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THE IMPACT OF HIGHER ORDER THINKING SKILLS (HOTS) INSTRUCTIONS IN TEACHING EFL SPEAKING SKILL FROM THE PERSPECTIVE OF STUDENTS' MOTIVATION

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ABSTRACT

The purposes of the research were to examine (1) whether or not the HOTS instruction was more effective than the LOTS (Lower Order Thinking Skills) instruction in teaching speaking for daily context to the first semester students at English Education department; (2) whether the students who had high self-motivation had better speaking ability than those who had low self-motivation; and (3) whether there was an interaction between teaching strategies and students' self-motivation. By using a quantitative research with the quasi-experimental type, the data were derived from tests and questionnaires. The results show that (1) HOTS instruction is more effective than the LOTS instruction in teaching speaking for daily context to the first semester students at the English Education Department; (2) the students who have high motivation have better speaking skills than the students who have low motivation; (3) there is an interaction between teaching strategies and motivation in teaching speaking for daily context. It can be concluded that HOTS instruction is an effective strategy in teaching speaking viewed from students' motivation. The effectiveness of the strategy is affected by students' motivation.

Keywords: *EFL, HOTS, LOTS, speaking skills, student motivation*

INTRODUCTION

Speaking is an English language skill needed for interaction and other global activities. Furthermore, in this 4.0 industrial era, almost all technologies are operated with English instruction. The English teacher needs to engage students with good English speaking ability. Speaking as one of the four skills in English is seen as the most crucial skill to be mastered by English learners. For most people, the successes in learning a language can be seen from how far the student can speak and communicate in language learning. In fact, speaking is often neglected in the classroom (Arbain & Nur, 2017).

Language students find difficulties to express themselves in spoken language. They are facing problems in using a foreign language to express their ideas. They stop talking because they face psychological obstacles or cannot find suitable words and expressions. Speaking is the most important skill because it is one of the abilities that are needed to perform a conversation. English speaking is not an easy task because speakers should know many significant components like pronunciation, grammar, vocabulary, fluency, and comprehension. Learners should have enough English speaking ability to communicate easily and effectively with other people (Leong & Ahmadi, 2017).

The transformation of education has changed. Recently teaching of Higher Order Thinking Skills (HOTS) becomes attested due to its important role in education. Students having HOTS claimed will be more successful than those having Lower Order Thinking Skills (LOTS). The students having a high level of HOTS are hoped to be a success in the next study program (Tanujaya, Mumu, & Margono, 2017). HOTS is also claimed to correlate with the students' work readiness (Hasan & Pardjono, 2019). The teaching of HOTS is a kind of student-centered learning activity. Some practices that can be applied in teaching HOTS are constructivist learning, brainstorming, inquiry teaching, problem-based learning, and thinking map (Chun & Yen, 2019). The teaching of HOTS based on Bloom's revised Taxonomy includes analyzing (C4), evaluating (C5), and creating (C6) (Anderson and Krathworl in Baguma et al., 2019; Fanani, 2018; Julianingsih, Rosidin, & Wahyudi, 2017; Tikhonova & Kudinova, 2015). HOTS represents more sophisticated and context-rich thinking processes

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that include critical, logical, reflective, metacognitive, and creative thinking (Siti, 2015).

Teaching HOTS has a positive effect on students' reading comprehension of adult EFL learners. This research gives an excellent example for the teacher in emphasizing HOTS in syllabuses. It is indicated that the use of HOTS strategies is useful for students because the result gives positive effects on students' reading skills. HOTS can improve students' reading comprehension (Nourdad, Masoudi, & Rahimali, 2018). In this research, the researchers want to substitute the effect of HOTS instruction in EFL reading ability on the effect of HOTS instruction in EFL speaking ability. So, it would give the novelty in education practice.

