

The Use of Quizizz Online Assessment Tools for Chemistry Learning During Limited Face-to-Face Learning

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Abstract

This study aims to determine the use of Quizizz online assessment media in chemistry learning during limited face-to-face learning (PTMT). During the PTMT period, many applications were used for assessment, one of which was Quizizz. Quizizz online assessment media with its various advantages has assisted educators in conducting online learning assessments, so that difficulties in assessment during the PTMT period can be overcome. This study uses a descriptive approach with quantitative and qualitative methods. Respondents were 45 students of 11th grade of Insan Cendikian Islamic High School in South Tapanuli, North Sumatra, Indonesia. This study implemented in the odd semester of the 2020/2021 school year. The results of the questionnaire given to the students it was concluded that the use of Quizizz media in assessment in chemistry learning could overcome problems in assessment during the PTMT period. This Quizizz online assessment method has bridged distance and time in chemistry learning which motivates students.

Keywords:

Online Assessment, Quizizz, Limited Face-to-face Learning

1. Introduction

The Covid-19 Pandemic period has had an impact on the economy, health and education. The number of covid-19 cases in Indonesia as of May 16 2021 reached 1,739,750 cases based on data from the government's official website, namely covid19.go.id (Sitorus and Tri, 2021). To break the

chain of transmission of this virus, the government issued a Minister of Education and Culture Circular Letter Number 4 of 2020 concerning Implementation of Education Policy in Emergency Situations Due to the Spread of Covid -19 it is recommended to carry out the learning process online from home (Elisa., *et al.*, 2021). This

pandemic has affected the education process, especially in Indonesia. The teaching and learning process which was originally carried out face-to-face changed to online (Rahmadhani, 2022). Online learning is considered the only medium for transferring information between teachers and students during the Covid-19 pandemic (Amalia and Maknun, 2021). This pandemic period had caused the process of learning activities to stop and be reopened by implementing Limited Face-to-Face Learning (PTMT). So that learning conditions like this become difficult, especially for educators to evaluate students (Rahmadhani, 2022).

Assessment is an effort made by educators to obtain comprehensive information regarding the extent to which students' abilities and learning progress include cognitive, affective and psychomotor aspects (Herlambang and Hanita, 2022). In general there are two assessment activities carried out by educators. Formative and summative assessments are two activities that are usually carried out by an educator in learning assessment. Formative assessment is defined as work done by students during the learning process and getting feedback to improve learning. This assessment aims to assist learning by generating useful feedback

information for students during the learning process and improving learning outcomes. Meanwhile, summative assessment is defined as an assessment carried out to find out how far students can move from one unit to another. In addition, this assessment is carried out if a learning experience or all subject matter is considered complete, so that the final semester exams and national final exams are included in the summative assessment category (Dewi, *et al.*, 2021).

Limited Face-to-Face Learning (PTMT) is a challenge for educators to carry out learning assessments with students with the condition that students cannot meet face to face directly (Rahmadhani, 2022). This situation has changed the method of assessment which was originally carried out in a conventional way, namely paper-based (paper-based tests) to switch to digital methods (Rahmawati, *et al.*, 2022). So that the solution for educators in this case is carried out by utilizing and using various applications as online-based assessment media (Rahmadani, 2022). Various kinds of online assessment media that can be carried out by educators include Google Forms, Edmodo, Zoom, and Quizizz (Mukharamah, 2021). An alternative to using assessments can be in the form of Quizizz as a stimulant that is "fun" but

still "learning" which can refresh memory, be interesting, and give a good impression on students' brain memory (Noor, 2020).

The Quizizz application was chosen as an online-based assessment medium because it has cool and attractive features and is easier to operate so that it can be used to motivate students (Rahmadhani, 2022). The use of Quizizz interactive learning media has a positive impact on educators and students, with the help of using Quizizz educators make it easier to convey learning material, condition students in class, and increase student motivation in learning (Hidayati and Aslam, 2021). This application can be accessed free of charge on devices such as computers, smartphones or tablets (Rahmadhani, 2022). The Quizizz application is a web tool for creating interactive quiz games for use in the learning process, for example in formative assessment (Noor and Sugian, 2020). In addition, Quizizz is a game-based application that makes learning activities more concentrated and fun. Quizizz is a web tool in the form of an interactive test that is used in classroom learning, for example for formative assessment (Mukharamah, 2021). Quizizz is also an educational game application that is narrative and flexible in nature, besides being able to

