conclusion was drawn based on the results of the validation of material experts with 4.08, linguists with 4.2, media experts with a score of 5 and the average final assessment score of 4.42 with the category of very suitable for use.

Keywords: Project Work; Learning Media; Flipbook Media

INTRODUCTION

The improvement of the quality of a nation is highly dependent on improving the quality of education in that nation. The quality of education is certainly not something easy to realize. The quality of education depends on how learning is carried out in an education system itself (Sunaengsih, 2016).

In the millennial era, technology is developing rapidly along with improving the quality of human resources. This has led to an increase in the need for information, so that the use of technology in the delivery and dissemination of information is increasingly in demand. There is no denying that information has a crucial role in the progress of a field.

The information that a company has can be used for internal development or shared with other parties who need it. The development of the current learning model is based on the integration of computer hardware and software with electronic technology, so that multimedia learning is increasingly used in various aspects of activities (Supriyadi, 2020).

In national education, the environment, infrastructure, resources, and society are components that work together, interrelated, and support each other to achieve educational goals. Advances in science and technology have encouraged changes in various aspects, including one of which is the change in teaching aids to the digital era. There are various forms of teaching aids in today's digital era, including videos, movies, powerpoint, animation, games, and digital books. However, one of the things that has been seen and has been applied in the learning process at school is digital books or better known as school electronic books (e-books). Digital books are available in a variety of formats, both those supported by large companies and other formats that are compatible with specific digital book devices or readers. In this study, researchers focus on digital books in flipbook format. The term Flipbook comes from a children's toy that consists of a series of different images. When the pages are opened in sequence, the images appear to move, resembling the effect of opening a printed book. Flipbooks are not always a book in themselves, but they can also be an additional feature in a book or magazine, usually located in the corner of the page (Aprilia et al., 2017).

Based on the background that has been explained, it is necessary to carry out a learning media development, where the researcher is interested in conducting research with the title flipbook-based interactive learning media development in the creative products and entrepreneurship class XI Subject.

RESEARCH METHODS

This project work is a development that uses the Research and Development (R&D) method, this method will produce a certain product which will later be tested for the effectiveness of the product. According to Brog and Gall in Nourman (2022), development research is an effort to develop and validate products that will be used in the learning process.

The model of developing a learning product certainly requires processes and steps that must be passed in order to create a good product according to the criteria that have

been set. The learning design model used in this project work research is ADDIE (Analysis, Design, Development, Implementation and Evaluation). According to Mulyatiningsih (in Tania: 2020), this model has an effective function for guidelines in the design of teaching aids and training programs. The training in question is learning. Therefore, this model can be used to develop various products such as models. Learning strategies, teaching methods, media and teaching materials.

The ADDIE Development Model has five stages that need to be passed, which are as follows. First, the Analysis stage. This analysis stage is an activity that includes 3 steps of analyzing, namely problem analysis, needs analysis, and learning goal analysis. Second, the Design stage. In this design stage, design the product that is being developed to solve the problem after it is found in the analysis stage. Third, the stage of development. This development stage is a step in product development after it is designed. This stage conducts validation that is tested by experts which is presented in the form of validation sheets of experts, both media, material and language experts. Fourth, the Implementation stage. This implementation stage is a step in implementing a product that has been declared valid and straightforward by experts, both media, material and language experts. Fifth, the evaluation stage. This evaluation stage is the last step carried out after the product trial for students. If the evaluation results are declared feasible, no revision is required or vice versa.

RESULTS AND DISCUSSION

Results

The feasibility of the flibook learning media achieved a "Worthy" level from a material expert with a final average score of 4.08 and a "Very Feasible" level from a media expert with a final average score of 5, as well as a "Worthy" level from a linguist with a final average score of 4.3.

The following is presented as a result of the revision of suggestions and comments from material experts.

A. Hakikat Kewirausahaan

Kita sering mendengar kata kewirausahaan, apa sebenarnya arti dan kata kewirausahaan itu sendiri? Kewirausahaan adalah merancang dan menjalankan suatu usaha seorang wirausahawan adalah seseorang yang memiliki usaha kecil yang menawarkan produk berupa barang atau jasa orang-orang yang berkemampuan di bidang kewirausahaan disebut dengan wirausaha. Namun, pada tahun 2000-an, pengertian kewirausahaan mengalami perkembangan makna menjadi kemampuan untuk melihat peluang dan mewujudkannya menjadi sebuah usaha.

