



Development of Arabic E-Book Media Based on Flip PDF Professional Application for Students

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ABSTRACT

The learning process in which the atmosphere brings boredom and laziness and the lack of use of learning media is one of the factors in the lack of effective learning and the lack of enthusiasm of students in learning. For example, when learning takes place in schools, educators still use package books as materials in the learning process, so that educators cannot create a learning atmosphere. Therefore, educators need to increase their creativity by developing skills in making teaching materials in the form of utilizing technology-based learning media such as developing Arabic e-books using the Flip PDF Professional application. The purpose of this study was to develop Arabic e-books with the professional flip pdf application for junior high school students. In developing this e-book, researchers used the Research and Development (R&D) method with the Borg & Gall technique, the subjects in this study were 125 junior high school students. Based on large-scale testing, the results of the questionnaire of students' learning independence in the e-book developed reached an average percentage of 82%, namely the "Good" assessment and also included the "High" category. The results of small-scale testing in the questionnaire assessment of students' interest in learning in the e-book developed reached an average percentage of 85%, namely the "Good" assessment and included the "High" category. Based on small-scale testing, the results of the questionnaire of students' interest in learning in the e-book developed reached an average percentage of 85%, namely the assessment of "Good" and included the "High" category. From the results of this study, the researcher concluded that the Flip PDF Professional-based E-book for students developed was able to increase students' interest in learning and learning independence.

Keywords: *E-Book, Professional, Learning Independence*

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INTRODUCTION

Education in Indonesia aims to improve human resources that have cognitive, affective and psychomotor abilities. Education makes learners develop to become more independent (Abou-Alfa dkk., 2020). Education in Indonesia is divided into four levels. One of them is the first level of secondary education, namely Junior High School or Senior High School level. This level of secondary education is a continuation of basic education for students (Dwivedi dkk., 2020). At the junior high school level, students are looking for their identity because they have gone through basic education. At this junior high level, the education provided should be interesting because students at this level like something interesting and are not easily bored. Educators in the education process should accompany education with technological developments because at this level students feel technology is something that can make education effective and practical, just try if education is not accompanied by the times the end result of education is the next generation not the straightener generation, why?. Because what is taught is only the opinion of some old experts, if the Educator is able to carry out Education according to the times, then the science is developing rapidly from all experts around the world. (Wahyuni & Bhattacharya, 2021).

The success of a process in education is inseparable from the rules provided by the curriculum that makes the learning process systematic, and is assisted by good communication from all elements related to the learning process. (Mahfud, 2019). Learners can be said to be qualified if the education has a system that is worth quality (Wheelahan & Moodie, 2022). The main purpose of learning is to make learners independent, understand social life, and be able to organize themselves effectively with the means provided. (Lau dkk., 2021). One of the subjects in the Junior High School curriculum is Arabic (Veza, 2021). Some students think that Arabic is scary because to understand it requires a lot of Arabic vocabulary in order to understand the patterns in Arabic (Zubaidah & Rahman, 2019). Arabic language learning at the Tsanawiyah level emphasizes the ability to master a minimum of 300 vocabulary words, understand qira'ah and translation, and understand patterns in Arabic sentences (Kawar, 2021). Delivering Arabic learning materials requires materials, strategies, methods and media to understand Arabic effectively and efficiently. (Ritonga dkk., 2022). In addition to facilitating learning, creating media can make learning Arabic fun. (Bahrudin & Febriani, 2020). So that learning Arabic is no longer a lesson that is avoided by students (Ahmedov, 2021).

The development of science and communication technology in the era of the industrial revolution 4.0 has helped education in the learning process, for example in carrying out their profession as educators. (Kocdar dkk., 2021). Educators are assisted by utilizing various media in the learning process (Yao dkk., 2021). Helps the learning process run well and is educational (Arkorful dkk., 2021). So as to make Arabic language learning run more creatively, innovatively and fun, all these efforts aim to make education effective. (Duong & Silova, 2021). One way to make learning creative, innovative and fun is for educators to be able to make the learning atmosphere meaningful. Students tend

to prefer to learn using the internet, for example, learning to create animations, create audio and create videos which will later be used in intervals that help participants understand the concept of Arabic. (Syafril dkk., 2021). In understanding the concept in learning Arabic it is very important because if the idea in conveying the concept is wrong (Nusantara & Putri, 2021). If the delivery of ideas in conveying concepts is correct, it will make the reasoning and logic of learners correct. So that the learners' Arabic language material can be continued to the next stage. (Hudzaifah dkk., 2021).

(Eltahir dkk., 2021) From the weekly scores obtained by educators, most of the students scored below the KKM and some were absent from every Arabic language lesson. (Limlingan & McWayne, 2022). This phenomenon shows that Arabic language learning is still not optimal (Retnawati dkk., 2020). This condition can be caused by the lack of strategies, techniques, methods, models and media in the learning process. (Aliyyah dkk., 2020). The explanation from the school community, namely the principal and vice principal, explained that educators did not use creative learning media and multimedia in explaining the material. (Saripudin dkk., 2021). In reality, in the learning process, most of the educators in the learning process only use books and pictures, which results in a learning atmosphere that does not support Arabic language learning. (AlGhamdi, 2018). Seeing this situation, educators need to develop technology and communication skills by creating animated media in learning. (Rohaeti dkk., 2019). Which supports and fosters the enthusiasm of educators and students in the teaching and learning process (van Leeuwen dkk., 2021).

