

Original Article Research

Developing Online Modules for Educators in Fifth Grade Physical Education Class

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Abstract

The purpose of this research is to develop online modules for educators in fifth-grade physical education classes. The participants of this study totaled 12 people who were divided at the validation and product trial stages. The design of this research is research & development. Research instruments are observation sheets, interview sheets, questionnaire sheets, and documentation sheets. Data analysis techniques are quantitative and descriptive. The results of the research and conclusions are (1) The online module is declared valid by media, materials, and language experts, and (2) the online module is declared suitable for use by educators and learners. The contribution to the next research is in the manufacture of *online* module teaching materials for educators in physical education (PJOK) class V subjects there are some obstacles or difficulties that may be an improvement for other researchers to develop online module teaching materials. for educators in PJOK class V subjects with other materials.

Keywords: physical education, module, online, elementary school

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1. INTRODUCTION

Learning is a concept of two dimensions of teaching and learning activities that must be planned and actualized & directed at achieving goals or mastery of several competencies and their instructors as an overview of learning outcomes (Irawan & Limanto, 2021; Phytanza, Burhaein, Indriawan, et al., 2022; Widodo & Zainul, 2021). The learning process in the school environment can be said to be a public strategy to improve knowledge and attitudes, besides that many learners find learning in school fun because students can meet with other friends, as well

as develop knowledge and attitudes and respect (Burhaein et al., 2022; Demirci & Phytanza, 2021; Sulistianoro & Setyawan, 2021). The above positive effects are noticeably reduced for now due to the pandemic so the learning process in schools is suddenly suspended due to the Covid-19 pandemic (Catur & Mujiriah, 2021; Phytanza, Burhaein, Lourenço, et al., 2022; Widiyono & Mudiono, 2021).

The emergence of the coronavirus pandemic caused the learning process to be carried out which was initially in schools and now turned into at home through the network. Online learning can use digital technology such as google classroom, zoom meeting, video, or phone, can be with online modules (Burhaein, Demirci, et al., 2021; Irawan & Prayoto, 2021; Widodo & Najibuzzamzam, 2021). Whether or not learning activities succeed depends on the way educators teach to be able to adjust based on the competency goals that will be achieved in learning activities so that the material to be delivered by educators can be delivered appropriately and easily understood by students (Azizah & Sudarto, 2021; Pramantik, 2021; S. Purwanto & Burhaein, 2021). Physical education (PJOK) learning is an educational process that utilizes physical activity to obtain changes in a person's quality, both in terms of physical, mental, and emotional (Prasetya, 2021; P. Purwanto et al., 2021; Sibarani & Manurung, 2021). The hope of PJOK learning in formal educational institutions can form the seeds of superior sportsmen from an early age, a problem that is often encountered in PJOK learning is the lack of PJOK learning process in terms of lack of learning facilities and infrastructure in schools because it is limited in quantity and quality (Burhaein, Tarigan, Budiana, Hendrayana, Phytanza, Demirci, et al., 2021; Phytanza, Mumpuniarti, et al., 2021; Sutopo & Misno, 2021). Another influence is the lack of support in terms of ability, creativity, and innovation of PJOK educators as learning implementers. In addition, there are also other factors such as limited infrastructure in schools, the allocation of time given is very limited. So, it requires a variety of learning resources to be used as a guide in the learning process, one part of the learning resource is teaching materials (Jannah et al., 2021; Mumpuniarti et al., 2021; Nanda et al., 2021). Teaching materials are instructions or images arranged regularly in presenting skills that must be mastered by students, namely modules, student worksheets, and printed books (Burhaein, Tarigan, Budiana, Hendrayana, & Phytanza, 2021; Burhaein, Tarigan, Budiana, Hendrayana, Phytanza, Lourenço, et al., 2021; Phytanza, Burhaein, & Pavlovic, 2021).

