Development of Virtual Field Trip (VFT) Media on Wasathiyah Islam Material at SMK Pancasila Mojowarno

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Abstract : *This study aims to develop and evaluate the effectiveness of Virtual Field Trip (VFT) learning media for Wasathiyah Islam material at SMK Pancasila Mojowarno, Jombang, East Java. The research employed a Research and Development (R&D) approach using the Dick and Carey model. The development stages included identifying learning objectives, conducting learning analysis, analyzing student characteristics, formulating specific goals, developing the product, designing learning strategies, preparing test items, conducting evaluations, revising the product, and performing summative evaluation. Data were collected through interviews, observations, questionnaires, and documentation. The instruments used included validation questionnaires for media and material experts employing a Likert scale, as well as pretest and posttest to measure effectiveness. Data were analyzed using both qualitative and quantitative descriptive techniques. Results revealed that the developed VFT media obtained a "Very Feasible" rating from media experts (91%) and material experts (86%). Effectiveness testing indicated a notable improvement in student achievement, with mean scores increasing from 60 on the pretest to 90 on the posttest, resulting in an N-Gain value of 0.8 categorized as high. In addition, students' responses toward the implementation of VFT media were highly positive, with 95% in the "Very Good" category. Therefore, VFT media is effective in enhancing learning outcomes and motivation*

Keywords : *Development learning media; VFT; Wasathiyah Islam.*

INTRODUCTION

Learning is an effort to prepare a smart young generation to welcome future developments. Therefore, learning must be carried out in a good and planned manner so as to create quality learning. One of the educational problems faced today is the low quality of education at every level and unit of education, especially primary and secondary education (Susilana & Riyana, 2008). Various efforts have been made to improve the quality of national education, including changes to the national education system law, curriculum changes, provision of adequate educational facilities, and improving the quality and qualifications of educators.

Teachers have an important role in the learning process. Teachers' pedagogical competence is needed to determine students' cognitive and behavioral abilities (Miranda, 2018). Indonesian Law Number 14 of 2005 requires teachers and lecturers to have knowledge, skills, and behaviors that reflect professionalism. Thus, teachers must apply

these competencies so that the learning process runs according to goals.

Learning is a communication process between teachers and students. To support this communication, schools typically provide handbooks or modules. However, not all modules include stimuli for applying learned knowledge, leading to difficulties for students in translating learning outcomes into practice and reducing their motivation to engage in learning activities. Teachers must identify factors influencing students' learning processes and develop innovative approaches, such as through the use of learning media (Dananjaya, 2012).

Learning media encompasses tools used to deliver educational content to students, stimulating their thoughts, emotions, attention, and interest in learning (Saputra & Purnama, 2012). The use of learning media is expected to facilitate effective content delivery and enhance student motivation. Teachers' selection of learning media must align with students' needs, particularly in online learning contexts, while also considering cost and efficiency in the learning process (Prasetio, 2015).

One type of learning media that can be used is audio-visual media in the form of videos. Learning videos can facilitate and provide innovation to students in understanding the material taught and arouse interest in learning (Nanda et al., 2017). The development of learning videos is considered suitable with the characteristics of students who are happy with interesting visual-based learning.

Virtual Field Trip (VFT) is a form of video-based learning media that provides opportunities for observation and analysis without having to be in the actual place (Vatyca, 2021). VFT can take students to places or events that they have never visited in person, thus allowing students to understand information about an area without having to physically visit it.

The development of VFT learning media on Wasathiyah Islam material at the SMK level is an interesting innovation to be researched. Wasathiyah Islam or moderate Islam is an important concept in Islamic teachings that needs to be well understood by students. Some scholars have provided views on the concept of wasathiyah, such as Imam Ibn Jarir At-Thabari who sees Muslims as moderate people who are in the middle position in all religions (Muzakki, 2022). Imam Al-Ghazali also emphasized the importance of a balanced and fair attitude in life, including in religion (Hutabarat, 2015).

Previous research has shown the effectiveness of using VFT in learning. Melinda et al. (2017) developed VFT-based social studies learning video media for grade V elementary school and found that the media was effective in improving student understanding. Meanwhile, Junia and Rachmadyanti (2018) developed MIMBAR (Domino Bergambar) media for social, economic, cultural, ethnic and religious diversity in Indonesia. Although these studies show positive results, there is still a gap in the development of VFT media for Wasathiyah Islam material at the SMK level.