Arabic language subjects at the Junior High School level are one of the religious subjects at school, Arabic teaches us about words, sentences in the style of the Qur'an (Tabroni dkk., 2022). Arabic is beautiful because it is God's word. At the junior high school level, students are not only equipped with religious knowledge, but also learn about general science. (Purwati dkk., 2018). Arabic language learning is also one of the lessons that must be taught, because madrasah is a school under the auspices of the Ministry of Religion which emphasizes religious learning, one of which is Arabic language (Latief dkk., 2021). At the madrasah level, Arabic language learning is provided for students regarding the ability of students to memorize vocabulary of at least 300 vocabulary, be able to understand Qira'ah, be able to write Arabic and understand sentence patterns in Arabic. Learning Arabic will feel unfamiliar to students who come from public schools. (Çelik & İçduygu, 2019), other than students who have learned Arabic before or who come from madrasah ibtidaiyyah where they have been equipped with knowledge of basic Arabic before. (Robbani dkk., 2021). Therefore, educators must use multimedia learning media that helps convey Arabic language material so that it is easy to understand and interesting so that students are enthusiastic and able to digest lessons clearly (Amrina dkk., 2021).

Media is utilized as one of the tools used in the learning process which is useful for conveying knowledge in the form of information related to teaching and learning. (Udayani dkk., 2021). Media can also be used to create which is supported by several elements such as objects, people, the environment that contains learning material and is

also one of the conditions for receiving information. (Miranda dkk., 2021). In learning, media can be used with many creations according to the characteristics of the subject. (Treiblmaier & Sillaber, 2021). The development of technology in learning media, there are various media, namely transparency media, e-learning, print, audio, interactive multimedia and digital media. Specifically in this study researchers utilized digital media. Digital-based media is one of the methods in creative learning that can be used in madrasas. (Santosa & Jazuli, 2022). Using digital media in learning can increase the interest of individual students in learning (Schneider dkk., 2021). The use of digital media in the teaching and learning process does not require students to use mobile phones in learning, but is facilitated by the school by providing adequate infocus, speakers which are useful in the learning process later. (Koehler dkk., 2021). The development of e-book media in learning that is developed will be one way for an educator to accompany education with the development of science and technology. (Mevarech & Iddini, 2021).

Researchers hope that this research on the development of Flip PDF Professional e-books can help students and further researchers make different developments, namely making Android-based E-Books. Electronic book (e-book) is a book that can be stored in the form of files in general in the form of pdf, which can be downloaded or sent directly via electronic mail (e-mail). (Achdiani dkk., 2021). If the e-book is free then it can be downloaded without using internet data, if the e-book is paid then it must be paid in advance, in order to use it. In the learning process later, if the e-book has been downloaded then its use can be done without being able to use the internet again. (Susantini dkk., 2021). So that schools are not wasteful in using the internet. In its use, the Arabic e-book with the Flip PDF Professional application can be used by students and educators. The same research was conducted by (Salamiyah & Kholiq, 2020) explained that the development of e-books using the Flip PDF Professional application makes e-books even more creative, because the Flip PDF Professional application will display Arabic language learning with images related to learning, audio can also be found, video that will makes it easier for educators to teach material and is also able to maximize the enthusiasm of students in the learning process, thus causing students not to get bored during the learning process. (Graciani Hidajat dkk., 2020).

Similar research conducted by (Sriwahyuni, 2019) explains that Flip PDF Professional can increase students' enthusiasm for learning, but the difference between researchers and this study lies in the subjects of learning. (Charness dkk., 2022). E-book media with the Flip PDF Professional application makes learning fun, because the advantages of using Arabic e-book media with the Flip PDF Professional e-book application can be displayed with animated images related to learning, can also play audio if the learning is in the form of mufradat, and can also play videos on learning in the form of qira'ah or hiwar. (Abdullah, 2022). In addition, the advantage of online learning is that students can study independently at home. (Mandasari & Wahyudin, 2021). In the learning process, the educator acts as facilitating the media, which can facilitate the educator in conveying learning. (Morris & Rohs, 2021). In using this e-book media, the role of the educator is very dominant because he will monitor whether the use of this

media is able to increase the enthusiasm of all students, because each person's personality has a different way of understanding learning. So that educators are required to be active, creative and innovative in learning (Dhamayanti, 2021).

Based on the above problems, the researcher intends to conduct research on the development of Arabic e-book media using the Flip PDF Professional application for students which aims to increase students' interest in learning and learning independence in Arabic language learning subjects at Junior High School. By utilizing this learning media, researchers expect educators and students to maximize their enthusiasm in the teaching and learning process so that they are able to more easily analyze the Arabic learning material being taught, so that the learning objectives designed can be achieved according to what is expected. (Hadi dkk., 2022). This research was conducted with the following objectives: 1. Producing e-books based on Flip PDF Professional in Arabic language subjects for Junior High School; 2. Increase students' interest in learning in using Flip PDF Professional-based e-books in Arabic language subjects for Junior High School; 3. Increase students' learning independence in using Flip PDF Professional-based e-books in Arabic language subjects for Junior High School.

RESEARCH METHODOLOGY

This research was conducted with Research and Development (R&D) research design is a research method in education based on research and development in the industry, where the results of the research are able to create new products, which can be used in the field systematically. The development steps of Borg & Gall (2001) consist of 10 steps, namely: 1. Research and gather information, 2. Doing planning, 3. Initial product development in the form of preparation of learning materials, preparation of handbooks, and evaluation instruments, 4. Initial field testing in the form of interviews, observations, the results of which are analyzed, 5. Make revisions to the e-book that was tried on the trial, 6. Conducting the first field trial at school for students, 7. Make revisions to the e-book that has been done, 8. Conducting large-scale field trials with the results of interviews, observations collected and analyzed, 9. Revise the final e-book based on suggestions and field tests, 10. Implementing e-books and making reports on e-books developed. The tools and materials used in collecting data in this study are: a .. (Questionnaire). Questionnaires are a number of written questions related to a particular problem and contain answers to each question written, this questionnaire is done by giving a question sheet that has been provided to the respondent then filled in and returned to the researcher in accordance with the agreement, b . Observation. Observation is a careful review, this observation is carried out by making direct observations to schools by means of questionnaire tests, sound recordings and various images, c . Interview. Interview is a way of getting information by asking questions directly to the source. Interview is a research method that collects data and information carried out directly where during the interview period, the interviewer asks questions, asks for answers and asks for explanations, records important javaabn and records sound during the interview as evidence of the interview. The analysis technique used in this study is to use tools and

materials in the form of assessment bars assessed by material experts and media experts. Based on the results obtained, the researcher will conduct a design evaluation of the Flip PDF Professional-based E-book for experienced users.

