Reading Between the Lines: Higher Order Thinking Skills (HOTS) Gains in Blended Learning

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Abstract: Blended learning has gained prominence as an effective teaching approach across educational levels and disciplines. In the English as a Second Language (ESL) context, it enables students to practice language skills collaboratively in class and independently in online environments. With an emphasis on the "analyzing" and "evaluating" skills in Bloom's Taxonomy, this study examines students' performance in higher-order thinking skills (HOTS)-based reading tasks using traditional methods and blended learning. The research involved 25 Year 6 primary school students of mixed abilities from a school in the Perak Tengah district, Perak, Malaysia. Students' scores from both learning modalities were used to examine the data, which was gathered using a quantitative action research method. Findings revealed that students demonstrated significant improvement in HOTS-based reading tasks in blended learning compared to those taught using traditional methods. Notably, students showed greater development in evaluating skills than in analyzing skills, despite evaluation being a higher-order skill in Bloom's Taxonomy. This study highlights the potential of blended learning to enhance student engagement and support the development of complex cognitive skills. The implications suggest that blended learning could be extended to incorporate a wider range of HOTS activities across various subjects. Future research should examine the long-term effects of blended learning on academic performance and cognitive development.

Keywords: blended learning, higher-order thinking skills, Liveworksheet, reading, technology

INTRODUCTION

The Sustainable Development Goal 4 (SDG 4) was set out to highlight the importance of quality education across the world especially for people who have been historically marginalized. When it comes to education, these people are stress via integrated systems that

build not just the mind, however the whole child, with their emotional and physical aspects (UNESCO, 2017a). This is also seen in Malaysia's educational targets where there was a reported increase in the uptake of Higher Order Thinking Skills (HOTS) after educational reforms were implemented. The Education system in Malaysia aims at HOTS by targeting learners and not content countries such as Malaysia (Ministry of Education Malaysia, 2013). HOTS, which include skills such as critical thinking, analysis, evaluation and creativity, are crucial in equipping students with the necessary skills to tackle complex problems and deal with the challenges of the 21st century (Nor et al., 2020). The Ministry of Education has integrated HOTS in all primary and secondary education levels with emphasis on critical thinking, problem-solving and analytic skills in the areas of Mathematics, Science and Bahasa Malaysia (Ismail, 2018). Nonetheless, the application of HOTS in the English as a Second Language (ESL) context poses different issues including in the case of Malaysia where a large majority of learners speaks English as a Second Language (Tan & Zakaria, 2021).

Particularly in ESL context, the teaching of HOTS demands teachers to consider language and challenge learners with higher-order cognitive tasks that are more than mere basic understanding. This is also made difficult by the multicultural status of the students and the necessity for culturally sensitive pedagogy to be employed (Rahim et al., 2022). To address these obstacles, educators should employ teaching resources and methods at their disposal that enhance student participation and stimulate critical thinking. Towards this end, technology, in general, helps in the development of HOTS as it enables learners to partake in engaging activities that promote independent thinking and group work (Koh & Tan, 2023). Blended learning tools have demonstrated potential in making students engage with more complex tasks wherein they are required to use the knowledge learnt in a more practical context and thus improve their critical and creative thinking abilities Tang et al. (2020), Ong and Tan (2023).

BACKGROUND OF THE STUDY

Blended learning, which combines face-to-face instruction with online components, has become a popular approach to enhance student engagement and learning outcomes. It provides opportunities for collaborative classroom learning and independent digital practice in ESL education. Blended learning is on the rise due to the increasing demand for flexible, personalized learning that can help develop critical cognitive skills (Graham, 2019). The COVID-19 pandemic accelerated its use, and it has proven its potential to enhance learning outcomes and develop more profound cognitive skills, especially in reading comprehension (Dhawan, 2020; Means et al., 2021). Despite its growing use, there is limited research on the impact of blended learning on Higher Order Thinking Skills (HOTS), especially in primary school settings (Nordin & Embi, 2020). Few studies explore how blended learning helps students progress through Bloom's Taxonomy, from basic skills to higher cognitive processes like evaluation and creation. While traditional teaching methods may focus on lower-order thinking, how the effectiveness of blended learning promotes HOTS such as analyzing, evaluating, and creating is under-explored in primary education.

