



# Development Of Practical Assessment Tools For Making Animal Preservation Products In Meta-Lessons Of Workshop And Entrepreneurship In Senior High Schools

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## ABSTRACT

This research is motivated by the use of manual assessment tools that do not have indicators on each aspect of the assessment. The purpose of this research is to develop an assessment tool for the practice of making animal preservation products in workshop and entrepreneurship subjects in digital-based high schools by utilizing the Jotform application. The method used is Research and Development (R&D) with the ADDIE model, through the optimization and evaluation stages. The validation results from the assessment expert showed a percentage of 95% with very feasible criteria, while the material expert gave a score of 82% which was also included in the very feasible category. The reliability test using the Cronbach Alpha method through SPSS resulted in a value of 0.806 which indicates a very high level of reliability. This study recommends that teachers use this assessment tool to measure students' skills in making animal preservation products, and encourages further research to examine the effectiveness of using this tool in supporting the practical learning process.

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## 1. INTRODUCTION

Education is all learning knowledge that occurs throughout life in all places and situations that have a positive influence on the growth of each individual. The purpose of an educational activity according to Law No. 20 of 2023 is for students to have religious spiritual strength, good personality, self-control, intelligence, noble character, and skills needed for themselves, society, nation, and state.

Broadly speaking, education can occur in three educational environments, or often known as the "Trilogy of Education" which states that the educational environment is divided into formal, in formal, and non-formal education (Febriyanti, 2021). Talking about formal education in schools, there is a process of learning activities. In learning activities, teachers must be able to create a conducive learning atmosphere so that learning activities run effectively, so that learning objectives can be achieved. In formal education at the Senior High School level, there are several subjects as stated in the Regulation of the Minister of Education and Culture Number 59 of 2014, article 5 paragraph (1), which consists of, "Group A General Subjects, Group B General Subjects, and finally Group C General Subjects". Group B general subjects consist of cultural arts, physical education, and workshops and entrepreneurship. Workshops and entrepreneurship carried out in secondary education units are usually complemented by local content.

Currently, the world of education is starting to implement the entrepreneurial spirit into students not only when they enter the world of lectures, but also at the high school level. The application of workshop and entrepreneurship subjects at the upper secondary education level is in accordance with the recommendations stated in the 2013 curriculum. One of them is SMAN 1 Jalancagak which is still using the 2013 curriculum, and requires students to study workshop and entrepreneurship subjects. This workshop and entrepreneurship subject also turns out to provide many benefits and a great contribution to today's younger generation, because at this time the availability of very few jobs has resulted in a large number of unemployed people in Indonesia, therefore this workshop and entrepreneurship subject has an important role in employment and can form an entrepreneurial attitude and spirit to students (Isqaedah, 2020). In this subject, there are usually practices carried out at the end of each delivery of material, because with practice it is hoped that students will better understand and easily understand the material that has been delivered so that it will improve students' skills (Fatimah, 2020).

The learning process and practicum certainly cannot be separated from an assessment process. Learner assessment is an important part of the learning process. Assessment is a process or effort made in obtaining information about the development of students during learning activities as decision-making material by teachers to determine and improve the process and learning outcomes of students (Imania & Bariah, 2019). Assessment is also one of the most important things in a learning process carried out by educators. Because with the assessment or assessment of learning outcomes, it can be used to determine how much success is achieved by students regarding mastery of material or mastery of competencies that have been taught by the teacher.

In the current digital era that continues to develop rapidly, the use of technology is growing, with a variety of gadgets such as laptops, computers, smartphones, and so on can be maximally utilized in the world of education and aims to improve the quality of education (Purnamasari, 2015). The development of information and communication technology provides many new opportunities in the way of teaching or assessment in schools. One of the utilization of technology in the field of education is the availability of digital assessment tools or often known as e-Assessment. In addition, assessment using a paper-based

assessment system is considered less effective and efficient (Hariono *et al.*, 2021). The assessment process is also carried out to see the ability of students in carrying out a practicum, including knowledge and skills that are carried out in consecutive times or together. The aspects of assessment contained in learning are three domains, namely cognitive, affective, and psychomotor. This assessment is implemented through the 2013 curriculum currently used by most schools in Indonesia. This skill competency assessment is carried out by directly observing the performance of students. In accordance with the Regulation of the Minister of Education and Culture Number 66 of 2013, namely regarding assessment standards, teachers can evaluate skills by using performance assessment, which requires students to show all their abilities through practical tests, projects, and portfolio assessments. Performance assessment is an assessment carried out by teachers in observing and assessing students' skills or competencies in carrying out a work task, creating products, and carrying out presentations (Isnaini & Utami, 2020).