Research about HOTS have been conducted by researchers in developing textbooks or module based on HOTS (Musfiqi & Jailani, 2014; Nur, 2017), in developing test instruments (Budiman & Jailani, 2014; Hamdi, Suganda, & Hayati, 2018; Julianingsih, Rosidin, & Wahyudi, 2017; Noprinda & Soleh, 2019; Ahmad et al., 2017), in Mathematics (Nisa & Retnawati, 2018; Tanujaya, Mumu, & Margono, 2017), in analyzing students' HOT (Shidiq, Masykuri, & Susanti, 2015), in teachers' understanding and practices about HOTS (Driana & Ernawati, 2019; Retnawati et al., 2018; Siti, 2015), in the relationship between HOTS and Japanese language classes (Toyoda, 2016). Some researchers have also researched improving and developing students' HOTS (Baguma et al., 2019; Jerome, Lee, & Ting, 2017; Mulyaningsih & Itaristanti, 2018; Arum, Sudarmi, & Pattiserlihun, 2019; Suryamiati, Pasah, & Eka, 2019; Wahid & Karimah, 2018; Widodo & Kadarwati, 2013; Zulfin et al., 2018).

These researches mentioned focus on developing textbooks or module based on HOTS, developing test instruments, mathematics study, analyzing students' HOT, teachers' understanding and practices about HOTS, the relationship between HOTS and Japanese language classes, improving and developing students' HOTS. These are not about teaching and learning the English language.

In EFL research, HOTS has been integrated into reading skills. Some researchers implement HOTS to improve students reading skills (Nourdad, Masoudi, & Rahimali, 2018) and to develop an English textbook for reading (Anasy, 2016). HOTS also has been integrated into writing skills (Shyamala, 2015; Rosli & Maarof, 2017). Nguyễn and Nguyễn (2017) have researched the influence of explicit higher-order thinking skills instruction on students' learning of English linguistics. Besides, they have said that these instructions of HOTS in the learning and assessment could positively influence students' learning of English linguistics in terms of the learning process, performance in assessment, creativity, and motivation to learn.

Another English research about HOTS is about teachers' perception of the integration of HOTS in language teaching. A research survey is conducted to 144 English teachers in Hulu Langat, Selangor (Siti, 2015). The EFL research mentioned focuses on linguistics, reading, and writing skills. There is no research focus on speaking skills. Therefore this research aims to evaluate the effect of HOTS instruction in speaking skills that will add literature of HOTS in EFL learning.

Dealing with the innovation of English teaching speaking skills, this research uses the HOTS instructions to gain the effectiveness of speaking learning process viewed from students' motivation. Specifically, this research aims to know; (1) whether or not the HOTS instructions is more effective than the LOTS (Lower Order Thinking Skills) instructions in teaching speaking for daily context to the first semester students at English Education Department; (2) whether the students who have high self-motivation have better speaking ability than those who have low self-motivation; and (3) whether there is an interaction between teaching strategies and students' self-motivation.

METHODS

By using quantitative research with the quasi-experimental type, the data are derived from the motivation questionnaire and English speaking test. This research employs data from the questionnaire of students' motivation consisting of 29 items after examined their validity and reliability using Biserial Point Correlation and Alpha Cronbach. The result of the validity and reliability analysis shows that the data was valid and reliable.

The indicators and aspects of motivation questionnaires used in this research are derived from Baron and Donn (2000). They are diligent, not easy to satisfy, active in learning, initiative, always trying to learn with the best result, punctual and disciplined, enthusiastic to try new things, having high curiosity, having great passion, be confident, having perseverance or persistent to practice and use the English language in speaking, feeling more independent, being able to overcome obstacles, and shows a better commitment. After delivering the motivation questionnaire, each class is divided into two groups; the students who have high motivation and those who have low motivation. It is a moderator variable of the research.

A speaking test is conducted after treatments. The data were analyzed by using descriptive analysis includes mean, mode, median, and standard deviation, then followed by normality and homogeneity testing. The result of normality testing using the Liliefors formula shows that all data are in the normal distribution (Table 1). Furthermore, the result of homogeneity testing also indicates the homogeneous data; χ_o^2 (4,792) < χ_t^2 (7,815).

