



**Integrating Higher-Order Thinking Skills (HOTS) into Essay Writing Instruction for Low-Achieving Students: A Two-Cycle Collaborative Action Research Study**

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| Received<br>27/12/2025                                                                                                                                                                                                                                                                                                                                                                                                | <b>ABSTRACT</b><br><br>Many educators believe that low-achieving students can't handle higher-order thinking tasks, which may hinder their growth and potential. This study employed a two-cycle collaborative action research design using a mixed-methods approach, and incorporating classroom observations, teacher interviews, and pre- and post-writing assessments, which were analysed using a paired-samples t-test. The participants were 3 Malay language teachers and 47 low-achieving students, all aged 16, from 3 rural secondary schools in Sarawak, Malaysia. The students' writing performance was analysed quantitatively, while the teachers participated in classroom implementation, intervention and interview. The classroom observation results indicate that teachers rely more on the analysing cognitive |
| Received in revised form<br>04/04/2026                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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|  | <p>domain. A process-based approach enhances higher-order thinking skills in essay writing among low achievers, thereby improving classroom teaching and learning. There was a significant difference between pre- and post-writing assessments, with average essay scores improving by approximately -19.47 points after the intervention. In conclusion, educators knowledgeable about HOTS cognitive domains play a crucial role in supporting struggling students to foster essay-writing abilities. For low achievers, a process-based approach is more effective than a modular approach for enhancing higher-order thinking in essay writing. Teachers should motivate students at all academic levels to participate in tasks that utilise higher-order thinking skills.</p> <p><b>Keywords:</b> Higher-Order Thinking Skills (HOTS), essay writing instruction, low-achieving students, intervention</p> |
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## Introduction

Behaviourist theories suggest that higher-order skills, which are essential for deeper thinking, should be introduced only after students have mastered the basics. As a result, low-achieving students may not reach higher-order skills levels, ultimately denying them the comprehensive educational experience they deserve. Students who struggle with basic skills are often taught using methods that focus primarily on fundamental concepts. Teachers usually view them as being at the early stages of learning. In contrast, high-achieving students who have already mastered the basic skills are presumed to be capable of tackling more challenging tasks. This difference in belief not only limits the growth of low-achieving students but also restricts their potential for academic advancement (Bloom, 1956; Foster, 1989; Peng et al., 2024).

The term “low-achieving” refers to students who consistently struggle academically. In the school environment, teachers often identify low-achieving (LA) students by their engagement with written and oral assignments and their test scores. Many educators prefer to use the term “weak students”, implying that the latter may lack essential intellectual abilities (Zohar et al., 2001). This labelling not only influences how the students are perceived but also impacts their self-esteem and learning opportunities. Instead of simply categorising students in ways that may limit their development, there is an opportunity to tackle the fundamental issues that lead to low achievement.

Higher-Order Thinking Skills (HOTS) are essential for promoting effective learning and teaching in the 21st century, particularly in secondary schools. The emphasis on HOTS represents a significant shift in the Malaysian education system, aligning with the Malaysian Education Blueprint 2013-2025. However, the adoption of HOTS in rural secondary schools faces several constraints. First, teachers often struggle to differentiate between HOTS and problem-solving skills (Pillay et al., 2018). Before 2021, Socratic questioning was a common pedagogical practice to enhance HOTS in schools (Chew, 2023), and some teachers continued to rely on the practice because they were unfamiliar with HOTS as a stimulus for critical thinking (Hunkins, 1989). A study by Arif (2019) on the use of questions in teaching essay writing found a higher proportion of low-order than high-order questions across several schools. Teachers tended to view questions as tools for assessing factual knowledge rather than as instruments for promoting deeper generalisations and inferences. Fostering students' HOTS is a critical educational objective. Several factors contribute to students' difficulties with HOTS questions, including a lack of confidence, perceptions of these questions as complex, and a need for longer and more detailed responses (Raflee & Halim, 2021).

The national education system in Malaysia emphasises Higher-Order Thinking Skills (HOTS); however, its implementation in Malay essay writing varies significantly across classrooms. Students in rural areas often receive instruction that primarily focuses on memory and comprehension, with limited support for skills such as analysis, evaluation, and creation. These students typically have weak literacy and limited vocabulary foundations, poor sentence structure, and a lack of cohesion in their writing. Additionally, they frequently encounter cognitive barriers that hinder their ability to improvise and effectively use their memory. In light of these challenges, this study offers practical evidence and ready-to-use tools to help implement HOTS in Malay essay writing. These resources include a structured approach to the writing process, a HOTS-aligned rubric for assessing essays, and a HOTS observation checklist for educators.

While many learning theories emphasise the importance of fostering thinking skills for all students, some teachers mistakenly believe this focus is only suitable for high-achieving students, believing that LA students are unable to handle higher-order thinking tasks. Zohar and Dori (2003, p. 146) found that many teachers often qualified this attitude by expressing views such as the following:

Some kids simply can't do it... You cannot ignore the variability among children.  
I also think that it's [i.e., higher order thinking] inappropriate for weak students.

I would very much like it to be for the weak students, but I have a feeling it will work well only with the strong ones. ... You can trust them, they are interested and curious. The weaker ones, we have to give them a lot of support and carry them on our shoulders to get some results.

Such notions can result in the mistreatment of these students. Thus, it is essential to investigate whether empirical evidence supports this belief (Zohar et al., 2001).

## **Literature Review**

This study uses Bloom's revised taxonomy (Anderson & Krathwohl, 2001) to explore higher-order thinking skills (HOTS) in essay-writing instruction. The taxonomy offers a clear, hierarchical structure that aligns with curricular objectives and assessment practices in the Malaysian education system. It emphasises observable cognitive processes - applying, analysing, evaluating, and creating - and provides educators with practical guidance for achieving learning outcomes and designing writing tasks.

While other learning theories, such as constructivism and sociocultural theory, address higher-order thinking, Bloom's taxonomy is more specific to categorising cognitive demands. Metacognitive theory focuses on internal cognitive monitoring, while cognitive load theory deals with information-processing capacity, making these theories less suitable for instructional design. Additionally, inquiry-based and problem-based learning are pedagogical strategies rather than cognitive frameworks.

Thus, Bloom's revised taxonomy serves as an effective bridge between theory and practice, offering a structured cognitive progression that supports differentiated instruction, particularly for low-achieving students, and ensuring pedagogical feasibility and clarity in an action research context.

