



# Formative Assessment In Problem Solving Oriented Language Learning In High School

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## ARTICLE INFO

## ABSTRACT

The aim of language learning is to teach students to develop theoretical and practical language skills. To find out whether students are skilled or unskilled, it is necessary to use appropriate assessment. Assessment is not just a complement to learning, but is a quality assessment that has validity and reliability. However, in reality students lack skill in all four language skills (listening, speaking, reading, and writing). For this reason, educators must be able to teach language skills according to learning outcomes. The solution offered to this problem is to develop a formative assessment model in language learning that is applied to online classes. This research is of the Research and Development (R&D) type using the Plomp development model which consists of preliminary research, prototype design, and evaluation. The sampling technique was carried out using purposive sampling to obtain 40 students as a test of the model developed. The data collection method was carried out using questionnaires and documents. Research instruments include questionnaires, observation sheets and tests. The data analysis technique used in this research is descriptive analysis technique, namely describing the result of data tabulation. The research result shows that the validity value obtained an average 91,11% in the very high category, the practicality is 92,37% and the effectiveness of the model can be seen from the graph of the scores obtained by students who use the model. This shows that the formative assessment model can be applied in Indonesian language learning.

**Keywords:** Formative Assessment, Language Learning, Online Classes

## INTRODUCTION

Formative assessment is considered as one of the assessments that is able to assess pedagogical competence (Black, 2018; Kaur, 2021). This assessment provides a balanced system with summative assessment (Lee and William, 2005). Considering the importance of this, the Ministry of Education and Culture, Research and Technology, Indonesia (2022) has issued a national assessment consisting of three instruments, namely (1) Minimum Competency Assessment (AKM) which measures students, reading literacy and mathematics literacy/numeracy, (2) character survey which measures attitude, values, beliefs, and habits that reflect the character of student, and (3) learning environment survey which measures the quality of various aspects of input and learning processes in the classroom and at the educational unit level. Referring to this, teachers in high school are expected to be able to apply relevant and balanced assessments, especially formative assessments in language learning.

The reason for this research is driven by the fact that the purpose of assessment is to be able to represent teacher activities in the classroom that are not yet clear and need to be investigated. This is still limited in the application of assessment specifically aimed at the classroom, but they have not been fully explored in the classroom context (Leong and Tan, 2014). This means that educators are given the freedom to choose these assessments in language learning that are not only formative assessment, but educators are able to explore these assessments and their effect (Leong, 2014; Kaur, 2021).

At this stage, students are seen as producers, not as consumers of knowledge. Learners who will produce new knowledge by connecting it with their previous experiences (Hagos, Tadesse and Andargie, 2023). As a result, learning emphasizes the ability of educators to facilitate students' understanding of the material they are

studying (Song and Sparks, 2019). Technological developments have changed educators to choose alternatives for using learning assessment (Menggo, Sebastianus, and Gunas, 2022).

Educators are expected to be able to choose the right type of assessment to improve the learning process (Tosuncuoglu, 2018). By implementing appropriate assessments, it will have an impact on feedback for students regarding student progress according to predetermined learning outcomes (Menggo et al, 2019). One of them is a formative assessment on writing skills. This formative assessment involves teachers and students in collecting, interpreting and documenting evidence of students carrying out learning activities (William, 2011). This formative assessment is also called assessment for learning (Antoniou & James, 2014). This formative assessment provides space for students to build their own knowledge through the learning process by encouraging students to be independent (Farisia, 2021).

Referring to this, research on assessment has been carried out by many previous researchers, but practicing formative assessment in language learning is still rarely researched. This is proven in related research, namely research on language problems Coombe, Vafadar & Mohebbi, (2020), research that focuses on assessing educator literacy Jawhar & Subahi (2020), research on classroom assessment (Yamtin & Wongwanich, 2014). However, this research only focuses on educators' insights into classroom assessment literacy. Classroom assessment literacy greatly influences the quality of learning and the quality of assessment (Pastore & Andrade, 2019; Khalid et al, 2023). Therefore, it is very necessary to research the implementation of online formative assessment. If related to the results of research conducted by Bennet (2011), class-based assessment using a formative assessment model has a positive impact on reading skills. Although teachers still experience difficulties in implementing this assessment (Westbroek, 2020).

This online-based formative assessment is adapted to online learning material, so that students can carry out it independently and gain more knowledge and skills (Olutola et al, 2021). The assessment does not just answer questions, but rather how far a process and results are obtained by students or the program that has been determined (Lincoln, and Riza, 2018). Therefore, this online-based formative assessment includes approaches, processes and techniques that use technology to increase access in language learning (Wang, 2009). In online classes, platform learning activities offer students a learning environment to innovate (Cahyani et al, 2020). This means that assessment in online-based learning has changed the learning framework and assessment techniques used (Suo and Shi, 2008).

In this regard, the aim of this research is to develop an online formative assessment model that is very suitable for detecting processes and obtaining student learning outcomes in language learning. The main question is to what extent is the development of online-based formative assessment models in language learning valid, practical and effective, making it easier for teachers to assess learning?

