

# Backchannel as an Online HOTS-Based Formative Assessment to Improve Students' Reading Skills

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# Backchannel as an Online HOTS-Based Formative Assessment to Improve Students' Reading Skills

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## ABSTRACT

One of Curriculum 2013 demands in teaching and learning process is the use of higher-order thinking skills (HOTS)-based authentic assessment. It asks the teachers to develop an ongoing activity assessment which records students' learning development processes. Formative assessment can be considered as a process assessment covering the curriculum 2013 demand. On the other hand, the use of internet-based learning is also part of teaching and learning nowadays. It is supposed that internet can be inserted in the classroom process. In English teaching, reading still becomes a main indicator of students' achievement. In fact, reading English text is not easy to comprehend. Teachers mostly use lower order thinking skills of reading text, so the students cannot train their reading skills. To add, the fact that teachers use conventional method of assessment leads the students into boredom. In line with the emergence of the need of formative assessment, this study is trying to investigate Backchannel as an online HOTS-based formative assessment in improving students' reading skills. This study took place in two junior high schools in Semarang, a state school and a private school. Online backchannel was applied and observed well in English reading classroom. At the end, the result shows that students were well-improved in their reading skills since the teachers evaluated the students in the process of learning before continuing to the next material. To add, the students' boredom was decreased well.

**Keywords:** *online backchannel, formative assessment, HOTS, reading skills*

## 1. INTRODUCTION

At present, technology use in educational process is crucial. It has become a need for teachers to help them in the class. Teachers might use this technology as their media or as others to support their teaching. [1] uses the term educational technology to give description about the use of technology in teaching and learning process. He said that educational technology is a systematic and organized process of applying modern technology to improve the quality of education. He adds that there are three domains of the technology use:

1. Technology as a tutor (computer gives instructions and guides the users)
2. Technology as a teaching tool
3. Technology as a learning tool

The use of each depends on the need of the teaching and learning process considering the students' and teacher's circumstances. When using educational technology, teachers should focus on the educational value of the tools; how adequate are the tools for the knowledge acquisition, how it can create good interaction between users and tool, and what benefit will be gained from them.

[2] mentioned that the use of technology as a media for teaching makes the teaching and learning session more

interesting and understandable. As described, by using technology media in the classroom, teachers may get easier way of achieving the teaching and learning goals. Students will meet different atmosphere of learning and it may rise their learning motivation. Moreover, students nowadays are very familiar with technology. Almost every day they use it to keep in touch with their relatives as if technology is their life and inseparable. Moreover [3] in their study found that the use of technology as a media of teaching can increase students' achievement. It can stimulate effective learning and improve students' performances. It also enhances high level of interactivity among students. Teachers as facilitators should be able to provide teaching with circumstances that can engage students' motivation in learning hence students can get a better achievement.

Not only for teaching media, teachers but also may use technology as a media of assessing students. Assessment is a part of teaching and learning process. This activity aims at finding out the progress of students' achievement in learning materials. Many teachers still keep in mind that assessing is giving students a test called a summative assessment. This assessment is given at the end of students' learning in which the teachers' orientation is the students' product and it will be

graded then. Whereas, the most current curriculum, curriculum 2013, demands teachers to use HOTS-based authentic assessment whose focus is not only the product but also the progress as mentioned in The decree of the Minister of Education and Culture No.23 of 2016 that students must be assessed well both in terms of process and product.

To cover the need of curriculum 2013, formative assessment is considered more appropriate rather than summative since it provides the way of assessing for the whole teaching and learning process. The focus of the assessment is not the students' final result but the growth progress. [4] defines that formative assessment evaluates the students' growth progress to form students' competencies and skills. By using this kind of assessment, teachers can know what has been achieved and has not by the students so that an idea of the next teaching and learning way can be formed. Furthermore, in this assessment a feedback is given for students in order to make the students know what still to be improved.

Most of formative assessments are informal and not in the form of test like summative. One of the formative assessments that can be done is backchannel. [5] defines backchannel as conversational devices used by listeners to show engagement. This formative assessment is a form of secondary conversation that takes place in one time with a conference session, lecture or instructor-led learning activity. Backchannel tends to use technology in the implementation. It forms such a forum for students and teacher in sharing and discussing learning materials. Students are freely to explore themselves in the term of sharing their minds through that forum.

