

## Utilization Of Gimkit For Online Game Mode Chemistry Formative Assessment

Sonny Rohimat<sup>1\*</sup>

<sup>1)</sup> SMA Negeri 6 Kota Serang, Banten

E-mail\*: [albaregbegi@gmail.com](mailto:albaregbegi@gmail.com)

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### ABSTRACT

One of the principles of merdeka curriculum is meaningful and enjoyable learning that is designed according to students' needs. The application of these principles can be carried out at various stages of learning, including during formative assessments. The aim of this research is to analyze the use of Gimkit for formative assessment for students on the topic of colligative properties of solutions. The research was conducted in a descriptive qualitative manner with three stages of activities, namely preparation, implementation and reflection. Based on the reflection results, it is known that the use of Gimkit for formative assessment of the colligative properties of solutions was stated as good or very good by 95.8% of students. This is reinforced by the results of observations that students took part in the formative assessment with enthusiasm

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## INTRODUCTION

The 2023/2024 school year is the second year of the implementation of a policy that gives freedom for all education units to implement an independent curriculum, even if the school is not a participant in the driving school program (Ministry of Education, Culture, Research and Technology, 2022). Education units that will implement the independent curriculum can register independently by choosing one of three options, namely independent learning, independent change, and independent sharing (Directorate General of Teachers and Education Personnel, 2022). Education units that register for independent learning curriculum implementation still use the 2013 curriculum content but by integrating the principles of the independent curriculum. Education units that register to implement the independent curriculum independently change have implemented independent curriculum content by using learning tools that have been provided by the Ministry of Education, Culture Research and Technology on the Merdeka Mengajar Platform. Education units that register to implement the independent curriculum independently share implementing the independent curriculum as a whole by developing their own learning tools (Rohimat, 2023).

In implementing the independent curriculum, there are two main types of assessments that teachers must carry out on students (Curriculum Standards and Education Assessment Agency, 2022). The two types of assessment are known as formative assessment and summative assessment. Formative assessment can be an

initial assessment to determine the readiness of students before participating in learning so that it becomes the basis for teachers in designing learning (Elviya & Sukartiningsih, 2023). Formative assessment can also be done during learning to see progress and feedback during learning (Rahmawati, Hartono, & Nugroho, 2015). Summative assessment is conducted at the end to measure the achievement of learning objectives (Mujiburrahman, Kartiani, & Parhanuddin, 2023).

One of the principles of the independent curriculum is meaningful and enjoyable learning designed according to the needs of students (Purnawanto, 2022). This is in accordance with Ki Hajar Dewantara's educational philosophy which is emphasized in the implementation of the independent curriculum (Nurchayani, Rajasa, & Wijayanti, 2022). This principle encourages teachers to organize learning in accordance with the nature of learners, both natural nature and the nature of the times (Rohimat, Wulandari, & Wardani, 2023). Natural nature relates to the background of learners according to their geographical, economic, social, and cultural environments. The nature of the times relates to the rapid development of science and technology.

The application of these principles can be done at various stages of learning, including in the implementation of assessments. The type of assessment that is relevant to the application of this principle is formative assessment (Bahri, Mutaleb, Gunawan, & Zainuddin, 2021) which is used to see progress and provide feedback during learning. The application of this principle can create a fun atmosphere for students even though they are participating in assessment activities.

The purpose of this study is to analyze the use of Gimkit for formative assessment for students on the material of colligative properties of solutions. Gimkit is a digital platform that can be used to work on various questions online with a display like an online game (Rohimat, et al., 2023). The utilization of digital platforms such as gimkit is one of the steps that teachers can take in compensating for the rapid development of technology in various fields of life, especially in the field of education or learning.

## **METHODS**

This research is a qualitative study using descriptive methods. Qualitative research can be interpreted as research that is flexibly designed and general in nature, prioritizing processes (Sidiq & Choiri, 2019), and producing research data in the form of pictures or words (Sugiyono, 2013). Descriptive method is a research method in the form of an explanation of attitudes, processes that occur, or activities carried out (Samsu, 2017).