The development of VFT media for Wasathiyah Islam material in SMK is important considering the characteristics of SMK students who need contextual and applicative learning. Through VFT, students can "visit" and observe the practices of Islam Wasathiyah in various places without having to make physical visits. This can provide a

richer learning experience and help students understand the concept of Islam Wasathiyah more concretely (Riyanto et al., 2019).

Based on this background, this research aims to develop Virtual Field Trip (VFT) learning media on the material of Wasathiyah Islam in SMK. The development of this media is expected to increase students' understanding and interest in learning the concept of Islam Wasathiyah, as well as contribute to the innovation of learning Islamic Religious Education at the SMK level.

METHOD

This research uses the Research and Development (R&D) method with the Dick & Carey development model. R&D is a research method used to produce certain products and test their effectiveness (Sugiyono, 2015).The Dick & Carey model consists of 10 stages carried out from the beginning of development to the product as a result of development (Dick et al., 2015). The development procedure includes: 1) identifying learning objectives, 2) conducting learning analysis, 3) identifying student characteristics, 4) formulating final objectives, 5) selecting and developing products, 6) developing learning strategies, 7) developing test items, 8) evaluation, 9) product revision, and 10) designing and conducting summative evaluation (Branch, 2009). The research was conducted at SMK Pancasila Mojowarno, Jombang, East Java, involving 25 students from Class XI as the primary subjects. These students, aged 16-17 years and comprising 18 females and 7 males, were selected based on their enrollment in Islamic Religious Education courses, with a focus on those exhibiting low motivation in traditional learning as identified through initial observations. The class represents a typical vocational setting, emphasizing practical skills in areas like business and management, where religious education is integrated but often undervalued.

Data collection techniques used interviews, observations, questionnaires, and documentation (Creswell, 2014). Research instruments include media and material validation questionnaires using a Likert scale, as well as tests to measure the effectiveness of learning media (Fraenkel et al., 2012).

Data analysis used descriptive qualitative and quantitative techniques. Qualitative data from interviews and observations were analyzed descriptively, while quantitative data from questionnaires were analyzed using a Likert scale and converted to qualitative data (Miles et al., 2014).

Table 1. Validator Likert Ratio Numbers

Assessment of Media Design Validation, Materials and Educational Practitioners	Score
Very good	4
Good	3
Good enough	2
Not good	1

Meanwhile, to analyze student responses, researchers also used a Likert scale with criteria as shown in the table 2.

Table 2: Likert Ratio of Learner Responses

Participant Response Assessment Educate	Score
Strongly Agree	4
Agree	3
Neutral	2
Disagree	1

The criteria for media and material feasibility and learner response use a percentage achievement interval, ranging from very less feasible/interesting (0-20%) to very feasible/interesting (81-100%) (Widoyoko, 2012).

Table 3. Percentage Achievement (100%) Criteria

Percentage Achievement (100%)	Assessment Criteria Media and Material Validation	Assessment Criteria Learner Response
81 – 100	Very Feasible	Very Interesting
61 – 80	Worth	Interesting
41 – 60	Decent Enough	Interesting enough
21 – 40	Less Feasible	Less Attractive
0 – 20	Very Less Feasible	Very Less Interesting

The improvement of student learning outcomes was measured using the N-Gain formula and processed through SPSS 16 (Hake, 1998). The N-Gain formula is:

$$N - Gain = \frac{Score_{Posttest} - Score_{Pretest}}{Score_{Maximum} - Score_{Pretest}}$$

Table 4 Criteria for Improving Learning Outcomes

Coefficient Interval	Criteria
$g < 0.3$	Low
$0.3 \leq g < 0.7$	Medium
$g \geq 0.7$	High

To ensure methodological rigor, the study incorporated triangulation of data sources, combining expert validations, student feedback, and performance metrics. Ethical considerations included obtaining informed consent from participants and ensuring anonymity in reporting individual results. The development process was iterative, with revisions based on formative evaluations at each stage, aligning with the Dick and Carey model's emphasis on systematic design (Dick et al., 2015). This approach allowed for adaptability to the vocational context, where students' schedules are divided between theoretical classes and practical training.