Preliminary studies carried out through observation and interviews with teachers of Workshop and Entrepreneurship subjects at SMAN 1 Jalancagak that the food practice assessment tools used include aspects of the stages of preparation, implementation, products produced, promotional aspects, and, reporting but the assessment tool has not been equipped with detailed success indicators on each aspect. Indicators of success must be included specifically so that the ability of students can be measured correctly so that teachers can reveal learning assessment is considered very important because of its function, namely to measure the achievement of learning objectives and competence of students. In addition, the assessment used at SMAN 1 Jalancagak still uses paper or often known as paper-based so that several problems arise in this assessment such as being vulnerable to loss, tearing, and damage.

Based on the background description, the researcher is interested in conducting research with the title "Development of Assessment Tools for the Practice of Making Animal Preserved Food Products in Workshop and Entrepreneurship Subjects at the Senior High School Level".

## 2. METHODS

The method used in this research is Research and Development or can be called Research and Development, with the use of the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation) which is the ADDIE model here in accordance with the objectives of the research to be carried out, namely to design and develop performance assessment tools (Hidayat & Muhammad). The research participants consisted of two material experts, two evaluation experts, and 10 class X students. The research location is SMAN 1 Jalancagak which is located at Jl. Cagak No. 061, Curugrendeng, Kecamatan jalancagak, Subang, West Java 41281. The data collection techniques used were interviews, expert judgment, product manufacturing practices, and reliability tests. Data interpretation was carried out from the results of data processing which was analyzed by comparing the scores of assessor 1 and assessor 2, with the inter-rater reliability test assisted by the SPSS application with the Cronbach Alpha method to determine whether the instrument was reliable or not. Cronbach Alpha criteria can be seen in **Table 1**.

**Table 1.** Cronbach's alpha criterion

Criteria	Reliability Level
0.91 – 1.00	Very High
0.71 – 0.90	High
0.41 – 0.70	High enough
0.21 – 0.40	Low
Negatif – 0.20	Very Low

Data interpretation in this study was carried out to get an overview of the results of the validation sheet. The interpretation of the data used by the validation results uses the assessment qualification criteria. Data interpretation can be seen in **Table 2**.

**Table 2.** Data interpretation

Percentage	Description
82% - 100%	Very suitable for use
63% - 81%	Feasible to use
44% - 62%	Not worth using
25% - 43%	Not worth using

### 3. RESULTS AND DISCUSSION

The results and discussion of the results of research on the development of practical assessment tools for making animal preservation products in workshop and entrepreneurship subjects, are the results of data processing obtained by researchers and organized based on research objectives. The following is an explanation of the research discussion:

#### 3.1. Implementation

The needs analysis activity is an activity in analyzing the needs of developing practical assessment tools for making animal preservation products in high school (Tamira & Ristiono). Based on the results of observations that have been observed through interview activities with one of the teachers at SMAN 1 Jalancagak, it is found that the practical assessment tools that already have appropriate aspects but are still general in nature, and have not covered more detailed and clear indicators as a reference to the activities that must be carried out by students when the practicum takes place besides that, the assessment tool still uses paper or (paper based) media. Therefore, it is necessary to have a digital-based assessment tool using the Jotform application as a solution in storing data safely and in the long term.

#### 3.2. Design

The design of practical assessment tools is adjusted to the assessment guidelines for high school contained in the book published by the Ministry of Education and Culture in 2015. The design of the development of practical assessment tools for making animal preservation products consists of selecting the format of the assessment tool, making instrument grids, and making digital-based assessment tools in the form of assessment forms in the Jotform application. The assessment tool for making animal preservation products that will be designed is in the form of a rating scale using an analytical rubric (Handayani *et al.*, 2023). The criteria used in this assessment tool is to give a score between

1-5. With information: (1) Very Less, (2) Less, (3) Enough (4) Good, and (5) Very Good. The last is the selection of assessment media, namely the Jotform application, this application was chosen because it can be used for digital assessments with checklist instruments, so that it can make it easier for users to determine the assessment scale. The use of the Jotform application has several advantages, including reducing the use of paper, making assessment activities simpler and saving time, and more effective.

### 3.3. Development

The development phase of the assessment tool has undergone a validation test conducted by two assessment expert validators and two material expert validators. The results from the assessment expert validators indicated a very feasible criterion, with a percentage of 95%. This suggests that the assessment tool developed meets high standards of feasibility from the perspective of assessment. On the other hand, the results from the material expert validators also showed a very feasible criterion, with a percentage of 82%. Although slightly lower than the results from the assessment experts, this percentage still indicates that the assessment tool is highly effective and can be used efficiently in the learning context. Based on these validation results, the assessment tool for the practice of making animal preserved products, developed through the Jotform application, is considered very feasible to be used in workshop subjects. It meets the required feasibility criteria from both assessment and material perspectives.

