

# The Development of WEB-Based Assessment

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## ABSTRACT

The purpose of this research is to produce a learning assessment web. Assessment has an important role in learning. Assessment is an inseparable part of the assessment. Assessment must be able to provide comprehensive information that helps teachers improve their teaching abilities and help students achieve optimal educational development. In this study, the type of research used is development research. The development carried out is making a web-based assessment. The design of research and development uses R & D with the ASSURE model. The conclusion obtained from this research is that web-based assessment products can be categorized as valid and based on product trials are categorized as very good so that they can be used as assessments.

**Keywords:** WEB-based assessment.

## 1. INTRODUCTION

Assessment is an effort to obtain data/information from the process and learning outcomes to find out how well the performance of students, classes/courses, or study programs is compared to certain learning objectives/criteria/achievements. After obtaining the results of the assessment, the assessment process is carried out. Assessment (grading) is the process of embedding attributes or dimensions or quantities (in the form of numbers/letters) to the results of the assessment by comparing them to a certain standard instrument. The results of the assessment in the form of attributes/dimensions/quantities are used as evaluation materials. Evaluation is the process of granting status or decisions or classifications to an assessment and assessment result (Directorate of Academic Development, 2021). These three things cannot be separated because they are an integral part of the implementation process to see the results of a learning process. In this study, researchers developed a focus on assessment.

Assessment can simply be interpreted as a process of measurement and non-measurement to obtain data on the characteristics of students with certain rules [1]. The purpose of the assessment, assessment and evaluation activities is to determine the progress of the learning process, determine learning achievement, provide value and as feedback in continuous improvement for lecturers, students, departments and universities. Thus, it is very

important that these three things be carried out in order to obtain an assessment and improvement in the future.

There are many ways to carry out an assessment. One of them is by utilizing technology. The presence of technology today is in line with the development of the internet. The technology that can be used together with the internet is the web. With the presence of various kinds of supporting technology, it becomes more possible to do communication and information services more easily and efficiently [2].

The use of technology in carrying out assessments has been carried out by many researchers and not all of them have succeeded perfectly in their research. As research conducted by [3] by utilizing the social network Facebook, but experiencing obstacles, namely researchers need a lot of time to analyze the results of student assessments because they must be done one by one. However, different research results were found by Rahman (2019). He found a positive response from teachers towards the use of web-based assessment and was interested in adopting it in schools so that all teachers could make the most of it. Based on the explanation above, researchers are interested in developing an assessment of learning processes and outcomes with the title "The Development Of Web-Based Assessment ". The purpose of this study was to produce a valid web-based instrument in the Anatomy course at the Faculty of Sports Science, State University of Medan.

## 2. RESEARCH METHOD

This type of research is development research (R&D). Research development here means to develop a product. In accordance with the author's objectives, what is developed is a web-based assessment. The stages of research and development (R&D) of Borg & Gall that have been adopted by Sugiyono, namely; 1) Potential and problems, 2) Data collection, 3) Product design, 4) Design validation, 5) Design revision, 6) Product trial, 7) Product revision, 8) Usage trial, 9) Product revision, 10) Mass production. However, in this study, due to the limitations of the researcher's time, the stages carried out were only up to stage 6, namely product testing. The research was carried out at the Faculty of Sports Science, UNIMED with the subject of students taking the Anatomy course. The technique of data collection is done by giving a questionnaire

## 3. RESULTS AND DISCUSSION

The results obtained from the study are as follows.

### 3.1. Potential and problems

Google sites is a facility from Google which is the embodiment of web-based assessment which has the potential to create flexible assessment media. Where the implementation of the assessment can be independent of geographical time and place. In other words, utilizing web-based assessment can make activities more efficient, especially in the implementation of the assessment. However, there was also one drawback according to some users that the use of the web was considered to be less effective in terms of financing and its complex creation and implementation.