RESULT AND DISCUSSION
1. Result
The development of Virtual Field Trip (VFT) learning media for Wasathiyah Islam material at SMK Pancasila Mojowarno District was carried out using the Dick and Carey development model. The stages of development include:

a. Identify Learning Objectives
The initial stage of development was carried out by identifying learning

objectives through curriculum analysis and competency standards to be developed, namely Wasathiyah Islam material according to Ulama and Fuqoha. The learning objectives formulated include:

- Display the definition of Wasathiyah Islam according to scholars and fuqoha
- Explaining the actualization of the meaning of wasathiyah
- Explaining the creed of wasathiyah Islam

b. Learning Analysis

Based on the analysis of competency standards, a learning analysis is carried out to find out the skills that students must master, namely Basic Competencies related to Islam Wasathiyah material. Students are expected to be able to know, understand and practice Islam Wasathiyah according to the learning objectives.

c. Identification of student characteristics

The results of the identification of student characteristics conducted with PAI teachers showed that students were less interested in participating in lessons using the previous teaching media in the form of LKS, because it only contained text so it was boring. The development of new media is expected to increase students' interest in learning.

d. Formulation of Specific Objectives

The specific objectives of developing VFT media for class XI vocational students are:

1. Students can understand the meaning of Wasathiyah Islam
2. Students can understand the actualization of the meaning of wasathiyah
3. Students can practice wasathiyah Islamic creed

e. Product Development

The learning media developed in the form of Virtual Field Trip (VFT) was designed based on the revision of the previous LKS media. The material is adjusted to the basic competencies of class XI. This VFT media aims to develop students' understanding of Wasathiyah Islam according to the Ulama and Fuqoha.

f. Learning Strategy Development

The learning strategy developed uses lecture methods and direct discussion with students, accompanied by subject teachers. This method is adapted to the problem-based learning model.

g. Test Item Development

The test items given were 10 multiple choice questions and 5 essay questions, adjusted to the student's ability. Working time is given longer than other normal students.

h. Evaluation

Evaluation was carried out through validation by media experts and material experts. The validation results were used to improve the developed VFT media. Media expert validation was carried out by the Head of Curriculum of SMK

Pancasila. The results of media expert validation can be seen in the Table 4.

Table 4. Media Expert Validation Results

No.	Aspects	Score	Percentage	Category
1	Media engineering	15	93.75%	Very feasible
2	Learning design	31	86.11%	Very feasible
3	Visual communication	16	100%	Very feasible
Total		62	91%	Very feasible

Based on table 4, it can be seen that the results of media expert validation show a total score of 62 out of a maximum score of 68, with a feasibility percentage of 91%. This shows that the VFT media developed is included in the "Very Feasible" category from the media aspect.

Material expert validation was carried out by the PAI teacher of SMK Pancasila. The results of the material expert validation can be seen in the Table 5.

Table 5. Material Expert Validation Results

No.	Aspects	Score	Percentage	Category
1	Material suitability	14	87.5%	Very feasible
2	Presentation of material	22	78.57%	Worth
3	Expediency	16	100%	Very feasible
Total		52	86%	Very feasible

Based on table 2, it can be seen that the results of the material expert validation show a total score of 52 out of a maximum score of 60, with a feasibility percentage of 86%. This shows that the material in the developed VFT media is included in the "Very Feasible" category.

To determine the effectiveness of the developed VFT media, a trial use of the media was conducted to students of class XI of SMK Pancasila. The trial was conducted by giving a pretest and posttest, as well as a student response questionnaire.

The pretest and posttest results, representing the mean scores of the 25 students, are presented in the Table 6.

Table 6. Pretest and Posttest Mean Results

Test Type	Value
Pretest	60
Posttest	90

Based on Table 6, the mean score increased from 60 on the pretest to 90 on the posttest, reflecting a significant improvement in student performance. The calculation using the N-Gain formula, defined as N-Gain = (Posttest Score - Pretest Score) / (Maximum Score - Pretest Score), yields a value of 0.8, which is classified as "High" according to the criteria established by Hake (1998). This indicates that the use of VFT media significantly enhanced student learning outcomes. The pretest and posttest were integrated into the VFT interface, with the pretest featuring 15 multiple-choice questions on basic Wasathiyah Islam concepts, accessible from the main dashboard with immediate feedback. The posttest, unlocked after completing the virtual tour, included similar questions plus five

essay questions, with automated scoring and a "Progress Report" menu tracking performance improvements. This structure supported self-regulated learning, with 80% of students revisiting weaker sections post-assessment, further contributing to the observed score increase.

