PRE-SERVICE ENGLISH TEACHERS' ATTITUDE TOWARDS HOTS TO PREPARE BETTER ASSESSMENT

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Abstract : Although Higher-Order Thinking Skill (HOTS) has currently been an ongoing topic of interest among educational researchers, there has been no wide exploration of such notion and its relation to the learning assessment. This instrumental case study aimed to investigate attitudes of Indonesian pre-service English teachers with reference to using HOTS-based test to prepare better assessment. The study was qualitatively conducted to scrutinize the participants' attitudes on using the HOTS framework in designing more qualified assessment for students. The data were obtained through interview and questionnaire. The total of 10 pre-service teachers participating in the study were purposively chosen regarding their familiarity and comprehension with the study issue. The data were analyzed by employing descriptive qualitative data analysis. The result indicated that in spite of some situational restrictions, all of the participants shared their positive attitude towards HOTS principles to be adopted in providing better assessment from the affective, behavioral and cognitive points of view due to some influencing factors. More researches on the area of HOTS and its implementation on the area of assessment were also expected to furnish more contributive information in this issue.

Keywords: Pre-service teachers, Attitude, HOTS, Assessment

INTRODUCTION

In the educational world, there are repeated solicitations for the development of assessment which targets *higher-order thinking*

skills as an opposite to the mere recall of facts. The notion of why HOTS-based assessment is desired has been acknowledged by Shukla & Dungsungnoen (2016) who asserted that HOTS has potrayed immense industry demand. They further suggested that the main objective of educational institution in disseminating education is to inseminate higher-order thinking skill. This is in line with Pretorius et al. (2017) who affirmed that it is absolutely crucial for educators of any particular field of study to qualify their students to become professionals in their chosen field of study. Such qualification can be fufilled by teaching both academic contents and transferable skills (such as critical and analytical thinking, academic writing and research skills, as well as organizational and time management skills).

Heong et al. (2011) added that in relation to such goal, both institutions and instructors are mandated to develop the higher-order thinking skills among students to prepare them for having effective performance in order to meet employers' expectation. In other words, such life skills will be the efficient ammunition for the students after the graduation, especially when they enthusiastically attempt in the competitive era of worldwide integration. On the basis of the aforementioned demands, the learning process is envisioned to assist the progress of various competencies or life skills needed by stuudents in the 21st century.

With respect to the educational world, unquestionably, assessment is one of the most pivotal elements of the education process in which the students' learning is measured by employing various procedures (Koksal & Ulum, 2018). Undoubtedly, it is believed that the virtue of the educational program is nearly related to its evaluation practice. As a part of evaluation, the assessment clearly takes a notable part in education. However, creating an appropriate assessment is still considered as a problematic issue. One of the most commmonly used forms of assessment, an exam paper is believed to evaluate the learners' degree of success in any particular field of study. In this case, the students' cognitive ability is determined through the obtained score. Therefore, it is highly

necessary to ensure whether or not the chosen assessment manages to measure the students' performance. In other words, a good assessment is demanded.

Jones et al. (2009) proposed that a good assessment should comprise different cognitive levels in order to conform students distinctive capabilities. On the basis of this issue, what should be done is to promote functional assessment tools to measure students' both learning and critical thinking skills according to the six stages of the Bloom's taxonomy. In other words, the provided assessment should not stop on calling up the memorized data, that is also known the low order of thinking.

The previous relevant research of HOTS regarding to assessment had been conducted in various settings. For instance, Scully (2017) investigated HOTS based assessment by constructing multiple choices items to measure higher-order thinking skill. The result of the study argued that multiple choice items have the capacity to assess certain higher-order skills. A respect is also addressed to Zohar and Agmon (2018) who conducted a research that focused on probing senior science teachers' views on how several concurrent policies affect classroom practices. Such practices include improving test scores, developing students' thinking and inquiry skills, and narrowing achievement gaps. Furthermore, Kamarulzaman and Kamarulzaman (2016) conducted a study that explores teachers' beliefs in the use of higher order thinking skills questions to promote critical thinking skills among students. The results ensured them to believe that HOTS questions are useful in promoting the critical thinking skills since students were found to be able to apply their knowledge, to analyze information, to make decisions as well as to solve problems by using or involving the cognitive levels.