be used as a means of conveying material, it can also be used as a media for evaluation (Rahmawati, *et al.*, 2022). Quizizz's online assessment tool can minimize emerging weaknesses. This is what happens when evaluation is done in a traditional way to make it more efficient. By minimizing human error, questions can be coded quickly to reduce exam cheating, and test results can be seen instantly so teachers can easily make corrections (Purba, 2021). In addition, Quizizz can be used in students' daily learning as learning evaluation material. This online test assessment media with Quizizz provides data and statistics about student performance, you can even download these statistics in the form of an Excel spreadsheet (Setiawati, 2021). The use of Quizizz helps teachers evaluate the learning process without being limited by place, a pleasant display, and the timing of working on questions guide student concentration (Sitorus and Tri 2021).

Based on the explanation of the problem above, a solution is provided which aims to find out the use of Quizizz online assessment media in chemistry learning during limited face-to-face learning.

2. Research methods

This research uses descriptive research method. This research was conducted in the odd semester of the 2020/2021 academic year at the Insan Cendekia Islamic High School in South Tapanuli, North Sumatera, Indonesia. The subjects of this study were students of 11th grade on chemistry lesson. Respondents in this study were 45 students. This study used a

questionnaire instrument to carry out tests using the Quizizz application in online chemistry subjects. Research data was obtained by distributing questionnaires to students via the Google Form. This questionnaire consists of 10 statements, each statement arranged based on the Linkert scale. The following questionnaire can see at Tabel 1 below.

Tabel 1. Questionnaire Use Application Quizizz in Chemistry Learning

No	Statement	SS	S	CS	TS	STS
1	Learning chemical online with quizziz media _ could motivating for learn jar					
2	Learning chemistry online with help quizziz walk with good					
3	Learning chemistry online with help quizziz going on effective and efficient					
4	On end learning chemical given Exercise using quizziz media					
5	Learning chemical online with _ help quizziz more make participant educate challenged					
6	Learning chemical with quizziz media assistance practice student for think fast					
7	Learning chemical online with _ help quizziz more make they independent finish about chemical					
8	Learning chemical online with _ application quizziz could obtain experience new on the learning process					
9	Learning chemical online with _ help quizziz want also used on eye lesson and other material					
10	Exam repetition / formative with using quizziz media					

In the data analysis technique, first reduce the existing data in the questionnaire. Reducing the data in this study is summarizing, choosing the main things, focusing on the things that are important and looking for patterns and themes. After the data is reduced, the next step is presenting the data. In this

study, the presentation of data is in the form of text and diagrams that describe the results of using Quizizz.

This activity raises and shows an organized and categorized collection of data or information that allows to make a conclusion or action to be drawn. Drawing conclusions is the final activity

of data analysis. The conclusion drawn in this study is to find the meaning of the questionnaire data that has been obtained.

3. Results and discussion

Based on the results of data collection from a questionnaire distributed to 45 students, the following response data were obtained:

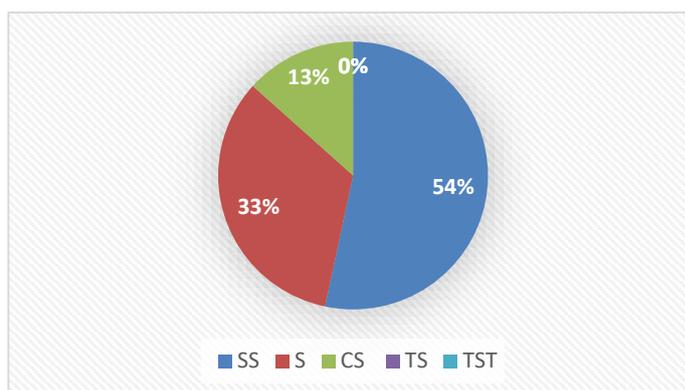


Figure 1. Students' Responses to the First Statement

Based on Figure 1, 54% of students strongly agree, 33% agree, 13% quite agree, and 0% of students disagree and strongly disagree. This shows that online chemistry learning with Quizizz media can motivate learning. The use of the Quizizz application as an online assessment medium can actually motivate students to learn. Assessment using the Quizizz application is one of the variations in assessment in learning. Besides that, using Quizizz media students are like playing games so that they feel enthusiastic and not boring when practicing questions. In line with the article written by (Wijayanti, *et al.*, 2021). The use of the Quizizz application is effectively used in school mathematics