This represents a significant research gap, since the development of HOTS in primary school students will definitely help them to pursue higher education and subsequently in their careers. An investigation of how blended learning supports students to achieve HOTS, especially in reading comprehension, will add useful knowledge for educators. Without this knowledge, blended learning cannot be fully realized and its effectiveness is reduced in fostering critical cognitive skills among young learners. The present study will, therefore, investigate the impact of blended learning on students' performance in Year 6 HOTS-based reading comprehension tasks in Malaysia and determine precisely what aspect of HOTS is best

developed through blended learning to enhance the understanding of how blended learning facilitation can result in higher-order thinking.

The primary objective of this research is to evaluate the effectiveness of a blended learning approach in enhancing Higher-Order Thinking Skills (HOTS) among English as a Second Language (ESL) primary school students through reading lessons. Therefore, the objective of the study is to examine the extent to which students demonstrate improvements in their HOTS-based reading comprehension performance following the blended learning intervention. To achieve the objectives, the following research questions will guide the study:

1. How does students' performance in HOTS-based reading comprehension tasks differ between traditional teaching methods and blended learning interventions?
2. Which specific levels of Bloom's Taxonomy higher-order thinking skills (analysis and evaluation) are most effectively developed by students in the context of reading comprehension tasks?

Therefore, the hypotheses for this study are:

1. Null Hypothesis (H_0): There is no significant difference in the performance of students between the two teaching methods (traditional teaching and blended learning).
2. Alternative Hypothesis (H_1): Students demonstrate better performance in HOTS-based reading comprehension tasks when taught using blended learning compared to traditional teaching methods.

LITERATURE REVIEW

Blended Learning

Blended learning combines traditional face-to-face teaching with online activities. This approach improves student engagement and learning outcomes by offering a flexible and interactive environment (Graham, 2013). Research suggests that it caters to a variety of learning styles and needs, offering personalized experiences that its traditional counterpart lacks (Horn & Staker, 2011). According to Dziuban, Hartman, and Moskal (2004), blended learning has reportedly shown greater advantages for ESL students since it provides personalized instruction and extra resources outside of the traditional classroom approach. Other research reports jointly by Means et al. (2010) dealing with students in the blended-learning situation had performed much better than learners who completed purely face-to-face classes, which denote its merits for ESL students. Blended learning is still functioning to improve student engagement and outcome densities through the mingling of online and in-person instructions (Graham, 2019). More recently yet, it had been revealed that it has been in a position to cater for diversified learning styles and needs, offering avenues for individual experiences which the traditional method would possibly not allow (Halverson et al., 2021). For ESL students, blended learning provides differentiated instruction and extra resources for practice (Vaughan, Cleveland-Innes, & Garrison, 2020). Bernard et al. (2019) found that students in blended learning settings outperformed those in face-to-face classes, indicating benefits for ESL learners. In Malaysia, blended learning in primary education has grown, especially after the COVID-19 pandemic. The Ministry of Education's efforts to boost digital literacy and integrate ICT into curricula have hastened this change. During the pandemic, schools rapidly adopted online tools, leading to a more blended learning approach. A study by Ismail et al. (2021) found that urban schools, supported by technology and internet access,

utilized platforms like Google Classroom and Microsoft Teams in a hybrid model alongside traditional face-to-face learning.

Bloom's Taxonomy

Bloom's Taxonomy, a framework for cognitive development, organizes thinking into six levels: Remembering, Understanding, Applying, Analysing, Evaluating, and Creating (Anderson & Krathwohl, 2001). These stages represent a progression from basic recall to higher-order thinking, essential for success in the modern world (Bloom et al., 2001). In Malaysia, the Education Blueprint 2013–2025 emphasizes Higher-Order Thinking Skills (HOTS) to improve students' critical, analytical, and creative thinking (Ministry of Education Malaysia, 2013). Similarly, Sustainable Development Goal 4 (SDG4) promotes education that supports lifelong learning and adapts to a changing world (UNESCO, 2017a). Incorporating HOTS, such as Analysing, Evaluating, and Creating, is crucial for engaging with content like reading comprehension tasks. These tasks require students to move beyond basic understanding, engaging in deeper processes like analysing text structures, evaluating content, and synthesizing new ideas (Nor et al., 2020). Research shows that reading comprehension tasks are effective in developing HOTS, especially when students critically engage with complex texts (Tan & Zakaria, 2021). Recent studies confirm the relevance of Bloom's Taxonomy in modern education. Adams (2019) highlights its value in curriculum development and assessment, while Krathwohl (2020) emphasizes its role in promoting critical thinking. Anderson and Sosniak (2022) show that Bloom's Taxonomy helps teachers structure lessons to progressively develop students' cognitive abilities, from basic recall to higher-order skills like analysis and creativity.

