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Debate as a Tool for Learning and Facilitating Based on Higher Order Thinking Skills in The Process of Argumentative Essay Writing

Marzni Mohamed Mokhtar

Universiti Putra Malaysia, Selangor, Malaysia
<http://orcid.org/0000-0002-9689-8235>

Marni Jamil

Universiti Teknologi Mara (UiTM) Cawangan Pulau Pinang, Penang Malaysia
<http://orcid.org/0000-0002-6746-7487>

Rohizani Yaakub

Universiti Sains Malaysia, Penang Malaysia
<http://orcid.org/0000-0003-0046-5425>

Fadzilah Amzah

School of Educational Studies, Universiti Sains Malaysia, Penang Malaysia
<http://orcid.org/0000-0001-7576-9840>

Abstract. This study was conducted to examine how teachers carried out teaching and learning (T&L) based on higher-order thinking skills (HOTS) in the process of argumentative essay writing. To obtain a holistic overview of the methods used by teachers in T&L, a qualitative case study approach was being employed as the research design of this study. Secondary school teachers were involved voluntarily in this study, and it was conducted at a boarding school in a district in Selangor, Malaysia. To collect meaningful data from both research participants, in-depth interviews, classroom observations, and document analysis were used until saturated data was achieved. The findings were analyzed to form the criteria and themes in discovering the use of HOTS in T&L of argumentative essay writing. It was found that debate is a viable method to implement HOTS in argumentative essay writing. The method can attract and inspire students to use HOTS in constructing their arguments and in completing their writing assignments.

Keywords: debate; HOTS; case study; argumentative essay; teaching and learning

1. Introduction

The education curriculum in Malaysia is unbalanced due to the neglect of the right brain developmental potential (language, literature, aesthetics, sports, creativity, and artistic talents). This neglect occurred due to excessive inclination towards the left-brain developmental potential (the academic part that includes analytical and mathematical logic aspects) that creates an educational curriculum which greatly focuses on abstract facts that are challenging for students' mastery (Aminah, 2003). The pedagogy practiced by the teachers is found to be didactic (teacher-centered) as compared to thematic (student-centered). This requires a change in the teacher's practice by implementing learning elements that encourage students to think and apply the information that may be associated with daily life (Aminah, 2003; Abd Rahman, Scaife & Yahya, 2010).

This change in pedagogical practice is in line with the recommendation of Maimunah (2004), which explains that thinking practices need to be continuously embedded in individuals and given early emphasis in schools and tertiary institutions. Cultivation of thinking skills is possible with the support of a conducive environment to provide more excellent opportunities for exploration, experimentation, training, and enhancement and ultimately enabling constant improvement of individual capabilities (Abdul, 2016; Abd Rahman & Scaife, 2012). Among the initiatives in the cultivation of high-order thinking is the use of teachers' teaching methods to produce quality students with quality thinking (Jumaliah & Zamri, 2016; Ibrahim, Ayub, Yunus, Mahmud & Bakar, 2019). Changes in teachers' pedagogical practices also involve teachers' efforts to prepare group thinking activities that can enhance students' cognitive abilities. This can be steered by the preparation of various plans, exercises, and alternatives discussed so that students can comprehend the meaning underlying an issue in question. As a result, students can think in multiple ways by looking at a case from various perspectives. Instead of being knowledge consumers, they are taught to be seekers of diverse knowledge.

2. Literature Review

Debate activity is understood as a formal discussion that requires an individual to argue, propose, and oppose verbally. This formal discussion requires the involvement of two sides discussing or debating on a project, with one side going for the proposition and the other side for the opposition. The discussion can be made either in the form of a competition or non-competition (Norhasni, 2014). The debate is also defined as the utterance of either proposing or opposing a view on logical grounds conveyed by the use of structured ideas (Nurhidayu, 2012). Debating skills can make an individual reject and refute others' accusations, reasons, assumptions, and opinions. Debating skills have also been found to enable an individual to be critical, able to present ideas on a case, the weakness of others' points, and the theoretical debate made by others on a matter (Mohd, 2001).