Sikap dan Perilaku Wirausahawan | Produk Kreatif dan ...

1. Pengertian Kewirausahaan

A. Been Bapstisa Sy (1916)
 Seorang wirausahawan adalah agen yang mengaitkan berbagai alat-alat produksi dan menemukan nilai dari produksinya

B. Ahmed Sanusi
 kewirausahaan adalah suatu nilai yang diwujudkan dalam penjualan, trik, teknik, tenaga penggerak, proses, dan hasil bisnis

C. Soeharto Prawiro
 Soeharto Prawiro mendefinisikan kewirausahaan sebagai suatu nilai yang diperlukan untuk memulai sebuah usaha dan pengembangan usaha.

Sikap dan perilaku wirausahawan **2**

(Before revision)

A. Proses Kerja Pembuatan (Prototyping) Produk Barang dan Jasa

Membuat prototipe produk barang atau jasa membutuhkan ide cemerlang dan tangan dingin seorang desainer. Tentu saja seorang desainer harus melalui tahapan-tahapan dalam merencanakan suatu produk. Bagaimanapun juga sebuah prototipe akan mewakili produk barang atau jasa yang sebenarnya, sehingga proses pembuatannya harus dilakukan dengan cermat.

E Prototype | Sk...

1. Tahapan-Tahapan dalam Proses Kerja Pembuatan Prototipe

A. Memformulasikan Hasil Riset Pasar
 Bisa dikatakan titik tolak dalam tahapan kegiatan desain produk barang ataupun jasa adalah riset pemasaran. Mengapa produk barang atau jasa adalah riset pemasaran. Mengapa demikian? Tentu saja, untuk mengetahui produk yang diinginkan pelanggan, seorang desainer produk harus memerhatikan data hasil riset pemasaran.

B. Memperimbangkan Kemampuan Fasilitas Perusahaan
 Tahapan kedua yang harus diperhatikan oleh seorang desainer prototipe, yaitu kemampuan perusahaan, yang meliputi seberapa banyak tenaga kerja, mesin-mesin, dan peralatan penunjang lainnya.

Proses kerja pembuatan prototipe produk barang **2**

(After revision)

Rangkuman

1. Wirausah adalah kemampuan untuk merancang dan menjalankan sebuah usaha.
2. Proses kewirausahaan: tahap memulai, tahap jalan, tahap mempertahankan usaha, dan tahap mengembangkan usaha.
3. Sikap dan perilaku wirausaha.
4. Keberhasilan dan kegagalan usaha.

Tugas Individu
 Carilah pengusaha inspiratif di lingkungan sekitar. Tuliskan perilaku prestafit apa yang bisa kalian diteladani?

Tugas Kelompok
 Siswa di bagi dalam beberapa kelompok yang terdiri dari 4-5 siswa. Siswa Diminta untuk melakukan wawancara dengan seorang wirausaha di lingkungan sekitar. Kemudian mempresentasikan hasil wawancara di depan kelas. Beberapa point yang dilakukan saat wawancara adalah sebagai berikut:

- a. Latar belakang sebagai wirausaha
- b. Jenis usaha dan produk
- c. Pemasaran produk
- d. Konsumen seserannya

Quiz

Sikap dan perilaku wirausahawan **5**

(Before revision)

Rangkuman

1. Tahapan-tahapan yang perlu diperhatikan pada saat proses kegiatan desain produk, antara lain memformulasikan hasil riset pasar, memperimbangkan kemampuan fasilitas perusahaan, membuat sketsa bentuk produk, dan membuat gambar kerja.
2. Gambar kerja terdiri dari gambar semua komponen produk lengkap dengan bentuk, dimensi, material, gambar susunan, spesifikasi yang memuat keterangan-keterangan yang tidak dapat dibuat pada gambar, serta rincian biaya.
3. Faktor-faktor yang memengaruhi prototyping, antara lain fungsi produk, standar dan spesifikasi desain, tanggung jawab produk, harga dan volume, dan evaluasi prototipe.
4. Prototipe merupakan model produk yang pertama yang akan dibuat, prototipe ini memperlihatkan bentuk serta fungsi yang sebenarnya, sehingga sebelum perusahaan memproduksi, maka prototipe diusahakan untuk dibuat terlebih dahulu.