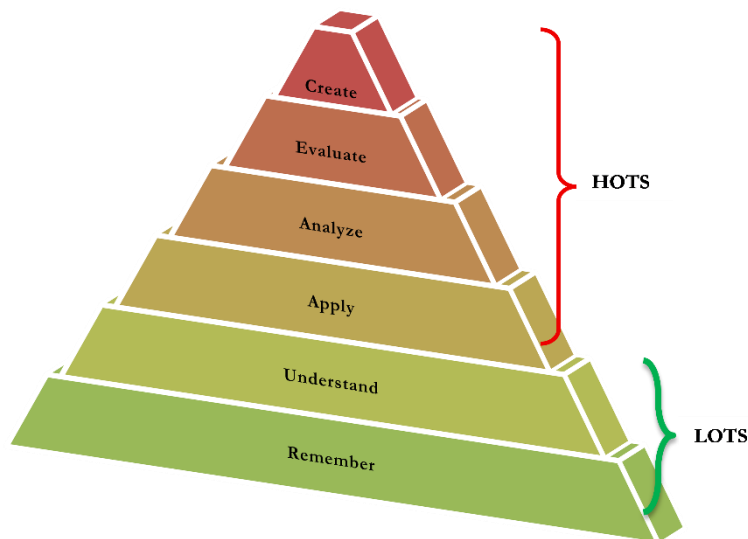
## **Higher-Order Thinking Skills (HOTS)**

In 1956, Bloom introduced a groundbreaking framework that identified six levels within the cognitive domain, ranging from the fundamental skill of recalling facts to the highest level of evaluation. However, recognising the evolving landscape of education, a team of psychologists led by Anderson revitalised this taxonomy in the 1990s to ensure its relevance in the 21st century. One of the most impactful changes was transforming the skill levels from nouns to verbs to reflect the active nature of thinking better. This shift emphasises that cognitive processes are not static but rather involve engagement and action. Moreover, the updated taxonomy not only replaces all levels with action-oriented verbs but also

reorders the synthesis and evaluation stages to enhance clarity. Given the revised hierarchy of Bloom's taxonomy (Anderson & Krathwohl, 2001), the Malaysian Ministry of Education defined Higher-Order Thinking Skills (HOTS) as encompassing the essential levels of applying, analysing, evaluating, and creating. The Understand and Remember levels are fundamental components of Lower Order Thinking Skills (LOTS) as illustrated in Figure 1.

**Figure 1**

*Revised Version of Bloom's Taxonomy, based on Anderson and Krathwohl (2001)*



To promote HOTS among students in the classroom, educators use the revised version of Bloom's taxonomy, developed by Anderson and Krathwohl in 2001, to create effective lesson plans. A key difference in this version is that the highest level of thinking has shifted from evaluation to creation. Each of the six stages of the cognitive process is paired with a verb, as explained below, making it easier for educators to craft clear learning objectives and assessments.

Create: Learner's ability to synthesise different pieces of information to generate something new.

Evaluate: Learner's ability to assess and effectively critique information.

Analyse: Learner's ability to analyse information by breaking it down into essential components.

Apply: Learner's ability to utilise information in a new context.

Understand: Learner's ability to comprehend information.

Remember: Learner's ability to retain information.

Anderson and Krathwohl's revised taxonomy (2001) offers a more dynamic perspective on learning processes than Bloom's (1956), including three significant changes: 1) the category names have been revised from nouns to verbs. 2) Evaluation has been placed before synthesis (Create) in the hierarchy. 3) The knowledge category has been expanded to include four dimensions instead of three. Bloom's taxonomy initially identified three types of knowledge under the remembering category: factual knowledge (basic facts), conceptual knowledge (relationships between ideas), and procedural knowledge (methods for accomplishing tasks). Later, Anderson and Krathwohl introduced a fourth type, called "metacognitive knowledge", which refers to the awareness and understanding of one's own thought processes.

## **Challenges in Integrating HOTS**

The Malaysian Ministry of Education is dedicated to improving teaching quality by promoting HOTS among educators. Since the introduction of the primary school curriculum, the Malaysian Ministry of Education has provided teachers with orientation courses focused on lesson planning that incorporate HOTS. These courses include microteaching sessions for practical classroom application. Additionally, the Malaysian Ministry of Education has published a comprehensive resource on HOTS available on its website, supporting teachers in fostering critical and creative thinking among students (Kementerian Pendidikan Malaysia, 2014). The need for teachers to engage students and enhance their thinking skills aligns with Malaysia's commitment to integrating HOTS into education. In the 21st century, this approach is essential for effective teaching, fostering competition among secondary school students, and preparing them for future challenges (Yahya et al., 2020).

A study by Aziz and Abd Rahman (2018) found that many teachers are unprepared to implement HOTS in their classrooms due to insufficient exposure to practical strategies and competing responsibilities. The problem highlights the urgent need for targeted support and training for educators. Research by Mohamed Hata and Mahmud (2020) revealed a significant link between teachers' willingness to incorporate HOTS and their understanding of related theories and approaches; therefore, it underscores the importance of equipping teachers with the necessary knowledge to enhance educational quality through higher-order thinking.

Andin and Rosmiza (2023) examined teachers' readiness to implement HOTS in low-performing schools and identified inadequate preparation as a significant barrier. Teachers had insufficient time and limited autonomy in subject selection, resulting in minimal exposure to HOTS concepts. The level of HOTS knowledge among teachers often depended on that of school administrators, with only a few teachers receiving formal training from the Ministry of Education. Due to incomplete knowledge transfer, teachers were implementing HOTS without fully understanding the guidelines. Additionally, teachers were often required to teach outside their preferred subjects, using diverse methodologies, which complicated the implementation of HOTS.

Teachers should shift from Bloom's taxonomy (1956) to the revised version by Anderson and Krathwohl (2001) to align with current educational reforms. This updated taxonomy supports a constructivist approach, fostering students' creativity and enhancing their ability to apply knowledge to real-life situations. By situating learning in authentic contexts, constructivism boosts student engagement and understanding, encouraging exploration through their natural curiosity (Dani, 2025).

## **Elements of HOTS in Essay Writing**

Writing involves composing a compelling essay or other text on a chosen topic. A typical essay has an introduction with a thesis statement, a body organised into supporting paragraphs, and a conclusion that summarises the discussion. Teaching essay writing skills benefits students by enhancing language proficiency, improving writing techniques, fostering interest in writing, and producing higher-quality essays. A practical approach helps students develop stronger content and better essays.

Sopiani et al. (2019) studied students' use of HOTS in writing across six stages: remembering, understanding, applying, analysing, evaluating, and creating. They found that students utilised HOTS effectively, leading to improved writing skills. Performance on a second essay-writing test exceeded that on the first, highlighting the positive impact of HOTS on writing. Questionnaire feedback indicated that the students appreciated the benefits of HOTS for their learning, suggesting that integrating these skills into writing instruction can significantly enhance students' abilities and academic performance.

In 2019, Salam's study found that only 30% of teachers could effectively create HOTS questions, with 70% lacking this skill. Notably, reasoning-based questions scored 0%, particularly in rural schools where teachers struggled to facilitate critical writing. This shortfall has profound

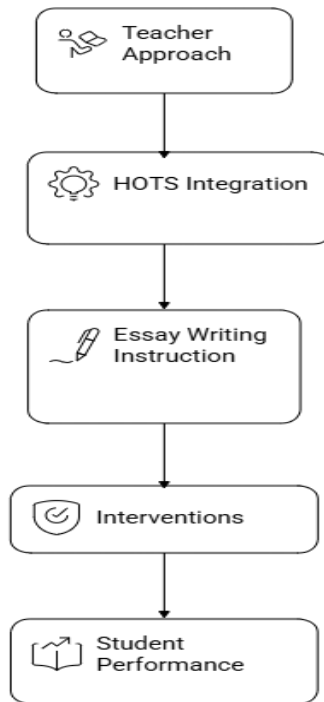
implications for students preparing for important public exams, such as the Malaysian Certificate of Education (Yahya et al., 2020).