It is vital to cultivate debating skills as part of the teaching methods to enhance students' cognitive mastery. In the context of the education system, the skills can

be used as teachers' assessment towards students' capacity to use their intellectual ability to argue with effects, evidence, and relevant information in making a statement (Mohd, 2001). Furthermore, the debate can serve as a form of training for a group of participants to generally discuss the advantages or disadvantages of an idea and to develop the students' ability so that they feel comfortable in playing their role, either as the proponent or the opposition to solve an issue or a topic (Norhasni, 2014).

This is reinforced by Nurhidayu (2012) who stated that debating skills benefit students, especially high school students, because communication skills can (i) develop practical communication skills; (ii) train students to think quickly and produce thoughts properly and in an organized manner; (iii) master language skills by using the correct sentence structure and appropriate language level; (iv) present argument rationally, critically and creatively and (v) practice listening, analyzing, debating and refuting skills. Looking at the opportunities and benefits of using the debate method in T&L, it is an effective medium for applying T&L based on HOTS especially in encouraging students to think in the process of argumentative essay writing. Students can hone their thinking skills at a high level to generate and develop ideas, insights, or knowledge with classmates that are linked together with relevant arguments, support, evidence, and description (Mohd, 2001) to find standard solutions to issues in argumentative essay writing assignments.

The development of debating skills will lead to the development of language skills, positive mental development, knowledge enhancement, and the development of leadership qualities in the student if the debating skill becomes a part of the T&L process continuously (Nurhidayu, 2012). In this study, Toulmin's Argumentative Writing Model (1958) and Argumentative Discourse Model (Ali, 2005) were used as necessary frameworks to examine how teachers use the debate method as a tool for T&L based on HOTS in the argumentative essay writing process. The selection of these two models was very coincidental with the context of writing argumentative essays in schools, which often discusses factors, causes, reasons, impact, and steps for an issue explained.

Toulmin's Argumentative Writing Model (1958) consists of six elements which are data, claim, warrant, backing, qualifier, and rebuttal (Toulmin, 1958; Nureeyah, 2015). The key elements that underlie the model's construction are data, arguments, and assumptions in examining the process of argumentation. Arguments and assumptions usually have a relationship derived from data (Mayberry, 2002). Subsequently, the supporting elements, refutation of evidence, and clarification elements serve as additional elements to support a statement of the premises to be debated. The supporting element plays a role in clarifying the supporting case in the absence of a general agreement. The fifth component, which is clarification, uses the word such as to strongly suggest a concrete idea to reinforce the case made. The final component, which is argument rebuttal is used to reject and clarifies any premise of the argument which it opposes. The relationship between these six writing elements is shown in Figure 1:

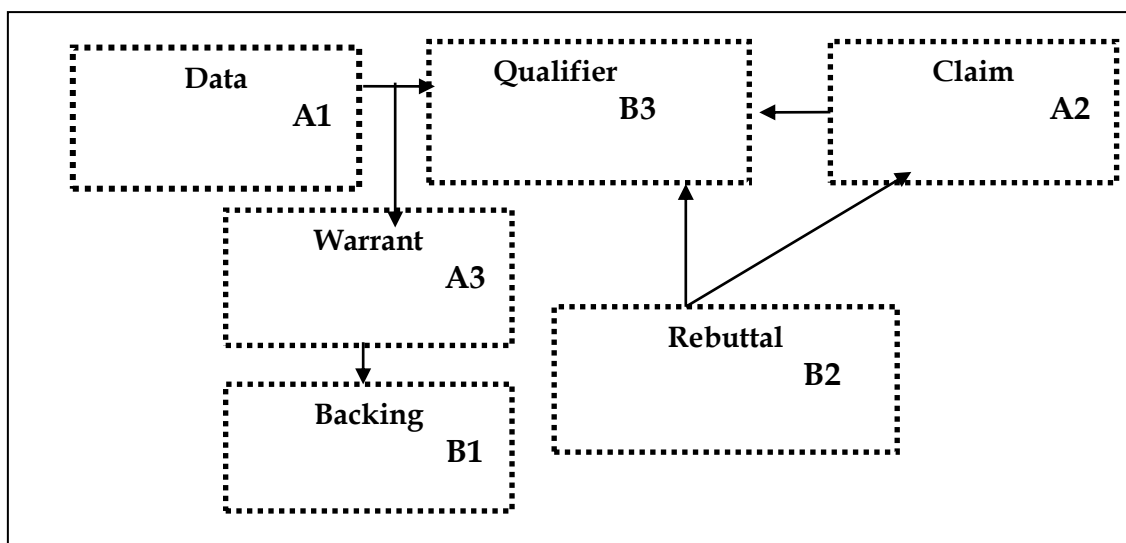


Figure 1: Argumentative Writing Model (Toulmin, 1958)

The Argumentative Discourse Constructions Model (Ali, 2005) was built by local scholars. This model is a refined idea from Toulmin's Writing Model to suit local needs. This model has two main constructs, namely argumentative construct and language aspects aimed at helping teachers to teach argumentative writing procedures in schools. Table 1 details how this model is used in argumentative essay writing.