Tugas Individu
 Cari Informasi dari berbagai sumber mengenai tujuan dilakukannya kegiatan prototyping produk barang dan jasa. Kemudian, buatlah analisis dari informasi tersebut. Tulis dalam kertas folio

Tugas Kelompok
 Buatlah kelompok, masing-masing terdiri atas 4 siswa. Carilah artikel mengenai diagram alur proses pembuatan prototipe di perusahaan tekstil, dan juga di perusahaan jasa. Buatlah perbandingan apakah ada perbedaan. Tugas ditulis dalam kertas folio. Diskusikan hasil yang kalian temukan. Presentasikan di depan kelas.

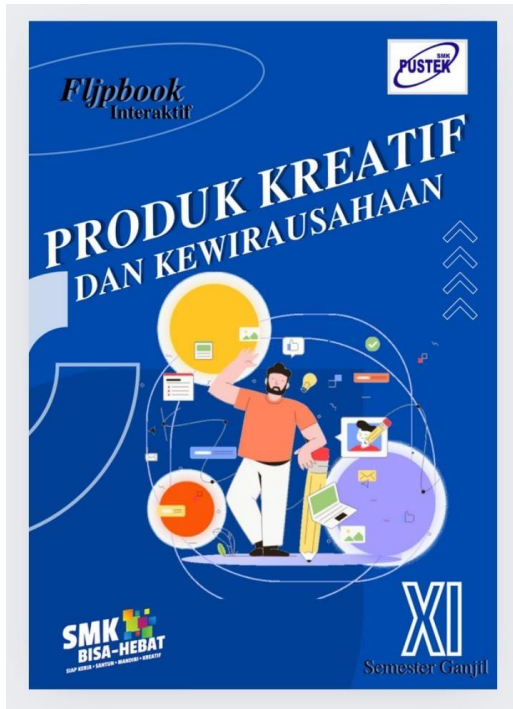
Format Tugas

Quiz

Proses kerja pembuatan prototipe produk barang **4**

(After revision)

The following is a revised version of suggestions and comments from media experts.



(Before revision)



(After revision)



(Before revision)

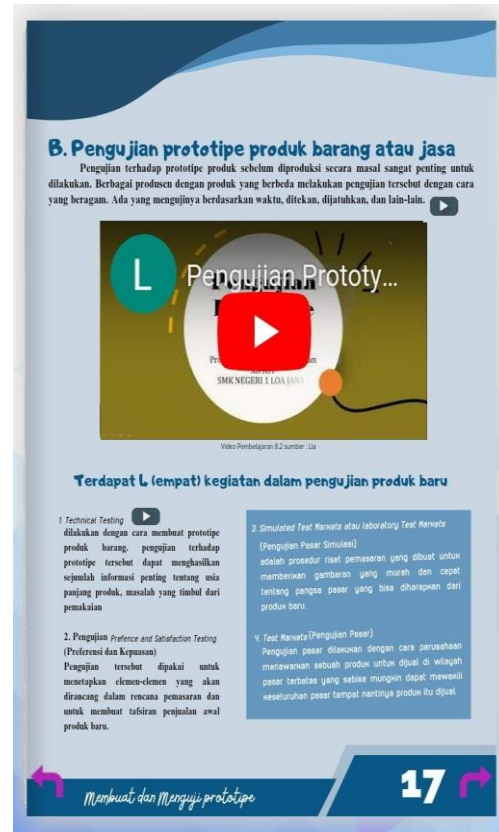


(After revision)

The following is the result of the revision of suggestions and comments from linguists.



(Before revision)



(After revision)

The step after the validation test was carried out by experts such as material experts, media experts and linguists. Then the flipbook learning media was piloted for small group students. This small-scale trial aims to find out the advantages and disadvantages of flipbook media which will later be used as a learning medium where flipbook learning media has been registered with Intellectual Property Rights with number EC0020451579, June 19, 2024 and 000626932 registration number.