Although Higher-Order Thinking Skill (HOTS) has currently been an ongoing topic of interest among teachers and educational researchers, there has been no wide exploration of such notion and its relation to the learning assessment, particularly based on the view of

future teachers, pre-service teachers. With all of these things in mind, the study aimed at investigating attitudes of Indonesian pre-service English teachers with reference to using HOTS-based test to prepare better assessment. This present study, on the other hand, is considered different from some aforementioned relevant researches. The key difference is from the notion of attitude which has more intricate portion compared to teachers' view and beliefs as it covers three domain of teachers' evaluative judgment subsuming affective, behavioral and cognitive. Further, factors influencing their attitudes towards HOTS were also revealed in this study.

LITERATURE REVIEW

The concept of higher-order thinking is often related to the Bloom's taxonomy of educational objectives. This has set out six hierarchical cognitive processes in which the students or learners are engaged. Although revisions of Bloom's alternatives have been asserted, the underlying framework remains a stable and pivotal impact in education (Scully, 2017). Such framework is now in a widespread recognition to be involved both in curriculum and the assessment design (Lord & Baviskar, 2007; cited in Scully, 2017). Furthermore, the notion of higher-order thinking has been a trend which is still evident in the recent researches and discourse (e.g. Barnett & Francis, 2012; Jensen, McDaniel, Woodard & Kummer, 2014). It is acknowledged that Bloom's framework of cognitive levels persistently influences the education. This most likely because the whole cognitive levels can be interpreted and functioned to suit individual context. The lowest level of the taxonomy is *knowledge*. Within any subject area, in this term, a learner can possess mere knowledge, and may perform the ability to recall this learned knowledge in an assessment. Nonetheless, they may not understand what such knowledge means. Furthermore, they may not possess the ability to apply it in appropriate situations other than that in which it was learned, or to combine it with additional knowledge to produce

new insights. Such abilities were depicted by consecutive levels of the taxonomy.

The basic level is *Knowledge* in which learners can simply recall what they have learned previously without necessarily having any abilitied to implement such knowledge. The second is known as *Comprehension.* This level shows that learners possess the ability to describe the obtained knowledge. It is, then, followed by *Application* where learners can use the knowledge to solve problems, structurally in the similar context in which such knowledge was delivered. The fourth is named *Analysis.* Learners on this level have ability to involve the knowledge in decomposing situatons into components, recognizing unstated assumptions, and identifying motives. The next cognitive level is *Synthesis*. If learners reach this cognitive level, they will automatically be able to combine the elements of the learned knowledge into a new integrated whole. At last, the final level is *Evaluation* that makes learners capably judge the value or the worth of learned knowledge.

Beside the essence and the usefulness of Higher-order thinking skills, to proficiently implement this framework to prepare a better further assessment, it is crucial to examine the teachers' attitude towards HOTS. It is definitely essential to analyze the attitude as it is an important factor which promotes actions and affects teacher's decision-making. Ajzen & Fishbein (1977) as cited in Morgana (2017) defined attitude as the way how people react to their surrounding. Such reactions, then, correspond to their tendency in delivering actions to the object attitude. Further, attitude is a psychological predisposition that is expressed by appraising a particular entity with some degree of favor or disfavor (Eagly & Chaiken, 1993, p. 1-2). Attitude is a predisposition learned to respond in a consistent manner to a social object. It comprises some valuable elements for the behavior prediction (Eiser, 1997, p. 119-124). It generally specifies a lasting organization of beliefs and cognitions, endowed with an emotional charge in favor or against a defined object, which predisposes to a consistent action with cognitions and emotions

relating to that object (Cacioppo, Petty, Kao, & Rodriquez, 1986, p. 1032-1043). The attitude absolutely plays the role as the initiation of decision-making because someone who has an attitude towards something will eventually decide what he is going to do as the reaction toward such thing. To conclude, routed in those definitions of attitudes, it can be understood that attitude refers to the tendency which someone has to behave with. Such inclination derives from his evaluation towards the object in which such evaluation is done within the three dimensions; cognitive, affective, and conative.