Table 1: Argumentative Discourse Construction (Ali, 2005)

Component	Detailing
A. Argumentative Essay Construct	<p>A. Introduction Topic sentence Supporting sentence Closure</p> <p>B. Main Idea (Main Argument) Detailed supporting sentence - - Evidence - Examples - Points</p> <p>C. 2nd Main Idea D. 3rd Main Idea E. 4th Main Idea F. 5th Main Idea G. Closure - Concluding sentence - Suggesting sentence - Expressive sentence - argumentative closure</p>
B. Language Aspect	<p>A. Sentence structure: Singular and plural sentences B. Grammar structure C. Semantic structure D. Rhetoric, argumentative and persuasive structure E. Sentence perfection (FN +FN; FN +FK; FN + FA; FN + FS) or (SUBJECT + PREDICATE)</p>

	<p>F. Has a discourse marker</p> <p>G. Has cohesion and coherence</p> <p>H. Has the beauty of language</p> <p>I. Has strong diction</p> <p>J. Has a smooth continuity</p>
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3. The Emphasis on HOTS Elements in Teaching and Learning (T&L)

The issue of teacher pedagogical practice in T&L is not recent to educational research. Teachers play an essential role in planning the T&L process to provide knowledge input to students while providing meaningful experiences for them. It also depends on the ability of teachers to use a variety of teaching methods and approaches to convey knowledge to students and keep their attention in the classroom. The emphasis on HOTS elements also requires teachers to apply effective T&L strategies and methods in the T&L process to develop students' minds (Wan & Norkhairiah, 2011; Sharifah, Nor, Mohd & Aliza, 2012). However, in terms of implementation, particularly involving HOTS in the Malay language, it is still less practiced (Rahman, Jamaludin & Zamri, 2015). Issues closely related to the implementation of T&L based on HOTS can be realized through two key issues, namely teachers' teaching practices and students' mastery of HOTS.

Teachers were found to be less prepared from the aspects of knowledge, pedagogical skills and attitudes to teach HOTS, besides not imparting knowledge according to the level of cognitive taxonomy, feeling more comfortable with conventional teaching practices such as chalk and talk compared to the two-way teaching method recommended by the Ministry of Education. There were issues related to the engagement of students, the utilization of educational resources as well as the quality of training and assignments, which became the contributors to the T&L quality based on HOTS of teacher-led practice (Baharuddin, 2006; Yusof, 2006; Nooriza & Effandi, 2015).

It was easier for teachers to teach students to remember facts, which was then followed by the assessment of their knowledge through a multiple-choice test. It was difficult for teachers to prepare students to analyze, synthesize, and evaluate the content of a lesson (Musliha Salma, 2010). This situation is opposing the set of learning objectives that require teachers to focus on high-order thinking that includes levels such as application, synthesis, and analysis, critical thinking, and opportunities to formulate ideas.

In the context of argumentative writing pedagogy that requires students to think in HOTS manner, it is crucial for teachers need to master and convey this knowledge effectively because, in every phase, teachers need to provide students with the task of designing, translating ideas, revising, refining and perfecting the work repeatedly by engaging in very complex cognitive activities to produce high-quality writing (Rajendran, 2000, 2001a, 2001b, 2001c, 2002 & 2008). Apart from that, the mastery of argumentative essay writing skills can enable teachers to overcome constraints in T&L based on HOTS, in the argumentative essay writing process such as students facing difficulties in completing the argumentative essay writing assignments (Wolfe, Britt & Butler, 2009). Students were also found to be confused in choosing the assignment title

(Wei Zhu, 2001) and were confined by the required number of pages to be written for the argumentative essay (Wei Zhu, 2001).