courses in terms of motivation and student learning outcomes. Another opinion in the article written by Solikah (2020) is that the use of the Quizizz application has a significant positive influence when viewed from the learning outcomes and student learning motivation. According to another opinion, Rofiq, *et al.*, (2022) said that in his article the Quizizz media used by teachers to support online learning during the Covid-19 pandemic was able to overcome the saturation of students at Mutiara Anak Sholeh Islamic Creative Elementary School. It can be seen from the results of the student perception survey regarding the use of Quizizz media with a percentage, (1) students feel interested and happy when learning

online using Quizizz media by 100% (2) students are motivated to study even

harder after applying Quizizz media in online learning by 100 %.

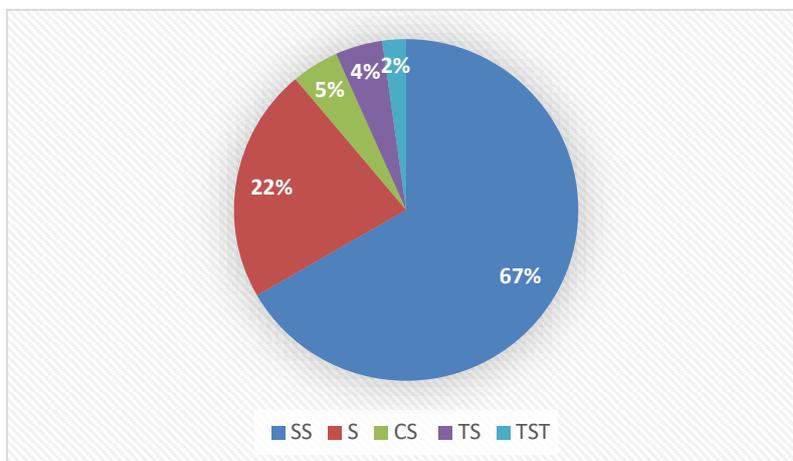


Figure 2. Students' Responses to the Second Statement

Based on Figure 2, 67% of students strongly agree, 22% agree, 5% quite agree, 4% disagree and 2% strongly disagree. This shows that generally online chemistry learning with the help of Quizizz is going well. The use of the Quizizz application in chemistry learning, especially in the assessment,

actually received a good response from students because with Quizizz media online assessment of chemistry learning could run well (89% of students agreed). In addition, this can also be seen from all students participating in exercises and quizzes given by educators.

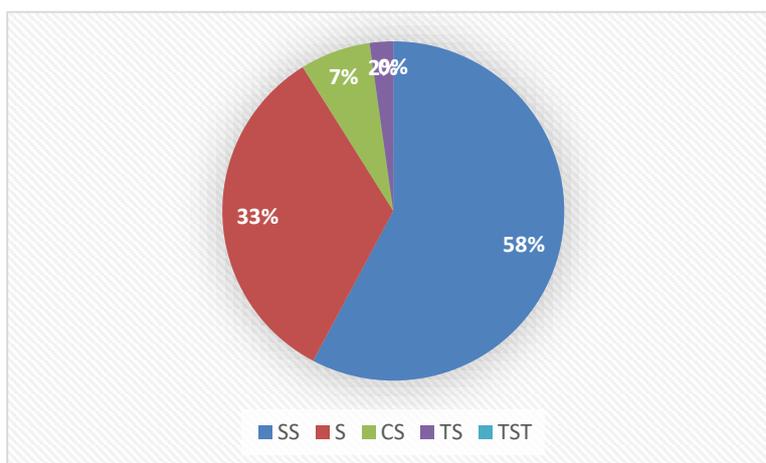


Figure 3. Students' Responses to the 3rd Statement

Based on Figure 3 as many as 58% of students strongly agree, 33% agree, 7% quite agree, 2% disagree and