Based on the results of pre-research at MIN 4 Bandar Lampung, according to an educator who allows PJOK subjects to obtain results that the learning process during the Covid-19 pandemic is carried out online, educators and students only use teaching materials in the form of educator books and student books, and in educator books and student books used in the learning process are still general, they have not explained the existence of PJOK learning clearly, as a result, learners still do not know and learn PJOK learning, while learners are required to improve movement skills. Educators have never found or developed PJOK teaching materials so educators hope that there will be the development of online module teaching materials during the pandemic that contains PJOK learning, one of which is the PJOK online module.

Based on the results of pre-research in the school, researchers will develop one form of teaching materials that educators can use during the pandemic in delivering PJOK materials, namely developing teaching materials in the form of online modules, especially in PJOK class V learning books. One of the teaching materials that educators can use in the PJOK learning process is the online module. The online module is an online-based non-printed teaching

material product that is independently made for educators' holding materials in teaching. The online module also aims to make students do their own learning process without any educators directly. Electronic-based modules that can be accessed online by its use are utilizing electronic devices such as computers, laptops, tablets, or even smartphones. Text in online modules can be made using Microsoft Word, but to display interactive media, online modules must be made using special e-book programs such as flipbook maker, iBook Author, Caliber, or static in PDF form (Burhaein, Tarigan, Budiana, Hendrayana, Phytanza, Lourenço, et al., 2021; Phytanza, Burhaein, Lourenço, et al., 2021; Putra et al., 2021).

Based on the above presentation, researchers will conduct research and development with the title online module development for educators in PJOK Class V Subjects, which aims to increase activities that are closely related to all components contained in Physical Education, Sports, and Health, namely psychomotor, affective, and cognitive domains. The hope is to be able to create innovative learning, as well as make PJOK learning more interesting, fun, and useful for the development of learners.

2. METHOD

2.1 Participants

The participants of this study totaled 12 people who were divided at the validation and product trial stages. Research participants at the product validation test stage include media experts (2 people), material experts (2 people), and Linguists (2 person). Test media experts, intend to know the minimum standards set in creating online module development for educators in physical education (PJOK) Class V subjects. The purpose of the product is tested by media experts to find out the accuracy and effectiveness of PJOK online modules. The media expert test will be conducted by two experts who are experts in the field. The material expert test aims to test how the feasibility of the material, namely class V PJOK material, and the suitability of online module development for educators in PJOK class V subjects. The material expert test set is 2 people who are competent in the field of Sports and Health Physical Education (PJOK). All experts on these materials are lecturers who can study related disciplines and SD/MI educators.

A test linguist can learn and research the language. In the test, linguists aim to explain the phenomenon of language that is natural in judging. Linguists behave that the language at hand has a system in both form and meaning. The linguist test was conducted by 2 UIN Lampung lecturer and educator at an elementary school (SD/MI). The next stage is a product trial involving 6 participants, namely a small-scale trial (2 people) and a large-scale trial (4 people). The trial is conducted for the teacher to increase the assessment of the product that has been developed and whether the product can be used as a teaching material well or not. The trials to be conducted are small-scale trials and large-scale trials. The small-scale trial was conducted by 2 PJOK teachers and a large-scale trial was conducted by 4 PJOK teachers. By conducting this trial, it is hoped that it can produce an interesting product both from the content, approach used, games applied in the online module, and the physical element of the online module that can be used by teachers as teaching materials in PJOK learning in class V.

2.2 Research Design

The method applied to this research is research and development (R&D) (Gall et al., 2003). This research method is used to produce a particular product and test its effectiveness of

the product. R&D can be defined as a research method that is deliberately, systematically, aimed, or directed to find, formulate, improve, develop, produce and, test the effectiveness of products, models, methods or strategies or ways, services, certain procedures that are superior, new, effective, efficient, productive, and meaningful. In this study, researchers intend to develop online modules for educators in PJOK class V subjects. The purpose of this research is (1) Knowing the feasibility of using online Modules for educators in PJOK class V subjects, and (2) To find out the response of educators to the use of online Modules in PJOK class V subjects.