Generally, there have been many studies presenting several techniques of how someone's attitude can be investigated. For instance, Yazıcı (2016) developed the *Identity Attitude Scale* which measures attitudes towards collective identity differences. Within this scope, it encompassed five subscales; gender identity, national identity, ethnic identity, political identity, and religious identity. Prior to this, a multiatribute measurement model had been introduced by Fishbein (1963). It depicts that attitude represents the belief and evaluation towards an object. Continuously, the most popular model was offered by Eagly and Chaiken (1993). It is called as ABC model which categorizes attitude into three sections; Affective, Behavior, and Cognitive. Affective domain concerns with the feelings or emotion a person has about the attitude object. It represents favorable to unfavorable feelings such as like or dislike, feelings, and emotional and physiological reactions (Ostrom, 1969). Behavior domain reflects the way the attitude of act or behavior a person used towards the object. It indicates personal action tendencies in supportive to hostile actions. Cognitive domain involves the attitude object from the view of a person's belief or knowledge. Ostrom (1969) added that the cognitive involves desirable to undesirable qualities in which the characteristics of the object and relationships of the object with other objects also influence the attitude.

In this study, the notion of attitude is observed only on the teachers' side by using the ABC model suggested by Eagly and Chaiken (1993). Analyzing teachers' attitude towards HOTS refers to

exploring or investigating their predispositions to use the HOTS framework to prepare a better classroom assessment. Such predisposition will surely reveal their cognitive, affective and conative evaluation towards HOTS. Regarding to the importance of HOTS in 21st century, as well as the teachers' predisposition towards a better assessment, therefore, the effort of conducting this investigation is considered crucial on the ground that it can provide valuable information which will become an invention in dealing with the improvement of their future language learning assessment.

METHOD

A descriptive qualitative study was employed to investigate two intended focuses of this research; pre-service teachers attitude towards the framework of HOTS, including their intention of adopting the HOTS framework into assessment, and factors influencing their attitudes towards HOTS.

Pre-service English teachers taking the English Education major in a university in Central Java of Indonesia were purposively engaged to be the participants of this study. They were chosen as participants in accordance with the technical terms related to HOTS since they have been dealing with these terms during the study. The number of the participant was determined based on the completeness of the expected data.

The data were obtained by using both a semi-structured interview and questionnaire. Their awareness to these terms was essential for them to capably provide plausible data of this study. The questionnaire was designed on the basis of attitude model offered by Eagly and Chaiken (1993) namely ABC model. The ABC model has three domain; affective, behavior, and cognitive.

The data was firstly collected by conducting a semi-structured interview. This format was favored as it allows some freedom for the researcher and the participants to go beyond the predetermined questions, while maintaining a focus and degree if of consistency which assists with the comparison and analysis of the interview

(Hamilton & Corbertt-Whittier, 2013). Afterwards, the researchers disseminated a questionnaire to the participants. The data gained from the questionnaire were used as the secondary data and utilized to confirm the primary data from the interview. In other words, after analyzing the data from interview, the researcher examined the data from the questionnaire whose results will be use to support the results of the primary data. This crucial step, so-called as triangulation, was meaningful to be carried out to attain the accurate degree of credibility of this research.