Table 1 Normality Testing

No	Group	Number of Group	L_o	L_t (0.05)	Test Result	Conclusion
1	(A_1)	38	0,1004	0,1437	$L_o < L_t$	Normal
2	(A_2)	38	0,1004	0,1437	$L_o < L_t$	Normal
3	(B_1)	38	0,1326	0,1437	$L_o < L_t$	Normal
4	(B_2)	38	0,0832	0,1437	$L_o < L_t$	Normal
5	(A_1B_1)	19	0,1197	0,1950	$L_o < L_t$	Normal
6	(A_2B_1)	19	0,1699	0,1950	$L_o < L_t$	Normal
7	(A_1B_2)	19	0,1070	0,1950	$L_o < L_t$	Normal
8	(A_2B_2)	19	0,1473	0,1950	$L_o < L_t$	Normal

The speaking scores computation of the students taught by using HOTS instructions (A_1) shows that L_o (0,1004) is lower than L_t (0,1437), it can be concluded that the first group is in the normal distribution. The speaking scores computation of the students taught by using LOTS instructions (A_1) shows that L_o (0,1004) is lower than L_t (0,1437), it can be concluded that the second group is in the normal distribution. The speaking scores computation of the students who have high motivation (B_1) shows that L_o (0,1326) is lower than L_t (0,1437), it can be concluded that the third group is in the normal distribution. The speaking scores computation of the students who have low motivation (B_2) shows that L_o (0,0832) is lower than L_t (0,1437), it can be concluded that the fourth group is in normal distribution.

The speaking scores computation of the students who have high motivation and taught by using HOTS instructions (A_1B_1) shows that L_o (0,1197) is lower than L_t (0,1950), it can be concluded that the fifth group is in normal distribution. The speaking scores computation of the students who have high motivation and taught by using LOTS instructions (A_2B_1) shows that L_o (0,1699) is lower than L_t (0,1950), it can be concluded that the sixth group is in the normal distribution. The speaking scores computation of the students who have low motivation and taught by using HOTS instructions (A_1B_2) shows that L_o (0,1070) is lower than L_t (0,1950), it can be concluded that the seventh group is in the normal distribution. The speaking scores computation of the students who have low motivation and taught by using LOTS instructions (A_2B_2) shows that L_o (0,1473) is lower than L_t (0,1950), it can be concluded that the eighth group is in the normal distribution.

This research uses total sampling. The sample consists of two classes of the first semester students at the English Education Department of IKIP PGRI Bojonegoro; each class consists of 38 students. The experimental class is taught by using HOTS instructions, and the control class is taught by using LOTS instructions. Before speaking activity, the students are given instructions based on HOTS and LOTS instructions. For an example of learning steps in experiment class, students are instructed to create pairs scenarios of role play then perform it. While in the control class, students should perform teachers' scenario by remembering or memorizing it.

The descriptive analysis includes mean, mode, median, and standard deviation, and inferential analysis includes normality and homogeneity test that is used in analyzing the data. Then it is followed by Anova (2 x 2 Multifactor Analysis of Variance) and Tukey test to know which group is better.

RESULTS AND DISCUSSIONS

After testing the pre-requisite test, the researchers analyze the data by using ANOVA (Multifactor Analysis of Variance 2 x 2) to identify the influence of motivation and the strategies in teaching speaking for daily context. It can be seen in Table 2.

Based on Tables 2 and 3, the interpretations can be described that source of variance between columns, F_o is 10,44, while the value of F_{table} is 4,00. It means that H_o is rejected. Therefore, it can be concluded that HOTS instructions differ significantly from LOTS instructions in teaching speaking for daily context. Based on the mean score, it is seen that the mean score of the students who are taught by using HOTS instructions (58,71) is higher than the mean score of the students who are taught by using LOTS instructions (48,66). It means that HOTS instructions are more effective than LOTS instructions in teaching speaking for daily context. Students who are taught by using HOTS instructions have more fluent and structured speaking ability.

Table 2 The Summary of 2 x 2 Multifactor Analysis of Variance

Source of variance	SS	Df	MS	F_o	F_t (.05)	Conclusion
Between columns	1920	1	1920,05	10,44	4,00	Ho is rejected
Between rows	1503	1	1503,21	8,17	4,00	Ho is rejected
Columns by rows	862	1	862,32	4,69	4,00	Ho is rejected
Between groups	4286	3	1428,53			
Within groups	13246	72	***183,97***			
Total	**17531**	**75**				

Table 3 The Mean Score

Motivation	Teaching Strategies		Total
	HOTS instructions	LOTS instructions	
HIGH	66,53	49,74	58,13
LOW	50,89	47,58	49,24
Total	58,71	48,66	

Based on source of variance between rows, F_o is 8,17, while the value of the F_{table} is 4,00. It means that H_o is rejected. Therefore, it can be concluded that the difference between students who have high motivation and those who have low motivation in speaking for daily context is significant. Based on the mean score, it is seen that the mean score of the students who have high motivation (58,13) is higher than the mean score of the students who have low motivation (49,24). It means that the students having high motivation have better speaking mastery than those having low motivation.

