Measuring Validity of Interactive Presentation Media Using Content Validity Index (CVI)

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Abstract. Interactive video presentation media is a hybrid of presentation material slides and the teacher's direct interaction in the media via media lectures that are integrated into an application. The purpose of this research is to collect information on the feasibility or validation of digital interactive presentation media geared toward problem solving. The data processed includes both qualitative and quantitative information. To use quantitative descriptive analysis techniques to analyze the research data. Content Validity Index (CVI) is one of the most suitable formulas for testing the content validity of interactive learning media. The media aspect scored 0.93, the material aspect scored 0.95, and the education aspect scored 0.91 based on the validity test results. The test results can be translated as digital interactive learning video media oriented to the problem-solving model, which is very important to develop because it has been tested in terms of media material and testing by education experts.

Keywords: Interactive Video Presentation · Validity Test · English course

1 Introduction

English subjects focus on learning to listen, speak, read, write as well as the use of English in various contexts such as internal communication, presentation, article writing, and even show business [1], To teach the information to students, a scenario or simulation that closely resembles the actual field setting is required. Due to the Covid 19 pandemic, research observations at Junior High School 6 Bukittingi resulted in English learning data on agreement and disagreement that could not be conducted face-to-face. As a result, the material used as the content of this interactive video is an "expression agreement and disagreement" in English subjects, students are required to be able to express their opinions on an issue and then determine whether they agree or not.

This study invites students to understand how to convey their reasons why they agree or disagree with a statement. using sentences that are easy to use and understand. the issues raised are issues of daily life both in the family environment at home and their peers at school. You can see interactive video presentation media that have been developed and implemented in schools as shown in Fig. 1.

Fig. 1. Video Focus on slide presentation

It is necessary to evaluate the viability of employing this media, so that the resulting media can be declared good and valid by experts. This study focuses on determining the validity of previously designed and built digital interactive video learning media. The goal of this research is to determine the validity of interactive video digital learning media for use in learning English subjects.

1.1 Interactive Presentation Media

An interactive audio-visual presentation serves as the vehicle for this education. The teacher's message is introduced to or passed through the student, the intended audience, using this interactive audiovisual. Learning objectives can be met with the use of well-designed audio-visual learning materials. Each sort of audiovisual learning content has unique qualities, benefits, and drawbacks. Using audio-visual learning resources can speed up the learning process and enhance the information in learning materials [2]. Additionally, this interactive audio-visual learning can be used to increase student engagement and teacher-student interaction [3]. This description claims that using audio-visual computers to learn is a component of the teaching strategy used in classrooms that significantly enhances student learning. When it comes to developing a deeper grasp of social events and spotting trends, learning with multimedia can be more effective.

Qualitative research is "naturalistic research," according to Tuturan [4]. There will be no intervention, regulation, or experimentation with narrative research; the field scenario will stay spontaneous. Data are written notes or writings on everything that is heard, seen, or experienced. short stories that are engaging, well-described, and actively engage pupils through audio-visual learning.

2   Method

Four stages were used to conduct this study. The first stage is to determine the material that needs to be validated as well as the key elements that need to be checked for validity [5, 6]. The appropriate method to use as a validation instrument is chosen in the second stage. The validator will complete the questionnaire instrument in this stage and offer a value for processing. The third stage involves converting the gathered qualitative data into qualitative data that indicates the viability of using the media in the classroom. The fourth and final section assesses whether the initial media validity hypothesis has been validated or not. This research focuses on the third step procedure to get media validity.

The achievement test, content validity will be critical. The content will be validated by experts. This research approach is quantitative based on the numbers obtained from the content validity test results [7]. The validity test assesses an instrument's level of validity and reliability, as well as the precision of data collected on the actual object and data collected by the researcher. The findings of content validity testing on interactive presentation media conducted by validators and experts were investigated using the Content Validity Index (CVI) approach [8].

The percentage of things determined to be relevant for each expert is measured using this method, and the percentages for all experts are then averaged. When the data obtained from the Content Validity Index (CVI) analysis is processed, several categories of qualitative data are generated, which can be further outlined as follows [9]: A rxy value of 0.00 means invalid, a rxy value of 0.80 means very high validity (very good), a rxy value of 0.60 means high validity (good), a rxy value of 0.40 means moderate validity (enough), a rxy value of 0.40 means low validity (poor), a rxy value of 0.40 indicates very low validity (poor), and a rxy value of 0.40 indicates invalid.