Data collection was carried out in this small-scale trial by giving a questionnaire to 5 students as random research respondents. From the results of the questionnaire collection, the results of the assessment and suggestions of students on the flipbook learning media developed so that it can be used as input to make improvements before being used in field tests. This small group trial was carried out on Tuesday, May 21, 2024.

The results of the analysis can be presented after a small trial by students is produced. The total average is 17.3 and the final average (X) of 3.46 is located in the level of $3.4 < X \leq 4.2$. Based on the results of the data, it shows that the flipbook learning media developed can be said to be "Feasible".

The next stage is a field trial or large-scale trial for students in class XI TKJ 1 SMK Pustek Serpong. In this field trial, data collection was carried out by providing questionnaires. From the results of the questionnaire collection, the results of student assessments and suggestions on the Interactive Flipbook learning media developed so that it can be used as input for revision or improvement to the development of the final stage of the pocket book, in addition to that in this field trial a learning motivation questionnaire was given to find out if there was an increase in student learning motivation after learning to use the accounting pocket book that had been developed. This field trial was carried out after learning activities were carried out during two meetings using Interactive Flipbook learning media, namely on May 23, 2024.

The results are in the form of aspects of students' assessment of flipbook learning media, which are as follows.

The results of the analysis after a small trial by students were produced. The overall average total is 94.7 and the final average (X) of 3.76 is located in the level of $3.4 < X \leq 4.2$. Based on the results of the data, it shows that the flipbook learning media developed can be said to be "Feasible".

The total average learning interest is 89.93 and the final average (X) of 3.58 is located in the level of $3.4 < X \leq 4.2$. Based on the results of the data, it shows that the flipbook learning media developed can be said to be "Feasible".

The total average teacher response of 15.19 and the final average (X) of 3.79 is located in the level of $3.4 < X \leq 4.2$. Based on the results of the data, it shows that the flipbook learning media developed can be said to be "Feasible".

The next stage is the evaluation stage. This stage is needed to find out whether the tested product can be used to support the learning process and its suitability can be improved by distributing an improvement questionnaire (evaluation). The evaluation of Flipbook product development was carried out based on the results of suggestions from several experts, which are as follows.

First, comments and suggestions from material experts, that it is better to type material that needs to be tidied up, add at least 15 references, Individual and group task forms should appear under the task in the form of links. So that the use of flipbook learning media can provide convenience for students in understanding the material.

Second, comments and suggestions from media experts, that the presentation of the material is sufficient and can be understood by students. It is recommended that the cover include an element of entrepreneurship and the font size is corrected.

Third, comments and suggestions from the language, it is recommended that the use of spelling of foreign terms is italicized, the use of capital letters and punctuation are observed.

Fourth, comments and suggestions from subject teachers and students of grade 11 TKJI 1 are easy to use anywhere and can be accessed anytime if you want to learn them related to the material being taught.

Fifth, from the results of the assessment by material experts, media, language, teacher responses and students, the researcher has made improvements to comments and suggestions to provide ease for students in understanding the material.

Previously, the distribution of assessment questionnaires had been distributed at the field-scale trial stage. The assessment system in the use of the questionnaire is on a likert scale with five alternative answers to valid question items in the m1 questionnaire totaling 20 questions. There were 25 students who submitted the questionnaire. In this questionnaire, a trial has been carried out using a reliability test and a Cronbach's Alpha score of 0.749 learning media questionnaires, 0.718 student interest questionnaires are located between $0.7 \leq \alpha < 0.8$, then the data is said to be Good or Reliable.

The Flipbook learning media that has been developed is expected to provide reference materials for teaching for educators and learning materials for students or students at school when participating in the learning process. The use of this learning media is intended for students of SMK Pustek Serpong class XI TKJ even semester from chapters 5 to 8 which are compiled and contained in this Flipbook learning media. Among other things, starting from the material, the work process of making prototypes of goods and services products to making and testing prototypes.

Some of the instructions in the use of this Flipbook learning media can be described as follows.