RESULT AND DISCUSSION

The implementation of this Research and Development (R&D) research has been carried out in accordance with the steps that have been determined so that this research achieves the desired objectives as follows: 1. An Arabic e-book based on Flip PDF Professional for Junior High School, 2. Conducting an assessment of students' learning interest in using the Arabic e-book based on Flip PDF Professional. DF Professional yang dinilai melalui angket 3. Assessing the learning independence of students in using Flip PDF Professional-based Arabic e-books which are assessed through questionnaires that have been distributed to junior high schools. This research was conducted using the Research and Development (R&D) method, namely by distributing questionnaires. Questionnaire is a way of collecting data and information through a number of questions related to the research being conducted. In this study, researchers distributed questionnaires online, because the Madrasah level will carry out the exam so that the questionnaire is distributed online. Online questionnaire means that the research was conducted by distributing questions through Google Forms, Google Forms is a Google Form containing questionnaires that will be sent to a predetermined sample.

In using a questionnaire in research, there are several instruments that must be prepared. Like the questions that have been prepared on Google Form, because it fits the current situation. The results of the questionnaire obtained from this questionnaire are that researchers know whether the development of this Flip PDF Professional-based e-book is able to increase students' interest in learning Arabic and whether the use of this Flip PDF Professional-based e-book can increase students' independence in learning Arabic. Then, in this study the research used interview techniques. Interview is a method that is carried out by bringing together the interviewer and the interviewee face to face in order to exchange information and ideas through questions and answers in order to find out the meaning of the topic to be discussed. In conducting interviews, researchers must prepare several instruments such as: answer sheets, stationery, and recording devices if they need interview recordings that are useful as evidence of interviews. The purpose of the interview in this research is to obtain information from educators and students regarding the Arabic language learning process at the Junior High School, especially on the media used in the learning process. Which this interview was conducted at the initial step and step after the development of the Flip PDF Professional-based E-book media developed. In carrying out interviews, researchers must prepare mentally in themselves, so that when conducting interviews later researchers are not nervous or afraid anymore.

In this study researchers also collected data and information using survey or observation techniques, surveys are a way of collecting data and information carried out by researchers by observing the sample to be studied. The purpose of the survey technique is so that the sample to be studied gets complete and accurate data. The instruments

needed in the survey technique are survey guides, stationery if there is something important to record later.:

Research and Information Collecting, is a step where research and information gathering, including questionnaire planning, interview planning, observation planning, identification of research that has been done by researchers, small research and preparation in conducting research. Based on the results of preliminary information gathering, in Arabic language subjects in junior high schools, the learning process has not used interactive and multimedia learning media, resulting in a lack of interest from students in learning Arabic. Based on the events in the field, the following information was obtained: 1). Educators in the Arabic learning process have not used digital learning media, 2). In the delivery of Arabic language material, the material is not brought into the students directly because it only focuses on the material in the package book, so that learning seems monotonous. To overcome the above problems, an Arabic E-book based on Flip PDF Professional was developed, which is the development of this Flip PDF Professional-based E-book focused on increasing students' interest and independence in learning Arabic.

Planning, is planning research, which includes defining the skills to be learned, determining the learning sequence, formulating goals, and conducting small trials. Based on observations made of junior high school students, it is known that students when they have participated in learning, for example, in learning Maharah Qira'ah, students tend to get bored quickly because in the teaching process the teacher only uses a packet book where there is only reading there, in conveying this Qira'ah learning there is only the voice of the educator, so that students tend to get bored quickly. Based on the above problems, educators and students need interactive and multimedia learning media, which can increase enthusiasm for learning in Arabic language learning. For this reason, researchers developed a Flip PDF Professional-based E-book because in this Flip PDF Professional-based E-book there are images related to learning, there is audio and video that can be used by educators as a way to convey material both in the Qira'ah text or other material. By using this Flip PDF Professional-based E-book, it can increase students' interest in learning Arabic.

Develop Preliminary Form a Product is a step where researchers develop E-books made which include, preparing learning materials to be developed, procedures and preparation of handbooks to be developed and evaluation instruments. The steps in developing this Flip PDF Professional-based E-book are



Figure 3.1 Cover typed in Word

The second step in creating a Flip PDF Professional-based E-book is to see the similarities between the Core Competencies (KI) and Basic Competencies (KD) on the Syllabus with the Flip PDF Professional-based E-book that we will develop or we can also rely on existing textbooks. For example, this is a package book regarding Core Competencies (KI) and Basic Competencies (KD):

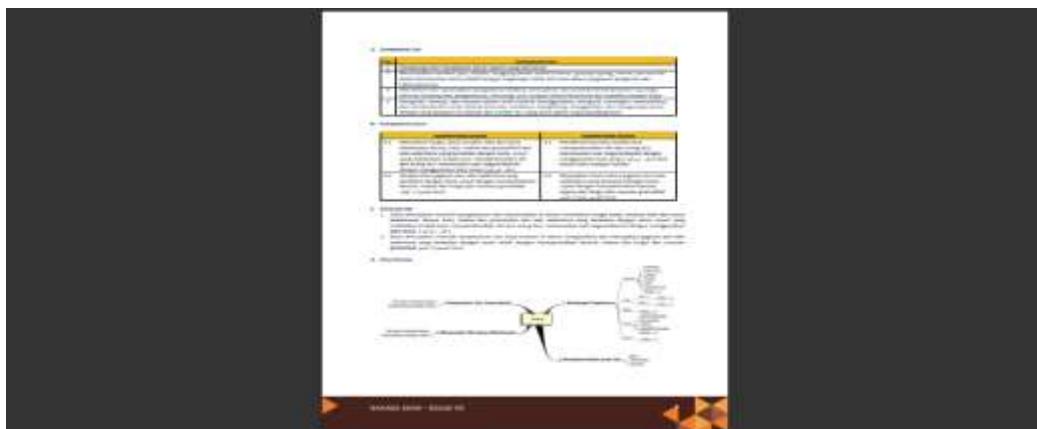


Figure 3.2 Core Competencies and Basic Competencies in the Package Book

After knowing the Core Competencies and Basic Competencies, then type them in Word. Here is an example:

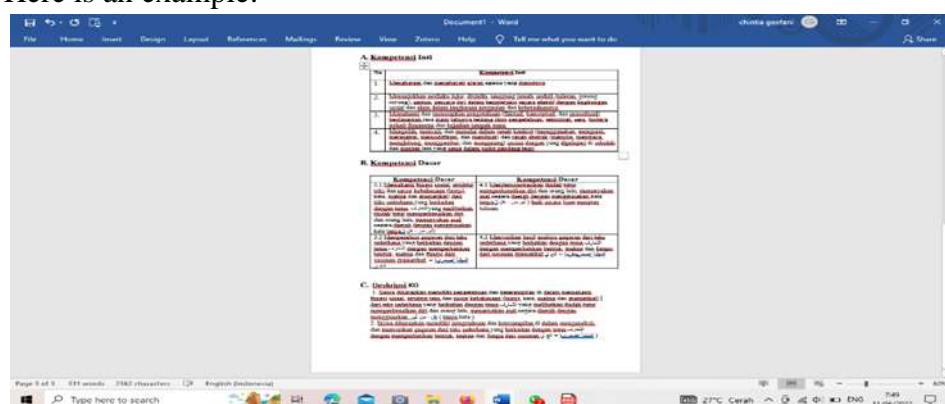


Figure 3.3 Typed Core Competencies and Basic Competencies

In the third step, namely typing Arabic language material in word first, after typing the material. Furthermore, you can add images according to the material in question, this

is the advantage of this Flip PDF Professional-based E-book development that can add images that aim to create material so that students do not get bored quickly in learning.

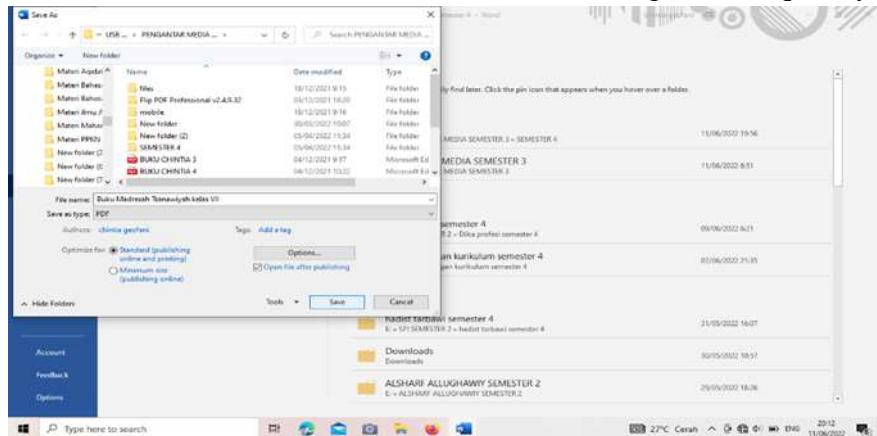


Figure 3.4 Arabic material typed in Word

The next step provides an empty image as a place to fill in the audio and video. In this Flip PDF Professional-based E-book, the division of its use is using audio for mufradat, video for hiwar and qira'ah. This audio and video installation will be paired when using Flip PDF Professional, that's where the audio and video will be paired with their use which is placed according to the space provided. In this developed E-book, audio and video are placed on the bottom sheet of mufradat, hiwar.



Figure 3.5 Empty space in Word for audio and video

After all the material is typed in Word, when finished, you can convert it to pdf before moving it into Flip PDF Professional which is used as the creation of the E-book to be developed.

The next step is to open the Flip PDF Professional application, after opening it, press try, and a new page will open then select New project.



Figure 3.7 Flip PDF Professional Application

After selecting New Project, the next step is to enter the pdf file by pressing the Browser, then the Recent File or Import Multi-Pdf File option appears, then select Import Multi-Pdf File. Then press Add, enter the Pdf file that has been prepared. Then press Add and after that click Import Now. Then it will be imported automatically, a Flip PDF Professional-based E-book will appear, as shown below;



3.7 Flip PDF Professional-based E-books

Next, enter the Audio and Video in the space provided, the installation of Audio and Video aims to create the developed E-book. Which helps educators in explaining learning.

Then press Edit Pegs, after which menus will appear to edit the E-book that has been created in Word. Because it will include audio on mufradat, then select the Audio menu. Then enter the audio that has been prepared, then it will be a Flip PDF Professional-based E-book.



Figure 3.8 E-book that has been inserted Audio

The next step is to press Save and Exit, and press Publish, then it will direct to Convert, Click Convert then it will be processed automatically. Then the E-book is based on Flip PDF Professional. Already finished.



Figure 3.9 E-book has been saved to the new Folder

Preliminary Field Testing means conducting initial testing, namely collecting data and information using questionnaires, observations and interviews. The validation test carried out on this model involves several experts, namely media experts and material experts. Based on the explanation above, it shows that design validation will be carried out. Which is where this design validation is related to the Flip PDF Professional-based E-book Development which will be tested by experienced experts. In this study, researchers developed a Flip PDF Professional-based E-book which was then tried on students and tested by material experts and media experts. In this initial test, the test scores from material experts and media experts were obtained;

The results of validation from material experts carried out by one of the junior high school educators, namely Mrs. Rahmawati, in this study researchers collected data and information through a questionnaire given to Mrs. Rahmawati. Namely the results of the validation sheet are systematically arranged as follows.