Additionally, the positive validation results from both sets of experts highlight the robustness of the assessment tool in terms of its applicability and relevance in practical settings. The small discrepancy in the feasibility ratings between the assessment experts and material experts may reflect differences in their areas of expertise, but overall, the tool is deemed to be reliable and appropriate for use in educational workshops. The high feasibility percentages suggest that the tool not only supports effective evaluation of the learning process but also aligns with the material content of the practice of making animal preserved products. This further reinforces the tool's value as an essential resource in enhancing learning outcomes and ensuring that workshop participants gain the necessary skills and knowledge efficiently.

### 3.4. Implementation

This implementation activity was carried out on Friday, August 2, 2024 at SMAN 1 Jalcagagak involving 10 class X students and two workshop teachers. At the time of implementation, the researcher explained the procedures for filling out the assessment tool, and shared the link to the assessment tool that had been designed in the Jotform application. Researchers explained in advance about the stages and indicators that will be assessed in this salted egg practicum. At the time of implementation, the teacher uses a smartphone as a medium used to access the link to the assessment tool that has been distributed. When the assessment activity takes place, the teacher observes the activities carried out by students and looks at the indicators to serve as guidelines in the assessment activity. Teachers can give scores of 1-5 on each aspect and are adjusted to the indicators achieved. Giving value / score only presses on one of the selected scores. After all indicators are filled in, the score will appear at the end of the assessment form.

### 3.5. Evaluation

The evaluation of the development of this assessment tool is carried out in the form of an interrater test (Interrater Reliability). This inter-rater test aims to determine the consistency and reliability of the assessment tools used in the learning process. The results of the student assessment are in the form of scores that can be seen by the teacher on the practical assessment tool application that has been developed. The evaluation results were carried out using the SPSS application through the interrater test as can be seen in **Table 3**.

**Table 3.** Case Processing Summary

<b>Case Processing Summary</b>			
		N	%
Cases	Valid	10	100.0
	Excluded	0	.0
	Total	10	100.0
<b>Reliability Statistic</b>			
Cronbach's Alpha		N of item	
.806		2	

**Table 1.3** shows the SPSS results that the Cronbach Alpha value for the entire measurement scale is 0.806 which is stated that it has a high level of reliability (Arikunto, 2016). These results indicate that the assessment tool for the practice of making digital-based animal preservation products using the Jotform application in workshop and entrepreneurship subjects has a fairly high level of reliability.

#### 4. CONCLUSION

- (i) The results of the needs analysis obtained in this study that the assessment tool for the practice of making animal preserved products in workshop and entrepreneurship subjects has not contained more detailed indicators and the assessment tool still uses paper media or (paper based). Therefore, it is necessary to have a digital-based assessment tool using the Jotform application as a solution in storing data safely and in the long term.
- (ii) The design of the assessment tool is carried out by making 1) selection of the format of the assessment tool with an assessment scale using an analytic rubric with a score range of 1-5. 2) instrument grid sheet 3) digital-based assessment tools, namely in the form of assessment forms in the Jotform application.
- (iii) The assessment tool development activities have gone through a validation test conducted by two assessment expert validators and two material expert validators. The results of the assessment expert validation are in the very feasible criteria with a percentage of 95% and the results of the material experts are in the very feasible criteria with a percentage of 82%. Therefore, the assessment tool for the practice of making animal preserved products developed through the jotform application is very feasible to be used in workshop subjects.
- (iv) The implementation of the developed assessment tool was carried out at SMAN 1 Jalancagak involving 10 students and two teachers of workshop and entrepreneurship subjects. Before the implementation day was carried out more precisely during the validation test, the researcher had introduced the application developed and had advised the teacher to download the Jotform application, so that during the implementation activities the teacher easily accessed the assessment tool link using a smartphone, when the practicum activities took place the teacher could pay attention to students and give scores based on the appropriate indicators.

(v) The evaluation was conducted through an interrater reliability test using the SPSS application.

From the above conclusions, the recommendations that can be given are for teachers that the practice assessment tool for making digital-based animal preservation products with the use of the Jotform application has been declared feasible so that the assessment tool can be used by teachers as an assessment tool in assessing student practice results. For further researchers, the assessment tool for the practice of making digital-based animal preservation products with the use of the Jotform application in workshop and entrepreneurship subjects that have been developed can be followed up by examining other variables, such as the implementation or effectiveness of the use of practical assessment tools for making animal preservation products for students.

## AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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