The objective of this project is to develop a problem-solving model-based interactive video learning medium. On the basis of the problem-solving methodology, the content of interactive presentation media was validated by three experts from in their respective fields. The location of the research was carried out in 6 junior high schools in the city of Bukittingi Indonesia. The purpose of selecting the research site is to strengthen the hypothesis from previous studies, specifically that certain students' interest in learning has not been piqued by the traditional learning approach, which consists of lecture models and autonomous student learning [10, 11]. This is because the learning tools adopted merely facilitate visualization.

Therefore, conducting interactive presentation media research at Junior High School 6 Bukittingi is deemed required. A questionnaire served as the data gathering tool for this investigation. Because it is simpler to quantify results later, the use of a questionnaire is justified. Both qualitative and quantitative data were used in this investigation. Information regarding the content validation evaluation of interactive presentation media makes up the qualitative data that is needed. Assessment outcomes from quantitative questionnaires are considered quantitative data in this study [12, 13]. In this study, quantitative descriptive analysis techniques were used to analyze the data [14].

3   Results and Discussion

There are three main parts to the content validity test for interactive presentation media. These are the 3 aspects: (1) Education experts look at media to see how well teachers use it to transfer knowledge; (2) Expert confirmation based on the aspect of the substance or content [15], The "material" part of the learning process relates to how transparent and accurate the content of the learning materials is in relation to the fundamental competencies that students aspire to achieve; and (3) on the media aspect, several technical points will be used to evaluate the usability of the media, where technical quality refers to how the program is used and how users interact with teachers and students when using it. The following is a grid-based study questionnaire for learning media:

4   Determine the Validation Questionnaire Instrument

This instance, the instrument items utilized as assessment points consist of 5 indications, namely suitability, attractiveness, convenience, clarity, and appearance. Expert validation based on educational elements. Table 1 contains more details.

The following are guidelines for creating questions for material experts. Suitability, completeness, convenience, and clarity are the four criteria considered. In conclusion, it is depicted in Table 2.

Media professionals respond to a questionnaire with explanations in Table 3 and indicators of usefulness, suitability, completeness in communication and interaction.

Three experts were given a research questionnaire based on learning media criteria [16], then calculate the validation of the assessment results by the validator. The Content

Table 1. Questionnaire for Educational Experts

No.	Indicator	Item (15 points)
1	Suitability	3
2	Attractiveness	2
3	Convenience	2
4	Clarity	7
5	Appearance	1

Table 2. Questionnaire for Material Expert

No.	Indicator	Item (15 points)
1	Convenience	3
2	Clarity	2
3	Suitability	4
4	Completeness	6

Table 3. Questionnaire for Media Expert

No.	Indicator	Item (15 points)
1	Communicative and Interactive	4
2	Convenience	1
3	Completeness	3
4	Suitability	6
5	Effectiveness	1

Validity Index (CVI) approach was used as an analytical technique to analyze the results. One of the most widely used techniques in nursing research is the content validity index (CVI). Martuza [17], an education specialist, created this technique. However, CVI has many detractors, and [18]. In his research, Tonya (Rutherford-Hemming, 2015) [18] calculated two types of CVI. The first type is concerned with the content validity of individual items (i-CVI), whereas the second is concerned with the overall scale's content validity (s-CVI).

5   Validator Assessment Tabulation

Instrument items representing some of the criteria, the educational aspect expert validation results were evaluated by three experts. The average I CVI, item-level content validity index, was calculated as 0.87. The average proportion determined to be relevant by the first expert was 0.90, the second expert was 1.00, and the third expert was 0.80. This translates to the fact that interactive presenting tools built around the problem-solving paradigm have very high pedagogical validity and may be applied with only little adjustments. Based on the expert verification provided above, interactive presentation media can instruct students in its delivery to enhance student' knowledge of the expression of agreement and disagreement topic (Tables 4 and 5).