Zohar et al. (2001) found that 45% of teachers believed HOTS were unsuitable for LA students, preferring a transmission-of-knowledge approach due to concerns about cognitive demands and potential frustration, which highlights a disparity in instructional goals, as LA students often receive a curriculum focused on lower-order skills. Research by Zohar and Dori (2003) found that high-performing students usually outperformed their LA peers on HOTS assessments, though in one case, LA students surpassed higher-achieving students. This result suggests that educators should actively promote HOTS engagement for all students to unlock their potential and create a more equitable learning environment.

Sinaga et al. (2023) found that HOTS-based questioning significantly improved secondary school students' essay-writing abilities compared to a control group. However, Koltovskaia (2023) notes that many teachers hesitate to adopt HOTS assessment methods, often favouring traditional practices out of comfort. By integrating HOTS into lesson plans, teachers can help struggling students improve their essay-writing skills and achieve academic success.

This literature review reveals a significant issue: many teachers lack a complete understanding of HOTS, which adversely affects students' development of critical and creative thinking skills. Despite the need to foster these skills, teachers often feel unprepared due to insufficient time, inadequate resources, and a lack of specialised training. This situation is particularly pronounced in rural schools, where teachers struggle to cultivate the critical writing skills essential for major public examinations, such as the Malaysian Certificate of Education. To enhance learning, teachers must move away from rote memorisation and create opportunities for students to articulate their ideas through essay writing.

Figure 2 below presents a conceptual framework of the relationships among the key variables in this study, aimed at integrating HOTS into essay writing instruction for LA students. This framework highlights the interactions between teacher methods, interventions, and student performance, offering a clear understanding of how these elements work together to improve HOTS outcomes.

**Figure 2***Conceptual Framework for HOTS Integration in Essay Writing*

This study is intended to enhance essay-writing instruction for low-achieving students by integrating Higher-Order Thinking Skills (HOTS) through a two-cycle action research design and investigating the impact of the HOTS-integrated instructional intervention on students' essay writing performance, focusing on two questions:

(a) How does the teacher's instructional approach develop after integrating HOTS into essay writing instruction through two cycles of action research?

(b) What are the effects of the HOTS-integrated instructional intervention on low-achieving students' essay writing performance?

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## Methodology

### Collaborative Action Research Design

Collaborative action research offers an opportunity for constructive problem-solving, fostering innovation and collective learning. In this case, the researcher, an education services officer, collaborated with administrators and teachers of Bahasa Melayu from two rural schools in Sarawak, Malaysia. Together, they pursued a shared goal of driving meaningful improvements in the learning outcomes of low-achieving students.

The main goal of action research, per se, is to identify and address problematic situations through a thorough and systematic examination. The term “problematic” does not imply that the teachers involved lack competence. Instead, it indicates their awareness of the gap between their current teaching practices and the ideal outcomes they aim to achieve. The central focus of action research is to intentionally intervene in these problematic scenarios and implement changes that can significantly enhance teachers’ classroom practices. As Burns (2010, p. 2) aptly states, “Changes made in teaching situations arise from solid information, not from hunches or assumptions”. This study is grounded in systematic data collection, ensuring that improvements in teaching practice are rooted in evidence. Burns (2010) outlines four main phases in the action research cycle: planning, action, observation, and reflection. The researcher can repeat the cycle as needed until satisfactory results have been achieved, and he decides to conclude the process.

#### *First Cycle*

##### 1. Planning

The researcher aimed to identify the challenges that teachers encounter when integrating HOTS into essay-writing instruction for LA students. Recognising the need for a practical teaching approach, he developed a comprehensive action plan to address these issues directly. The plan includes the following: i) the careful selection of research instruments to gather relevant data, ii) a strategic alignment of the research timeframe with teachers’ schedules to ensure feasibility, and iii) a thorough evaluation of potential improvements that could significantly enhance LA students’ learning outcomes.

##### 2. Action

To address the challenges faced by the teacher in implementing HOTS elements in the instruction of essay writing for LA students, the

researcher undertook the following actions: i) secured the teacher's consent to conduct an in-depth interview focused on the integration of HOTS in essay writing instruction for LA students, ii) conducted this interview to gather valuable insights, and iii) transcribed the recorded session to identify and articulate the key challenges that present opportunities for improvement.

### 3. Observation

The researcher observed the teacher presenting a lesson on essay writing that had been explicitly designed for LA students. The lesson adhered to the daily lesson plan for the Bahasa Melayu form four syllabus. To collect valuable insights without disrupting the learning process, he used a structured observation sheet that focused on the teacher's integration of HOTS elements into his teaching.

### 4. Reflection

The researcher presented the study's preliminary findings to both the teacher and the school administrator.

## ***Second Cycle***

### 1. Revised Plan

The second cycle of action research reinforced a commitment to elevate student learning outcomes through innovative teaching. The researcher crafted an intervention lesson plan to enhance the integration of HOTS into essay-writing instruction for LA students. Drawing on the model-process approach to teaching writing, established by Sun and Feng (2009), this lesson plan equips students with critical-thinking skills essential to their academic success.

### 2. Planning

Before implementing the lesson plan in the classroom, the researcher had detailed discussions with the participating teachers to ensure that the training phase of the intervention aligned with the instructional goals.

### 3. Action

The teacher used the intervention lesson plan in real classroom settings, designed to enhance the integration of HOTS into essay-writing instruction for LA students.

### 4. Observation

The observation examined how the newly implemented lesson plan affected the teacher's instructional practices and the students' responses. The

researcher used the same observation sheet from the first cycle as a research tool during the teaching and learning process in the second cycle.

## 5. Reflection

The researcher critically reflected on, evaluated, and articulated the intervention's impact to gain deeper insights into the issues explored. Readers can find a comprehensive overview of the study's results in the Findings section, which outlines all key insights. Recognising the importance of collaborative growth, the researcher shared the research findings with the school administrator and teachers as an essential part of their ongoing professional development.

## Location and Participants

The research was carried out at three rural secondary schools in Sarawak, Malaysia, as outlined in Table 1 below.

**Table 1**

### *Location and Profiles of Study Participants*

| Rural Secondary School                              | Research Level | LA Students | Age Years | Teachers | Age Years | Teaching Experience |
|-----------------------------------------------------|----------------|-------------|-----------|----------|-----------|---------------------|
| 1 school in the Kuching State Education Department  | Pilot Study    | 34          | 16        | T1(M)    | 57        | 5 years             |
| 2 schools in the Padawan State Education Department | Main Study     | 23          | 16        | T2(F)    | 40        | 15 years            |
|                                                     |                | 24          | 16        | T3(M)    | 27        | 2 years             |

The term “low-achieving” (LA) refers to students who consistently struggle academically. The LA students in this study were selected based on their results from the previous year's form three assessment, specifically those who had obtained grades of C, D, or E, as recommended by the relevant State Education Department. In the Padawan State Education Department, two schools had both female and male teachers participating in the main study. A total of 47 students were involved, comprising 26 boys and 21 girls, all aged 16.