2.3 Instruments

This research instrument uses many types to produce quality data. Among them are observation sheets, interview sheets, questionnaire sheets, and documentation sheets. *Observation sheet*, this instrument refers to the concept of observation. The concept is the activity of paying close attention to something seen. Observation is a data collection technique that is carried out by seeing and recording the subject of research carried out in a planned manner. In this development study, researchers used non-participant observations. Non-participant observations, i.e., researchers do not involve themselves directly with people's activities, researchers only observe done in passing at the time of observation. Observations made by researchers are unstructured observations, meaning observations are made without any concept of what will be observed. At the time of making observations researchers are free to record what are interesting things to analyze for earlier conclusions. This observation was carried out at MIN 4 Bandar Lampung. *Interview sheet*, this instrument refers to the concept of the interview. An interview is a question-and-answer activity conducted by the interviewer as a questioner and a resource person as an answerer. Interviews are conducted to obtain data about a person's condition, such as to find data about the background variables of learners, parents, education, and behavior towards something. The interview technique that will be used in this study is non-trucking interviews. This type of interview in its implementation will be freer than a structured interview. The goal is to find a problem more clearly from the source to be interviewed by asking for opinions and ideas. The subject of this study was Mrs. Winda Triana Sari's mother, who is a PJOK teacher at MIN 4 Bandar Lampung. The results of interviews conducted with educators, namely, it is known that PJOK teaching materials used for learning have not been developed and there are no teaching materials for PJOK learning during the pandemic.

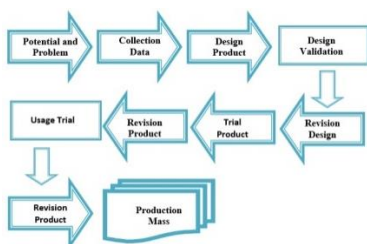
The questionnaire sheet, this instrument refers to the concept of the questionnaire. The questionnaire is a data collection tool that contains questions or written statements to be answered in writing also by respondents. The questionnaire is a data collection technique that is carried out by providing several questions in writing and answered in a written way also by respondents. Questionnaires are conducted only like interviews, which intend to obtain information about respondents or information about others. Questionnaires are used as assessments of product products to obtain eligibility level data from the development of teaching materials. *Documentation sheet*, this instrument refers to the concept of documentation. Documentation in terms means written items. Documentation is a demonstration to obtain data directly from the research site, including relevant books, regulations, activity reports, photographs, film documents and relevant data. To further strengthen the data of research results, researchers documented by taking photos of school conditions, educator data, school facilities and infrastructure.

2.4 Procedures

Research conducted using development research procedures includes: 1) Potential and Problems, 2) Data collection, 3) Product design, 4) Design validation, 5) Design revision, 6) Product trial, 7) Product revision, 8) Product trial, 9) Product revision, 10) Mass product (Gall et al., 2003). The research and development steps are shown in Figure 1 as follows.

Figure 1.

Steps to Use the R&D Method



Based on previous development research, in this development step researchers only limit up to seven steps out of ten steps this is because the seventh stage has been able to produce a product that is worthy of use and only up to the use of the product not until mass production. When the product has been declared feasible and effective for use after a trial it can be mass-produced. Product development is carried out only until the stage of producing the final product, namely the Development of Online Modules for Educators in Class V Health Vendor Subjects.

2.5 Data Analysis

Data analysis in this study is two, namely data analysis of product validation stage and analysis of educators & students' responses. The validation stage is carried out with the technique of analyzing the acquisition of data in online modules which are expected based on the use of content validation sheets and online module constructs for educators in PJOK subjects. This stage is done by coding or classifying data. Validation is filled by educational experts. After seeing the validity of the online Module for educators in the final revised PJOK subjects, an online module for educators in PJOK subjects is formed that will be developed.

The activities in the data analysis technique of validation of the contents and construction of online modules for educators in PJOK subjects are carried out by (1) Processing the number of validator answer scores, and (2) Calculating the average percentage of validation sheets to find out the degree of conformity of content and construction of online modules for educators in PJOK subjects by adapting the formula as follows:

$$\%X_{in} = \frac{\sum S}{S_{max}} \times 100\%$$

Information:

$\%X_{in}$ = Validation sheet answer percentage

$\sum S$ = Number of answer scores

S_{max} = Maximum score

Interpret the percentage of overall validation sheet answers by using the following table 1 interpretation.