Table 3.1 Material validation result sheet

No	Question	Score
1	Flip PDF Professional Based E-book is useful to support learning	4
2	Suitability of Flip PDF Professional-based E-books in accordance with Core Competencies (KI)	4
3	Suitability of Flip PDF Professional-based E-books with learning objectives	5
4	Correctness of Arabic concepts presented	3
5	Concept maps are appropriate for the material and easy to understand	4
6	Examples of Flip PDF Professional-based E-books according to the concepts presented	4
7	The suitability of E-book material with Arabic language rules	4
8	Sentence adjustment is not double meaning	4
9	Sentence adjustment is not double meaning	4
10	Customization of material between sub-subparagraphs The paragraph shows the total amount	4
Average Number		40
Average		4.0
Category		Valid

The results of validation from media experts conducted by one of the students of the Batusangkar State Islamic Institute with this sial D, in obtaining the results of media validation researchers used a questionnaire given to the student. The results of the media expert validation are systematically arranged as follows.

Table 3.2 Media Expert Result Sheet

No	Question	Score
1	Accuracy in the selection of screen design in the E-book	4
2	Accuracy in the selection of fonts in the E-book	4

3	Accuracy in the selection of writing colors and background colors in the E-book	5
4	Appropriateness of the animation displayed with the context	4
5	Functioning of navigation buttons on the E-book	4
6	Fullscreen navigation functionality	4
7	The functionality of the sound button found on the sound	
8	Clarity of sound on video and audio	5
9	Clarity of images and illustrations in the E-book	4
10	Image/illustration suitability with learning materials	4
	Total	42
	Average	4.2
	Kategori	Very Valid

Based on the validation results from media experts and material experts as described in tables 3.1 and 3.2 which show in the two tables above, the average of both is 4.1, based on the average results, if we convert it to validity, the results of the media experts and material experts will be valid. including the Very Valid category. So we can conclude that the instrument in this study is very valid, so we can test the media in the learning process5. Main Product Revision is a step where researchers make the first revision of the Flip PDF Professional-based E-book developed, which is based on suggestions from trial experts, namely material experts and media experts. Based on the results of media experts and material experts, it shows that this Flip PDF Professional-based E-book media can already be used as media in the teaching and learning process in class. In this study when researchers conducted interviews, material experts and media experts gave suggestions, namely: 1). In making Flip PDF Professional-based E-book material, researchers must be able to increase students' interest in learning and learning independence, 2). In providing images, audio and video, researchers must be able to synchronize the material with the Flip PDF Professional-based E-book media developed, meaning here in developing this Flip PDF Professional-based E-book as exemplified above that the image will be placed on mufradat and qiraah, audio can be used on mufradat, while video can be used on Qira'ah text. It turns out that the suggestions from this material and media expert were known during the interview, so that researchers can also make suggestions as a reference in making Flip PDF Professional-based Ebooks. Which in this reference the researcher can make this research better and of higher quality. If a study is good and of good quality, it means that the Flip PDF Professional-based E-book media studied can already be used in the learning process.

6 .Main Field Testing means a research step in which the researcher conducts the main field trial on the product that has been revised first. In research trials are carried out to find out whether the media used is effective to use, for this reason the importance of conducting trials. In conducting trials, the first step that must be done is to conduct validation tests by material experts and media experts, all of which aim to determine the effectiveness of the Flip PDF Professional-based E-book that we developed. The trials that we did on the development of Flip PDF Professional-based e-books in small numbers will involve educators and students who we made samples in the study. At the stage of testing the revised Flip PDF Professional-based E-book was carried out at a junior high school where 10 seventh grade students were involved. Which looks at the learning interests of students and the independence of students in the learning process by using the Flip PDH Professional-based E-book, where the retrieval of these data results uses a questionnaire about the effectiveness of student learning and independence in the teaching and learning process. This questionnaire is distributed via the WhatsApp grub, which has been designed on google forms. The results of this trial are as follows; 1). The results of the assessment of students regarding the questionnaire of interest in learning in using the Flip PDF Professional-based E-book media developed are obtained an average value (in%) of 86% which is included in the "Good" category. Based on the assessment of the students' questionnaire above, the researcher concluded that the Flip PDF Professional-based E-book media developed by researchers can be used in the teaching and learning process because it can increase the interest of students. 2). The results of the students' assessment of the questionnaire of students' learning independence in using the developed Flip PDF Professional-based E-book are obtained an average value (in%) of 84% which is included in the "Good" category. Based on the assessment of the students' questionnaire above, researchers can conclude that we can use Flip PDF Professional-based E-book media in the teaching and learning process, because it can increase students' learning independence.

Operational Product Revision means that here researchers revise the Flip PDF Professional-based E-book developed in the teaching and learning process. The revision in this step is carried out based on the Flip PDF Professional-based E-book trial on the results of the questionnaire distributed to students, namely regarding increasing students' interest and independence in the Arabic language learning process. Here the researcher will make revisions through suggestions and comments from the questionnaire distributed. The purpose of doing another revision at this stage for researchers is to increase the effectiveness of the Flip PDF Professional-based E-book media developed, then make a reference to researchers on how to increase effectiveness in increasing students' interest and independence. While the advantage for students is that we as students can try out the Flip PDF Professional-based E-book media developed, so that if students like this media it can also be used as a reference for educators in applying it in the teaching and learning process. In researching suggestions or responses from the samples we take it is important because it determines the good and bad of the Flip PDF Professional-based E-book media that we develop or also in other studies because why,

namely because of the responses from the samples we take whether they can increase interest in learning and independence in learning with the media we develop. In the trial conducted, it was found that the students' assessment of the Flip PDF Professional-based E-book media seen from the questionnaire distributed regarding increasing students' interest in learning and learning independence in learning Arabic was good and there was no revision.