This study is purposed to investigate whether backchannel is effective to improve students' reading skill. Reading is one of important skills in English learning since many kinds of test are oriented on the reading skill. Test takers should comprehend texts and answer the provided questions.

Regarding this condition, teachers have to be able to improve students' reading skill during the learning. This study is expected to be able to help teachers know a process oriented and HOTS-based formative assessment format by combining the use of technology within.

## **2. LITERATURE REVIEW**

### **2.1 Assessment in Teaching**

Assessing and teaching are part of the educational process which cannot be separated. Those two are all done in a relation. Assessment occurs due to the teaching process. Teachers give materials to students in a wide range of activities. They provide students with many knowledge to learn. And to measure the understanding of students towards the materials given, teachers do an assessment.

The term 'assessment' is often regarded the same as 'testing'. However, those two are distinct in some ways. According to [4], testing is a method of measuring students' knowledge, ability, or performances in a given domain. On contrast, assessment is an ongoing process of knowing students' achievement towards the materials that encompasses the wider domain. Tests are prepared administratively in certain time after the certain lessons have been taught. Test is also done in a formal way with the result of scores at the end. These scores are regarded as the final judgment from the

teachers for what have been achieved by the students. In doing the test, students are in a conscious circumstance. Meanwhile, assessment is not done in those ways. Teachers do assessment to evaluate the teaching process which has been done so far. This is line with [6] that assessment is an ongoing process of evaluating learners' ability or skill after process of teaching and learning. It can happen anytime without an administrative preparation. It is done informally. Even, sometimes students are not realized that they are assessed [6].

What has to be highlighted here is the word 'measure' for the definition of test and 'evaluate' for assessment. A measure is finding the size, length, degree, etc. of something in standard unit, while evaluate is deciding the value or quality of something. From those definition, it can be known that test are coming up with degree or in this case is students' scores while evaluate is resulting quality of the students which can be teachers' reference for the next teaching process.

Moreover, [7] adds that by assessment, learners can get feedback from what they have learnt and they are expected to be able to apply knowledge in their real life. Therefore, it suits with the definition of assessment which is to evaluate students' performances in order to produce feedback for students' achievement of lesson understanding and for teacher as the reference of what to do next.

To make the clearer understanding of those two terms, [4] argues that tests are subset of assessment, all tests are assessment but not all assessments are test. In short, one of the types of assessment is test.

### **2.2 Formative Assessment**

Assessment is done to collect information about students' proficiency to be sources for teachers for their teaching [8]. Dealing with assessment, formative is one way of assessing students' performance during the classroom activities. The latest curriculum in Indonesia, curriculum 2013, demands teachers to assess student not just at the end of learning. They have to also monitor students' progress in order to know the extent of which the students have reached the understanding. Hence, formative assessment is considered as the appropriate one applied in today's curriculum for the assessing concept is suitable with the education goal. Different from the previous one, summative assessment which is done when the learning materials have finished and its purpose is to grade the students' achievement, formative assessment does evaluate the students' learning progress.

According to [9] and [10], formative assessment which is used to check students' level of understanding can increase students' achievement when applied properly. Because the students' progress of understanding the materials is monitored, teachers may not miss the gaps among the students. When gaps arise, teachers may reflect the teaching and create the new one which is more appropriate. In addition, the regular use of formative assessment may help teachers collecting data about the students' proficiency and evaluate the teaching quality so that a better teaching structure can be created. In the manifestation, formative assessment is not done just once. It happens repeatedly as long as the certain materials are not finished yet.

Achievement gaps for students underrepresented group may be closed [11].