## METHOD

This type of research is research and development which aims to produce formative assessment model in Indonesia language learning in online classes for high student. This model uses the Plomp & Nienke (2013) development model which consists of preliminary research, prototyping phase, and assessment phase. At the preliminary research phase, the researcher carries out needs analysis, student analysis, curriculum analysis, concept analysis, analysis of the formulation of learning objectives, while in the prototyping phase, the researcher designs the product trials to determine practicality and effectiveness values (Atmazaki, 2021).

The development procedure is carried out according to the stages of the Plomp development model. At the preliminary research phase, researches carried out needs analysis, student analysis, curriculum analysis, concept analysis, analysis of the formulation of learning objectives. Next, the prototype phase is carried out by designing an formative assessment model according the characteristics and needs of students. After that, the next step is the researcher to validate the designed model for experts to assess aspects of content, presentation, language, and layout.

After the formative assessment model was validated by experts, the researches conducted trial at SMA Negeri 1 Medan with 40 students. The selection of schools was carried out using purposive sampling provided that students were registered as high school level students in Medan City; open to accepting innovation; can establish good cooperation; and have adequate facilities and infrastructure to carry out research. The trial will be carried out May to August 2023, adjusted to the high school curriculum, so that aligned formative assessment model can be applied to Indonesian language subjects in odd semester. The research instrument used consisted of questionnaires, observation sheet, and tests. The data analysis technique is carried out using descriptive data analysis techniques, namely describing the Plomp model can be seen in chart 1:

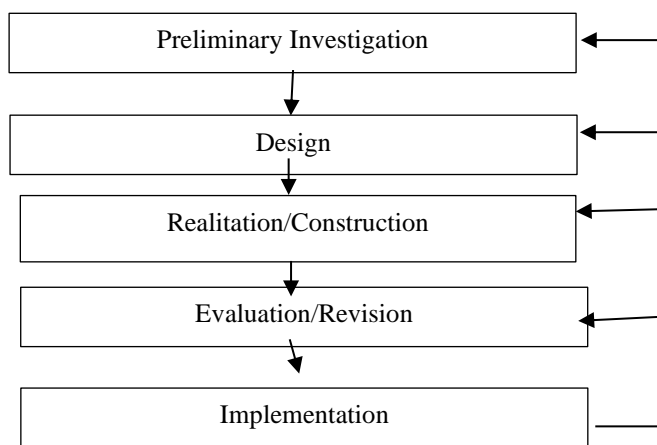


Chart 1. Plomp development model

### RESULTS AND DISCUSSION

#### Description of Research Results

Based on the research objectives stated previously, the researcher describes the results of developing a formative assessment model in Indonesian language learning as follows. After the product (formative assessment) has been designed, the next step is researchers to carry out validaitaion tests by appropriate experts in their respective fields. The aspects assessed by model consist of aspects of content, presentation, language, and layout. The purpose of the validation test is to measure the validity or feasibility of the model developed by the expert. Validationis not just filling in the tick marks given by experts, but is more about the shortcomings of the model being developed to be corrected. The validation results of the formative assessment model in online classes are presented in table 1.

Table 1. Formative Assessment Model Validation Results

| No | Rated Aspect | Validation Result (%) | Category   |
|----|--------------|-----------------------|------------|
| 1  | Content      | 90,20                 | Very Valid |
| 2  | Language     | 90,40                 | Very Valid |
| 3  | Presentation | 92,35                 | Very Valid |
| 4  | Layout       | 91,50                 | Very Valid |
|    | Total        | 364,45                | Very Valid |
|    | Average      | 91,11                 | Very Valid |

The results of the practicality of the formative assessment model were obtained from questionnaires distributed to students which had already been filled out. By filling in the questionnaire, students provide assessments and comments regarding the models that have been used in the Indonesian language learning process. The practicality of the formative assessment model is assessed by students including aspects of the language used in the model. This practicality questionnaire was filled in by 40 students. After the students filled out the questionnaire given, the researcher then calculated by assessing the practicality of the model. Next, the researcher analyzed the questionnaire according to the statement items, and carried out an overall analysis. The results of this analysis can be seen in table 2.

Table 2. Model Practicality Results by Students

| No | Rated Aspect  | Percentase (%) | Category       |
|----|---|----------------|----------------|
| 1  | The use of formative assessment models can improve student learning outcomes. | 92,25          | Very practical |
| 2  | The language used in the model is very systematic and concise as needed.      | 92,50          | Very practical |
|    | Total   | 184,75         | Very practical |
|    | Average   | 92,37          | Very practical |

The results of the effectiveness of the formative assessment model are obtained from student learning activities and student learning outcomes during the learning process. Student activities were observed by two observers who assisted the researcher, namely Mrs. Komariah, S.Pd. and Mr. Dika Sahputra, S.Pd. Student activity data was collected by the teacher as the first observer, and the researcher as the second observer. This observation aims to determine the suitability of activities carried out by students when learning Indonesian. The results of the model's effectiveness are described in table 3 below.