The team conducted the pilot study at a school in the Kuching State Education Department in Sarawak, Malaysia. This location was ideal for the study's objectives because it is a rural secondary school. The participants

included a male teacher and all 34 form four students, 16 girls and 18 boys, from a low-achieving class, with an average age of 16 years. These students were actively learning Malay as their second language. The teacher has five years of experience teaching Standard Bahasa Melayu.

The interview with the Malay language teacher revealed his structured approach to integrating HOTS into his essay-writing instruction for LA students. The teacher employed a modular, modelling-based strategy, focusing on careful lesson planning, daily instructional goals, and assessment through written tests and classroom observation. The teacher linked essay topics to current issues from the textbook, but found HOTS questions challenging for LA students, leading to confusion and limited engagement. Modelling was deemed the most effective method, with students analysing sample essays to understand writing standards and exam requirements. However, the teacher acknowledged ongoing difficulties in encouraging higher-order responses from LA students, indicating that opportunities for student-centred engagement and cognitive challenge were initially limited before the interventions had been implemented.

In the essay-writing assessments, LA students had an average score of 36.70 (SD = 10.96) before the intervention. After implementing a process approach, the average score increased to 38.35 (SD = 13.38), indicating a significant improvement in student performance as a result of the intervention.

## **Research Instruments**

### ***Observation Sheet***

The observation sheet for evaluating the implementation of HOTS in the teaching and learning process was adapted from the Kementerian Pendidikan Malaysia (2017, p. 4-9). It contains 10 statements about integrating HOTS into a teacher's instructional delivery, which served as a tool for assessing the teacher's understanding and application of HOTS. The evaluation is based on coded items (1–10) using three scales (1–3) as detailed in Appendix A.

### ***Interview Sheet***

The interview sheet serves as an additional resource to complement the classroom observation checklist. The semi-structured interview questions were carefully reviewed by two expert lecturers from a local university and tested during a pilot study. The set initially included five questions, but the researcher removed Questions 4 and 5 to prevent overlap with the HOTS

included in the essay-writing instruction statements on the observation sheet. The interview sheet included the following structured questions:

1. How do you provide structure and direction when teaching essay writing in your class?
2. How do you integrate HOTS questions when teaching essay writing?
3. In your opinion, what is the most effective approach you use for teaching essay writing?
4. What challenges do you face regarding the application of HOTS in the questions you ask students during essay writing instruction?
5. How do you assess students' abilities in essay writing?

### ***Daily Lesson Plan***

The teacher creates a daily lesson plan based on the Bahasa Melayu Form Four syllabus issued by the Malaysian Ministry of Education (2018). The Standard Curriculum and Assessment Document for the Bahasa Melayu subject emphasises the importance of a modular approach (p. 13). "The modular approach in the Secondary School Standard Curriculum is designed to be integrated, which aligns with the national curriculum's primary focus" (Kementerian Pendidikan Malaysia, 2018, p. 4). Three key elements of this modular approach are the teacher as a planner of teaching and learning activities, the teacher as a facilitator, and the teacher teaching one skill in one teaching and learning session. In contrast, other integration skills are recorded only as steps in the activity. (see Appendix B)

### ***Intervention Lesson Plan***

The intervention lesson plan followed a process-oriented teaching model. The teacher encourages students to generate initial ideas that will impact their writing outcomes. Three key elements of this process approach include brainstorming essay topics as a group, using model texts, and evaluating ideas (Sun & Feng, 2009). Writing production includes collaborative writing sessions and self-study or home practice. (see Appendix C)

### **Data Analysis**

The data analysis employed both qualitative and quantitative methods. According to Creswell (2014), qualitative methods serve as complementary tools that enhance the research process, while quantitative methods guide the research.

The quantitative assessment on the observation sheet included 10 statements, each supported by three scale indicators:

Scale 1: The application of HOTS is inadequate and requires improvement (scores ranging from 1 to 10).

Scale 2: The application of HOTS is acceptable but could be enhanced (scores ranging from 11 to 20).

Scale 3: The application of HOTS is exceptional and exceeds expectations (scores ranging from 21 to 30).

The researcher employed a qualitative approach to analyse the teacher-recorded interview, presenting the transcription results in sentences that emphasise depth of insight and reinforce the teacher's perspective.

The scoring system for the students' essays aligned with the standards of the Malaysian Certificate of Education (Buku Teks Digital, 2020), as follows:

- A score of 26–30 indicates excellent performance.
- A score of 20–25 indicates distinction achievement.
- A score of 15–19 indicates satisfactory achievement.
- A score of 10–14 indicates less satisfactory results.
- A score of 01–09 indicates general achievement.

A paired-samples t-test assessed whether the mean difference between two related measurements of essay-writing scores (before and after intervention) was statistically significant. Effectiveness was judged in three ways using the output table: namely, the t value (e.g, 6.004) exceeded the critical value (e.g, 2.045), the p-value (e.g, 0.001) was less than 0.05, and the 95% confidence interval bounds were both negative and did not cross zero. All three criteria indicated that the mean difference of (e.g, -5.167) was statistically significant, allowing rejection of the null hypothesis and a conclusion that the treatment had a real positive effect.

## Findings

This section presents the study's findings from two cycles: Cycle 1 (preliminary findings) and Cycle 2 (conclusive findings). Cycle 1 was based on observations of instruction in essay writing and interviews with two anonymous Malay language teachers, T2 and T3. Cycle 2 involved observing instruction using an intervention lesson plan to assess the effectiveness of a process-oriented approach for improving the writing skills of LA students. The comparisons of average essay-writing scores before and after the intervention provided evidence of the research outcomes.

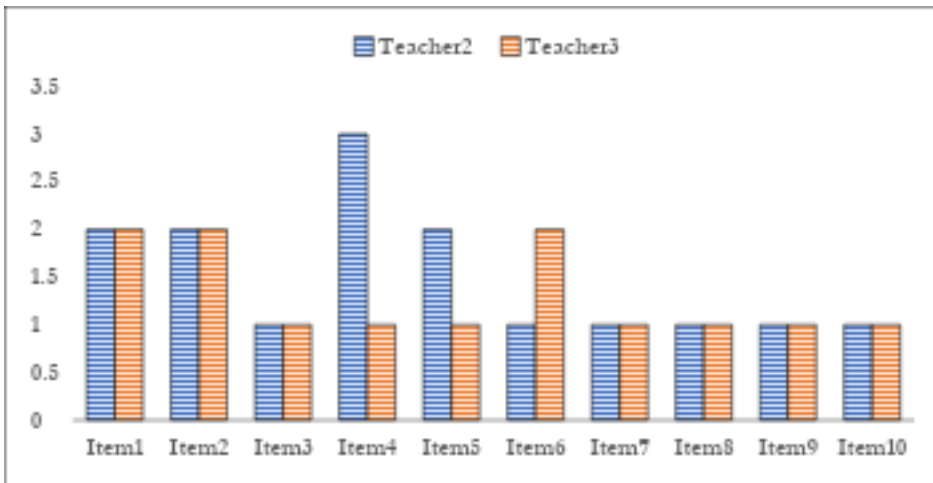
## Findings from Cycle 1 (Preliminary Findings)

### *Observation Findings*

Figure 3 presents the findings from observations of the integration of HOTS into the essay-writing instruction of two Malay language teachers.