As stated, the goal of formative assessment is to monitor students during the teaching and learning process and to provide an ongoing feedback that can be used by teachers to improve their teaching activity. By using this, teacher can diagnose students whose achievement is still less, hence teacher may use it as reference to modify their teaching way. [12] describes some characteristics of effective formative assessment;

1. Formative assessment is a part of process. It will not in the form of quiz, test or worksheet because it does not judge students' achievement.
  2. It is transparent and explicit. It is transparent for students know the criteria and learning objectives. It is explicit because it leads to particular instruction that targets the criteria of assessment and learning objectives.
  3. It provides useful information for the teaching and learning adjustment.
  4. It is goal-oriented.
  5. It offers rich descriptive feedback.
  6. It leads to a more innovative teaching.
  7. It is portfolio because they result will be in pieces of information that tells students' strengths and weaknesses.
- When all the steps of formative assessment is completed, it can help students in doing the summative assessment. They will be more ready to face it since their learning progress has been monitored well and gradually gets progress.

### **2.3 Backchannel**

One way to assess students formatively is by implementing backchannel. [5] said that backchannel is a conversational devices which is used to show an engagement. Students and teachers can have a communication through this device to share, comment, or clarify something. This is provided as discussion forum between teachers and students. In this forum, students can freely share what is coming up in their minds and discuss with the mates about a topic. They do not need to feel like being threatened since this does not require students to speak up in the class. Even this will make students feel more sociable because they will interact with other students. In addition, after assessing students teacher will give feedback towards students' activity in that forum. Backchannel is considered as one of good forms in assessing since its use of digital social media which is suitable with teenagers' condition now. Students sometimes need innovative classroom activities from the teachers which can encourage them more in the learning activities to get a better improvement of learning. They are willing with an enjoyable activity. Furthermore, those who feel anxiety of their English skill need to be facilitated appropriately by teacher in order to lost their fear and together can meet the learning goals with the other mates. Hence, backchannel meets the latest condition of students related to technology and the teacher's demand in the term of students' assessment.

In manifesting backchannel in the classroom, students and teachers need to be facilitated by technology such as computer and internet connection. To apply, there are some steps to do;

#### *Step 1*

Teacher creates a social media group, such as Facebook group, Whatsapp group, Line group, etc., which involves students within.

#### *Step 2*

Afterwards, the teacher will provide a topic that need to be discussed in the forum. Every student should participate to share their ideas. They may form questions, comments, confirmation, clarifications or others.

#### *Step 3*

At the end, teacher will come with some feedbacks related to the students' performances in discussion forum. This feedback will be benefit for students' performance and classroom activity evaluation.

### **2.4 Reading Assessment for Junior High School**

Reading is an active process which requires readers to make their background knowledge active so that they understand the writer's intended meaning [13]. Teaching reading in junior high school in Indonesia is such a challenging for teacher in English classroom. In this education level, students are just starting to practice themselves in comprehending texts since the latest Indonesia curriculum does not give English subject in elementary level. Furthermore, this skill needs vocabulary mastery in the practice that sometimes makes students difficult to understand the text and get bored of the classroom activity. To enable students develop their reading skill, the teachers should know the rationale of reading nature and its implication in teaching techniques. To make a better understanding of reading material and improve reading skill, there are three stages to do. They are pre-reading, whilst-reading, and post-reading.

Among all four English skills, reading is considered as one of the importance skills to be mastered by students in Indonesian context. [14] mentioned that there are two reasons why reading is emphasized to be acquired. The first is because in reading skill, the level of learners' literacy is measured. In some international assessment like TOEF, IELTS, PISA, TIMMS, and PIRLLS, and others, reading becomes the most dominant part of the test. The second reason is the limited time of learning time at school results impossibility to attain all four language skills so that teaching is just focused in some skills, one of them is reading. Reading becomes the focus due to its benefit for future. Many books and other references now are written in English so that good literacy is needed here.

Unluckily, reading assessment is always provided in the form of paper-based assessment. That kind of assessment brings boredom for students. Even some students may get sleepy when doing this. Students have to read many texts silently and are asked to answer the provided questions. With such kind of situation, students are less motivated since the learning technique is not attractive and boring.

Therefore, backchannel is offered in this study to bring new circumstances of students learning in comprehending English text. They do it in by having discussion with their peers through the social media. They can have interaction there. They can comment, ask, clarify, and others which are cannot be done in paper-based assessment they usually do.