Operational Field Testing, namely in this step the researcher conducts a field test of the Flip PDF Professional-based E-book developed. In this trial step, researchers still took samples from junior high school students, but with a larger sample size than before, namely 25 people. At this trial stage, researchers also used an instrument in the form of a questionnaire distributed to students, which was also distributed via the WhatsApp group. But at the field test stage this time the researcher also conducted interviews with students, which were not as a whole but only a few people. Based on the results of the assessment of the questionnaire distributed, the results of the assessment of the questionnaire are as follows; 1). The results of the questionnaire assessment of students in using the Flip PDF Professional-based E-book in increasing students' interest in learning are calculated using (%) which obtained an assessment of 90%, from the results of the questionnaire assessment the researcher concluded that the Flip PDF Professional-based E-book media developed could be used in the teaching and learning process, because it could increase students' interest in learning. 2). The results of the questionnaire of students in using the Flip PDF Professional-based E-book in increasing the independence of students which is calculated using (%) which is 86%, from the results of the questionnaire the researcher concluded that the Flip PDF Professional-based E-book media developed can be used in the Arabic language learning process, because this media can increase the independence of students in learning Arabic. At this stage the researcher also conducted interviews with several students, in which one of the respondents with the initials "H" responded that this Flip PDF Professional-based E-book media is suitable for media use in learning Arabic, because this media can increase enthusiasm for himself and his friends in learning Arabic. But there is a slight shortage of Flip PDF Professional-based E-books developed, namely the lack of cute animated images. Why is that because researchers in developing this E-book use formal animations, so if it can be varied again in providing funny animations.

Final Product Revision is a step where researchers make final revisions to the Flip PDF Professional-based E-book developed. Based on the results of the media trial of the Flip PDF Professional-based E-book from the assessment in increasing students' interest in learning and learning independence through a questionnaire assessment, it was found to be "Good", while the results of the interview obtained a shortcoming of the Flip PDF Professional-based E-book developed, namely the lack of use of funny animations in the E-book developed. Based on the response of one of the students, the researcher took the initiative to add funny animations to the developed Flip PDF Professional-based E-book. In the addition of these animations also supports the material presented, and also as a re-activator for students when they have reached their saturation point, by seeing funny animations so that it raises their laughter. So that enthusiasm reappears. Likewise, for

educators with the addition of funny animations, it is also useful for educators, namely bringing educators to a conducive learning atmosphere, and also for teachers who are mutant in teaching these funny animations are used as encouragement. It is also related to the smooth or not smooth in using the media used by educators in explaining learning. The success or failure of something depends on who develops and how to develop something.

As explained above, this research uses the method (Research and Development), which aims to develop Flip PDG Professional-based E-book media to increase students' interest in learning and independence in learning Arabic. The development model used is (R&D) which has 10 steps in this model. The first step taken by researchers to develop this E-book is to first see the potential of students. Then new researchers can develop this Flip PDF Professional-based E-book. After knowing the potential of students, then plan learning procedures and feasibility trials. After that the researcher develops the handbook procedure and prepares the necessary instruments when the research is carried out. After that, a small trial can be carried out, using the Flip PDF Professional-based E-book developed to the sample that has been developed. After the initial trial, the next step researchers will revise from the suggestions and responses from the samples that have been tried. After being revised, the next step is to conduct the main field trial, where the results of this trial are adjusted to the objectives of the study. After the trial was carried out, the revision was carried out again, at this stage a good score was obtained, so that nothing had to be revised. Furthermore, the operational field trial was carried out, where more samples were studied. After testing the developed E-book, at this stage an interview was also conducted. And obtained a suggestion from the respondent, so the researcher revised the final Flip PDF Professional-based E-book developed. The final step of this model is to implement the developed E-book

CONCLUSION

The development of science and technology from time to time also changes the system in education, following the times is fulfilling the needs in the teaching and learning process, namely by using interactive media. In learning, educators must pay attention to the needs of their students, and also the problems experienced by students. If education is accompanied by the development of the times, it will be certain that education will experience a very brilliant increase. Because the development of science and technology at this time, is very helpful to us if it is associated with the world of education, not only education, but all sectors both industry, food sector can be improved accompanied by the development of the times. As we know today, education has been accompanied by the development of science and technology, but if the educator does not have high skills, then this will be a problem for the learning process. Because if there is media that we use but we as educators cannot use it, it is the same as there is no benefit from technology for the teaching and learning process. For this reason, educators are needed who are skilled and have high quality in using technology. If educators have skills in developing technology in the teaching and learning process, the learning process will be fun and enjoyable. A

process is good if the components in it are of high quality. If it is associated with education, the purpose of education will also be achieved according to what has been planned

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REFERENCES

Abdul Afwu Godly Prayitno, M. Z. M. (2020). PENGEMBANGAN KURIKULUM PEMBELAJARAN BAHASA ARAB PADA MASA PANDEMI COVID-19. *AL-AF'IDAH: Jurnal Pendidikan Bahasa Arab dan Pengajarannya*, 4(2), 15–29. <https://doi.org/10.52266/al-afidah.v4i2.591>

Al-Ayyoub, M., Nuseir, A., Alsmearat, K., Jararweh, Y., & Gupta, B. (2018). Deep learning for Arabic NLP: A survey. *Journal of Computational Science*, 26, 522–531. <https://doi.org/10.1016/j.jocs.2017.11.011>

Aljarah, I., Habib, M., Hijazi, N., Faris, H., Qaddoura, R., Hammo, B., Abushariah, M., & Alfawareh, M. (2021). Intelligent detection of hate speech in Arabic social network: A machine learning approach. *Journal of Information Science*, 47(4), 483–501. <https://doi.org/10.1177/0165551520917651>

Almarzooq, Z. I., Lopes, M., & Kochar, A. (2020). Virtual Learning During the COVID-19 Pandemic. *Journal of the American College of Cardiology*, 75(20), 2635–2638. <https://doi.org/10.1016/j.jacc.2020.04.015>