**Figure 3**

*Observation Findings, Cycle 1*



The teacher incorporated thinking tools into the teaching and learning process (Item 1), demonstrating that both T2 and T3 used these tools to stimulate students' creative and critical thinking. During instruction, teachers utilised HOTS questions, often focusing on “why” and “how” questions (Item 2). Thus, most of the questions posed by T2 and T3 effectively encouraged students' creative and critical thinking.

Regarding a student-centred learning environment (Item 3), the researcher observed very few students actively engaged in such activities in T2 and T3 classes. The teacher should act as a facilitator in the learning process (Item 4). While T2 fully embraced this role during learning activities, T3 struggled to fulfil it effectively.

The teacher utilised support materials to enhance students' critical thinking skills (Item 5). T2 effectively used materials to stimulate creative and critical thinking, whereas T3 utilised materials that were not suitable for this purpose. Throughout the teaching and learning process, the teacher should aim to engage students actively (Item 6). In T3's class, most students participated actively in various ways. They focused on learning and

facilitation, while only a few of T2's students were actively involved, with most being less engaged in these areas.

Teachers should encourage students to express their opinions and make decisions (Item 7), but neither T2 nor T3 did so. Additionally, the teacher should showcase the students' recent work in the classroom and allow them to share their thoughts (Item 8). However, T2 and T3 displayed very little of their students' work, and their peers do not utilise it.

Regarding student engagement in the inquiry process (Item 9), it is noted that only a small proportion of students participated in inquiry activities in T2's and T3's classes. Finally, while the teacher should attempt to involve students in addressing real-life problems (Item 10), neither T2 nor T3 engaged the students in problem-solving activities.

### ***Interview Findings***

T2 took a straightforward approach to teaching essay writing, making key concepts easier to understand. T3 used a memorisation strategy alongside essay drafts based on proven techniques, emphasising that this structure improved understanding and confidence in essay writing.

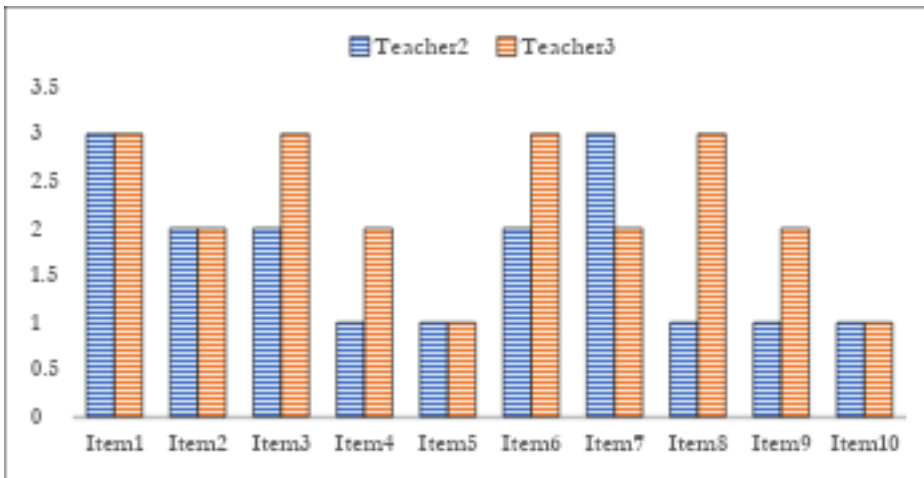
To effectively integrate HOTS into essay writing, T2 emphasised that students should first identify the theme, then clarify expectations, and be empowered by providing writing techniques. Similarly, T3 focused on students' understanding of the assignment's theme and requirements to ensure purposeful writing. T2 found diverse teaching materials, such as worksheets and formulas, beneficial for enhancing essay comprehension. At the same time, T3 promoted a 21st-century learning approach that aligns with students' varied learning styles and fosters deeper engagement.

T2 highlighted the importance of assessing students' essays for their use of fluent language, rich vocabulary, and engaging expressions. T3 added that a student's ability to work independently is a key indicator of proficiency. T2 used structured assessments with targeted exercises, while T3 evaluated students based on their dependence on teacher support. Frequent questions about unfamiliar words were taken as an indication of a need for more assistance.

## **Findings from Cycle 2 (Conclusive Findings)**

### ***Observation Findings***

Figure 4 below presents the results of the observations of the integration of HOTS into the essay-writing instruction provided by T2 and T3, the two Malay language teachers who participated in the study.

**Figure 4***Observation Findings, Cycle 2*

In relation to Item 1, which focuses on incorporating thinking tools into teaching and learning, both T2 and T3 selected engaging tools that enhance creative and critical thinking. In Item 2, the teachers employed HOTS questions during instruction, frequently asking “why” and “how”. Thus, indicates that the majority of questions from T2 and T3 encouraged creative and critical thinking.

Regarding Item 3, the observations revealed that most students in T2’s class engaged in a student-centred learning environment. However, T3 facilitated even higher engagement, with nearly all students actively participating in student-centred activities. In Item 4, where the teacher acts as a facilitator, T2 struggles to effectively facilitate learning and related activities, whereas T3 partially succeeds in this role.

In Item 5, both T2 and T3 utilised support materials considered inappropriate for enhancing students’ critical thinking skills. Despite this, throughout the teaching and learning process (Item 6), the objective remained to encourage active student engagement. In T2’s class, some students demonstrated engagement and attentiveness, while in T3’s class, most students were engaged and focused during the learning process.

Regarding Item 7, the teachers encouraged students to express their opinions and make decisions. T2 consistently fostered decision-making and rewarded good opinions, while T3 also encouraged decision-making, though not as frequently. In Item 8, the teachers showcased students’ recent work in the classroom, allowing them to share their thoughts. T2 displayed work from

only a few students, and peers rarely engage with it. In contrast, T3 showcased nearly all relevant student work, which peers actively utilised.

In Item 9, the teachers' engagement with the inquiry process is noted. Only a few of T2's students participated, whereas most of T3's students were involved. Finally, in Item 10, neither T2 nor T3 effectively included students in problem-solving activities.

### ***Students' Essay-Writing Assessment***

**Table 2**

#### *Group Paired-Samples Statistics*

| Essay Writing Assessment |                   | Mean  | N  | Std. Deviation | Std. Error Mean |
|--------------------------|-------------------|-------|----|----------------|-----------------|
| LA                       | Pre-Intervention  | 14.23 | 47 | 8.621          | 1.257           |
|                          | Post-Intervention | 33.70 | 47 | 8.126          | 1.185           |

The paired samples in Table 2 above provide the descriptive statistics for each level of the variable. The group's essay-writing assessment scores before and after the intervention differ in their respective means. The LA essay pre-intervention mean score was 14.23, while the post-intervention mean was 33.70, with a lower standard deviation, indicating that the scores became more clustered around the mean after the intervention, showing increased consistency and reduced variability among participants, or bringing lower-performing individuals closer to the group average.

