

Development of Interactive E-Book by Flip PDF Professional Application for the Improvement of Students' Competence in French Language

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ABSTRACT

This research aims to explain the development process, validity, and effectiveness of Flip PDF Professional application media which produces interactive French E-Book products that improves students' language skills. This development process was validated by four media and material validators, and the media was suitable for teaching and learning use at SMA Plus Efarina Simalungun. From needs analysis, students had difficulties in learning French because the learning methods were oriented to lectures / demonstrations and discussions although they needed technology-based media which could become solutions and had several advantages, such as, it was easy to use anytime and anywhere, simple (not heavy on storage), interactive, and complete with video, audio, text, quizzes, etc. This paper was adapted from ADDIE model proposed by Molenda although this paper only discussed the development stage. In the material validation process, an average score of 87% was obtained so it was categorized as very good. Meanwhile, in the media validation process, an average value of 90% was gotten so it was categorized as very good too. Thus, the development of the Flip PDF Professional application media which was proved as interactive French E-

book products could improve students' language skills.

Keywords: Development, Interactive, E-Book, Augmented Reality, Livgent.

INTRODUCTION

At the time of the test, the scores for some materials had not reached the target, and students had not finished their Minimum Completeness Criteria or KKM. Around 60% of them experienced difficulties in learning French, ranging from pronunciation, reading, and vocabulary. Teachers tried to overcome them by Discovery Learning as teaching model, combined with Problem Based Learning and Project Based Learning. Apart from that, teachers also attempted to make learning more interesting and maximal through games during the learning process and they were well-received by students.

The learning process was only verbal without being combined with other learning models so students did not understand the materials of four skills, namely oral comprehension, written production and comprehension, and oral production. During observations, we focused on oral production by inviting students into dialogue, and into play a role. However, because there were no divisions into four skills in the process of learning French in high school, teaching oral production received less attention. Poor

pronunciation, grammar, and vocabulary mastery were still the main problems, and the media was not yet supportive. All students argued that the learning was carried out by conventional media, such as, textbooks, exercises, and texts, so the learning process was not well-supported. In learning, conventional media can actually be converted into multimedia, but there might be a change in form from print to digital using supporting software. In this research, we developed learning media in the form of interactive electronic book (E-Book) as a learning solution to support both online and face-to-face learning process which was aimed at improving French language skills. The content of the subjects remained the same as stated in the syllabus; hence, the aim of this paper is to develop an E-Book added to audio, image, and video functionality. Its contents include grammar, vocabulary list, and pronunciation. There are also practical questions in which students can answer directly and correct automatically by clicking on the link provided. Arsyad (2014) revealed that interactive E-Book allow students to not only involve the sense of hearing, but also the sight.[1]

The more senses are used to receive information, the more likely the information would be remembered and understood. Experts prove that there are significant differences in learning outcomes achieved through the senses of sight and hearing (Prihantana), so, the presence of E-Book supported by visualization and audio would be good in the French language learning process in high school.

To complete the E-Book which becomes a learning medium that supports 21st century skills, the assessment sections such as assignments and questions presented in this interactive E-Book would be integrated according to 21st century skills which are not only focused on the cognitive domain but also include a number of personal and social skills. Therefore, it is hoped that this interactive E-Book can be an effective

learning method for improving French language skills in high school.

LITERATURE REVIEW

According to Law No. 20 of 2003 regarding the national education system (Dikmenjur), learning is defined as a process of interaction between students and educators and learning resources in a learning environment. Zulherman, et al. stated that learning is a collaborative process between teachers and students to achieve predetermined goals.[2] Sugandi, et al. indicates that learning is the translation of the word “instruction” which means self-instruction (from the internal) and instructions (from the external).[3] External learning, among other things, comes from the teacher called teaching and in external learning, learning principles would automatically become learning principles. Learning is an activity that is intentionally carried out under various conditions in order to achieve a goal that has been planned in the program. The term apprenticeship is an integral part of learning and teaching.