Table 1.

Percentage Of Assessments Against Answer Choices

Percentage	Criterion
80,1% - 100%	Very High
60,1% - 80%	High
40,1% - 60%	Medium
20,1% - 40%	Low
0,0% - 20%	Very Low

The response instrument of educators and learners is the response to the online module for educators in PJOK subjects, carried out after the product is validated by media experts and materials regarding the online Module that has been developed. This instrument is used to determine the response of educators and learners consisting of 4 choices of answers that match the question. The score of the assessment can be seen in Table 2 below.

Table 2.

Score Scoring Against Answer Choice

Score	Answer Options
4	Very Good
3	Good
2	Low
1	Very Low

The number of assessment scores obtained from the responses of educators and students then calculated the percentage and then changed in the form of questions to determine the ministry of the Online Module developed. Here are a table 3 of the requirements.

Table 3.

Product Eligibility Criteria

No	Percentage	Eligibility
1.	$x \geq 80\%$	Very Good
2.	$60\% \leq x < 80\%$	Good
3.	$40\% \leq x < 60\%$	Medium
4.	$20\% \leq x < 40\%$	Low

3. RESULTS

3.1 Expert Validation Results

Validation carried out by experts is used so that the product developed does not experience many errors. Data from the validation of linguists, material experts, media experts

and validation of educator responses and student responses, namely as follows.

Validation of material experts was carried out by PGMI lecturers of the Faculty of Tarbiyah and UIN Raden Intan Lampung Teachers, namely Mr. Deri Firmansah, M.Pd, and Mr. Cahniyo Wijaya Kuswanto, M.Pd. with 3 aspects of assessment covering module content, work procedures and questions, and language. The results of the material validation data can be seen in Table 4 as follows.

Table 4.

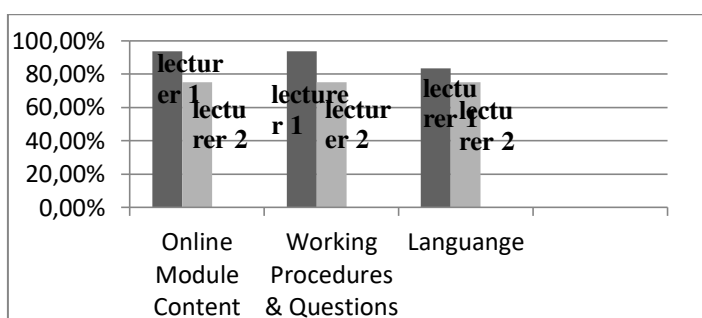
Material Expert Validation Results

Assessment Aspects	Validator		Analysis
	Lecturer 1	Lecturer 2	
Online Module Content	15	12	ΣScore
	16	16	Maximum score
	93,75%	75%	Percentage
	Very High	High	Criteria
Working Procedures and Questions	15	12	ΣScore
	16	16	Maximum score
	93,75%	75%	Percentage
	Very High	High	Criteria
Language	10	9	ΣScore
	12	12	Maximum score
	83,3%	75%	Percentage
	Very High	High	Criteria
Score	90,2%	75%	ELIGIBLE
Percentage	82,6%		

Based on the data obtained from the table above can be concluded with the diagram in figure 2 below.

Figure 2.

Material Validation Result Diagram



Based on the table and figure 2 above, it can be concluded that the assessment of 2 material expert validators consisting of 3 aspects of assessment, seen in the feasibility aspect of the content of PJOK online module class V obtained a score of 93.75% and 75% with the criteria "High", for the feasibility aspect of work procedures and questions obtained a score of 93.75% and 75% with criteria "Tinggi", and the language aspect got a score of 83.3% and 75% with the criteria "Tinggi". From the table above, it is known that of the 2 material expert

validators, they received scores of 90.2% and 75% respectively with a percentage of 82.6% in the "Eligible" category.