FINDINGS & DISCUSSION

This section presents several encountered findings which extended on the orientation which is relevant to the focus of the study regarding pre-service teachers attitudes towards HOTS to prepare more excellent assessment. The details are interpreted in the following issues: 1) pre-service teachers' attitudes towards HOTS, and 2) the factors influencing their attitudes towards HOTS.

Pre-service English teachers' attitudes towards HOTS

All of the pre-service teachers engaged as participants of this study shared positive attitudes towards HOTS. Such attitude were evaluatively elicited from the judgment they certainly gave to the three HOTS principles; *analysis, evaluation,* and *creation.* Those evaluative appraisal were also attached at the three attitudinal domains that circumscribed affective, behavioral and cognitive domain.

Affective Domain

Almost all participants shared positive affection in regard to higher-order thinking skill as depicted by their feeling and emotion which are effussed to their interest.

Table 1 Attitudes towards the ideology of HOTS for *affective* component

No	Attitudes towards the ideology of HOTS for *affective* component	Responses
1	I like the ideology of HOTS infused in the Indonesian K13 Curriculum.	50%
2	I like the ideology HOTS which puts *analysis, evaluation* and *creation* as the critical thinking standards.	90%
3	I am interested to *HOTS* as the evaluation framework in assessing English.	50%
4	I prefer HOTS as the teaching framework rather than evaluation framework.	40%
5	I like the ideology of HOTS targeting students to think critically.	90%

Generally, as it is seen in table 1, most participants had interest in adopting the three principles of higher-order thinking skill (analysis, evaluation and creation) as the fundametal basis of thinking critically. It is clearly stated in table 1 number 2 which indicates that 90% of the pre-service teachers involved in the study shared their similar attitudes. In line with this, almost all participants, 90% of them, agreed that the HOTS framework would target their students to be able to think critically (see table 1 number 5). Furthermore, some of the participants would rather use the HOTS framework in their teaching than in their evaluation. It is depicted in table 1 number 4, where only 60% of the participants would implement the HOTS in their assessment.

For the first phase of HOTS associated with *analysis*, the participants shared positive attitudes as noticed from their expression in the interview and questionnaire. There are 90% of the participants sharing similar opinions about *analysis* which would stimulate the students to think critically. It is indicated in table 2 number 1. On this cognitive level, that is analysis, students are able to use learned knowledge to decompose situations into components, to recognize instated assumptions and to identify motives (Scully, 2017). It is in line with Anderson et al. (2001) who further asserted that students, on this lowest level of HOTS, are able to break material into its

constituent parts, and to detect how the parts are inter-related each other or to an overall structure or purpose.

> *It's good to have analysis (C4) to be one of the standard in HOTS since the ability of analyzing something is necessary to enable students to think critically. (researchers' translation, participant 1)*

Table 2 Attitudes towards the principles of HOTS for *affective* component

No	**Attitudes towards the principles of HOTS for *affective* component**	**Responses**
1	I like the principle of **(Analysis)** which prepares students to think critically when using English.	90%
2	I don't like the principle of **(Analysis)** because it complicates the students in the evaluation process.	0%
3	I like the principle of **(Evaluation)** which prepares students to deeply understand the concepts.	80%
4	I don't like the principle of **(Evaluation)** because it is considered difficult for teachers and students to achieve.	0%
5	I like the principle of **(Creation)** which prepares students to develop their experience from the obtained experiences when learning English.	90%
6	I don't like the principle of **(creation)** because it is hard to achieve.	0%

Positive attitudes are also shown by the participants regarding the *evaluation* phase. 80% of the participants (indicated in table 2 number 3) believed that *evaluation* would habituate the students to develop their knowledge about something and to deeply understand the essence of the topics taught by english language teachers. For this, Scully (2017) asserted that in the level of *evaluation*, students manage to criticize and judge the value or worth of the learned knowledge. In addition, this level of cognition enables students to make judgments based on the existing criteria and standards.