First, instructions for students. (1) Students can read, interactive Flipbook of creative products and creativity subjects through the URL Link shared by the teacher as a system of information material to be learned. (2) Students can learn interactive Flipbooks anywhere and anytime because it is in the form of a URL Link accessed through a smartphone or laptop. (3) Students can fill in the attendance before the learning starts by clicking on the automatic attendance list tool. (4) Students can understand the material easily, by clicking on the tools of images, learning videos and audio information that support according to the material. (5) Students can read and memorize important material points presented in the material summary through search toolbar search. (6) After reading, studying the material, students can measure the level of knowledge and understanding of the material by working on individual questions, group questions and quiz questions. (7) Students can ask questions or discuss with the teacher of the Creative Products and Entrepreneurship subject and their friends, if there is material that has not been understood.

Second, Instructions for Teachers or Educators. (1) Teacher Educators can use this Interactive Flipbook as a tool to teach and deliver material to students. (2) Teachers can use Interactive Flipbooks through URL Links anywhere and anytime because of the small size of the pocket book so that it is easy to carry and study at any time, such as to review a material. (3) Teachers can share the URL of the Interactive Flipbook Link as a teaching material to increase student learning motivation, because the pocket book is developed with an attractive design and is an update of learning media, so that students will be interested. (4) Teachers can measure the level of student success in learning, through the quiz button or individual and group assignments to measure the level of student understanding in the material by giving assignments and practice questions contained in the Interactive Flipbook. (5) Teachers can invite students to discuss during learning activities about the analysis problems contained in the Interactive Flipbook.

Discussion

Today's technological advances are developing very rapidly, and one of the most frequently used technologies is smartphones. Its use has now reached various levels of society, especially among students (Ilma & Syafaatul Hidayati, 2023).

One of the learning media that can increase student interest is flipbook learning media. This is in line with the research that has been carried out by (Setiadi et al., 2021) given the many advantages and benefits of using flipbook learning media in the learning process, the researcher will elaborate further on its application in online learning. Flipbook is a form of teaching material that is presented in electronic book format (e-book). This media can be developed by compiling subject matter texts, adding interesting images and videos according to the material, including supporting audio effects, and presenting concept maps, quizzes, material summaries, and practice questions.

The research was also conducted by (Hayati et al., 2015) the feasibility test of Flipbook Physics is carried out by experts in the field of materials and media, and validated by users. The results of the assessment showed that media experts gave a score of 91.46%, material experts 94.17%, while the trial on users obtained 99.38% results from educators and 96.70% from students. Once validated, the Physics Flipbook was used in an experimental class to collect data. The results show that the average percentage of increase in all aspects reaches 57.23%. Thus, it can be concluded that the multimedia-based Physics Flipbook is able to improve the learning outcomes of high school students.

The same is true of the research conducted by (Sari et al., 2017) the development of digital flipbook learning media for social studies subjects with the material The Beauty of Diversity in My Country was carried out using the ADDIE R&D development model and has been tested on grade IV students. The final product produced is in the form of a digital flipbook containing the social studies material. This media was developed using Adobe Flash and Adobe Animate. The results of assessments from experts, including media experts and material experts, show that this digital flipbook has good quality and is worth using. In addition, this media has been tested by teachers and students. Based on the entire development and testing process, it can be concluded that this study has succeeded in producing social studies digital flipbook learning media that can be used as a learning tool in the teaching and learning process in elementary schools.

CONCLUSION

Based on the results of the Project work with the development of flipbook-based interactive learning media and discussions, it can be concluded that as follows: (1) The Validation Test Assessment by Material Experts shows the results obtained, namely the

average final score of 4.08 is classified in the "Feasible" category. (2) The Assessment of the Validation Test by Media Experts showed that the results obtained, namely the average final score of 5 were classified in the category of "Very Feasible". (3) The Assessment of the Validation Test by the Linguist showed that the results obtained, namely the average final score of 4.3 were classified in the "Feasible" category. (4) The assessment by the teacher's response showed that the results obtained, namely the average final score of 3.79 were classified in the "Feasible" category. (5) The assessment of the feasibility of flipbook learning media in small-scale trials and field-scale tests for students was obtained with a final average of 3.64. Based on these results, it can be concluded that the assessment by students from a small scale and field scale can be said to be "Feasible" to use.

Thus, the Flipbook learning media developed in project work can be used as one of the references that will be used in the learning process in the classroom. This research is expected to be developed by future researchers regarding the limitations of the product, namely by adding learning materials in odd semesters, more interactive and easy to implement for teaching and learning activities.

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