0% strongly disagree. This shows that online chemistry learning with the help of Quizizz in assessment is effective and

efficient. This can also be seen from the Quizizz application which presents data on students' work and can be shown in the form of statistical data and students' work can be downloaded in Ms.Exel form. Furthermore, in using the Quizizz application, it is enough with a cellphone, each student does not need assistive devices such as an LCD or projector. Students can answer exercises/quizzes/test questions after getting the game code, the questions will appear on the student's cellphone or computer screen. In addition, students

will also be more focused during quizzes because the questions they are working on are different from one another, because the questions can be random. This was also written by (Fitriyeni and Wahyu, 2022). The use of the Quizizz application is effective for use in learning assessments, this is evidenced from the student response questionnaire the majority agree that the Quizizz application is easy to understand to use, there are no obstacles in using it. It is more effective to use than any other application.

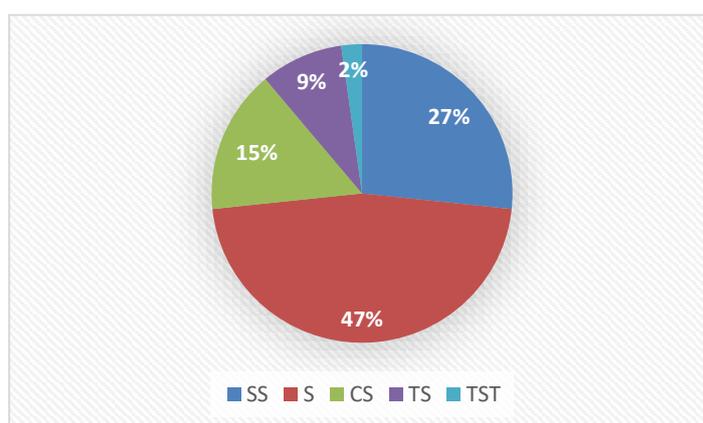


Figure 4. Students' Responses to the 4th Statement

Based on Figure 4, 27% of students strongly agree, 47% agree, 15% quite agree, 9% disagree and 2% strongly disagree. This shows that students generally agree that at the end of chemistry learning they are given

exercises using Quizizz media (74% of students agree). Furthermore, this can also be seen from students who work on practice questions through this application on doing the questions.

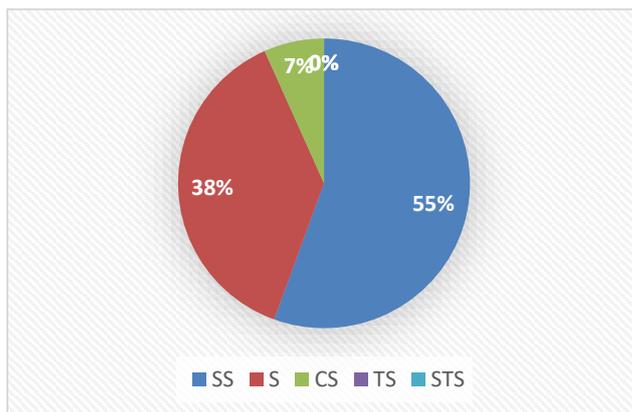


Figure 2 Students' Responses to the 5th Statement

Based on Figure 5, 55% of students strongly agree, 38% agree, 7% quite agree, 0% disagree and 0% strongly disagree. This shows that online chemistry learning with the help of Quizizz makes students more challenged. This can also be seen from the enthusiastic attitude of the students in answering the questions because there is a time limit in working on the questions, plus the quiz questions are

like playing games so they try to be more enthusiastic about finding high scores. In addition, the questions will be answered randomly and minimize cooperation or cheating between students. In addition, in this application there is also a score ranking, so that with this score ranking it will challenge students to be more careful in choosing answers and make students more enthusiastic about learning.

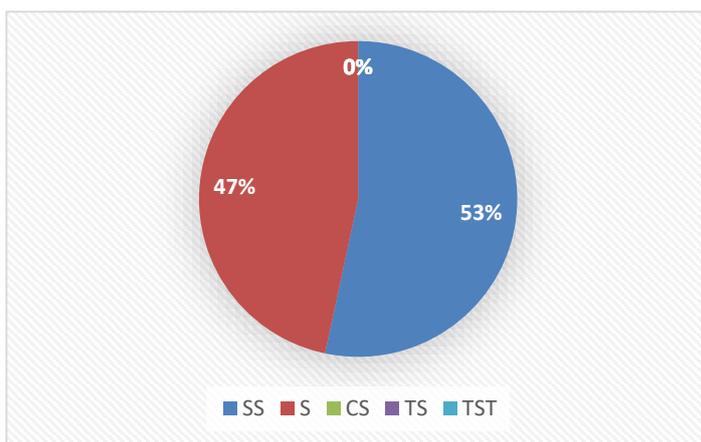


Figure 3 Students' Responses to the 6th Statement

Based on figure 6 as many as 53% of students strongly agree, 47% agree, 0% quite agree, 0% disagree and