E-Books as transformations from traditional books to digital forms allow students to easily search for information (Nugroho). Koh & Herring argued E-Book have a variety of advantages over current printed books.[4] They are easy to access (no need to go to the library), easy subject searching, accessible anywhere and anytime, display is better, cheaper and saves space. Sutopo argued, multimedia consists of two types, namely linear and non-linear multimedia. Multimedia that runs directly or sequentially is called linear, for examples television and movies. However, if multimedia can be controlled by the user, it is called non-linear, often called interactive multimedia, for example interactive multimedia which is a learning presentation where users can choose the topic, they want to learn without having to wait so that the entire presentation is displayed.

Flip PDF Professional (see Fig. 1) is one of the developments of interactive learning media since it is software for creating

electronic books in the form of a flip book (Hidayatullah & Rakhmawati); Mulyadi & Wahyuni). This software has the advantage of being able to enter video and audio into a PDF so that it does not have to be opened elsewhere or in a separate location, but is

directly entered into a PDF file (Hardiansyah). In addition, it is also possible to add URLs for quizzes, so, the learning materials presented are very complete.

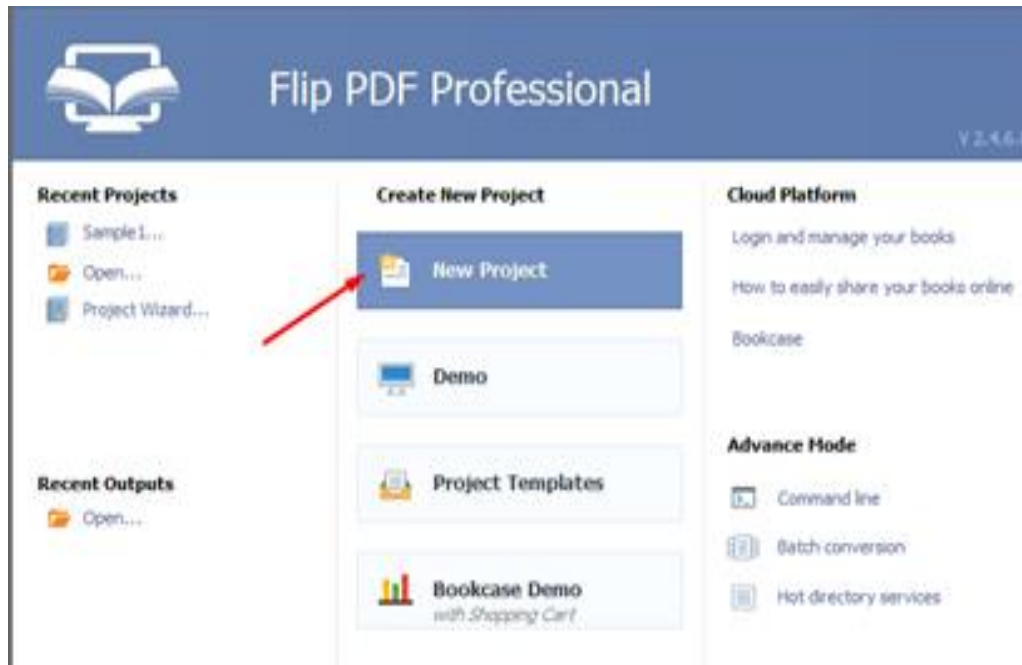


Figure 1. Display of Flip PDF Professional

MATERIALS & METHODS

Sugiono argued the term research and development (R&D) is a type of research method being used to manufacture a particular product and test its effectiveness to the product.[5] This research used R&D involving the ADDIE research model proposed by Molenda.[6] The ADDIE is an acronym for the core activities included in it, namely analysis, design, development, implementation, and evaluation (see Fig. 2).



Figure 2. ADDIE search model

ADDIE is divided into five phases, namely analysis phase (or needs analysis of learning media programs, related to learning problems, goals, and objectives), design phase (including the design and manufacturing of educational media designs), development phase (the stage of manufacturing learning products or media), implementation phase (such as the implementation of learning media), and evaluation phase (the evaluation phase to assess the developed media). Finding aids refer to tools used when searching and using a method. In this study, we applied several instruments and techniques to collect data, such as, documentation, questionnaire method. The data analysis techniques are qualitative and quantitative.

RESULT AND DISCUSSION

This section describes the results and process of development-based media which produces E-Book by Flip PDF Professional.