In junior high school, reading is taught through some materials including short functional text and short simple

essay in daily life context. Short functional text is a text to give information or warning the importance of something to get to know. It can also be mentioned that short function al text contains greeting, asking, offering, and others which are used for daily communication. Meanwhile, in short simple essay, students will read some genres of text such as descriptive, narratives, report, recount text, etc. the difference between two is the sentences applied. Short functional text has shorter text structure than short simple essay.

Based on the syllabus of English for seventh grade of junior high school, reading and listening are categorized into "knowledge competence" while speaking and writing are into "skill competence". Reading skills are taught through some short functional texts including expressions of greeting, thanking, parting, apologizing, introducing, telling time, descriptive text, and song. In this case, students were assessed their reading skill through descriptive text by implementing backchannel as formative assessment before the summative was done.

**2.5 Previous Study**

Studies have been conducted by some scholars related to formative assessment. They studied how formative assessment is appropriately applied in English classroom assessment. The first study was by [15]. They tried to develop portfolio assessment in English classroom for Malaysian L2 learners. Nine secondary schools English teachers were participated in that study. The implementation of that assessment shows that teachers got assisted by the use of portfolio in documenting the students' learning growth. They believe that by upgrading their teaching materials, teaching techniques, and teaching assessment their teaching can be sustained.

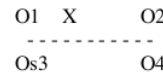
[16] also investigated the effectiveness of applying formative assessment in his English classroom. He did it in oral English class. He wanted to know whether formative assessment was able to alleviate students' speaking apprehension. His finding reveals that the use of formative assessment was effective to decrease students' speaking anxiety. He got his students gradually have a better progress. They are braver to share their ideas. Their fear was reduced as speaking.

Formatives assessment is formed in many ways. One of them is backchannel in which the implementation is inserting technology within. Some studies about the use of backchannel as the assessment tool have been conducted by [5]. They tried to make a study about how digital backchannel is effective in engaging students in Indonesia EFL large class. The degree of students' engagement was measured in in three types, i.e. emotional, behavioral, and cognitive. Based on the result of the study, it was found that backchannel promoted students' engagement in learning activity and help teachers in providing feedback for their students and themselves.

Furthermore, [17] examined the nature and the quality of peer feedback exchanged in Backchannel among pre-service teachers. The result reveals that backchannel is a very good tool reflecting rich, real time and high quality feedback and space to collaborate and exchange ideas while improving engagement.

**3. METHODOLOGY**

This study employed a quantitative research method using nonequivalent Control group of Quasi-Experimental group design in getting the data. Two schools were used as the data observation, SMP Nusa Putera Semarang as control group and SMP N 6 Semarang as experimental group.



**Figure 1** Quasi-Experimental Design (Best, 1993)

Backchannel was only applied in experimental group as the treatment. The number of the students involved was 74 students with 37 students for each group. In knowing whether backchannel helps students improve their performances, pretest and posttest for both groups were applied as a part of data collection. Pretest and posttest question were tried before hand in order to know the reliability and validity of the test. Each test consists of 25 questions and was done in 30 minutes. Furthermore, observation was also used to know the students' response in experimental group only towards the use of backchannel during the classroom activities.

**4. FINDINGS AND DISCUSSION**

The study was initialed by giving pretest for control group and experimental group using the questions which have been trialed before. After doing the pretest, experimental group was given a treatment by implementing backchannel to assess students during the teaching and learning process while the control group was not. This assessment was not only done once but several time to strengthen the students' understanding of the lessons. Then, posttest was given for both groups. When all the data were gained, the calculation for both pretest and posttest was conducted.

Based on the data calculation of the test, it was found that the total score of students' test from control group was 2.570 with mean score 69.46. Besides, the experimental group got 2.545 for the total score with mean score 68.78. From this result, it shows that students from control group have higher score for the pretest. In the next meeting, treatment was applied. The experimental group was assessed using backchannel while control group was not. Assessment was done several times to know advance result. As the treatment was considered enough, post test was conducted for both control group and experimental group. Control group's total score in posttest was 2.855 with mean score 77.16, meanwhile experimental group gained 3.020 for the total score and 81.62 for the mean score. The scores show that experimental group got higher score than control group in the posttest.