Validation of media experts was carried out by PGMI lecturers of the Faculty of Tarbiyah and UIN Raden Intan Lampung Teachers, namely Mrs. Yuberti, M. Pd, and Mrs. Dr. Wita Kurnia, M.Kom. with assessment aspects that include physical condition, material condition, cover design, and story content. The results of media validation data can be seen in Table 5 as follows.

Table 5.

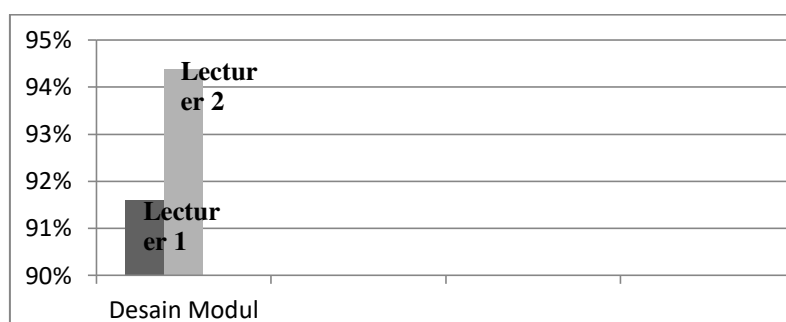
Media Expert Validation Results

Analysis	Validator		Analysis
	Lecturer 1	Lecturer 2	
Module design	33	34	Σ Score
	36	36	Maximum score
	91,6%	94,4%	Percentage
	Very good	Very good	Criteria
Score	91,6%	94,4%	ELIGIBLE
Percentage	93%		

Based on the data obtained from the table above can be concluded with diagram figure 3 below.

Figure 3.

Media Validation Results Diagram



Based on the table and figure above, it can be known that the assessment of 2 media experts on the feasibility aspect of PJOK online module design class V obtained a score of 91.6% with the criteria "very high" and 94.4% with a criterion of "very high" with a final percentage of 93% with a criterion of "very high" therefore the module developed by the researcher is said to be "Very Feasible". Based on the results of the validation of the PJOK class V online module above which the researcher has carried out in stage one and has obtained the final result is very feasible, therefore the researcher can do the next stage without doing the second stage validation but the researcher makes improvements according to the records directed by the validator.

Validation of linguists was carried out by PGMI lecturers of the Faculty of Tarbiyah and UIN Raden Intan Lampung Teacher Training, namely Mrs. Ernawati, M.Pd with 2 aspects of assessment including Cover, preface, and module content. The results of media validation

data can be seen in Table 6 as follows

Table 6.

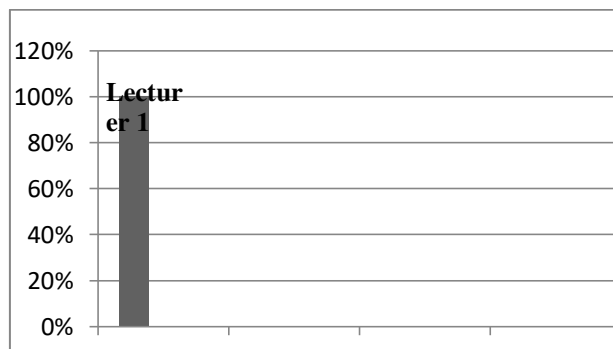
Linguist Validation Results

Assessment Aspects	Validator	Analysis
Cover	24	Σ Score
	24	Maximum score
	100%	Percentage
	Very High	Criteria
Language and Module Contents	24	Σ Score
	24	Maximum score
	100%	Percentage
	Very High	Criteria
Score	100%	ELIGIBLE
Percentage	100%	

Based on the data obtained from the table above can be concluded with diagram figure 3 below.

Figure 3.

Language Validation Results Diagram



Based on the table and figure above, it can be concluded that the assessment of the linguist validator consisting of 2 aspects of assessment, seen in the cover aspect obtains a score of 100% with the criteria "very high", and for the pre-karta aspect and the contents of the module obtains a score of 100% with the criteria "very high", from the table above it is known that the linguist validator gets a score of 100% with a percentage 100% category "Very Feasible".