Table 3. Experimental class student scores

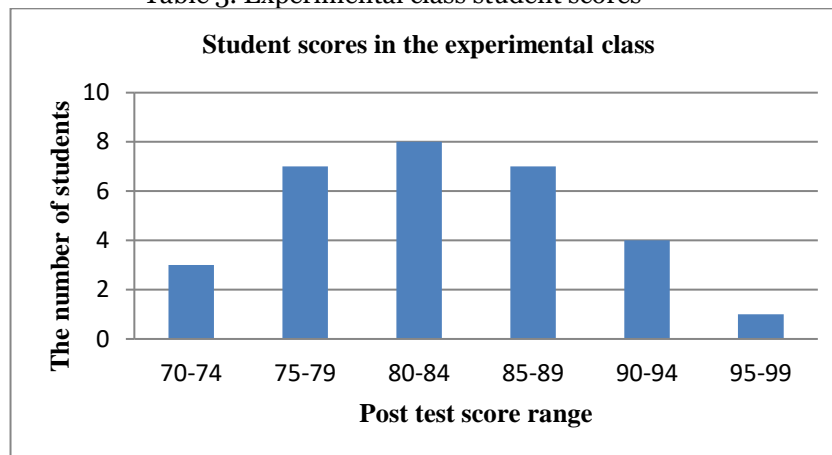
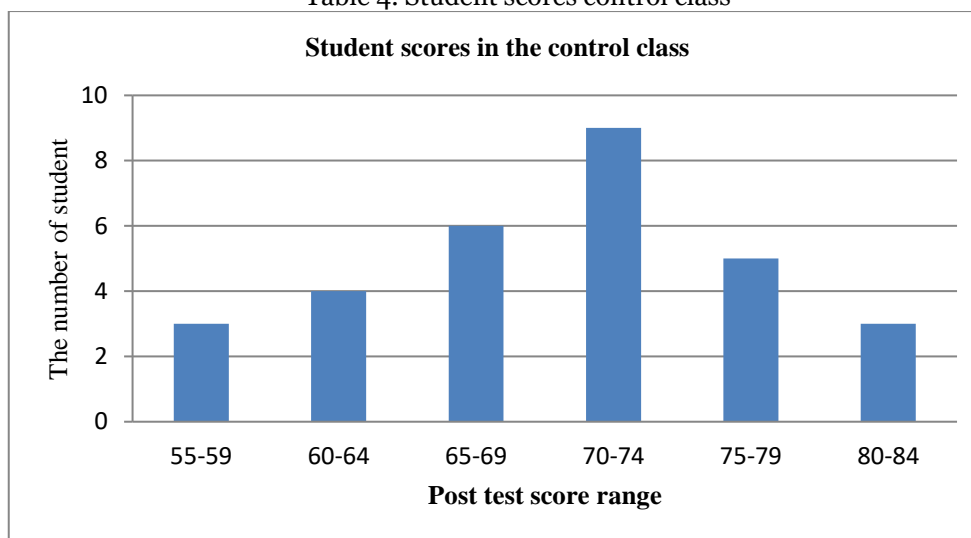


Table 4. Student scores control class



Based on the results of the effectiveness of the model above, it shows that the formative assessment model is effectively used by educators and students. In addition, Indonesian language teachers at SMA Negeri 1 Medan can easily use models as evidenced by the increasingly creative students in learning. Teachers can learn according to general instructions and specific instructions in the model. The material presented in the model is in accordance with the needs of teachers and students.

### Impact of Formative Assessment Models

The use of the formative assessment model has been widely used by previous researchers, showing that students are more stimulated, guided, think critically, analytically and systematically in order to find answers independently. Students can develop intellectual skills, such as asking questions and searching for their own answers. In practice, this formative assessment model can be applied with various learning models. The application in learning is adjusted to the characteristics and needs of students. Formative assessment provides students with the ability to understand and use language appropriately in language skills, namely listening, speaking, reading and writing skills (Menggo et al, 2019).

Formative assessment can be carried out based on its context and objectives, for example aptitude tests, proficiency tests, placement tests, diagnostic tests, and achievement tests (Noor et al, 2020). Formative assessment is very useful for assessing students' speaking abilities, such as motivating students to think higher, be objective and holistic. In addition, this assessment can also measure knowledge, attitudes, self-assessment, which have a positive influence on students' abilities in real talk (Abbaspour, 2016). Another advantage of formative assessment is that it allows students to think objectively and creative, respecting pluralism, commitment, integrity, and working together in different groups. This is in line with the demands of 21<sup>st</sup> century educational skills (Abualrob & Al-Saadi, 2019). Therefore, it can be concluded that formative assessment has developed students' skills, both individually and in groups, recognizing holistic awareness, good communication strategies and students' self-confidence increases.

## CONCLUSION

The formative assessment model in language learning has a very high level of validity by expert assessment. This means that this model represents harmony between learning material and the needs of high school teacher and student. The syntax is clear and easy to follow by teachers as facilitators and easy to understand by student as subjects in language learning. The practicality of the formative assessment model is very practical due to the use of educators in implementing it according to the instructions contained in the model. The effectiveness of the model can be seen from the increase in learning outcomes of students who follow it, indicated by students becoming more creative in the four language skill (listening, speaking, reading, and writing).

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