HOTS in Blended Learning

The development of HOTS can be effectively facilitated by blended learning, especially in ESL instruction. Blended learning promotes active participation, critical thinking, and knowledge application by fusing traditional instruction with internet resources. Students can participate in higher-order cognitive tasks with the use of digital technologies including interactive workbooks, discussion boards, and multimedia resources (Ong & Tan, 2023). Digital annotations, online debates, and collaborative tasks, for instance, encourage critical thinking and creativity by asking students to assess various perspectives and come up with unique ideas (Lai, 2020). Students can work their way through Bloom's Taxonomy at their own rate, due to blended learning's flexibility, which also helps them enhance their analytical abilities and comprehension of texts (Koh & Tan, 2023). Additionally, studies carried out in Malaysia have shown how effectively blended learning works in improving HOTS, particularly in reading comprehension tests. For instance, a study conducted in 2023 by Köksal, Ulum, and Yürük discovered that the utilization of higher-order cognitive tasks in blended learning settings greatly improved the reading comprehension of ESL students. Digital tools' interactive features foster critical thinking and greater understanding of challenging texts in these settings. Comparing ESL students in blended learning programs with students in traditional learning environments, Alhassan's (2020) research found that the former exhibited major improvements in their ability to analyse and synthesize material.

HOTS in Reading Comprehension

The importance of reading comprehension in developing higher-order thinking skills cannot be overemphasized. It is well established that, in reading texts at deeper analytical levels, students gain vital cognitive life skills that go way beyond mere comprehension (Zohar & Dori, 2003). Blended learning makes such deep engagement possible and lets students critically analyse the texts, evaluate varied viewpoints, and synthesize information into new ideas. For the ESL students, who are often developing language and critical thinking skills at the same time, this would work best (Rosen & Salomon, 2007). Reading comprehension tasks using blended learning also allow for personalized learning and are suited to individual student requirements while creating a conducive environment for engaging in higher orders of cognition (Yang & Ho, 2023). Research by Hoi and Mu (2021) illustrates how multimedia resources and shared platforms motivate students in blended learning environments, engage them, and improve HOTS development. These expose students to various considerations and encourage skills in evaluation and inference from texts. Likewise, Nambiar and Thang (2022) discovered that blended learning's tailored assessment and support foster the development of critical thinking in students by otherwise conducting complex cognitive tasks. Regardless of the increase in research on blended learning in combination with HOTS, a gap exists, yet such a lack is understood when considering the interaction between the two for further enhancement of reading comprehension in ESL classrooms. Few have examined the perspective of blended learning and its full impact on tasks related to reading in ESL contexts, apart from a few studies showing some enhancement in HOTS conforming to this direction (Koh & Tan, 2023). This calls for further research on how best to optimize blended learning for developing higher-order cognitive skills in reading comprehension tasks amongst ESL students.

METHODOLOGY

Research Design

This research specifically targeted a quantitative approach in studying students' performance on HOTS-based reading comprehension tasks. It employed a quantitative action research method. This study compared scores obtained in traditional reading assignments which were done on printed handouts, to those obtained in the blended learning intervention which involved a digital workbook. Both traditional and blended learning settings were carried out for 9 weeks. Additionally, this study sought to identify which higher order thinking skills (‘evaluating’ and ‘analysing’) were the most and least achievable by the students in both settings. The blended learning intervention was designed to improve students' higher-order thinking skills required for reading comprehension.

Population and Sample

Primary ESL pupils in the Perak Tengah district were the study's target demographic. Twenty-five Year 6 students of mixed ability who were actively involved in the program were chosen as a sample. In addition, these students were the only year 6 students at this school. The participants were purposively sampled, as it was believed that they could provide meaningful information on the effectiveness of blended learning interventions for facilitating Higher Order Thinking Skills (HOTS) in a Year 6 ESL reading classroom especially for low enrolment schools. Purposive sampling, judgmental or selective sampling, is a non-probability method

that selects participants according to some specific characteristic with a view to achieving the aims of a study (Patton, 2015).