**Table 3**

#### *Group Paired-Samples Correlations*

| Essay Writing Assessment |                                      |    | Significance<br>Correlation | Two-Sided p |
|--------------------------|--------------------------------------|----|-----------------------------|-------------|
|                          |                                      | N  |                             |             |
| LA                       | Pre-Intervention & Post-Intervention | 47 | .965                        | <.001       |

A correlation significance test determines if the population correlation coefficient differs from zero. In the LA analysis output, the p-value remains below 0.001, and the correlation coefficient is 0.965, indicating a significant, nearly perfect relationship between the two measurements.

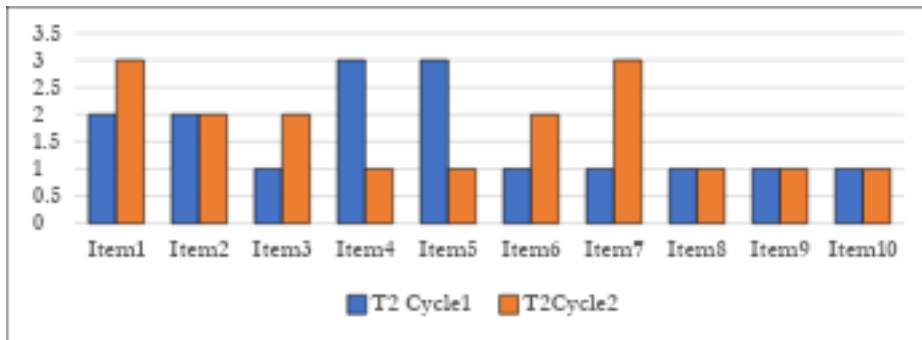
**Table 4***Group Paired-Samples Test*

|    |                   | Paired Differences |                |                                           |         |         |         |                            |  |
|----|-------------------|--------------------|----------------|-------------------------------------------|---------|---------|---------|----------------------------|--|
|    |                   | Mean               | Std. Deviation | 95% Confidence Interval of the Difference |         | t       | df      | Significance (Two-Sided p) |  |
|    |                   |                    |                | Lower                                     | Upper   |         |         |                            |  |
| LA | Pre-Intervention  |                    |                |                                           |         |         |         |                            |  |
|    | Post-Intervention | -19.468            | 2.264          | -.330                                     | -20.133 | -18.803 | -58.962 | 46                         |  |
|    |                   |                    |                |                                           |         |         |         | <.001                      |  |

For the LA group, the mean score before the intervention was 14.23 (SD 8.62), increasing to 33.70 (SD 8.13) after the intervention. This change was highly significant, with  $t(46) = -58.962$ ,  $n = 47$ ,  $p < .05$ , and a 95% confidence interval for the mean difference of -20.133 and -18.803. On average, essay scores had improved by approximately -19.468 points following the intervention. The researcher found a statistically significant difference in essay-writing assessment scores between pre- and post-intervention. Consequently, the researcher rejected the null hypothesis and accepted the alternative hypothesis that the administered intervention was effective.

## Discussion

The findings from observation of the integration of HOTS into the essay-writing instruction of two Malay language teachers, T2 and T3, are presented in two cycles: Cycle 1, which includes preliminary findings, and Cycle 2, which encompasses the conclusive findings. Cycle 1 utilises a modular approach, and Cycle 2 a process approach. T2 is a 40-year-old female teacher with 15 years of teaching experience. T3 is a 27-year-old male teacher with 2 years of teaching experience. The development of T2's teaching approach after the incorporation of HOTS into essay writing instruction through two cycles is illustrated in Figure 5.

**Figure 5***The Development of T2's Teaching Approach*

In Cycle 1, T2's teaching achieved a scale rating of 3 for two items. T2 served as a facilitator in the teaching and learning process (Item 4) and utilised support materials that enhanced students' critical thinking skills (Item 5). However, in Cycle 2, the rating dropped to scale 1, indicating that T2 struggled to facilitate the learning activities effectively and that the support materials used were inappropriate.

In Cycle 2, several items progressed to scale 3, highlighting significant enhancements in T2's teaching approach. T2 effectively incorporated thinking tools into the educational process (Item 1), fostering deeper understanding. Additionally, she embraced a student-centred learning environment (Item 3), which is crucial for promoting engagement. Furthermore, T2 actively engaged students throughout the teaching and learning process (Item 6), ensuring that they were involved and invested. Finally, T2 empowered her students to express their opinions and make decisions (Item 7), thereby cultivating their critical thinking and confidence. Together, these advancements demonstrate a commitment to enhancing the overall learning experience.

In both cycles, Items 8, 9, and 10 consistently rank at scale 1: the work of only a limited number of students was displayed, and peers seldom utilised this work; there was minimal student participation in the inquiry process; and T2 largely excluded students from collaborative problem-solving efforts. This highlights a pressing need for a more inclusive and engaging approach that encourages active student involvement and values students' contributions.

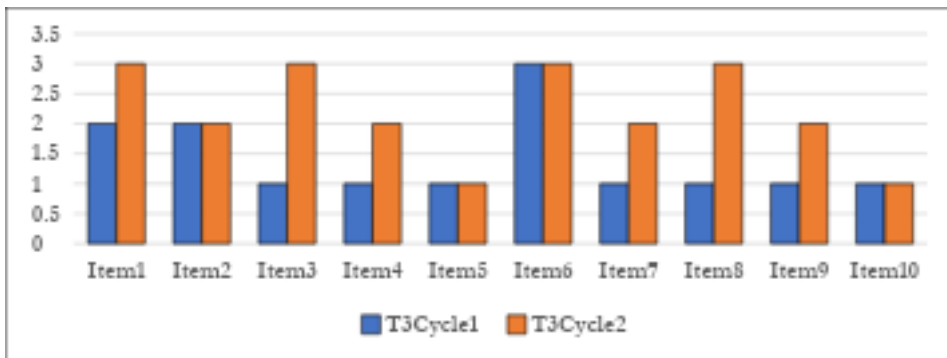
In Cycle 1, the overall HOTS score was 16, indicating that the HOTS application is acceptable, though with room for improvement. In Cycle 2, the overall HOTS score was 17, indicating that the application of HOTS remains acceptable, with potential for further enhancement.

The T2 instructional approach showed a 1-point improvement after integrating HOTS into essay writing instruction across two cycles of action research. However, T2 struggled to move away from the modular approach mandated by the Malaysian Ministry of Education in secondary schools. In the transcript of the T2 interview, it is clear that she favours a straightforward approach to teaching essay-writing that simplifies the key concepts for her students. This skill-focused teaching and learning method is a hallmark of the modular approach. There is a significant link between teachers' willingness to use HOTS and their understanding of the approach (Mohamed Hata & Mahmud, 2020).

The development of T3's teaching approach, following the integration of HOTS into essay-writing instruction through two cycles, is depicted in Figure 6.