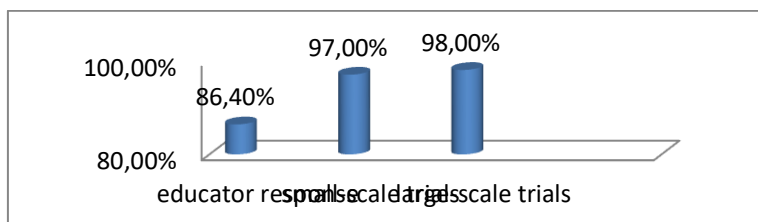
3.2. Product Trial Results

The limited trial was conducted on students from class V MIN 2 Bandar Lampung. Then students are given questionnaires to assess the ministry of an online module for educators in PJOK class V subjects, which researchers have developed, so researchers distribute questionnaires to 15 learners who will be distributed in accordance with the wishes of students. This research was carried out of line at MIN 2 Bandar Lampung school by distributing online modules in PJOK class V subjects, through the WhatsApp application and providing questionnaires to students. Based on the results obtained when conducting small-scale tests on MIN 2 Bandar Lampung schools obtained 97% with criteria "very interesting".

After conducting a small group trial then the product was re-piloted in a large group. A large group trial was conducted at MIN 4 Bandar Lampung in a trial of 30 students. To get a response to the ministry of online modules, researchers share the online module through the WhatsApp application to students and then students fill out questionnaires. Based on the results obtained when conducting large-scale tests on MIN 4 Bandar Lampung schools obtained 98% with "very interesting" criteria.

Figure 4.

Product Trial Chart



4. DISCUSSIONS

Online module teaching materials for educators in PJOK class V subjects have been completed and developed by peneliti. The research and development (R&D) model include: 1) Potential and Problems, 2) Data collection, 3) Product design, 4) Design validation, 5) Design revision, 6) Product trials, 7) Product revisions, 8) Product trials, 9) Product revisions, 10) Mass products. The stage of creating this module is carried out with several steps starting from compiling the module framework and writing the program in detail consisting of several parts, covers, foreword, and bibliography. The goal to be achieved in the development of this module is to produce teaching materials in the form of viable PJOK online modules by describing how its development, testing its feasibility, then knowing the response of educators and learners to online module teaching materials for educators in PJOK class V subjects.

The online module teaching materials in this study are used to present a material that is packaged completely and more modern in the 21st century, in addition to that online module teaching materials are practically used in the circumstances of the Covid 19 pandemic which makes it easier for educators to deliver materials. Researchers package PJOK learning into an online module so that learners better understand the material more concretely and contextually. PJOK online module teaching materials developed by researchers are expected to help and facilitate students in understanding materials, especially PJOK. The following is an explanation related to the validation of online module teaching materials.

4.1 Product Trial Discussion

The assessment of *online* module teaching materials was carried out by two validators, namely Mr. Deri Firmansah, M.Pd, and Mr. Cahniyo Wijaya Kuswantp, M. Pd as PJOK lecturers at PGMI and PIAUD UIN Raden Intan Lampung, based on the results of validation that had been carried out obtaining a percentage of 82.6% with the category of "very feasible". This is reinforced by the statements of the two experts that the online module teaching materials that researchers developed have been worthy of trials in the field.

The expert assessment of *online* module teaching materials media for educators in PJOK class V subjects, conducted by two validators, namely Mrs. Dr. Wita Kurnia, M. Kom,

and Mrs. Yuberti, M.Pd based on validation results obtained a percentage of 93% with the category "very feasible". This is reinforced by the statements of the two experts that the module media that the researchers developed has been worthy of trials in the field.

The assessment of *online* module teaching materials for educators in PJOK class V subjects was carried out by one validator, Namely Mrs. Ernawati, M.Pd based on the results of validation that has been done obtaining a percentage of 100% with the category "very feasible". This is reinforced by the statement that the media modules that researchers develop have been worthy of trials in the field.