Data Collection Instruments

The research instruments in this study included HOTS-based reading assessments for both intervention and non-intervention settings, designed in alignment with the Malaysian Year 6 CEFR syllabus and Bloom's Taxonomy thinking domains. In the non-intervention phase, reading lessons for the traditional class were conducted by the teacher in the classroom through methods such as reading aloud, silent reading, or taking turns. Classroom discussions and Q&A sessions followed to enhance the understanding of students. Students worked on comprehension tasks by writing questions and answers in their writing books or using printed handouts. The course lasted nine weeks and covered nine different reading topics.

Similar to this, during the intervention phase, when blended learning was used, the teacher provided the students with reading materials through traditional classroom settings, allowing them to read independently or under guidance. It was later followed by discussion or Q&A to improve communication, teamwork, and critical thinking abilities. After that, students used the *Liveworksheet* platform's digital workbook to finish their reading comprehension assignments. Instant feedback was made possible by using a digital workbook. According to Smith & Budhai (2020), it allowed them to evaluate themselves and work at their own pace. These resources made it possible to conduct a thorough evaluation of the effects of the blended learning intervention on the students' higher-order thinking abilities. The evaluations conducted during the intervention and non-intervention periods allowed for a quantitative comparison of the performance of students and revealed which higher-order thinking skills the students found most attainable in each method.

RESULT AND FINDINGS

Analysis of Students' Performance in Traditional Learning and Blended Learning

Analysis of data was done in relation to the first research question, *'How does students' performance in HOTS-based reading comprehension tasks differ between traditional teaching methods and blended learning interventions?'.* Scores on assessment were collected for each student in traditional and blended learning tasks. Descriptive statistics, including the mean, median, and standard deviation, were calculated to summarize the central tendency and variability of the scores. A statistical test was then performed to determine if the improvement in students' scores from traditional worksheets to digital worksheets was statistically significant. The analysis compared the means of the paired data while accounting for individual differences.

The primary quantitative data for this study were obtained from participants' scores on HOTS related reading comprehension tasks, both in intervention and non-intervention settings.

Table 1: Means of Scores

	P1	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**
Traditional Approach	4.16	7.56	7.60	7.60	7.72	7.16	7.00	7.64	7.16
Blended Learning	7.04	7.92	8.56	8.00	8.44	7.76	8.24	9.08	8.46

Table 1 above presents the mean scores of students across nine reading comprehension practices completed through traditional and blended learning approaches. In the traditional method, students' mean score for the first task (P1) started at a low 4.16 but gradually increased, reaching the highest 7.64 (P8) as the course progressed. In contrast, under the blended learning approach, students began with a higher mean score of 7.04 in the first practice and achieved the highest mean score of 9.08 in Practice 8 (P8). This progression highlights the differences in learning outcomes between the two approaches, with blended learning demonstrating a stronger and more consistent positive impact on student performance.