Alsubaie, M. A. (2022). Impacts of Technology in Learning: Mobile Typing Applications for Writing and Accomplishing Academic Tasks among Arabic-Speaking Undergraduate Students. *Education Sciences*, 12(12), 891. <https://doi.org/10.3390/educsci12120891>

Avisyah, G. F., Putra, I. J., & Hidayat, S. S. (2023). Open Artificial Intelligence Analysis using ChatGPT Integrated with Telegram Bot. *Jurnal ELTIKOM*, 7(1), 60–66. <https://doi.org/10.31961/eltikom.v7i1.724>

Balaha, H. M., Ali, H. A., Saraya, M., & Badawy, M. (2021). A new Arabic handwritten character recognition deep learning system (AHCR-DLS). *Neural Computing and Applications*, 33(11), 6325–6367. <https://doi.org/10.1007/s00521-020-05397-2>

Blanchete, I., Mourchid, M., Mbarki, S., & Mouloudi, A. (2018). Formalizing Arabic Inflectional and Derivational Verbs Based on Root and Pattern Approach Using NooJ Platform. Dalam S. Mbarki, M. Mourchid, & M. Silberztein (Ed.), *Formalizing Natural Languages with NooJ and Its Natural Language Processing Applications* (Vol. 811, hlm. 52–65). Springer International Publishing. https://doi.org/10.1007/978-3-319-73420-0_5

Boufenar, C., Kerboua, A., & Batouche, M. (2018). Investigation on deep learning for off-line handwritten Arabic character recognition. *Cognitive Systems Research*, 50, 180–195. <https://doi.org/10.1016/j.cogsys.2017.11.002>

Boukil, S., Biniz, M., Adnani, F. E., Cherrat, L., & Moutaouakkil, A. E. E. (2018). Arabic Text Classification Using Deep Learning Technics. *International Journal of Grid and Distributed Computing*, 11(9), 103–114. <https://doi.org/10.14257/ijgdc.2018.11.9.09>

Elnagar, A., Al-Debsi, R., & Einea, O. (2020). Arabic text classification using deep learning models. *Information Processing & Management*, 57(1), 102121. <https://doi.org/10.1016/j.ipm.2019.102121>

Ertefaie, A., Small, D. S., & Rosenbaum, P. R. (2018). Quantitative Evaluation of the Trade-Off of Strengthened Instruments and Sample Size in Observational Studies. *Journal of the American Statistical Association*, 113(523), 1122–1134. <https://doi.org/10.1080/01621459.2017.1305275>

Guerrero-Ibáñez, J., Zeadally, S., & Contreras-Castillo, J. (2018). Sensor Technologies for Intelligent Transportation Systems. *Sensors*, 18(4), 1212. <https://doi.org/10.3390/s18041212>

Guillén-Gámez, F. D., & Mayorga-Fernández, M. J. (2020). Quantitative-comparative research on digital competence in students, graduates and professors of faculty education: An analysis with ANOVA. *Education and Information Technologies*, 25(5), 4157–4174. <https://doi.org/10.1007/s10639-020-10160-0>

Heikal, M., Torki, M., & El-Makky, N. (2018). Sentiment Analysis of Arabic Tweets using Deep Learning. *Procedia Computer Science*, 142, 114–122. <https://doi.org/10.1016/j.procs.2018.10.466>

Holly, S., Maulik, B., & Samuel, I. (2023). Use of Whatsapp as A Learning Media to Increase Students' Learning Interest. *Scientechno: Journal of Science and Technology*, 2(1), 35–48. <https://doi.org/10.55849/scientechno.v2i1.57>

Huang, P., Miao, Q., Sang, G., Zhou, Y., & Jia, M. (2021). Research on quantitative method of particle segregation based on axial center nearest neighbor index. *Minerals Engineering*, 161, 106716. <https://doi.org/10.1016/j.mineng.2020.106716>

Jung, Y. M. (2019). Data Analysis in Quantitative Research. Dalam P. Liamputpong (Ed.), *Handbook of Research Methods in Health Social Sciences* (hlm. 955–969). Springer Singapore. https://doi.org/10.1007/978-981-10-5251-4_109

Kamorudeen, B. (2021). The Impact of Information and Communication Technology on the Teaching and Learning of Arabic in Nigeria. *Journal of Muslim Minority Affairs*, 41(4), 608–614. <https://doi.org/10.1080/13602004.2022.2029011>

Kato, N., Mao, B., Tang, F., Kawamoto, Y., & Liu, J. (2020). Ten Challenges in Advancing Machine Learning Technologies toward 6G. *IEEE Wireless Communications*, 27(3), 96–103. <https://doi.org/10.1109/MWC.001.1900476>

Larabi Marie-Sainte, S., Alalyani, N., Alotaibi, S., Ghouzali, S., & Abunadi, I. (2019). Arabic Natural Language Processing and Machine Learning-Based Systems. *IEEE Access*, 7, 7011–7020. <https://doi.org/10.1109/ACCESS.2018.2890076>

Loderer, K., Pekrun, R., & Lester, J. C. (2020). Beyond cold technology: A systematic review and meta-analysis on emotions in technology-based learning environments. *Learning and Instruction*, 70, 101162. <https://doi.org/10.1016/j.learninstruc.2018.08.002>

Lulu, L., & Elnagar, A. (2018). Automatic Arabic Dialect Classification Using Deep Learning Models. *Procedia Computer Science*, 142, 262–269. <https://doi.org/10.1016/j.procs.2018.10.489>

Mensah, C. N., Long, X., Dauda, L., Boamah, K. B., Salman, M., Appiah-Twum, F., & Tachie, A. K. (2019). Technological innovation and green growth in the

Organization for Economic Cooperation and Development economies. *Journal of Cleaner Production*, 240, 118204. <https://doi.org/10.1016/j.jclepro.2019.118204>

Mohammed, A., & Kora, R. (2019). Deep learning approaches for Arabic sentiment analysis. *Social Network Analysis and Mining*, 9(1), 52. <https://doi.org/10.1007/s13278-019-0596-4>