Students were also found to face difficulties in structuring and organizing ideas (Hyland, 1990; Abdul et al., 2008; Wei Zhu, 2001), using inaccurate discourse markers for beginning new paragraphs (Wei Zhu, 2001) and facing problems such as the ability to link evidence with arguments and assumptions in an argumentative essay writing (Cho & Jonassen, 2002; Brudvik, Hong & Chee, 2006; Moore & MacArthur, 2011). Moreover, the inability to draw conclusions on the issues debated (Wei Zhu, 2001) or to diversify accurate diction and use grammatical sentences in argumentative writing to support the argument (Wei Zhu, 2001; Abdul et al., 2008 & Yusfaiza & Mohd Isha, 2012) were also the difficulties which they faced. In addition, the format and guidelines were not followed, and the sentences constructed were structured irregularly in the essay writing and required the teachers' guidance to meet the requirements of the question (Rahman, Jamaludin & Zamri, 2015). Sahlan, Shalinawati & Saemah (2013) also found that some students wrote only one or two statements about the title, but did not elaborate the title with current issues, and wrote an introductory paragraph that was not relevant to the content paragraph.

Hence, to address these issues, by using qualitative research design, it is vital for studies related to the exploration of how Malay language teachers conduct T&L based on HOTS in the process of writing an argumentative essay in school in the actual context to be carried out. The qualitative study enables the researchers to get a clear picture of students' different cognitive abilities due to diverse methods of observation, information processing, abstract understanding of lessons, or concrete arguments. The degree of acceptance and cognitive readiness of the students vary based on various socio-economic and educational backgrounds.

4. Purpose and Research Questions

This study aimed to explore how Malay Language teachers implement T&L based on HOTS in the process of writing an argumentative essay in secondary school. The following is the research question of this study:

How do Malay Language teachers implement T&L based on HOTS in the process of argumentative essay writing?

5. Methodology

5.1 Research Design

The selection of qualitative research design is very relevant in this study. The understanding of a phenomenon can be conducted precisely and in a detailed manner to form a meaning (Faridah & Rohaida, 2013). Qualitative research also offers researchers the opportunity to clearly understand the social and cultural contexts that underlie aspects of personal opinion, experience, and understanding rather than merely trying to bridge the relationship between variables (Denzin & Lincoln, 2008). The selection of qualitative case study design is also based on the consideration that the researcher can perform meaning construction process, is allowed to express feelings of agreement or

disagreement with the views of the research participants, and to express the tension encountered while exploring a subject (Koo, Wong, Kemboja & Mohd, 2011). Thus, the case study design is relevant for this study to answer the research questions about the Malay language teachers' understanding, their way of implementing T&L based on HOTS in the process of argumentative essay writing, and the importance of HOTS implementation process in T&L. Researchers generated new information in addition to the existing knowledge and created inherent connections between various objects, the components, and elements in the case study.

5.2 Research Participant

This study involved the participation of two Malay language teachers who were teaching in a boarding school in Banting, Selangor. The teachers who were labeled as GA and GB respectively volunteered in this study to provide the research data. The researchers used a purposive sampling technique because the research participants are experts as they have valuable information on the topic studied (Mason, 2002; Maxwell, 2008 & Merriam, 2009).

5.3 Data Collection

To reach the rich and thick data from the participants, 9 months were allotted to complete the data collection process. The data collection process involved in-depth interviews (labeled as TB1) between the two research participants and the researchers, classroom observations (labeled as BP1), and document analysis of students' essays. Data triangulation occurred in this study through a variety of data collection techniques to ensure the data reached a saturation point before the final theme was developed for the research questions related to how teachers implement T&L based on HOTS in the argumentative essay writing process (Cresswell & Miller, 2000).

5.4 Data Analysis

In this study, some data pilings would be problematic to deal with (Anderson, 2004); hence the researchers analyzed the findings of the study immediately after the completion of the semi-structured interview as well as the observation activities and collected all the required documents as secondary data. The process of data analysis performed in this study began with the process of data organization, filtering, and coding, theme construction, data saturation, drawing conclusions, and data exhibition. For findings validation, members checking technique, audit trail, prolonged engagement, and a coefficient of Cohen Kappa were used to validate the constructed themes. Three inter-rater were appointed for this purpose.