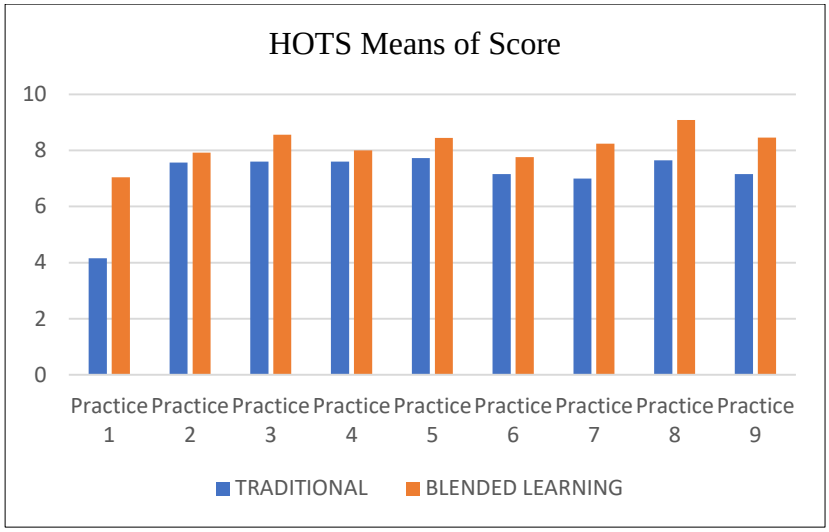

Figure 1: Comparison of Means of Scores

Figure 1 above provides a clearer depiction of the differences in students' scores for each topic, comparing two types of tasks and teaching methods. In both methods, students' scores did not increase consistently over time, showing fluctuations across the nine weeks of intervention. However, the data from the table and bar chart indicate that students' scores for each topic were higher when using digital worksheets compared to traditional handouts. This suggests that students perform better with the blended learning approach.

Wilcoxon Signed-Rank Test

Table 2: Wilcoxon Signed-Rank Test Result for HOTS Performance

	BL score mean - HD score mean
Z	-3.059[b]
Asymp. Sig. (2-tailed)	.002
a. Wilcoxon Signed Ranks Test	
b. Based on negative ranks.	

To evaluate the statistical significance of the differences, the non-parametric Wilcoxon Signed-Rank Test was employed, as the data did not follow a normal distribution. The results, presented in Table 2, indicate statistically significant differences between the two teaching approaches in HOTS-related reading skills ($p = 0.002$). Since the p-value is less than the significance threshold of 0.05, the null hypothesis is rejected. This provides strong evidence that a statistically significant difference exists between the scores of students under the two teaching methods.

Analysis of Higher Order Thinking Skills Achievement

The data analysis addressed the second research question: *Which levels of Bloom's Taxonomy (analysis and evaluation) are most effectively developed by students in reading comprehension tasks?* The assessments were designed to focus on 'analysis' and 'evaluation', as these skills are crucial for reading lessons. Analysis involves understanding the structure of the text by identifying themes, arguments, and relationships, which is crucial for reading comprehension. Evaluation, on the other hand, focuses on assessing the credibility and relevance of information, fostering critical thinking and comparison of viewpoints. The final stage in Bloom's Taxonomy, 'creating' (generating new ideas), is less emphasized in reading comprehension tasks (Ramadea et al., 2023; Sainyakit, 2023; Erdiana & Panjaitan, 2023; Rahmi & Ahsani, 2024), which is why it was excluded from this study. The average scores for each phase were calculated from both the intervention and non-intervention assessments, and these were compared to see which phases were most and least achievable by the students.

The Most Effectively Developed HOTS Among Students

Table 3 below, presents students' scores on the targeted higher-order thinking skills (HOTS) questions in their reading comprehension tasks**.**

Table 3: Students' scores in 'Analysis' and 'Evaluation' questions

APPROACH	TRADITIONAL HANDOUT		BLENDED LEARNING	
SUBJECT	ANALYSIS	EVALUATING	ANALYSIS	EVALUATING
S1	9	10	5	9
S2	4	7	7	12
S3	18	18	17	18
S4	8	9	5	7
S5	5	9	8	14
S6	3	6	9	16
S7	3	4	9	16
S8	4	9	11	13
S9	16	14	16	18
S10	16	17	13	15
S11	12	9	11	16
S12	8	12	9	13
S13	10	12	15	13
S14	7	9	7	15
S15	11	14	12	16
S16	13	12	18	17
S17	16	17	18	14
S18	17	17	18	16
S19	13	14	8	13
S20	16	15	11	17
S21	18	17	18	16
S22	17	18	15	17
S23	16	14	8	15
S24	16	16	17	17
S25	16	18	12	15
TOTAL	292/ 450	317/450	297/450	368/450
PERCENTAGE	47.95	52.05	44.66	55.34

The HOTS emphasized in this study are *analysing* and *evaluating* skills, which are closely related to reading comprehension as mentioned earlier. The table shows that, in a traditional setting, students scored a total of 292/450 marks on *analysing* questions and 317/450 marks on *evaluating* questions across the nine reading sessions. In contrast, under the blended learning approach, students achieved 297/450 marks for *analysing* questions and 368/450 marks for *evaluating* questions.