This development process is described in three stages, namely, analysis, design, and development.

Analysis

Needs analysis was carried out by distributing questionnaires to Class X having 20 students at SMA Plus Efarina via the Google Form link. Data showed that 60% of students had difficulty in learning French; that their difficulties were in pronouncing and reading words, listening to conversations, and writing French, as well as in lecture/demonstration and discussion learning methods; that there were 85% of students with conventional learning media (package books), and that there were 95% of students needing technology-based media.

Design

The design is a continuation of the needs analysis that was shared on Google Forms. Making designs based on the Flip PDF Professional application is conceptual, meaning that it is carried out in detail and planned and has a clear theoretical basis, context, objectives, media, and benefits. Three design processes are described below.

A. Préparer le matériel

Of five books that have been used as references, the material was summarized and continued to be developed into Flip PDF Professional media to become an E-Book.

B. Creating illustration/image designs

After designing the material, we prepare illustration and image designs which are combined with E-Book development. This activity aims to add to and beautify the book with a touch of color and illustrations depicting France. The illustration (see Fig. 3) is the result of our design using the application assistance, namely Canva.



Figure 3. Illustration of design results from the Canva application

C. Collecting audio and video

In the audio creation process, we use a help website, namely soundoftext.com. When finishing creating the audio, we also collected videos relevant to the material. Our videos were based on the references from YouTube by including the source and YouTube link.

Development

This development stage is a continuation of the design stage, where the main activity is designing all the elements that will be transformed into the development of Flip PDF Professional media to become an E-Book. The following are the stages in the media development process.

A. Initial stage of production

1. The first step was done by installing the PDF Professional application on the website flipbuilder.com/flip-pdf-pro-for-windows on Google (consider Fig. 4).



Figure 4. Professional PDF Website

2. having clicked Download, the application is available in the download file and we continue to install the application so that it is paired with the computer device. This

process takes quite a while to succeed (see the application in Fig. 5).

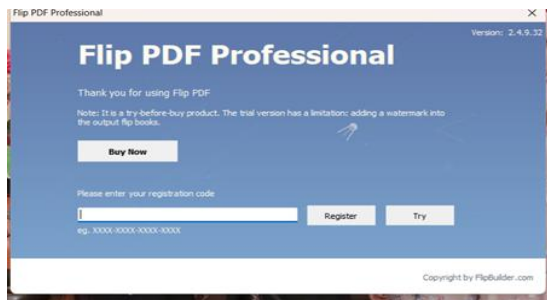


Figure 5. Initial display of the application

B. Core stage of production

1. After clicking “enter” on the application registration menu, the display appears (see Fig. 6). In the media development process, click 'New Project', then, two options appear, namely HTML5 or Flash and we selected the HTML5 and click ‘OK’.

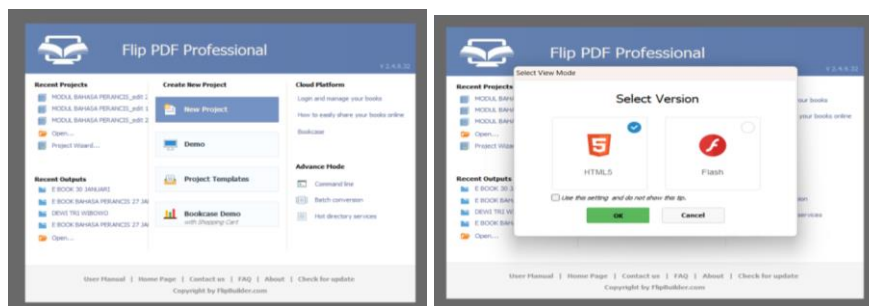


Figure 6. Starting a new project

2. Enter the document as shown in Fig. 7.

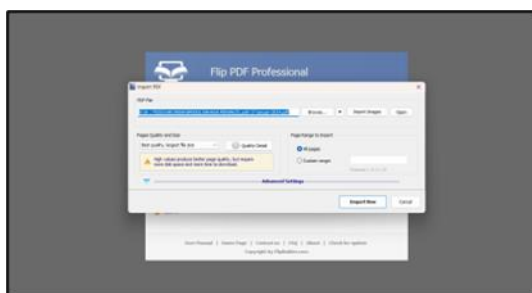


Figure 7. Enter documents

Having clicked the Browser, we look for the book file that we have previously designed in the form of a PDF file. After the file has been entered successfully, we check the "all pages" menu and the final step is to click the "Import Now" menu. Wait for the Converted page process for a few minutes.