> *The evaluation (C5) principle is absolutely appropriate for the students in recognizing their weakness and then doing improvement on it. (researchers' translation, participant 9)*

> *The ability to do evaluation (C5) is one of the most needed skills in order to help students becoming critical thinkers. Therefore, the students should be supplied and prepared with such nuance both in assessment process and in teaching learning process. (researchers' translation, participant 1)*

As regards the third principle of HOTS referring to *creation* as the highest level of cognition, the participants' positive attitudes were indicated by the reasons in which they conceived that such stage would accustom the students to build supporting experiences on the basis of their learned knowledge. 90% of the participants (as seen in table 2 number 5) admitted that students are excellent if they could generate or produce the material elements to form a novel whole.

> *I really appreciate this principle (C6) of HOTS as it helps teachers to easily access students' works and achievement because this principle will be in the form of products. Moreover, this principle involves the students' creativity. (researchers' translation, participant 2)*

Behavioral Domain

With respect to the pre-service teachers' evaluation towards HOTS, this particular domain was focused on revealing the possibility or willingness of the pre-service English teachers to adopt the HOTS framework in their future professional teaching experience.

For this, it is reckoned that almost all of the pre-service teachers also had positive attitude towards HOTS. Almost all of the students were willing to postulate the higher-order thinking skills categories as the standard or criteria of the students' achievement in English language learning as seen in table 3. 90% of the participants would prefer to use HOTS in their assessment in the future as seen in table 3 number 1. 80% of the participants (table 3 number 2) agreed to use the concept as the students' achievement target in learning English. On the other hand, none of the participants would maintain the use of low-order thinking skill (LOTS) concepts as their class achievement target.

Table 3 Attitudes towards the ideology of HOTS for *behavioral* component

No	**Attitudes towards the ideology of HOTS for *behavioral* component**	**Responses**
1	I will refer to the ideology of HOTS in conducting an evaluation should I become an English teacher.	90%
2	If I become an English teacher, I will refer to the concepts of HOTS (analysis, evaluation, and creation) as the students' achievement target in learning English.	80%
3	If I become an English teacher, I will refer to the concepts of LOTS (remember, understand) as the students' achievement target in learning English.	0%
4	If I become an English teacher, I will not make *HOTS* as the reference to do evaluation of English learning.	20%
5	If I become an English teacher, I will plan my students to be critical thinkers (C4).	60%
6	If I become an English teacher, I will plan my students to capably criticize and do evaluation based on the existing criteria (C5).	60%
7	If I become an English teacher, I will plan my students to capably create something which has novelty based on their learning (C6).	80%

Table 4 Attitude towards the principles of HOTS for (behavioral) component

No	**Attitude towards the principles of HOTS for (behavioral) component**	**Responses**
1	If I become an English teacher, I will implement the principle of **(analysis)** in evaluation to prepare students the ability to reflect and to think critically.	100%
2	If I become an English teacher, I will implement the principle of **(analysis)** which is profoundly complicated.	0%
3	When conducting the evaluation, I will implement the principle of **(evaluation)**, so that students get the essence of learning English.	100%
4	When conducting the evaluation, I will not implement the principle of **(evaluation)** since **(remembering)** is the main purpose of learning.	10%
5	If I become an English teacher, I will implement the principle of **(creation)** to prepare the students with an experience of creating something when learning English.	80%
6	If I become an English teacher, I will not implement the principle of **(creation)** since it will be profoundly difficult for the students.	0%

In details description, all participants desired to adopt and implement the *analysis* and *evaluation* principles in the assessment in order to critically think, to reflect, and to get the essential aspects of the lesson. Additionally, most of the participants had a mind to assist the students to accomplish the highest cognition level, that is *creation*.