6. Research Findings

Teachers need to use the best techniques in conducting T&L based on HOTS in the argumentative essay writing process. In this study, one of the T&L techniques used by both research participants was the debate technique. The technique was used five times out of 13 T&Ls conducted in the classroom. Two sub-themes were constructed as a result of the research finding concerning the use of debate technique as a T&L procedure based on HOTS in the process of

argumentative essay writing. These two sub-themes consisted of (i) simulations of the debate in the classroom and (ii) writing the full-text of the debate.

6.1 Simulation of Debate Competition in the Classroom

Both participants in this research used the debate method as a T&L tool based on HOTS in the process of writing an argumentative essay. The debate method used involved the simulations of the competition in the classroom. The simulations were conducted to train and provide a platform for students to come up with ideas and defend them before they were formulated in full essay form. Table 2 shows the research findings of how the teachers conducted simulation competitions in the classroom.

Table 2: Research Findings Details for Debate Competition Simulation

Debate Competition Simulation	Research Findings Details
The Procedure of Debate Competition	The teacher re-explained the number of cases required, which included four cases for essay writing, debate according to the situation: whether it was a parliamentary competition, with two arguments, or an open debate with three cases. The teacher also described the time frame given for the cases to be between 7 to 8 minutes according to the competition, situation to allow the judge to evaluate the debaters' evidence (BP10GB).
Debater Turn in Competition	It depends on how well he can deny. If he refutes much, we set him third (TB1GAGB/line 593596) Little refute, we place as a second. If it's lesser, we place him as the first, but usually, we have a formula, that formula is based on experience. Normally, according to experience, usually the best students, we will place as a second (TB1GAGB/line 598-601).
Video Show of Debate Competition	The teacher then asked the students to examine the second video show of a friendly competition carried out by the debate group. The teacher also encouraged students to apply the debating method after watching the second video. The teacher then explained that in the debate competition, the debater is required to start the argument session by presenting the definition of the given proposal or title. The teacher then asked the students to try to apply the method, intonation, voice of the debate activity through the example debate text provided. The teacher demonstrated the style before asking the student to use it (BP9GB).

6.2 Writing Complete Text of Debate Essay

The second sub-theme of the debate method is the full-text debate essay writing. Both research participants have a strong belief that students needed to understand the question's instruction first and master the format of debate essay writing before the student can produce a full-text of the debate essay. Table 3 elaborates on the findings of the study on how GA and GB guided the students.

Table 3: Detailed Research Findings for the Full-Text of the Debate Essay

Full-Text Writing of Debate Essays	Details of Study Findings
Comprehension of instruction - To propose or oppose the proposition	Students responded in favor or not of the given issue. The teacher validated the students' answers to whether or not the student proposed the issue, which is the importance of preserving the heritage city. The teacher then asked what is meant as proposing and opposing. The teacher explained that students were allowed to choose whether to propose or to oppose, but needed to depend on the instruction of the questions of whether students needed to propose or oppose (BP7GA).
Format of debate essay writing	The teacher asked students about the form of debate essay writing. Students listed the concerning format, which included the forewords, definitions, bring forth the topic, and closure. The teacher gave a hint to the students about a matter using the letter H. Students answered the argument (BP10GB).

GA developed a framework for the use of the debate essay writing format in T&L during the observation of BP11GA. The construction of a debate essay format includes the mode of the argumentative essay (facts, comparison, persuasion, and argument); the development of paragraphs (introduction, 5 main ideas, and conclusion); and the way to use words of wisdom, personages, and proverbs in an argumentative essay as an added value in their writing skills. Both research participants, GA and GB chose the topic for the debate essay writing to ensure that students can master the full-text debate essay writing. Table 4 is a list of debate essay titles discussed during classroom observations.