3. The book file has been entered into the Flip PDF Professional application, click Edit pages to develop the media (see Fig. 8).

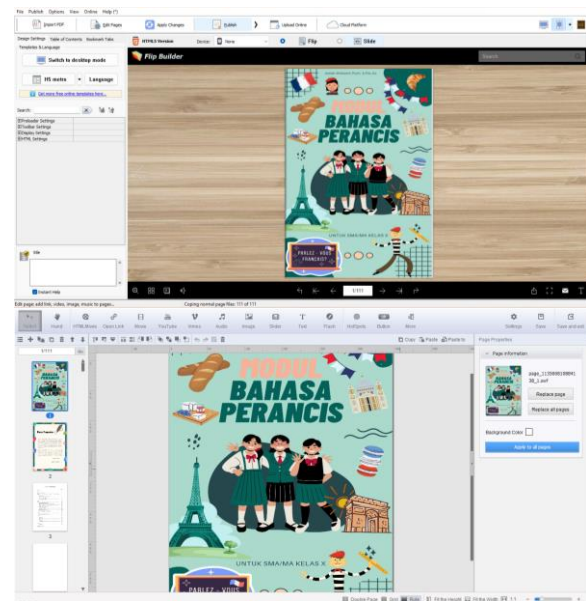


Figure 8. Edit pages

4. The display above is the main display in the media editing process because there are many tools which are described as follows.
a. 'Hand' tool; we use to replace the arrow cursor with a hand shape.



Figure 9. Hand tool

b. We use the 'movie' tool to add videos manually to the E-Book.

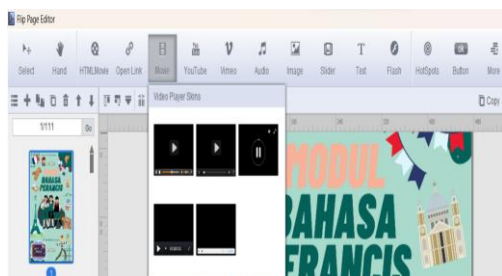


Figure 10. Movie tools

c. In the 'YouTube' tool, we use to add videos from YouTube links. Steps we can take are to click the YouTube tool, and to direct the cursor to form a square then adjust it to the size of the video displayed in the e-book. The next step is to enter the YouTube Video ID, then click save.

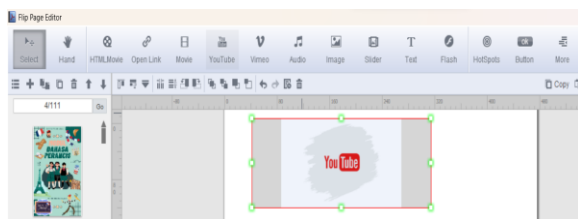


Figure 11. YouTube tools

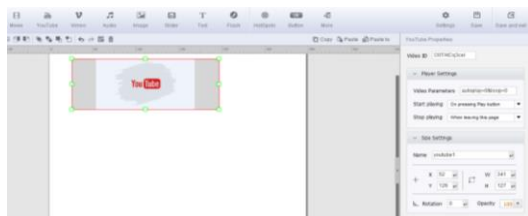


Figure 12. Enter the YouTube video ID tool

d. The 'Vimeo' tool also has the same working steps as the YouTube tool.

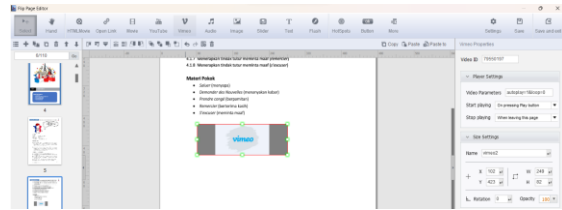


Figure 13. Vimeo tools

e. We use the “audio” tool to add audio from the results we have created at the design stage with the soundoftext.com tool. The audio model can be selected using the display below.