0% strongly disagree. This shows that students agree that learning chemistry with the help of Quizizz media trains

students to think precisely and quickly. The Quizizz application is equipped with interesting features so that a time limit for working on questions can be carried out, depending on the criteria of the questions, questions that calculate the duration of the processing time are longer than theoretical questions, so students cannot cooperate or exchange answers. This is in line with what was written by (Citra and Rosy, 2020) in his article on the Quizizz media. The questions presented have a time limit. Students are taught to think accurately and quickly in working on the questions

on the Quizizz media. In addition, the Quizizz media has the advantage that the questions presented in the Quizizz media have a time limit, students are taught to think accurately and quickly in working on the questions on the Quizizz media. Another advantage of the Quizizz media is that the answers to the existing questions will be displayed in color and pictures and seen on the teacher's computer (as the operator) and on student devices they will change automatically according to the order in which the questions are presented.

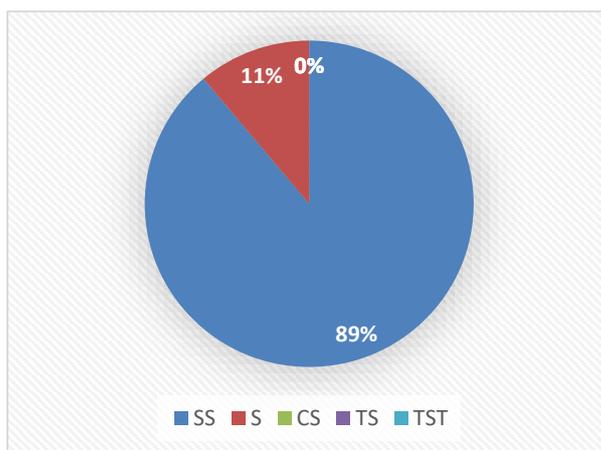


Figure 4 Students' Responses to the 7th Statement

Based on Figure 7, 89% of students strongly agree, 11% agree, 0% quite agree, 0% disagree and 0% strongly disagree. This shows that learning chemistry online with the help of Quizizz makes them more independent in solving chemistry problems. Setting the time duration for uploading questions in the Quizizz application is

useful for minimizing collaboration and exchanging answers between students, because the order of questions displayed on each screen has been made randomly. In line with what was written by Citra & Rosy (2020) on their article, the Quizizz media has the advantage that the questions presented in the Quizizz media have a time limit,

students are taught to think accurately and quickly in working on the questions on the Quizizz media. Another advantage of the Quizizz media is that the answers to the existing questions will be displayed in color and pictures and

seen on the teacher's computer (as the operator) and on student devices they will change automatically according to the order in which the questions are present.

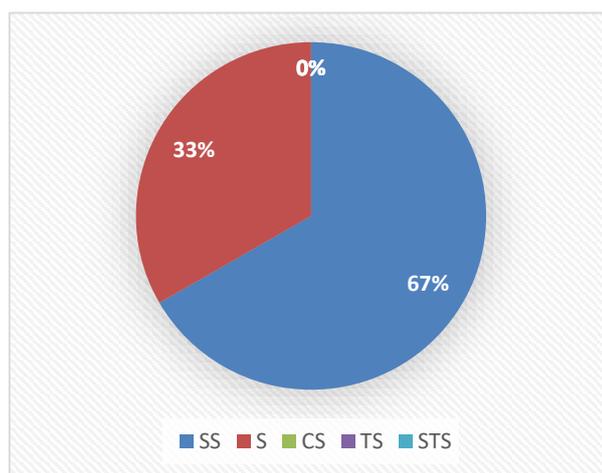


Figure 5 Students' Responses to the 8th Statement

Based on figure 8 as many as 67% of students strongly agree, 33% agree, 7% quite agree, 2% disagree and 0% strongly disagree. This shows that students agree that online chemistry learning with the Quizizz application can gain new experiences in the learning process (100% of students agree). In the previous fact, learning was usually carried out face-to-face, but due to the covid pandemic, learning was carried out online. So that various digital media are used for online learning including the Quizizz application for special assessments. Quizizz provides many benefits for students such as directing