**Figure 6**

*The Development of T3's Teaching Approach*



In Cycle 1, only Item 6 achieved scale 3, indicating that T3 actively engaged students throughout the teaching and learning process. Items 1 and 2 were rated at scale 2, reflecting the use of tools that stimulated creative and critical thinking (Item 1) and the fact that most questions encouraged such thinking (Item 2). The remaining items were rated at scale 1, which is considered a negative indicator.

Item 1 increased from scale 2 in Cycle 1 to scale 3 in Cycle 2. Item 3, which focuses on a student-centred learning environment, and Item 8, which concerns showcasing students' recent work in the classroom and encouraging them to share their thoughts, both rose from scale 1 in Cycle 1 to scale 3 in Cycle 2. Item 6 remained consistent at scale 3, as in Cycle 1. Items 5 and 10 showed no change in either cycle, indicating the continued use of

inappropriate support materials and the teacher's lack of student involvement in problem-solving.

Cycle 1's overall HOTS score was 14, indicating an acceptable application of HOTS, with room for improvement. Cycle 2's overall HOTS score was 22, signifying that the application of HOTS was exceptional and exceeded expectations.

T3's instructional approach improved by 8 points after integrating HOTS into essay-writing instruction across two cycles of action research, demonstrating its effectiveness in enhancing student performance. The 21st-century approach is essential for effective teaching and for equipping secondary school students to face future challenges (Yahya et al., 2020). In the interview, T3 advocated for a 21st-century learning approach that accommodates students' diverse learning styles and promotes deeper engagement. One key element of fostering engagement is brainstorming, as outlined in the process approach (Sun & Feng, 2009).

The HOTS-integrated instructional intervention positively impacted low-achieving students' essay-writing performance. Before the intervention, LA students' average essay score was 14.23 (SD = 8.62) using a modular approach. After switching to a process approach, the average rose to 33.70 (SD = 8.13), indicating greater consistency and reduced variability in scores. This improvement suggests that lower-performing students made gains, highlighting the intervention's effectiveness. The paired-samples test produced a p-value below 0.001, indicating a significant difference in the means. Thus, the researcher rejects the null hypothesis, confirming the intervention had an effect. An earlier study of HOTS implementation by Sopiani et al. (2019) found that students demonstrated a significant improvement in their writing performance between the first and the second tests.

### **Limitations of the Study**

This study has some limitations, especially its focus on a rural school and LA students, which limit the generalisability of the findings. While focusing on this specific location enabled a detailed examination of the unique challenges faced by this demographic, budget constraints prevented research across multiple locations. Gathering data from the same group of students in an urban secondary school would significantly improve understanding of the participants' writing abilities. The findings would indicate whether these skills are consistent or affected by environmental factors, providing insights into how demographics influence academic performance.

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## Conclusion

The study demonstrates that using the process approach model, LA students made remarkable strides in their writing skills. Notably, the results show that the process approach to teaching writing exceeded expectations, with greater improvement than seen with the modular approach. The process approach to writing instruction is essential for effectively integrating HOTS into essay-writing for LA students. It presents an alternative to traditional product-oriented methods. By implementing engaging classroom activities, such as brainstorming sessions, group discussions, and the rewriting process, the process approach enhances language development. It empowers students to become more confident and competent writers. Therefore, the researcher advocates that teachers adopt a process approach to their instructional practice to foster HOTS in essay writing.

Although it is well - established that the process approach generally outperforms the product approach in writing instruction, this study contributes to the literature not by reaffirming this superiority but by demonstrating how the process approach specifically supports LA students within an action research framework. For LA learners, writing difficulties often stem from limited confidence, restricted language resources, and a lack of opportunities for meaningful engagement. The process approach serves as a pedagogical scaffold, reducing cognitive and emotional barriers by breaking writing into manageable stages and allows students to collaboratively generate, evaluate, and refine their ideas.

The structured brainstorming, guided questioning, and iterative drafting processes enable LA students to engage in higher-order thinking without feeling overwhelmed. The action research design supports this process, as the observed improvements arose from context-sensitive teaching adjustments rather than externally imposed instructional models.

Reflective collaborative action research is also proven useful for iteratively refining practice and expanding equitable access to higher-order learning opportunities. Reframing essay writing as a process supported by higher-order questioning led to observable shifts in classroom interaction and measurable improvements in students' HOTS-aligned writing. Hence, future work should incorporate a comparison or control group, track longer-term development, and examine professional learning models that sustain HOTS-aligned pedagogy for low-achieving learners.

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## Appendix A

### Observation Sheet for Integrating HOTS in the Essay Writing Instruction

| Items | Statements                                                                                                                                                    | Scale 1                                           | Scale 2                                                        | Scale 3                                                                                  |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 1     | The teacher incorporates thinking tools into the teaching and learning process.                                                                               | Not using appropriate thinking tools.             | Using tools that stimulate creative and critical thinking.     | Selecting engaging tools that enhance creative and critical thinking.                    |
| 2     | Teachers utilise higher-order thinking skills (HOTS) questions during the teaching and learning process, including questions that start with 'why' and 'how.' | Few appropriate HOTS questions.                   | Most questions trigger creative and critical thinking.         | Almost all questions are clear, appropriate, and enhance creative and critical thinking. |
| 3     | Teachers use a student-centred learning environment.                                                                                                          | Few students engage in student-centred learning.  | Most students engage in student-centred learning.              | Almost all students actively engage in student-centred learning.                         |
| 4     | The teacher acts as a facilitator in the teaching and learning process.                                                                                       | The teacher fails to facilitate the LnF activity. | The teacher partially facilitates the LnF activity.            | The teacher fully facilitates the LnF activity.                                          |
| 5     | The teacher utilises support materials that can enhance students' critical thinking skills.                                                                   | Inappropriate support materials.                  | Support materials that trigger creative and critical thinking. | Appropriate, interesting materials that enhance creative and critical thinking.          |
| 6     | The teacher engages students actively throughout the teaching and learning process.                                                                           | Few students engage and pay attention to LnF.     | Some students engage and pay attention to LnF.                 | Most students engage and pay attention to LnF.                                           |
| 7     | The teacher encourages students to express their opinions and make decisions.                                                                                 | Teachers do not encourage decision-making.        | Teachers often encourage decision-making.                      | Teachers always encourage decision-making and reward good opinions.                      |

|    |                                                                                                           |                                                        |                                                             |                                                                                      |
|----|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 8  | The teacher showcases the students' latest work in the classroom and allows them to share their thoughts. | Few students' work is displayed and not used by peers. | Most students' work is displayed but not utilised by peers. | Almost all relevant student work is displayed and used by peers.                     |
| 9  | The teacher engages the students in the inquiry process.                                                  | Few students are involved.                             | Most students are involved.                                 | Nearly all students are involved.                                                    |
| 10 | The teacher engages students in addressing real-life problems.                                            | Teachers do not involve students in problem-solving.   | Teachers often involve students in problem-solving.         | The teacher always involves students in problem-solving with real-life applications. |

Source: Adapted from Kementerian Pendidikan Malaysia (2017, p. 4-9)