Based on source of variance columns by rows, Fo is 4,69, while the value of Ftable is 4,00. It means that Ho is rejected. Therefore, it can be concluded that there is an interaction effect between teaching methods and students' motivation in teaching speaking for daily context. Thus, the influence of teaching strategies and speaking skills depends on the degree of motivation.

Then, the researchers need to do Tukey testing to test the different mean of each group or to prove the interaction between groups. It can be seen in Table 4.

The interpretations can be described that the score between groups of A_1 - A_2 (the students taught by using HOTS instructions and the students taught by using LOTS instructions) shows that q_o (4,57) is higher than q_t 2,86, HOTS instructions differ significantly from LOTS instructions on the students' speaking ability. The mean score of the students who are taught by using HOTS instructions (58,71)

is higher than the mean score of the students who are taught by using LOTS instructions (48,66). Therefore, it can be concluded that HOTS instructions are more effective than LOTS instructions on students' speaking ability.

Table 4 The Summary of Tukey Test

Between groups	q_o	q_t .05	q_t. 01	Meaning	Category
A_1 - A_2	4,57	2,86	3,82	$q_o > q_t$	Significant
B_1 - B_2	4,04	2,86	3,82	$q_o > q_t$	Significant
A_1B_1 - A_2B_1	13,68	2,96	4,05	$q_o > q_t$	Significant
A_1B_2 - A_2B_2	0,20	2,96	4,05	$q_o > q_t$	Not Significant

The score between groups of B_1 - B_2 (the students who have high motivation and the students who have low motivation) shows that q_o (4,04) is higher than q_t (2,86), the students who have high motivation are different from those who have low motivation in the speaking skills. The mean score of the students having high motivation (58,13) is higher than the mean score of those having low motivation (49,24). Therefore, it can be interpreted that the students having high motivation have better speaking skills than those having low motivation.

The score between groups of A_1B_1 - A_2B_1 (the students who have high motivation and taught by using HOTS instruction compared with the students who have high motivation and taught by using LOTS instruction) shows that q_o (13,68) is higher than q_t (2,96). It means that the students having high motivation and taught by using HOTS instructions are significantly different from those having high motivation and taught by using LOTS instructions in the speaking skills. The mean score of the students having high motivation and taught by using HOTS instructions (66,53) is higher than the mean score of those having high motivation and taught by using LOTS instructions (49,74). Therefore, it can be interpreted that the students having high motivation and taught by using HOTS instructions have better speaking skills than those having high motivation and taught by using LOTS instructions.

The score between groups of A_1B_2 - A_2B_2 (the students who have low motivation and taught by using HOTS instructions compared with the students who have low motivation and taught by using LOTS instructions) shows that q_o (0,20) is lower than q_t (2,96). It means that the students who have low motivation and taught by using HOTS instructions are not significantly different from the students who have low motivation and taught by using LOTS instructions in the speaking ability. Therefore, it can be concluded that the students' speaking ability between the students who have low motivation and taught by using HOTS instructions and the students who have low motivation and taught by using LOTS instructions is not significantly different.

It can be concluded that HOTS instruction effectively improves students speaking skills in EFL learning. They can create the dialog then perform it fluently. They can also deliver their critical thinking after analyze and evaluate the authentic material from some source then perform it through debate. Students having high motivation are not awkward to give their ideas and opinion eagerly. The speaking ability of EFL learners improves significantly after taught by using HOTS instruction. It is in line with the last research of Wahid and Karimah (2018) that have stated that the integration of HOTS through creative problem-solving increases students learning motivation and interest. The process of teaching and learning become more fun and joyful. HOTS does not restrict students' ability to give opinions, estimation, ideas, and conclusions. HOTS influences students' academic achievement. Students having high HOTS are supposed to succeed in their future study (Tanujaya, Mumu, & Margono, 2017).