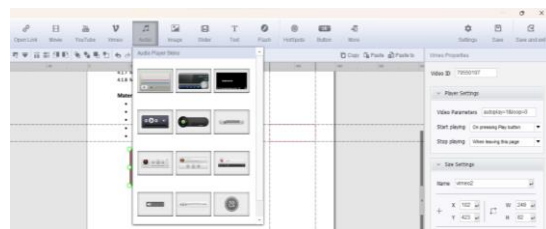


Figure 14. audio tools

f. About the “image” tool, we use this tool to add images that match the theme of the material. Working steps include add action / select an image, then we can adjust the image lighting, filter the image, frame, rescale, etc.

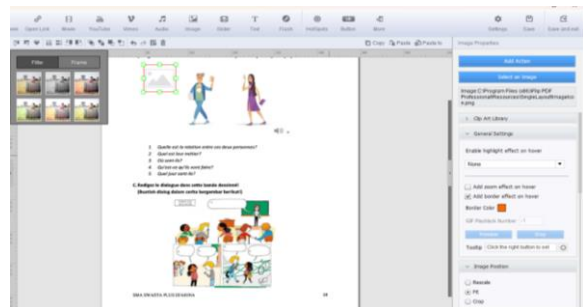


Figure 15. Image tools

g. The “slider” tool is used to make the image more lively and interesting.

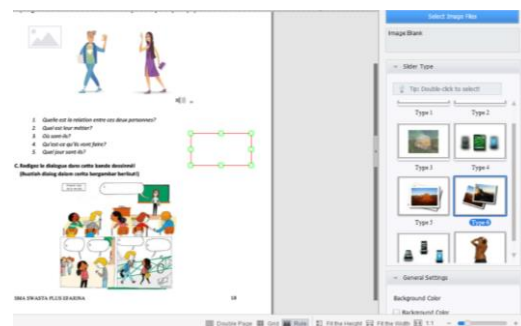


Figure 16. Slider tool

h. We use the “text” tool to add various types of writing.

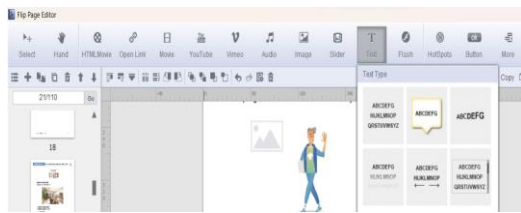


Figure 17. Text tool

i. The “flash” tool is used for images or illustrations to move for a few seconds. We use the “hotspot” tool and the “button” tool to watermark the interactive quiz that we created in the E-Book. The steps include: click the watermark that we chose, click add action, then click the mouse down and open the quiz. After that, we add questions and answer options, and provide correct and incorrect answers. Then select “save” and exit. After clicking “OK”, the watermark appears according to the color we chose and we can rename it with the name 'INTERACTIVE QUIZ'. Students can click on this quiz to play French questions. After everything is finished, we save and exit the editing file.

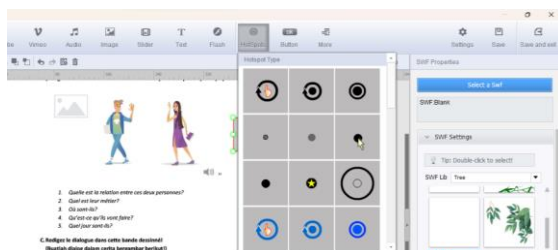


Figure 18. Hotspot and button tools

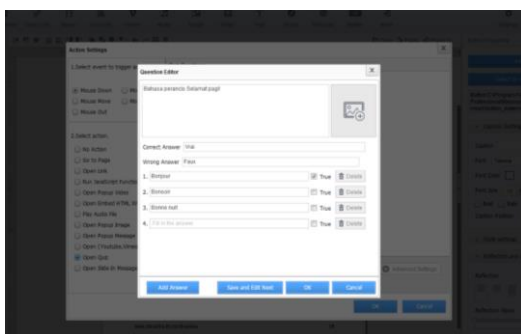


Figure 19. Interactive quiz

C. Final stage of production

At this stage, after the book results have been developed, return to the “home” menu.