In its implementation, this activity is carried out through three main steps, namely preparation, implementation, and reflection. The preparation stage was carried out through making formative assessment questions using Gimkit, the implementation stage was carried out through chemistry formative assessment activities in class XII MIPA, and the reflection stage was carried out through filling out surveys on the Google Form link. The data collection techniques used were observation and survey of the utilization of Gimkit as a formative assessment media in chemistry learning. The research was conducted in September 2023 on the learning material of colligative properties of solutions in accordance with the 2013 Curriculum.

The population of this study were all students of class XII MIPA in the 2023/2024 school year at SMA Negeri 6 Serang City. Observations were made classically to all

students who took the formative assessment of the colligative properties of solutions using Gimkit. The survey was conducted through a Google Form link given to respondents as a reflection of the learning that had been carried out. The number of respondents was 166 students or 73.13% of all students in class XII MIPA at SMA Negeri 6 Kota Serang.

## RESULT AND DISCUSSION

The first stage carried out in this research is the preparation stage. The preparation stage was carried out by preparing various tools needed in formative assessment activities using the Gimkit platform. The tools include formative assessment questions on the subject matter of the colligative properties of the solution along with the answer key, as well as a survey instrument for reflection on formative assessment activities. The assessment questions were entered into the Gimkit platform by following the steps given on the platform. The formative assessment reflection survey instrument was created using a Google Form consisting of two questions. The first question was in the form of multiple choice questions related to students' responses to the use of Gimkit as a formative assessment media. The second question is a description question about the reason for choosing the answer to the first question.

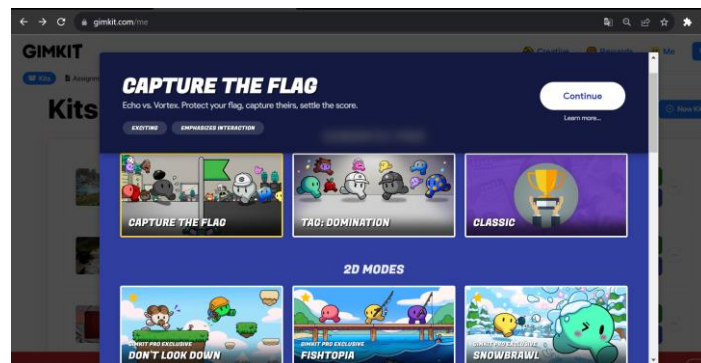
The second stage is the implementation of formative assessment of the subject matter of colligative properties of solutions using Gimkit. At this stage the teacher chooses the type of game and determines the rules of the game that will be used in the assessment activities. The type of game used in this assessment is Snowball. The game join code is distributed to participants by displaying it through the LCD Projector screen. This is done so that the join code is visible to all students in the class (Maryono, Susanto, & Syam, 2022). Participants join this game by accessing <https://www.gimkit.com/join> and then entering the join code that has been distributed by the teacher (Rohimat, et al., 2023).

Based on the observations made in all classes, it was found that almost all students participated in the formative assessment with enthusiasm. This enthusiasm can be observed from the facial expressions and speech of students (Anggraeni, 2016). Learners' enthusiasm has appeared since they successfully joined the game and saw the appearance of the assessment they would take. This enthusiasm was even more visible when the participants took the assessment in online game mode. Many students even expressed their excitement with emotional shouts that showed excitement or surprise. Expressions of disappointment also appeared when the game ended because the time was over.

However, there are some learners who experience obstacles in participating in formative assessment using Gimkit. The obstacle was caused by the learners not having a cellphone. To resolve these obstacles, these learners are allowed to take the formative assessment in the computer laboratory. Another obstacle that occurred was that there were learners who often left the game because the internet network on their cellphones was not stable. This resulted in a decrease in the enthusiasm of these learners in participating in the assessment.