### 3.2. Gathering information

Furthermore, based on the potential and problems, various information or data are collected that can be used in designing WEB-based assessments [4]. The assessment is developed by utilizing an application from Google that can be used for free. Information is also obtained on how to make WEB so that it can be used as a facility to provide assessments to students. In addition to information about the google site, researchers also collect information related to the material, namely Anatomy. The objectives of the Anatomy course are: To provide a basic understanding of anatomy, namely osteology, arthology, myology, anthropometry. The assessment technique used is self-assessment technique, observation, written test, performance and assignment.

### 3.3. Product design

The product design in this research is using a WEB-based design. Where assessment is used as an evaluation

or assessment tool in online Anatomy courses. This is very important given the current condition, namely a prolonged pandemic. Students and lecturers are not allowed to meet face-to-face. Therefore, this product is one solution that can be done.

The design model used is the ASSURE model, which stands for analyze learners, state objectives, select method, media and materials, utilize media and materials, require learner participation, evaluation and review.



Figure 1 ASSURE Model.

#### 3.3.1. Analyze Learners

The initial stage is to analyze the student's character. The goal is to be able to adjust the method, media and material presented. This analysis is in the form of describing class conditions (age, gender, geography, and so on), students' prior knowledge and learning styles.

#### 3.3.2. State Objectives

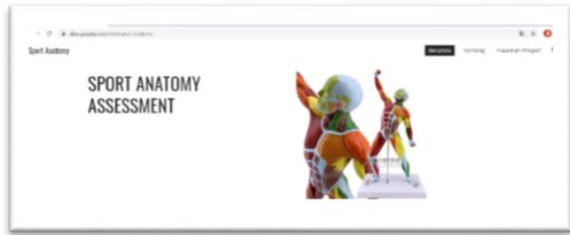
This stage is the formulation of learning objectives. The formulas used are Audience, Behavior, Condition and Degree.

#### 3.3.3. Select Method, Media and Materials

Next is the selection of methods, media and materials. In this study, the media used was WEB as an assessment facility. The method follows the steps in the WEB. And the material is Sports Anatomy.

#### 3.3.4. Utilize Media and Materials

This stage prepares the WEB-based assessment media. Namely by designing the homepage, compiling assessment features, information about the WEB and instructions for use. As well as preparing to involve students in learning by using WEB-based assessment media.



**Figure 2** Sport Anatomy Assessment WEB.

**3.3.5. Require Learner Participation**

Furthermore, students are fully involved in the use of WEB-based assessment media so that they can measure their effectiveness.

**3.3.6. Evaluation and Revise**

Finally evaluate and revise the overall learning and follow up on learning deficiencies and weaknesses.

**3.4. Design validation**

At this stage, on the WEB product that has been completed, the researcher validates two experts, namely media and material experts. The results of the two validators become the basis for product improvement.

**Table 1** Expert Validation Result.

Validation	Percentage	Result
Media	87%	Valid
Material	77%	Sufficiently Valid

**3.5. Design improvements**

After the product is tested by media experts and material experts, the product is declared valid. Next, the product is tested. The trial was given to 2 lecturers of Anatomy. Testing by providing a response questionnaire to a validated WEB-based assessment. Based on the test data, it was concluded that the product was very good with a percentage of 89%.

The development of a WEB-based assessment in the Anatomy course begins with the creation of websites followed by an assessment process. The systematic development of WEB-based assessment in this research focuses on improving the design so that the product can be used as an assessment for students taking the Sport Anatomy course. The results of the development of this assessment indicate that the product is "very good" so that it can be used. By using google sites, much can be done. Google site is projected to be a WEB-based assessment. The benefits can be used in assessing students' daily activities. This assessment was established so that its implementation is more flexible and easier.

**4. CONCLUSION**

Based on the results of the previous research and discussion, it can be concluded that the WEB-based assessment product is "very good" so that it can be used for students who teach Sports Anatomy courses. In addition, there are suggestions that can be given to other researchers who will develop web-based assessments, it is better if the recording history format of all assessment results is displayed, so there is no need to record every assessment. Furthermore, WEB-based assessments can be tested on direct students. This requires more time. The goal is to get the other side of the response to the product being developed.

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