Mulyasari, D., Noer, R. M., Sari, N., Ermawaty, E., Triharyadi, F., Tampubolon, D., & Catherine, S. (2023). Improving Health Status in The Elderly Through Health Checks and Education at Nuriah Nursing Homes in Karimun. *Pengabdian: Jurnal Abdimas*, 1(2), 75–81. <https://doi.org/10.55849/abdimas.v1i2.183>

Mustapa, A. M., Ghani, S. Ab., Rahman, M. A., Nawawi, Z., & Kamarudin, M. A. (2022). *Evaluation of the online arabic treasure hunt as learning games activities using the technology acceptance model (TAM)*. 040017. <https://doi.org/10.1063/5.0092716>

Osamy, W., Salim, A., Khedr, A. M., & El-Sawy, A. A. (2021). IDCT: Intelligent Data Collection Technique for IoT-Enabled Heterogeneous Wireless Sensor Networks in Smart Environments. *IEEE Sensors Journal*, 21(18), 21099–21112. <https://doi.org/10.1109/JSEN.2021.3100339>

Pamuji, S., & Limei, S. (2023). The Managerial Competence Of The Madrasa Head In Improving Teacher Professionalism And Performance At Mi Al-Maarif Bojongsari, Cilacap District. *Pengabdian: Jurnal Abdimas*, 1(2), 66–74. <https://doi.org/10.55849/abdimas.v1i2.158>

Ramadhan, F. K., Faris, M. I., Wahyudi, I., & Sulaeman, M. K. (2023). PEMANFAATAN CHAT GPT DALAM DUNIA PENDIDIKAN. *Jurnal Ilmiah Flash*, 9(1), 25. <https://doi.org/10.32511/flash.v9i1.1069>

Shorman, S., Jarrah, M., & Alsayed, A. R. (2022). The Websites Technology for Arabic Language Learning Through COVID-19 Pandemic. Dalam A. Hamdan, A. Harraf, P. Arora, B. Alareeni, & R. Khamis Hamdan (Ed.), *Future of Organizations and Work After the 4th Industrial Revolution* (Vol. 1037, hlm. 327–340). Springer International Publishing. https://doi.org/10.1007/978-3-030-99000-8_18

Sohn, K., & Kwon, O. (2020). Technology acceptance theories and factors influencing artificial Intelligence-based intelligent products. *Telematics and Informatics*, 47, 101324. <https://doi.org/10.1016/j.tele.2019.101324>

Staszak, M., Staszak, K., Wieszczycka, K., Bajek, A., Roszkowski, K., & Tylkowski, B. (2022). Machine learning in drug design: Use of artificial intelligence to explore the chemical structure–biological activity relationship. *WIREs Computational Molecular Science*, 12(2). <https://doi.org/10.1002/wcms.1568>

Tan, J., Liu, W., Xie, M., Song, H., Liu, A., Zhao, M., & Zhang, G. (2019). A low redundancy data collection scheme to maximize lifetime using matrix completion technique. *EURASIP Journal on Wireless Communications and Networking*, 2019(1), 5. <https://doi.org/10.1186/s13638-018-1313-0>

Thaher, T., Saheb, M., Turabieh, H., & Chantar, H. (2021). Intelligent Detection of False Information in Arabic Tweets Utilizing Hybrid Harris Hawks Based Feature Selection and Machine Learning Models. *Symmetry*, 13(4), 556. <https://doi.org/10.3390/sym13040556>

Theobald, E. J., Hill, M. J., Tran, E., Agrawal, S., Arroyo, E. N., Behling, S., Chambwe, N., Cintrón, D. L., Cooper, J. D., Dunster, G., Grummer, J. A., Hennessey, K., Hsiao, J., Iranon, N., Jones, L., Jordt, H., Keller, M., Lacey, M. E., Littlefield, C. E., ... Freeman, S. (2020). Active learning narrows achievement gaps for underrepresented students in undergraduate science, technology, engineering, and

math. *Proceedings of the National Academy of Sciences*, 117(12), 6476–6483. <https://doi.org/10.1073/pnas.1916903117>

Tuttle, J. F., Blackburn, L. D., Andersson, K., & Powell, K. M. (2021). A systematic comparison of machine learning methods for modeling of dynamic processes applied to combustion emission rate modeling. *Applied Energy*, 292, 116886. <https://doi.org/10.1016/j.apenergy.2021.116886>

Vicky, D., Adrianna, H., & Phan, B. (2023). Use of Gadgets by Early Childhood in the Digital Age to Increase Learning Interest. *Scientechno: Journal of Science and Technology*, 2(1), 17–34. <https://doi.org/10.55849/scientechno.v2i1.58>

Wang, B., Hu, S. J., Sun, L., & Freiheit, T. (2020). Intelligent welding system technologies: State-of-the-art review and perspectives. *Journal of Manufacturing Systems*, 56, 373–391. <https://doi.org/10.1016/j.jmsy.2020.06.020>

Weidlich, J., & Bastiaens, T. J. (2018). Technology Matters – The Impact of Transactional Distance on Satisfaction in Online Distance Learning. *The International Review of Research in Open and Distributed Learning*, 19(3). <https://doi.org/10.19173/irrodl.v19i3.3417>

Xie, H., Chu, H.-C., Hwang, G.-J., & Wang, C.-C. (2019). Trends and development in technology-enhanced adaptive/personalized learning: A systematic review of journal publications from 2007 to 2017. *Computers & Education*, 140, 103599. <https://doi.org/10.1016/j.compedu.2019.103599>

Zhang, J., Yu, J., Fu, S., & Tian, X. (2021). Adoption value of deep learning and serological indicators in the screening of atrophic gastritis based on artificial intelligence. *The Journal of Supercomputing*, 77(8), 8674–8693. <https://doi.org/10.1007/s11227-021-03630-w>

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