4.2 Product Trial Discussion

The first trial is that the product is given to the educator. The learning media assessment was conducted by 2 class V educators at MIN 2 Bandar Lampung and MIN 4 Bandar Lampung. Based on the results of research conducted by researchers who obtained a percentage of 86.7% with the category "Very Worthy". After being tested on educators, it is then tested to learners in two stages, namely small groups and large groups. The implementation of trials in small groups is carried out to get advice and input from learners who then identify the location of the shortcomings of the product. Respondents to the small group trial as many as 15 class V learners at MIN 2 Bandar Lampung. Based on the data obtained that the online module trial received a percentage of 97% with "very interesting criteria" and the module can be used by educators and learners in the learning process. The final stage of online module assessment for educators in PJOK class V subjects, is a large group trial involving 30 students of class V MIN 4 Bandar Lampung. Based on the data obtained that the online module trial received a percentage of 98% with "very interesting" criteria and the module can be used by educators and learners for the learning process.

Researchers can conclude that it can be seen the enthusiasm of learners in studying online module teaching materials for educators in PJOK class V subjects, students ask understand the material contained in the module. Learners' learning motivation increases with the use of PJOK online modules, researchers also get advice or comments from learners that are quite varied. But in general, students like the pjok online module teaching materials that researchers develop, students reveal that they are happy if learning in the classroom uses PJOK online module teaching materials so that learning is not boring and creates a fun learning process (Amran et al., 2021; Jeong & So, 2020; Nurulfa et al., 2021).

During the process from the beginning of the development of teaching materials to become the final product, of course, researchers found supporting factors and inhibitory factors (Filiz & Konukman, 2020; Hambali et al., 2021; Putra et al., 2021). As for the supporting factors, as follows (1) Positive response of learners and educators to online module teaching materials for educators in PJOK class V subjects; (2) Related to product design, input from supervisors and validators and educators is very helpful for researchers in developing online module teaching materials for educators in PJOK class V subjects, and (3) There are several previous studies that can be used as references in the manufacture of online module teaching materials for educators in PJOK class V subjects.

In addition to supporting factors, researchers obtained factors that hindered the development process of PJOK online module teaching materials (Baloran, 2020; Burhaein, Tarigan, Budiana, Hendrayana, Phytanza, Lourenço, et al., 2021), these inhibitory factors,

include (1) Difficulties when designing cover designs because they use Corel draw software Corel, and; (2) Materials in the module developed, namely PJOK. The final product resulting from this research and development is an online module teaching material for educators in PJOK class V subjects, which can help pjok class V learning.

5. CONCLUSIONS

Research and development of *online* modules for educators in PJOK class V subjects, as teaching material, can help the learning process to create a pleasant learning atmosphere. The results and conclusions of research and development of *online* modules for educators in PJOK class V subjects can be concluded, as follows:

1. The results showed that the feasibility value of the online module was based on the validation results of 5 experts, namely 2 material experts got an average score of 82.6% with the criteria of "very high" and then 2 media experts got an average score of 93% with the criteria of "very high" then 1 linguist got an average score of 100%.
2. The results of the PJOK online module field trial conducted involving educators and learners, namely 2 educator responses received a score of 86.4% with a category that is very feasible to use. Learners' response to *online* modules for educators in PJOK class V subjects is very worthy of being seen from the calculation of the final score during the study and providing a questionnaire for learners' responses in the trial. The small group got a score of 97% with a very decent category, for the large group trial at MIN 4 Bandar Lampung got a score of 98% with a very decent category.

Some suggestions are aimed at educators and learners. The first suggestion for educators is that learning using online module teaching materials for educators in PJOK class V subjects can be developed by educators on an ongoing basis for different materials. The advice for learners is that online modules in PJOK class V subjects are expected to increase learners' learning motivation and add knowledge and insights about the importance of PJOK learning. The recommendation for the next researcher is the manufacture online module teaching materials for educators in PJOK class V subjects there are some obstacles or difficulties that may be an improvement for other researchers to develop online module teaching materials for educators in PJOK class V subjects with other materials.

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