students to be more thorough and managing the time allotted and being able to interact with other students even though learning is carried out online by teachers in supporting online learning during the Covid-19 pandemic was able to overcome the boredom of Mutiara Anak Sholeh Creative Islamic Elementary School students. It can be seen from the results of a survey of student perceptions regarding the use of Quizizz media with the percentage that students feel they are getting new experiences after using Quizizz media in online learning of 100%.

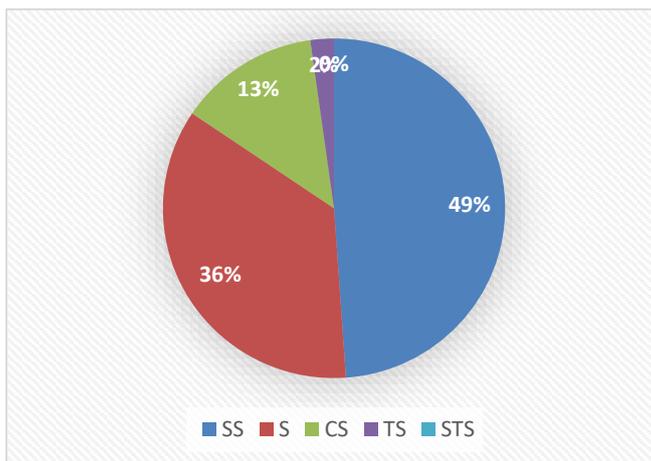


Figure 6 Students' Responses to the 9th Statement

Based on figure 9 as many as 49% of students strongly agree, 36% agree, 13% quite agree, 2% disagree and 0% strongly disagree. This shows that students agree that online chemistry learning with the help of Quizizz also wants to use it in other subjects and materials (85% of students agree).

Quizizz media-assisted learning is something new and interesting for students because it is like a game in education, so it is not easy to get bored. Quizizz is a game-based application that makes learning activities more concentrated and fun.

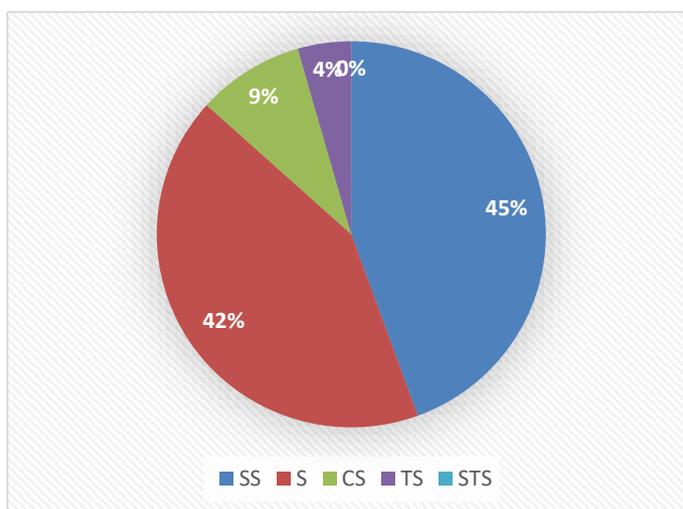


Figure 7 Students' Responses to the 10th Statement

Based on figure 10 as many as 45% of students strongly agree, 42% agree, 9% quite agree, 4% disagree and 0% strongly disagree. This shows that students agree to carry out

remedial/formative exams in chemistry subjects using Quizizz media (87% of students agree). In the Quizizz application there is a setting for the duration of time to work on the

questions, so they don't cooperate with each other.

4. Conclusion

Online chemistry learning using online assessment media is very interesting and liked by students, because through the use of this media students are motivated to learn, gain experience, train to think quickly and accurately, practice independence in answering questions and are very effectively used in learning assessments. This application has facilitated the process of assessing students, even though in the midst of limited face-to-face learning conditions this does not reduce the enthusiasm of students in learning.

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