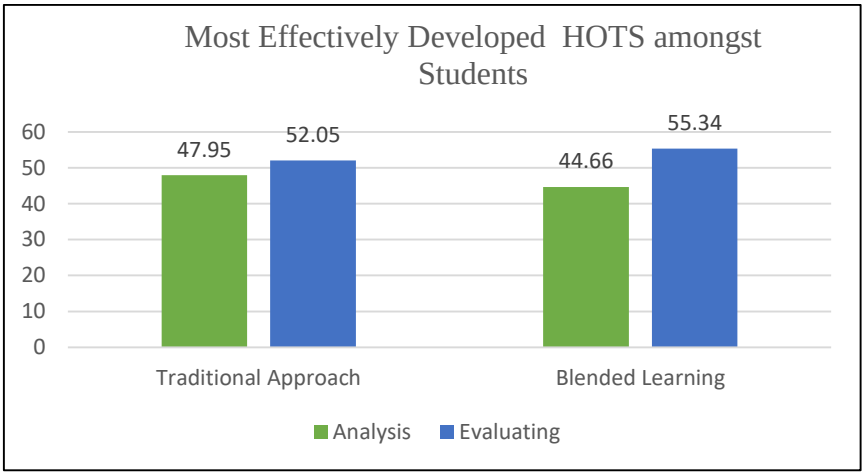

Figure 2: Most Effectively Developed HOTS amongst Students

The data in Table 3 are represented in Figures 2 to provide a clearer understanding of the differences in students' performance in HOTS, presented in percentage form. In a traditional classroom setting, students performed slightly better on evaluation questions (52.05%) compared to analysis questions (47.95%), although the difference was not pronounced. A similar trend was observed in the blended learning setting, where students scored 55.34% on evaluation questions and 44.66% on analysis questions, with the difference being more noticeable. These findings indicate that evaluating questions were more manageable for students in both traditional and blended learning settings, enabling them to develop evaluating skills more effectively than analysing skills, despite evaluating being categorized as a higher-order skill than analysing in Bloom's Taxonomy.

DISCUSSION

Comparison of Students' performance between traditional and blended learning methods

The findings of this study indicate that students achieved higher scores in reading comprehension tasks in a blended learning environment compared to traditional methods. Specifically, the data revealed that students' scores did not increase consistently over time in both methods, showing fluctuations across the nine weeks of intervention. However, the blended learning approach was always at the top of the students' scores for each topic. That means with digital worksheets and online resources, blended learning allows greater opportunities to analyze and evaluate critical thinking, thus enhancing the HOTS of the students. This result corroborates Pitaloka et al. (2020), where blended learning is found to increase engagement in the English reading activity along with the reading skills. A meta-analysis conducted by Bernard et al. in 2019 showed that students in blended learning environments outperform their peers in traditional settings. Besides, Köksal, Ulum, and Yürük (2023) reported that the use of the revised Bloom's Taxonomy in reading comprehension

activities with ESL students significantly improved their proficiency. These observations are consistent with Singh and Kaur's (2023) argument that tailored blended learning approaches, which meet specific student needs, can lead to improved academic outcomes. Similarly, Halverson et al. (2022) demonstrated that blended learning supports differentiated instruction, accommodating individual learning preferences and needs.

Changes in the trends of the students' scores across the nine-week intervention could also be said to imply that HOTS is developed in an elusive way because many factors can interact together. For example, nature of the tasks, teaching method, and differences in each individual student. Although blended learning enhances HOTS, it doesn't guarantee uniformity for every single student and in each kind of HOTS. This again brings into focus the need for continuous assessment and adaptive teaching strategies to take care of the diverse needs of learners. Aziz and Jusoh (2021) reiterated that regular practice in HOTS questions is necessary for students to be confident and competent in handling complex tasks. It can be summed up that the use of blended learning contributes to better learning performance for ESL students and brings a richer learning experience, enabling them to improve their critical skills more effectively and confidently. Therefore, educators have to prepare appropriate teaching and learning materials, integrating technology such as the digital workbooks used in this study. Zhang (2023) emphasizes that digital tools promote interactive learning, provide immediate feedback, and present diverse knowledge representations, which collectively enhance comprehension and critical thinking. The use of digital workbooks likely facilitated self-paced learning, enabling students to engage with tasks in a structured and organized manner. Such features are integral to supporting the higher-order levels of Bloom's Taxonomy (Anderson & Krathwohl, 2020).

Identification of the most effectively developed Bloom's Taxonomy level for students in both traditional and blended learning contexts.