The third stage is the implementation of reflection on formative assessment activities using Gimkit. In this reflection activity, learners were asked to answer two questions about the implementation of formative assessment using Gimkit. In the first

question, students were asked to choose one of five answer options in the form of responses to the use of Gimkit as a formative assessment media. The five answer choices are Very Good; Good; Fair; Not Good; and Very Bad. The second question is an open question in the form of reasons for choosing the answer to the first question. Respondents' answers to the first question are presented in Figure 1.

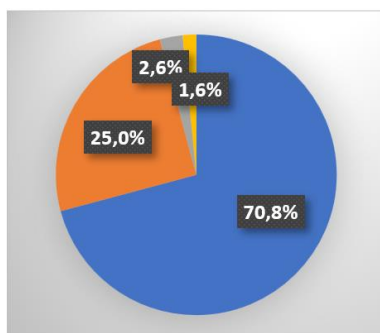


**Figure 1.** Game Option in Gimkit Platform

Based on the results of observations carried out in all classes, it is known that almost all students took part in the formative assessment with enthusiasm. This enthusiasm can be observed in students' facial expressions and spontaneous speech (Anggraeni, 2016). The students' enthusiasm has emerged since they successfully joined the game and saw the display of the assessment they will take part in. This enthusiasm is increasingly visible when participants take part in assessments in online game mode. Many students even expressed their expressions with emotional screams that showed their joy or surprise. Disappointed expressions also appeared when the game ended because the time was over.

However, some students experience problems in taking the formative assessment using Gimkit. This obstacle is caused by students not having cell phones. To resolve these obstacles, these students are allowed to take part in formative assessments in the computer laboratory. Another obstacle that occurs is that students often enter and exit games because the internet network on their cell phones is less stable. This resulted in the students' enthusiasm for taking the assessment decreasing.

The third stage is carrying out reflection on formative assessment activities using Gimkit. In this reflection activity, students are asked to answer two questions about implementing formative assessments using Gimkit. In the first question, students are asked to choose one of five answer choices in the form of a response to the use of Gimkit as a formative assessment medium. The five answer choices in question are Very Good; Good; Enough; Not good; and Very Bad. The second question is an open question in the form of reasons for choosing the answer to the first question. Respondents' answers to the first question are presented in Figure 2.



**Figure 2.** Respondents' answers of utilization of Gimkit as assessment media. Respondent state as blue is very good, orange is good, grey is fair, and yellow is unfavorable.

Based on the diagram in Figure 2, it is known that the utilization of Gimkit for formative assessment of the colligative properties of solutions is stated to be good or very good by most respondents. A total of 70.8% of respondents stated very good; 25.0% of respondents stated good; 2.6% of respondents stated fair; and 1.6% of respondents stated unfavorable towards the utilization of Gimkit for formative assessment of the colligative properties of solutions. On this reflection, there were no respondents who stated that it was not good. Respondents' answers to the first question had various reasons. Respondents who stated very good reasoned that the assessment was very exciting and fun because they could learn with an atmosphere like playing a game. Other respondents reasoned that the assessment using Gimkit was a different kind of learning and practiced retrieval in a short period of time. Respondents who stated good reasoned that learning with Gimkit was fun, exciting, not boring, and made them more enthusiastic in exploring insights. Respondents who stated fair reasoned that the learning was exciting but found it difficult to play the game. Respondents who stated that it was not good reasoned that they did not like playing online games and did not enjoy the game because they often left Gimkit.

## CONCLUSION

The utilization of Gimkit for formative assessment on the material of colligative properties of solutions was stated to be good or very good by most students, namely 70.8% of students stated very good and 25.0% of students stated good. This is supported by the observation that almost all learners took the formative assessment with enthusiasm. The enthusiasm of the learners appeared since they managed to join the game and saw the appearance of the assessment that they would take in the form of the Snowball online game. Based on the feedback reflection, many learners hope that learning using the Gimkit online game mode will be done more often in class.

Based on this research, it is hoped that online game mode formative assessment activities can be carried out in various subjects. On the Gimkit digital platform, teachers can try various types of games other than Snowball. In addition, various parties are also expected to develop various other alternative assessment platforms that are interesting and fun that are educational.

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