In writing skill research, the students who are applying HOTS in their composition have more organized essays than those who do not apply it. The t-test in the oneway analysis shows that there is a significant difference in the grades of essays with HOTS and without HOTS. Using HOTS is a good method to organize points to write up an essay. It enhances creativity, and students innovatively write their essays. Apart from that, some teachers feel that HOTS allows students to train themselves to think in finding solutions and ideas when it comes to writing an essay. Therefore, it should be implemented in the teaching process in the classroom. HOTS should be utilized in the process of teaching and learning among teachers and students (Shyamala, 2015).

In a rural government primary school at Sarawak, most of the students able to create a longer composition, more critical, and more creative ideas after they have conducted treatment sessions. This research also elaborates on the influence of HOTS questions in providing guides to develop students' cognitive ability in their writing (Rosli & Maarof, 2017). A research about the influence of explicit higher-order thinking skills instruction on students' learning of English linguistics and these instructions of HOTS in the learning and assessment could positively influence students' learning of English linguistics in terms of the learning process, performance in assessment, creativity, and motivation to learn (Nguyễn & Nguyễn, 2017). Not only in EFL learning, in the mathematics study and science study, but HOTS has also proved improving the students' learning activity (Tanujaya, Mumu, & Margono, 2017; Widodo & Kadarwati, 2013).

Meanwhile, the Chinese students show better at answering LOTS questions than HOTS questions. They are able to answer LOTS instructions, but they struggle to answer HOTS instructions because they have filed to use the right strategies, limited vocabulary and lacked critical thinking (Nair, Wider, & Yan, 2019). HOTS can be developed effectively if LOTS has been interiorized (Tikhonova & Kudinova, 2015). It is important for the students to master the lower order thinking skill before they achieve higher-order thinking (Raquela & Rini, 2016).

The students who have high self-motivation have the better speaking ability. Motivation makes students more enthusiastic to try new things. They have high curiosity and a great passion for mastering a speaking skill well. Besides, the students who have high motivation always be confident while delivering their speech in front of others, even though they make mistakes in grammar, pronunciation, vocabulary, and lack of content. Students with high motivation tend to have perseverance or persistent in practicing and using the English language in speaking to maintain and improve their fluency. They feel more independent in expressing their idea and insight because they can manage their minds to have good concentration.

Students who have high motivation have high levels of performance and the ability to overcome obstacles (Tohidi & Jabbari, 2012). Students who have high motivation show a better commitment to their work (Buijs & Admiraal, 2013; Taurina, 2015). The characteristics/indicators of motivation are enthusiasm, curiosity, passion, perseverance, confidence, persistence, Independence, concentration (Astuti, Suranto, & Masykuri, 2019).

Students who have high motivation have better speaking ability than those having low self-motivation. Students' motivation for learning a language is important. Because of motivation, students able to do some tasks and achieve the aim of learning. Motivation adds the quality of work, makes the students more diligent, active, curious, and disciplined. It is indicated by some characters, such as diligent, not easy to satisfy, active in learning, initiative, always trying to learn with the best result, punctual, and disciplined (Baroon and Donn in Bakar, 2014).

CONCLUSIONS

The results of this research show that the use of HOTS instruction in teaching speaking skills viewed from students' motivation will be advantageous and beneficial because the result of HOTS instructions give positive effects on students speaking skills significantly. HOTS instructions help the students improve their speaking ability. Especially, this research can help other teachers to get a better understanding of using HOTS instructions in teaching speaking for daily context to the first semester students at the English Education department. HOTS instructions help students to improve their speaking skills in which students face serious difficulties in learning speaking for daily context. This research can also improve English teachers' professional development.

It can be summarized that: (1) HOTS instruction is more effective than LOTS instruction in teaching speaking for daily context to the first semester students at English Education department; (2) the students who have high self-motivation have better speaking ability than those who have low self-motivation; and (3) there is an interaction between teaching strategies and students' self-motivation. From the results, it is recommended that, first, HOTS instructions could be used as a teaching strategy to improve the students' EFL speaking skills. Second, the students who have low motivation should force themselves to have high motivation because motivation is one of the factors, which influence the success of learning. Third, there are some weaknesses, which should be reviewed by other researchers to implement better research about HOTS instructions. Fourth, this research gives insights to the other researchers, lecturers, and teachers to implement the HOTS instruction in their teaching and learning process and to conduct another research related to HOTS.

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