The data analysis indicates that students performed better on evaluating questions than on analysing questions in both traditional and blended learning environments. This finding is particularly noteworthy, as evaluating is considered a higher-order cognitive skill than analysing according to Bloom's Taxonomy. One explanation for this discrepancy could be the nature of the tasks involved. Evaluation tasks often require students to synthesize information and apply it to real-world scenarios, which may be more intuitive and straightforward than the more intricate process of dissecting information into parts, as required in analysis (Resurreccion, 2014). Blended learning, which integrates face-to-face instruction with online activities, may contribute to this phenomenon by providing a versatile and engaging platform for skill development. Zhu (2023) highlights the importance of incorporating higher-order thinking skills (HOTS) into reading instruction through flexible approaches. The blended learning model aligns with this recommendation, as it allows students to engage actively in both physical and digital learning spaces. Additionally, digital tools such as interactive workbooks can scaffold learning, offering structured opportunities for students to practice and refine their evaluation skills.

Recent studies confirm this observation. For example, according to Nanda et al. (2023), since the nature of evaluation tasks intrinsically engages students in deeper cognitive processes such as judgment and decision-making, these are considered more engaging and motivating. The increased engagement may justify the good results obtained in evaluation tasks compared to analytical ones. Similarly, Resurreccion (2014) reported that students in experimental groups performed better on evaluation tasks, thus pointing to task format and instructional delivery as facilitators of evaluative thinking. While these findings are positive, the performance on analysing tasks was considerably lower, indicating a gap that needs to be addressed. This could be developed into blended learning activities that clearly target the development of analytical

skills such as comparing, categorizing, and identifying patterns. For instance, online modules could include interactive exercises that deconstruct complex texts to help students practice the skills necessary for advanced analysis; this would ensure a more balanced development of HOTS and further enhance overall academic performance.

This study adds to the growing body of evidence on the effectiveness of blended learning for enhancing students' higher-order thinking skills while undertaking reading comprehension tasks. The higher performance in evaluation tasks suggests that blended learning environments are particularly effective in fostering specific HOTS, such as judgment and decision-making. However, the time-wise fluctuation in scores and challenges related to task analysis do call for further assessment and personalized instructional strategies. Filling these gaps will allow educators to maximize the full potential of blended learning in fostering holistic cognitive development in students.

Implications for ESL education

This study, therefore, established the great potential of blended learning to improve ESL students' Higher-Order Thinking Skills in performing reading comprehension tasks. By embedding digital tools into conventional teaching, blended learning can engage students in interactive and varied learning, developing such higher-order thinking skills as analysis and evaluation. It is an approach that will help ESL teachers to develop dynamic, personalized learning environments that support deeper cognitive engagement of learners. Harris et al. (2021) propose the merit of emphasizing HOTS in ESL teaching. Also, tasks which would encourage higher-order thinking skills development in analysis and evaluation will be conducive in enhancing reading comprehension and critical thinking. Teachers should prioritize such tasks to help students build skills necessary for academic success (Wang & Li, 2022).However, the study also reveals that not all students benefit equally from blended learning. To address this, continuous assessment and adaptation of teaching strategies are crucial. Differentiated instruction can provide the support needed for students who are struggling to develop HOTS and thus allow all learners to achieve their full potential. This is supported by Thompson et al. (2020).

CONCLUSION AND RECOMMENDATION

This study also indicates that blended learning can enhance Higher-Order Thinking Skills in ESL reading comprehension in analysis and evaluation through the integration of traditional methods with digital tools. Integration of traditional and digital tools fosters deeper cognitive engagement and higher levels of thinking. However, the generalization of findings is limited by the relatively small sample size and the intervention period-the nine-week time span-may be too short to cause significant changes. Future research should include larger, more diverse groups and longer intervention periods to explore the long-term effects of blended learning on HOTS (Chang & Yu, 2021; Liu & Zhang, 2023). The emphasis in this work was placed mostly on analysis and evaluation in reading activities, meaning that further research is needed, extending the range of HOTS included, across a wide array of school subjects, but also exploring various digital tools promoting HOTS (Xu & Wei, 2022; Jiang & Lu, 2024). In the end, although blended learning has shown some promise, further research is needed to understand its long-term benefits and how well it fosters HOTS across diverse educational settings.

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