Table 4. Validation Results: Educational Aspect

Items	Ed. Exp 1	Ed. Exp 2	Ed. Exp 3	Amount of Approval	I-CVI
1	1	1	1	3	1.00
2	1	1	1	3	1.00
3	1	0	1	2	0.67
4	1	1	1	3	1.00
5	1	1	1	3	1.00
6	0	1	1	2	0.67
7	1	1	1	3	1.00
8	1	1	1	3	1.00
9	1	1	1	3	1.00
1	0	1	1	2	0.67
11	1	1	1	3	1.00
12	1	1	1	3	1.00
13	1	1	1	3	1.00
14	0	1	1	2	0.67
15	1	1	1	3	1.00
	12	14	15	Mean I-CVI	0.91
proportional significance	0.8	0.93	1.00		

Table 5. Validation Results: Material Aspect

Items	Mat. Exp 1	Mat. Exp 2	Mat. Exp 3	Amount of Approval	I-CVI
1	1	1	1	3	1.00
2	1	1	1	3	1.00
3	1	1	1	3	1.00
4	1	1	1	3	1.00
5	1	1	1	3	1.00
6	1	1	1	3	1.00
7	1	1	1	3	1.00
8	1	1	1	3	1.00
9	1	1	1	3	1.00
10	1	1	1	3	1.00
11	1	0	1	2	0.67
12	1	1	1	3	1.00
13	0	1	1	2	0.67
14	1	1	1	3	1.00
15	1	1	1	3	1.00
	12	14	15	Mean I-CVI	0.91
proportional significance	0.93	0.93	1.00		

Three experts were given a questionnaire containing the findings from the validation test, and the results produced a mean I-CVI, or item-level content validity index, of 0.95. The relevant proportion for the first expert was 0.93, the average for the second expert's relevance proportion was 0.93, and the third expert's full relevance proportion was 1.00. The utilization of digital interactive video learning medium can be considered to have very high media validity and only require modest adjustments. The content should be represented via digital interactive video learning tools [19] (Table 6).

It provided an explanation for the mean I-CVI, the item-level content validity index, which had an average of 0.93 based on data from validation test results given to three media experts in the form of a questionnaire. The first expert's relevance % was 0.93, the second expert's relevance proportion was 0.93 on average, and the third expert's relevance proportion was 0.93. The utilization of digital interactive video learning medium can be considered to have very high media validity and only require modest adjustments. Technically, users may easily understand and use the media that is used in digital interactive video learning materials.

A number of user reactions have been identified based on the findings of expert validation, including: Users are happy when they use the media; they are not bored when they use the media; and they are motivated to learn science in the area of expression agreement and disagreement after using the media. Based on the findings of expert

Table 6. Validation Results: Media Aspect

Items	Med. Exp 1	Med. Exp 2	Med. Exp 3	Amount of Approval	I-CVI
1	1	1	1	3	3/3 = 1.00
2	1	1	1	3	3/3 = 1.00
3	1	1	1	3	1.00
4	1	1	1	3	1.00
5	1	0	1	2	0.67
6	1	1	1	3	1.00
7	1	1	0	2	0.67
8	1	1	1	3	1.00
9	1	1	1	3	1.00
10	1	1	1	3	1.00
11	0	1	1	2	0.67
12	1	1	1	3	1.00
13	1	1	1	3	1.00
14	1	1	1	3	1.00
15	1	1	1	3	1.00
	14	14	14	Mean I-CIV	0.93
proportional significance	0.93	0.93	0.93		

validation, the security feature of this application can be summed up as follows: The program doesn't have any negative components, but the completeness of the recording feature and the addition of animated slides are still thought to be insufficient. Finally, some changes must be made in order to provide appropriate media for students.

6 Conclusion

The validity of the information in interactive presenting media was examined in this study in three key areas (media aspects, material aspects, and educational aspects). An average item-level content validity index of 0.93 was obtained for a number of media-related criteria, which were represented by 15 items on the validity calculation instrument and validated by three validators. This means that interactive presenting tools based on the problem-solving paradigm ought to be created for usage in terms of practical considerations, whether they are evaluated in terms of instruction, curriculum, material, interaction, feedback, and error management. The average item-level content validity index for the 15 items on the validity assessment tool that reflected different program display criteria and were verified by three validators was 0.95. As stated by.

The interactive digital video learning medium is relevant to its use, according to the overall content validity results, but there are a few minor adjustments that must be performed to ensure that it is perfect and that answers from users are satisfied. In order to develop this teaching tool and provide more ideal outcomes, further trials, according to the study's author, are essential. Additional research is required to verify that.

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