Students' response to the use of VFT media was measured using a questionnaire consisting of 10 statements. The results of the student response questionnaire can be seen in the following table:

Table 7. Student Response Questionnaire Results

No.	Aspects	Score	Percentage	Category
1	Learning motivation	14	87.5%	Very good
2	Comprehension of the material	15	93.75%	Very good
3	Interest	9	100%	Very good
Total		38	95%	Very good

Based on table 7, it can be seen that students' responses to the use of VFT media are very positive with a total percentage of 95% which is included in the "Very Good" category.

i. Product Revision

Based on the suggestions and input from the validators, revisions were made to the VFT media before being tested on students. Revisions are made to perfect the learning media so that it is suitable for use in learning. The results of the video can be accessed through the following link: https://youtu.be/X6Xvs0Jr5CE?si=uOeRDM4C9oRikSSq

Discussion

The development of Virtual Field Trip (VFT) learning media for Wasathiyah Islam material at SMK Pancasila was carried out through several stages according to the Dick and Carey model. The selection of this model is based on its suitability for developing effective and systematic learning media.

The initial stage of development is carried out by identifying learning objectives and conducting learning analysis. This is in line with Suparman's (2014) opinion that identifying learning objectives is an important step in determining the direction of learning media development. Through learning analysis, it can be seen the skills that students need to master to achieve learning objectives.

The identification of student characteristics showed that students were less interested in participating in lessons using the previous teaching media in the form of LKS. This finding supports the research of Vannisa Aviana et al. (2018) which concluded that the utilization of multimedia-based PAI learning media is very important in helping the teaching and learning process, because it is a bridge of communication between teachers and students. The development of VFT media is expected to increase students' interest and motivation to learn.

The developed VFT media contains Wasathiyah Islam material presented in the form of interactive learning videos. The choice of this format is in accordance with the characteristics of digital generation students who are more interested in visual and interactive content. This is supported by Andina Widhayanti's research (2019) which found that the use of audiovisual learning media can improve student learning outcomes including cognitive, affective, and psychomotor aspects.

Media expert and material expert validations were conducted to ensure the quality and feasibility of the developed VFT media. The results of media expert validation show a feasibility percentage of 91% which is included in the "Very Feasible" category. While the results of the material expert validation showed a feasibility percentage of 86% which also included the "Very Feasible" category. This indicates that the VFT media developed has met the eligibility standards from both media and material aspects.

Product revision is carried out based on suggestions and input from validators. This revision process is important to perfect the learning media before it is used by students. As stated by Sugiyono (2015), product revision aims to improve the weaknesses and shortcomings of the products developed to make them more effective and efficient

The effectiveness of VFT media is measured through the improvement of student learning outcomes and student responses to the use of media. The pretest and posttest results showed an increase in scores from 60 to 90, with an N-Gain value of 0.8 which is included in the "High" category. This finding is in line with Andina Widhayanti's research (2019) which found that the use of audiovisual learning media can improve student learning outcomes.

This significant increase in learning outcomes can be explained through the cognitive multimedia learning theory proposed by (Mayer 2009). This theory states that learning will be more effective when information is presented in verbal and visual form simultaneously. VFT media that combines text, images and videos allows students to process information through dual-channel (auditory and visual), thus facilitating better understanding and retention of the material.

Students' responses to the use of VFT media were very positive with a total percentage of 95% which is in the "Very Good" category. This shows that VFT media has succeeded in increasing students' motivation and interest in learning. This finding supports the research of Vannisa Aviana et al. (2018) which concluded that the use of multimedia learning media can increase student interest and motivation.

The success of VFT media in improving learning outcomes and student motivation can be explained through the concept of situated learning proposed by Lave and Wenger (1991). This concept emphasizes the importance of context and real experience in learning. VFT media provides virtual experiences that are close to real situations, thus helping students construct a more meaningful understanding of Wasathiyah Islam.

CONCLUSION

Based on the results of the study, the development of Virtual Field Trip (VFT) learning media for Wasathiyah Islam material at SMK Pancasila Mojowarno District has been successfully carried out using the Dick and Carey model, meeting eligibility criteria with 91% from media experts and 86% from material experts, both categorized as "Very Feasible." The implementation proved effective in improving student learning outcomes, with scores rising from 60 on the pretest to 90 on the posttest and an N-Gain of 0.8 classified as "High," while student responses reached 95% in the "Very Good" category, indicating heightened motivation and interest. This emphasizes VFT's role as an innovative solution to conventional media limitations, enhancing Islamic Education in the digital era and opening avenues for broader applications.

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