In this menu there are “apply changes”, “publish”, and “upload online”. We use these three menus to finalize media production.

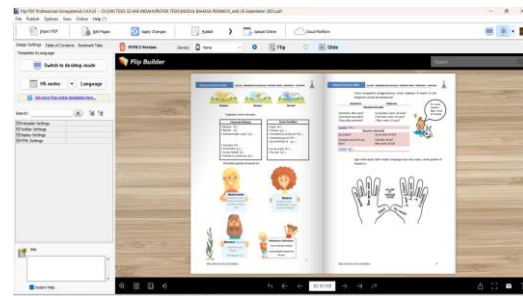


Figure 20. Apply changes

1. Next, click “Publish”, and then give the file a name according to the name of the book being developed. The final step is to click “Convert” and wait a few moments. The finished E-Book is in the form of a Professional PDF file.

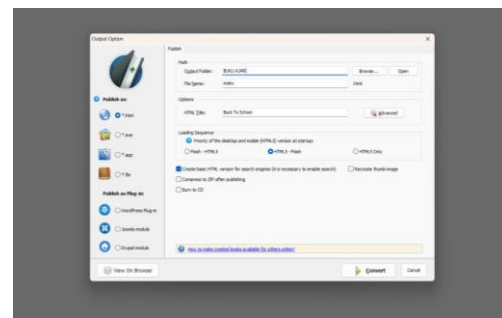


Figure 21. Convert

2. The next step is to make the resulting Flip PDF book into a link. In this method, we use the website tool <https://app.netlify.com/login>.

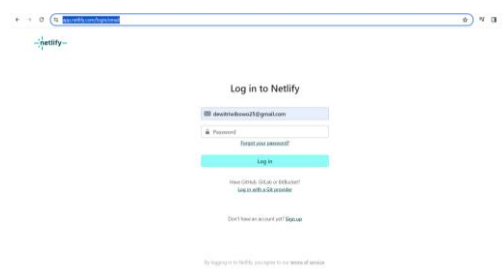


Figure 22. Netlify login

3. In the enter your email address and password menu, then we enter the E-Book and wait a few moments. After that, the E-

Book link appears, then copy and paste. We share the final step with students via the WhatsApp group with the following link <https://ebookbhspersancis.netlify.app/>. The display in Fig. 24 is the final result of an E-Book based on Flip PDF Professional.

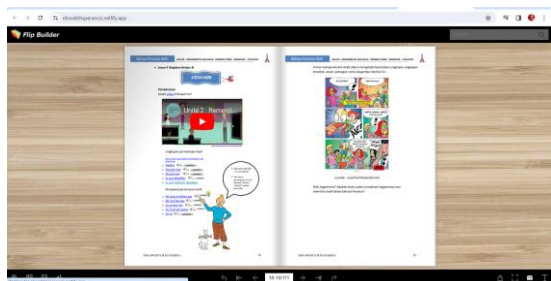


Figure 23. E-book in the form of a website by Netlify

Media validation

This stage is divided into two, namely material and media validation. Material validation was assessed by two material experts and had four aspects: 1) the suitability aspect of the content is divided into four, for instance, a) conformity of the material with the RPP, b) accuracy of the material, c) update of the material, d) encouraging curiosity; 2) aspect of appropriateness of language is divided into five, such as, a) straightforward, b) communicative, c) dialogic and interactive, d) conformity to language rules, and e) use of terms, symbols or icons; 3) the feasibility aspect of presentation is divided into four, for example, a) presentation technique, b) presentation support, c) presentation of learning, and d) coherence and sequence of thought flow; and 4) contextual assessment is divided into two, namely, contextual nature and contextual components. In media validation there were two experts involved and this validation had three aspects, such as appearance, readability, and program.

CONCLUSION

In the material validation process, an average score of 87% was obtained so it was categorized as very good. Meanwhile, in the media validation process, an average score of 90% was achieved so it was also categorized as very good. Thus, the development of media based on the Flip PDF Professional application which produces interactive French E-book products can improve students' language skills.

Declaration by Authors

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