**Table 1. The Progress Of Students Test Result**

No	Group	Pretest		Posttest		Progress	
		Total score	Mean score	Total score	Mean score	Total score	Mean score
1	Control group	2.57	69.46	2.855	77.16	285	7.7
2	Experimental group	2.545	68.78	3.020	81.62	475	12.84

The table reveals that both group experienced progress comparing between pretest and posttest result. However, the progress of the experimental group was higher than the control group. After finding out the students' score of pretest and posttest for both groups, t-test was calculated to know the significant differences of the summative test result between control group and experimental group.

**Table 2 The Result Of T-Test Calculation**

Paired Samples Test									
		Paired Differences			95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error	Lower	Upper			
Pair 1	Variance_001 - Variance_002	4.459	8.147	1.339	7.176	1.743	3.330	36	.002

From the calculation of SPSS the result showed that  $t_{test}$  was 3.330 and  $t_{table}$  was 2.026 with df 36 and significant level 0.05 (5%). It was also found that Sig. (2-tailed) was 0.002. When the  $t_{test}$  was higher than  $t_{table}$  and the Sig. (2-tailed) value was lower than 0.05, it implies that there were significant differences between control and experimental group in achieving the result of the posttest. Null hypothesis ( $H_0$ ) was rejected and alternative hypothesis ( $H_1$ ) was accepted since  $t_{value}$  was higher than  $t_{table}$  ( $t_{value} > t_{table}$ ). In short, there was significant difference in the students' reading comprehension assessed using backchannel and without using.

In addition, some notes were also taken during the process of class observation. This was done to know the students response towards the use of backchannel in the teaching and learning process. In experimental class, students tend to have some improvements in every meeting. It can be seen from their participation during the forum discussion. They looked enthusiastic in doing discussion in the group. They feel like they have conversation with their peers. They felt free to command, ask, clarify and other forms. Although at the first they still got confused in the technical use, they lost it then after certain period. To add, students who participated less in the first use progressively contribute more. They were not afraid of sharing what was in their minds. They did not feel threatened. To be affected, students' score in reading comprehension was significantly better.

Compared with control group, the result was different. In control group, the students were not active. Just a few of them participate in the teaching and learning activity. Most of the students were silent during the class. When they were asked some questions, the response was not satisfying. They responded it with silence or answered haphazardly. They did not show an enthusiasm and interest in the process. Their faces showed that they were afraid and felt insecure. Although the teacher had tried to encourage the students, they still felt afraid of giving opinions because they were afraid of making mistakes. As the result, their post test score was not significantly improved even some were not.

Combining technique of discussion with technology, assessing students using backchannel helps teacher much in meeting the learning goals. The improvement was not just the

score but also students' linguistics performances through reading skill. As stated by [18], backchannel can enhance the students' access in thinking. Students also feel more enjoyable in doing the teaching and learning process. They made interaction with other peers like daily conversation. They comment their peers' opinions, ask questions, or give additional information. They do it naturally meaning that they participate in the forum intentionally without being forced. Furthermore, having discussion with the others through technology use is like what they are doing nowadays. Today's students are accustomed to have frequent interaction in social media through technology devices like mobile phone or computer. So that is why backchannel is appropriately used for today's students meeting with the way how it is operated. Overall, backchannel is suitable to be applied in the classroom to improve students' reading skill. This assessment helps students to get progress gradually since it is done in formative way in which the students are monitored during the learning process [19].

## 5. CONCLUSION

Assessment is part of teaching process. It evaluates the students' progress towards their understanding of the subject materials. This assessment does not end with a judgment but a teaching reflection. Moreover, by using assessment, teacher can gain a rich descriptive feedback for their students' condition that will be useful for the next teaching plans. Backchannel is one of the offered formative assessment. Different from other ones, it offer new circumstances of assessing students because it uses technology within. Based on the study findings, this assessment becomes an effective solution to assess students in formative way which was done during the teaching and learning process. It effects on students' improvement in reading comprehension. Students got a significant result on their posttest after backchannel was applied. In addition, this way of assessing also reveals students' boredom. They were attracted by the use of social media within. This kind of activity is considered as the new way of learning how to comprehend a text. Moreover, technology is used in which this has been a familiar thing to them.

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