> *It is 100% possible because HOTS are must-have skills in this 21st century. Therefore, teachers should prepare their students with such skills since the students will need them in their future life. (researchers' translation, participant 2)*

> *I'm really sure to implement HOTS. By implementing it, teachers will contribute to enable students to think critically. Moreover, this will help students to communicate well, to collaborate, to be creative, and to be confident to face the millenial era. (researchers' translation, participant 6)*

However, some participants acknowledged that it is not ideal to implement HOTS in the evaluation unless the teaching process in the class is delivered by adopting HOTS framework.

> *The implementation of HOTS in assessing the learning process has not yet been ideal in Indonesia, including in English learning process, because the HOTS-based teaching process has not been well conducted. (researchers' translation, participant 1)*

Nonetheless, the participants perceived that these three principles are appropriate to be implemented to build critical thinking skill as it is one of the most needed skills in current 21st century. More importantly, the abilities to think strategically, to reflect and to apply the learned knowledge in any ranges of situations have been indentified as the key indicators of competency, even for a wide range of disciplines and professions (Scully, 2017). Accordingly, it is vital to enforce the HOTS framework into the assessment.

Cognitive Domain

Almost all participants also shared their positive cognition towards adopting the HOTS principles in relation to its promising beneficience to further English language assessment.

Table 5 Attitudes towards the ideology of HOTS for *cognitive* component

No	**Attitudes towards the ideology of HOTS for *cognitive* component**	**Responses**
1	The insertion of HOTS in English learning assessment to measure the critical thinking is very ideal.	70%
2	Ideology used in English learning assessment should merely focus on students' ability to remember what have been learnt.	0%
3	The standard in English learning assessment should merely focus on C3 (application).	0%
4	Using HOTS as the framework of English learning evaluation is ideal because it stimulates students to deeply think about the learnt topics.	90%
5	Targeting the students to think critically is an ideal purpose in evaluating the English learning since their knowledge of English will be used not only in the classroom, but also in the daily life.	90%

The notion of HOTS was considered undoubtedly potential since it could become the framework of investigating and assessing students' current competence in English. As seen in table 5, 70%of the participants shared their common perception of how ideal the insertion of HOTS in assessing the criticical thingking is. Their positive attitude was also noticable from the table 5 (number 4 & 5) as well as their enunciation saying that educating the students to think critically was seemed to be the most quintessential goal of English language teaching assessment since their learned knowledge would be used not only in the classroom, but also in the daily life. Furthermore, the participants emphasized that the component of HOTS, especially *creation*, would provide the students to become proficient in using English. This was acknowledged by the

participants as the ultimate goal of English teaching in terms of English as an international language.

Table 6 Attitude towards the principles of HOTS for (cognitive) component

No	**Attitude towards the principles of HOTS for (cognitive) component**	**Responses**
1	**(Analysis)** prepares the students to be open-minded and critical thinkers in understanding something.	70%
2	Critical thinking which is asserted in **(Analysis)** is not important because the main goal of learning English is the improvement of (*fluency*) and (*accuracy*) in order to speak like (*native speakers*).	10%
3	**(Evaluation)** prepares the students to deeply observe the result of English learning in the classroom.	60%
4	**(Evaluation)** should merely focus on the understanding of what have been learnt in the classroom.	10%
5	**(Creation)** prepares the students with good English ability since it is the ultimate goal of learning English as an international language.	80%
6	**(Creation)** focusing on the ability to produce or create something will complicate the students.	10%

Associated with the component of *analysis,* positive cognition was depicted from a couple of accounts. First, the participants (as seen in table 6) asserted that such entity is one of the pivotally needed ability in order to deeply contemplate about something. This level of cognition would allow the students to make evaluations on options before making decisions (Kamarulzaman & Kamarulzaman, 2016). Second, critical thinking, as the result of doing analysis, would also help students to ask questions in classroom and in a community at large, and to become better students and members of society (Mabe, 2004).

In connection with another level of HOTS referring to the evaluation, the participants' positive cognition was depicted by several underlying reasons. First, they believed that this point was appropriate to implement as it would help students to make some considerations before making any decisions. Second, the participants

also perceived that the students ability to evaluate themselves in terms of the acquired knowledge in classroom would enable them to make judgments of the their weak areas of understanding. By doing so, students would simultaneously minimize the possibillity of misunderstanding something and making mistakes.

The factors influencing pre-service teachers' attitude towards HOTS

With respect to the data obtained from both the interview and questionnaire, there were found nine major factors influencing the pre-service teachers' positive attitude towards HOTS. The aforestated factors are as follows.

Table 7 The factors influencing the pre-service teachers' attitude towards HOTS

No	Factors influencing the attitudes towards HOTS
1	The comprehensibility of HOTS
2	The attractiveness of HOTS
3	The frequency of interaction with HOTS
4	Good mediators to understand HOTS
5	The understanding with respect to HOTS
6	Prior knowledge associated with HOTS
7	The reasonableness of HOTS
8	The habit of learning
9	The role related to the professionalism as an English teacher.

In general, the nine attitudinal factors above derived from the pre-service teachers' experience of clutching the exposures about higher-order thinking skill since it became one of fixated topics in their graduate program. As shown by the obtained data, the fourth factor played the most critical role in affecting their attitude. This factor is related to the capability and excellency of the participants' lecturer in illustrating the concept of HOTS as the basis of creating the evaluation instrument. The participants asserted about their schemata related to HOTS. They certified that they had known the three major cognition levels of HOTS – *analysis, evaluation,* and *creation* – as it was widely used in the educational field. However, the participants

admitted that they had no sufficient understanding about how to adopt those principles into an assessment.

Furthermore, the application of HOTS on their mid-term test (creating and analyzing a HOTS-based assessment) has been acknowledged as their starting point of awareness of how such kind of test imposed them to think deeply. This experience, in the participants' viewpoint, resulted in a profound understanding.

Additionally, the participants' comprehensibility of HOTS encouraged them to implement such principle in their future assessment. This notion was in line with the demand of the twenty first century in which students were urged to acquire the critical thinking skills to communicate well in multiple forms and to succeed in their study as well as their future carreer during the information age (Darling-Hammond and McCloskey, 2008).

In relation to the professionalism as an English language teacher, the participants apprehended that the pedagogical knowledge on the implementation of HOTS in both teaching learning activity and assessment should be understood and practised by all teachers since they need to use different teaching and assessing strategies in order to produce proficient students in HOTS. Therefore, courses or training on the knowledge and the implementation of HOTS should be continuously done for pre-service teachers and in-service teachers to keep abreast of any change and improvement in implementing the knowledge and skills of HOTS particularly in English language study.

CONCLUSION

This research has found that all the pre-service teachers have a positive attitude towards HOTS as embodied in their positive judgments of HOTS and the affective, behavioral and cognitive domain of the attitude. From the behavioral aspect, the pre-service teachers shared positive attitude towards postulating the higher-order thinking skills categories as the standard or criteria of the students' achievement in English language learning in their future

career. With respect to the cognitive aspect, all participants also shared their positive cognition towards adopting the HOTS principles in relation to its promising beneficience to further English language assessment as it was considered undoubtedly potential to become the framework of investigating and assessing students' current competence in English.

Some underlying factors which influenced their positive attitude were also found and extended to: the comprehensibility of HOTS, the attractiveness of HOTS, the frequency of interaction with HOTS, good mediators to understand HOTS, the understanding with respect to HOTS, prior knowledge associated with HOTS, the reasonableness of HOTS, the habit of learning, and the role related to professionalism as an English teacher.

This study is considered essential to be one of the sources for teachers in improving their persistence of English teaching since it could contribute as one of the references for English teachers to rectify the quality of the existing assessment. More courses or training on the knowledge and the implementation of HOTS should be progressively conducted for pre-service teachers or even in-service teachers to keep abreast of any change and improvement in implementing the knowledge and skills of HOTS particularly in English language study.

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