Table 4: Selection of Debate Essay Titles by GA and GB

Research Participants	Debate Essay Title	Date of Classroom Observation (T&L)
GA	1. Assume your group has been selected to represent the Association of Malaysian Heritage Friends to debate the following title: Preserving Heritage Cities is More Important Than Building A Modern City. (BP7GA)	24 August 2016
	2. Historic Places Encourage Level of Patriotism Among Students. (BP11GA)	7 September 2016
	1. The Use of the internet Does More Good Than Harm. As an opposition side, discuss this title. (BP8GB)	25 August 2016
	2. You have been selected to	25 August 2016

GB	participate in a school debate competition. The title of the debate is The Internet Does More Good Than Harm. State your argument as a proponent. (BP9GB)	
	3. Assume your group has been selected to represent the Association of Malaysian Heritage Friends to discuss the following title: Preserving Heritage Cities Is More Important Than Building A Modern City. (BP10GB)	6 September 2016

7. Discussions

After reviewing all the findings, the researchers found that the justifications of the two research participants in providing the data were based on the knowledge, understanding, and practice as the debate side coach (GA) and the debate side manager (GB). Both participants used the disclosures gained as a result of their involvement in the debate competition as one of the T&L methods to train students in thinking using HOTS. This is because both research participants were actively involved in training their school debate team to participate in debate competitions at school, district, state, and national levels and ultimately being crowned the winner of the Prime Minister Cup in 2016. Both research participants, GA and GB, used the debate as a method to incorporate the elements of HOTS by allowing students the opportunity to express their views in debate form, and debated plans were converted to the full-text essay writing form.

7.1 Adaptation of Argumentative Writing Model in T&L

The findings of this study are in line with the ideas presented by Toulmin's (1958) in the Argumentative Discourse Writing Model and Argumentative Discourse Construct Model by Ali (2005). Through the simulation of debate competition, the research finding, which is the debate competition simulation matches the six elements of Toulmin's Model. In the competition simulation, students were found to use the main elements of the model which model, which are data, arguments, and assumptions to discuss the proposition in the classroom. Students then used the support elements, refutation of argument, and clarification elements to respond to the arguments presented by the opponents during the debate in the classroom. This had implications for students' thinking because students had to find the right facts to support their argument. The findings of this study are in line with the views of Mohd (2001), Norhasni (2014), and Nurhidayu (2012). The high-order thinking activities can be applied through debate skills as students can express their ideas as well as defend their ideas and arguments to reach common ground on issues discussed. Debate activities can serve as a medium for sharpening students' minds and talents in defending an argument.

7.2 Acculturation of Debate Methods in T&L Essays

Next, the debate method used by both research participants included exposure and guidance made by GA and GB regarding the full-text debate essay. Debate essay writing is a formative essay. After the students were given the experience of simulating a debate competition to hone their debating talent, they were then instructed by the two research participants to prepare a complete debate essay. Both research participants repeatedly asked the students to comprehend the essay instruction: they had to either propose or oppose the topic before beginning to write the full-text debate essay. The research participants were found to have provided a debate framework format to be made as a guide for students to produce the debate essay. The debate essay preparation was found to be the same as the Argumentative Discourse Construct Structure (Ali, 2005).

Both research participants emphasized the language aspect because students needed to use appealing language to get readers' support or approval to accept the views expressed in the debate essay. The use of the debate method was able to engage the students in maintaining as well as increasing their attention and thinking ability. They were expected to be prepared with questions or to clarify questions posed by their teachers or peers during the debate activity in the classroom. The implication of using debate is students are found to be more prepared by making preliminary reading and eager to defend their ideas in a group. To ensure the debate method is successfully carried out as a T&L tool based on HOTS, teachers must choose the topics that follow the students' cognitive level, and have a close relationship with the students' environment while tapping on the current issues.

8. Conclusion

In planning the T&L process based on HOTS, teachers must first understand and live the philosophy and aim of the curriculum, structure, and organization of the curriculum, and the syllabus of the Malay language subject. Teachers also need to have competent knowledge about their option subject and teaching skills including integrating knowledge, skills, and values. Besides, they should be able to teach students with multiple abilities and have positive and creative teacher characteristics to conduct the T&L process (Mok, 2012). Teaching effectiveness depends on the teachers' ability to facilitate students' learning activities and create motivation for their learning. Thus, the success of this approach depends mainly on the teachers' ability in the classroom. Teachers also need to consider the limitations in T&L such as the mastery of students' reading skills, teaching resources and elaborations of the content proposed. Therefore, it is particularly relevant if various studies are conducted regularly to examine the best ways to be applied by teachers in doing meaningful T&L processes and give a positive impact on the formation of student's high-order cognitive abilities in total. Hence, the application of HOTS in T&L teaching of essays should not be overlooked by teachers as HOTS can open up space and opportunities for students to improve their thinking ability. Teachers should make HOTS a major aspect of their attention during the T&L process.

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