## Appendix B

### Daily Lesson Plan (Before Intervention)

| DAILY LESSON PLAN: BAHASA MELAYU FORM 4 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |            |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------|
| <b>WEEK</b>                             | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>DAY</b>      | -          |
| <b>DATE</b>                             | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>TIME</b>     | -          |
| <b>CLASS</b>                            | 4F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>DURATION</b> | 60 Minutes |
| <b>THEME</b>                            | LOVE MY MALAYSIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |            |
| <b>TOPIC</b>                            | Essay on Ways to Love School                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |            |
| <b>CONTENT STANDARD</b>                 | 1. Understand and use adverbs correctly according to context.<br>2. Crafting a purposeful and well-organised piece of writing.                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |            |
| <b>LEARNING STANDARD</b>                | 1. Write various content paragraphs that fit the theme using appropriate and grammatical language.<br>2. Identify and use adverbs correctly according to context.                                                                                                                                                                                                                                                                                                                                                                                          |                 |            |
| <b>SUCCESS CRITERIA</b>                 | Students can accurately construct declarative sentences based on context.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |            |
| <b>LEARNING OBJECTIVES</b>              | By the end of the lesson, students will be able to:<br>1. Identify and use various types of sentences correctly according to the context. (Apply)<br>2. Write content paragraphs using structured keywords. (Create)                                                                                                                                                                                                                                                                                                                                       |                 |            |
| <b>ACTIVITIES</b>                       | <b>Induction set</b> <ol style="list-style-type: none"> <li>Students listen to the teacher explain the structured keywords for composing body paragraphs.</li> <li>Students listen to the teacher explain the lesson content and then ask questions about the previous lesson.</li> <li>Students listen to the teacher's explanation and copy the example content of paragraph 1 using the structured keywords.</li> </ol> <b>Activities</b> <ol style="list-style-type: none"> <li>Students are in pairs, each forming part of a larger group.</li> </ol> |                 |            |

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                           |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
|                                               | <ol style="list-style-type: none"> <li>Each pair will work together to develop the second part of the essay outline.</li> <li>Students present the outcomes of the discussion.</li> <li>The teacher collaborates with the students to create content on the whiteboard or LCD screen.</li> <li>Students develop content three as a follow-up exercise at home.</li> <li>Students listen as the teacher summarises the lesson content.</li> </ol> |                                                                                                                                           |
| <b>i-THINK MAP CURRICULUM SET</b>             | <b>STRATEGY</b><br>21st Century Skills<br>Higher-Order Thinking Skills (HOTS)<br>Teaching and Learning Strategy<br>Thematic Approach<br>Cross-Curricular Elements (CCE)<br>Textbook, PowerPoint, Marker Pen<br>Questions (Oral and Written)                                                                                                                                                                                                      | <b>LEVEL</b><br>Teamwork<br>Applying; Creating<br>Modular<br>Identity, Patriotism and Citizenship<br>CCE – Language<br>Values – Integrity |
| <b>TEACHING AIDS ASSESSMENT REFLECTION 4F</b> | <i>By the end of the lesson, _____ students achieved the set objectives; those who did not will receive tailored guidance in the next session.</i>                                                                                                                                                                                                                                                                                               |                                                                                                                                           |

## Appendix C

### Intervention Lesson Plan

| DAILY LESSON PLAN: BAHASA MELAYU FORM 4 |                                                                                                                                                                                                                                                                     |                 |            |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------|
| <b>WEEK</b>                             | -                                                                                                                                                                                                                                                                   | <b>DAY</b>      | -          |
| <b>DATE</b>                             | -                                                                                                                                                                                                                                                                   | <b>TIME</b>     | -          |
| <b>CLASS</b>                            | 4F                                                                                                                                                                                                                                                                  | <b>DURATION</b> | 60 Minutes |
| <b>THEME</b>                            | LOVE MY MALAYSIA                                                                                                                                                                                                                                                    |                 |            |
| <b>TOPIC</b>                            | Essay on Ways to Love School                                                                                                                                                                                                                                        |                 |            |
| <b>CONTENT STANDARD</b>                 | <ol style="list-style-type: none"> <li>Understand and use adverbs correctly according to context.</li> <li>Crafting a purposeful and well-organised piece of writing.</li> </ol>                                                                                    |                 |            |
| <b>LEARNING STANDARD</b>                | <ol style="list-style-type: none"> <li>Write various content paragraphs that fit the theme using appropriate and grammatical language.</li> <li>Identify and use adverbs correctly according to context.</li> </ol>                                                 |                 |            |
| <b>SUCCESS CRITERIA</b>                 | Students can accurately construct declarative sentences based on context.                                                                                                                                                                                           |                 |            |
| <b>LEARNING OBJECTIVES</b>              | By the end of the lesson, students will be able to: <ol style="list-style-type: none"> <li>Identify and use various types of sentences correctly according to the context. (Apply)</li> <li>Write content paragraphs using structured keywords. (Create)</li> </ol> |                 |            |

|                                   |                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ACTIVITIES</b>                 | <b><u>Pre-lesson (10 minutes)</u></b>                                                                                                  | <ol style="list-style-type: none"> <li>1. The teacher instructs students to watch a video about Love My School Week.</li> <li>2. The teacher asks students about current issues based on the identified theme.</li> <li>3. Students discuss and respond to the issues presented. (brainstorming)</li> <li>4. The teacher connects the topic discussed to the learning objectives.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                 |
|                                   | <b><u>Lesson Delivery (45 minutes)</u></b>                                                                                             | <ol style="list-style-type: none"> <li>1. The teacher instructed the students to open the Form 4 Malay textbook and asked some of them to read the information in it.</li> <li>2. The teacher exposed the students to a structured set of keywords for describing content paragraphs.</li> <li>3. Students listen to the teacher's explanation and copy the example content of paragraph 1.</li> <li>4. In pairs, students discuss the content of the second paragraph based on the keywords. (Evaluate ideas)</li> <li>5. The teacher displays the discussion results on the whiteboard/LCD screen for discussion. (writing output)</li> <li>6. Students will develop the third content as follow-up exercises to complete at home. (self-study)</li> </ol> |
|                                   | <b><u>Post-lesson (5 minutes)</u></b>                                                                                                  | <ol style="list-style-type: none"> <li>1. The teacher and students review and summarise the outcomes of the activities related to the lesson content.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>i-THINK MAP CURRICULUM SET</b> | <b>STRATEGY</b>                                                                                                                        | <b>LEVEL</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                   | 21st Century Skills                                                                                                                    | Teamwork                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                   | Higher-Order Thinking Skills (HOTS)                                                                                                    | Applying; Creating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                   | Teaching and Learning Strategy                                                                                                         | Process Approach                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                   | Thematic Approach                                                                                                                      | Identity, Patriotism and Citizenship                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                   | Cross-Curricular Elements (CCE)                                                                                                        | CCE – Language                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                   |                                                                                                                                        | Values – Integrity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>TEACHING AIDS ASSESSMENT</b>   | Textbook, PowerPoint, Marker Pen                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>REFLECTION</b>                 | Questions (Oral and Written)                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>4F</b>                         | <i>By the end of the lesson, _____ students met the objectives, while _____ will receive exceptional guidance in the next session.</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |