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RESEARCH ARTICLE

Design and Development of WeCWI-AI-Enabled Instructional Blog to Improve MUET Writing Performance among Malaysian Undergraduates

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ABSTRACT

This paper presents the design and development process of the WeCWI-AI-Enabled Instructional Blog, a pedagogical innovation designed to enhance MUET Writing Task 2 performance among ESL undergraduates. Anchored in the Design, Development, and Research (DDR) framework, the study integrates principles from Web-based Cognitive Writing Instruction (WeCWI) and an Artificial Intelligence tool (ChatGPT) to improve MUET Writing performance among ESL undergraduates. This instructional blog was designed based on the comprehensive literature review and analysis of the current regulations and test specifications of MUET. In this study, the researcher only applied three phases of the ADDIE model, which are: Analysing, Designing, and Developing (ADD) without implementing and evaluating phases. The design and development phases involved analysis of the Comprehensive Literature Review and the Experts' Review Form. Expert reviews from language educators and technology specialists provided crucial feedback on pedagogical alignment, usability, and content accuracy. Revisions were made based on their suggestions to enhance technological elements, scaffolding, and alignment with the MUET writing band. This article outlines the iterative development process and emphasises the importance of incorporating expert feedback in refining instructional tools. The findings contribute to the growing body of research on technology-enhanced language learning and underscore the potential of AI-enabled platforms to support high-stakes academic writing tasks.

Contribution/Originality: This study contributes to the existing literature by showing how AI-enabled Instructional blog implemented based on the WeCWI framework, developed through the DDR that serves as scaffolding tool for the MUET Writing Task 2 performance among ESL undergraduates.

1. Introduction

The Malaysian University English Test (MUET) is a set of exams that represents a high-stakes standardised test of English language proficiency offered by the Malaysian Examination Council to evaluate the language proficiency of prospective graduate students who are non-native speakers of English. As several issues faced by undergraduates were highlighted in MUET Writing, especially in the years that followed. According to Ghani and Paramalingam (2023), MUET Writing Task 2 is more difficult for ESL undergraduates because it requires coherent writing, critical thinking, and mastering the conventions of academic language. Other studies also support this, and MUET reports that highlight issues related to linguistic competence (Karnine et al., 2022; Malaysian Examination Council, 2021; Singh et al., 2017), task fulfillment (Malaysian Examination Council, 2018; Malaysian Examination Council, 2020), and psychological factors such as anxiety (Aidit et al., 2023; David et al., 2018). According to Amreet and Harun (2019), the problem in writing arises due to the lack of creativity and innovative pedagogy in the teaching and learning process. Haidari and Katawazai (2020) suggested that teachers or educators should be able to experience pedagogy with the use of technological tools.

To overcome these limitations, the study aimed to design and develop a new innovative instructional blog. The software incorporates AI-based functionalities and the WeCWI (Web-based Cognitive Writing Instruction) Framework for supporting MUET Writing Task 2 instructions. The research reported here is guided by the Design, Development, and Research (DDR) approach, which systematically utilises empirical research to design and refine educational products iteratively in collaboration with MUET and Information Technology (IT) experts. The contribution of experts was crucial in the development of the tool, which had to be compliant with both pedagogical and technical requirements.

1.1. Research Objectives

The objectives of this paper are:

i. To design and develop a WeCWI-AI-enabled instructional blog to improve MUET Writing Performance among undergraduates.
ii. To investigate the experts' perceptions towards the newly designed and developed instructional blog

2. Literature Review

Over the years, the integration of technology in education has become increasingly familiar among educators. The utilisation of technology is encouraged since it has been proposed by the Malaysian Education Blueprint 2013-2025 to increase both teachers' and students' skills in information and technology literacy. Aligned with the challenges of MUET Writing Task 2 and the need to develop online material with a theoretical and pedagogical framework, this section is a compilation of existing research on ways that WeCWI-AI-Enabled Instructional Blog can be designed and developed to improve ESL undergraduates' writing skills.

2.1. Malaysian University English Test (MUET) Writing and Challenges

The Malaysian University English Test (MUET) was originally introduced in 1999. The purpose of MUET is to evaluate English proficiency among candidates to know students'

or candidates' ability to comprehend and apply the English Language for academic task fulfillment in higher learning contexts. Four skills will be tested in MUET: listening, speaking, reading, and writing. There are two parts to MUET writing: the first part, namely Task 1: Guided Writing, which focuses on writing a letter or email that requires at least 100 words.

The second part is Task 2: Extended writing, in which the students are required to write an essay (argumentative, discursive, or problem-solving) of 250 words (Malaysian Examination Council, 2021). Recent studies conducted by Parnabas et al. (2022), found that pre-university students face difficulty in MUET Writing Task 2 (extended writing) since it carries 60% marks as the highest score. The issues in MUET Writing are also mentioned by other studies. Ghani and Shing (2019) emphasised grammatical errors, the MUET report (2019) noted L1 interference, and both Karnine et al. (2022) and Edward et al. (2021) pointed out vocabulary limitation in providing ideas.

2.2. WeCWI (Web-Based Cognitive Writing) Framework

In developing online material and instructional design, learning theories are important (Picciano, 2017). According to Fang et al. (2024), the use of learning theory in instructional design, such as interactive learning theory, ensures that the content is not only practical but also plays a part in enriching students' cognitive and critical thinking skills during the learning process. Web-based Cognitive Writing Instruction (WeCWI) is a theoretical and pedagogical framework that highlights 3 main important activities: Reading, Discussion, and Writing for cognitive development. It serves principles of theories, approaches, and models that emphasise 4 different domains of studies, language acquisition, composition studies, cognitive theories, and e-learning (Mah et al., 2021).

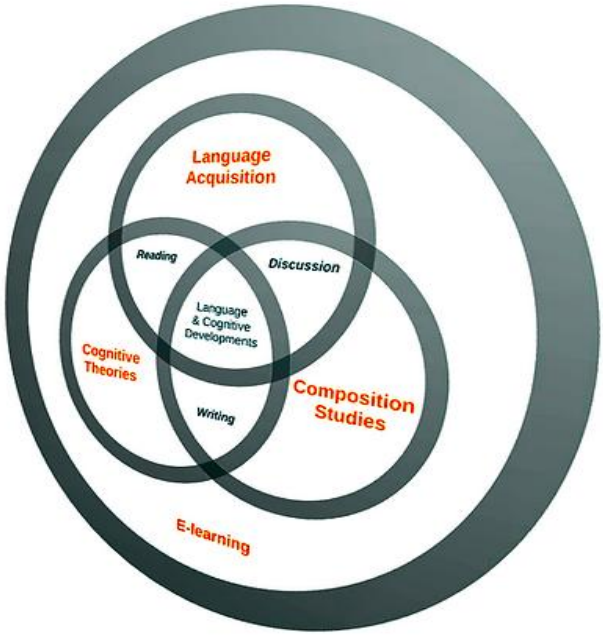
Figure 1 shows the framework of Web-based Cognitive Writing Instruction (WeCWI) introduced by Mah (2015). Based on the framework, activities like reading, writing and discussion are deeply rooted in cognitive theories, language development and language acquisition. From a cognitive theory perspective, activities like reading and writing can develop learners' attention, problem-solving skills and mental processes. Meanwhile, composition studies are developed through discussion and writing activities, for instance, through writing exercises and discussion among peers that encourage learners to generate content in their writing.

As for language and cognitive development, it is enhanced through learners' engagement with new vocabulary, and the connection with prior knowledge promotes higher thinking skills. Language acquisition is supported through all three main activities: reading, writing, and discussion, which align with Krashen's Input Hypothesis and Social Constructivism by Vygotsky. The integration of E- Learning in the context serves to promote a pedagogical approach that promotes both collaborative and autonomous writing practices in the ESL context, while it engages cognitive and language skills processing.

According to Mah (2015), WeCWI offers both linguistic and non-linguistic contributions towards language development. From a linguistic perspective, WeCWI fosters literacy skills via Free Reading and guided writing with online materials and activities. It also considers cognitive and psychological insights. Cognitive benefits come from reading, discussion, and writing, supported by inquiry models that promote interaction and questioning. Psychological benefits are gained through platform features that lessen

students' writing anxiety. The study by Mah et al. (2017) found that WeCWI is required as a Web-based Instruction (WBI) framework for supplementary online writing programs due to the positive results of WBI and the global influences of the internet that will improve writing performance.

Figure 1: Web-based Cognitive Writing Instruction (WeCWI)



Source: Mah (2015)

2.3. Artificial Intelligence (AI) in Writing

Artificial Intelligence (AI) refers to human intelligence that has been adapted through machines that enable the mimicry of human thinking and action. According to Tahiru (2021), in 1956 AI was introduced by John McCarthy at the Dartmouth Artificial Intelligence Conference, where the researchers and participants started to discuss how AI can relate to creative thinking and mimic human intelligence by carrying the concept of a "thinking machine". The application of AI and machine learning is increasingly utilised through various devices and services, as it can capture the attention of every individual. For instance, the AI application refers to a Google Duplex-like chat agent that can give feedback and FaceApp, Siri, and other services that are convenient for the users (Zawacki-Richter et al., 2019).

According to Chen et al. (2020) AI has been used in educational institutions; it covers the integration of AI in web-based systems, which is particularly related to technology and computers as the main source. According to Atlas (2023), ChatGPT is one of the AI applications that students at the tertiary level of education frequently use, as it assists with language acquisition, writing, research, and administrative tasks. Students normally utilise AI tools in writing to generate and revise essay structure, and check grammar errors and spelling (Raimi et al., 2024). According to Rosdiana et al. (2024), AI tools like ChatGPT, Quillboll, Grammarly, and Deep L are famously utilised by ESL undergraduates to aid their process of writing, from brainstorming to publication.

2.4. Blog

According to Elega and Özad (2018), the blog began to gain fame in the early 2000s, as it became one of the most usable Computer-Mediated Communication (CMC) tools. Bakar and Ismail (2009) stated that blogs are among the most popular Web 2.0 platforms used in the education field. This is also supported by Mushtaque et al. (2020), who suggest that blogs have been suggested by researchers to be utilised in education as they can create interaction among students and encourage attentiveness during the learning process.

According to Blanco and Magariño (2018), the use of the blog is beneficial for the users as it increases interaction, besides its ability to be easily accessed, customised, modified, and is free for users to utilise according to their needs. According to Zeng (2020), the use of blogs is recommended in teaching writing, as they offer writing practice, feedback, and interaction to enhance language learning. Spanou and Zafiri (2019) stated that the use of blogs is proven to be effective in enhancing collaborative learning and social interaction among students and teachers.

3. Research Methods

The design and Development Research (DDR) approach, as described by Richey and Klein (2007), was used to systematically design, develop, and evaluate the AI-enabled instructional blog in this study. The DDR approach was chosen because its framework is both structured and flexible in developing new instructional products, especially in educational technology environments. The study employed DDR type 1, which emphasised the construction of a product and tool research to develop a web-based instructional blog on facilitating students with MUET Writing Task 2. According to Richey and Klien (2014), DDR type 1 requires specific phases to be implemented from analysis to evaluation.

The researcher employed the ADDIE (Analyse, Design, Develop, Implement, and Evaluate) model as a research procedure. However, the researcher only uses three phases: analysis, design, and development, without implementing and evaluating them. This is due to the nature of the project. Evaluation could still be done in the development phase to ensure successful product design. The analysis phase involved a preliminary study diagnosing MUET Writing challenges faced by ESL undergraduates and the need for a theoretically enabled online instructional tool to improve their performance. In 2024, 84 students in an Academic Writing course at a private university took a survey on MUET Writing challenges and the need for a web-based tool, using Google Forms.

For the design phase, a comprehensive literature review was chosen to determine the necessary elements required in designing a web-based instruction for MUET Writing Task 2. For this study, the researcher only selected articles related to the tag WeCWI, WeCWI enhanced 21st Century Learning Design, MUET Writing Task 2, and AI. Sources of the comprehensive literature review are taken from indexed databases such as Scopus, WoS, Google Scholar, and MyCite, including online journals, books, research reports, and conference proceedings, ranging from 2018 to 2024.

The development phase began with the design of a storyboard, which served as a core reference for the website's success. Then, the process continues with the development of the prototype. The usage of WordPress as the base of the site, and additional plug-ins such as ChatGPT, and RSS Newsfeed complemented the development process. Then, the newly

designed and developed instructional blog (prototype), namely MUET ProMax, was introduced to the six experts (3=MUET, 3=Information and Technology) to be evaluated through the Expert Review Form.

4. Results

This section elaborates on the results of the study. The initial data are derived from the design phase, specifically from a comprehensive literature review. Moreover, the development phase addresses data that employs an overall formative evaluation of the expert review form, utilising both descriptive and thematic analyses.

4.1. Analysis of Comprehensive Literature Review

For analysis of the Comprehensive Literature Review, the first phase started with the exploration phase, where the researcher narrowed down the year of literature ranging from the year 2018-2024, with tagging that is connected to WeCWI, instructional blogs, MUET Writing task 2 and A.I. Then the researcher continued to the second phase which is analyse and synthesise information to compare ideas from the body knowledge. The researcher then compiled the analysis and synthesised data to acknowledge ideal elements to be included while designing web-based instruction.

As shown in Table 1, the summary of reviewed studies from 2018 to 2024, covers ten focus areas: Pedagogical an Theoretical Framework, Blog Design and Multimedia Use, Aesthatic Appeal, Interactive Features, AI in teaching writing, Content Alignment with MUET, Contextual Learning, Content Quality Assurance, Personalized Learning, and Access and Equity. Blogs are believed to be useful in MUET Writing preparation in view of the growing emphasis on the use of digital media in education.

Table 1: Summary Table of Reviewed Studies

Study	Focus Area	Key Findings	Relevance to MUET Instructional Blogs
Mah and Cheah (2022)	Pedagogical and Theoretical Framework	The utilization of pedagogy and theory in developing instructional blog	Assist in language and cognitive development
Saad (2023)	Blog Design and Multimedia Use	Integration of multimedia enhances motivation and comprehension.	Emphasizes the need for engaging design elements in blogs.
Wobbrock (2019)	Aesthetic Appeal	Visual appeal increases perceived credibility and student trust.	Highlights the importance of professional and attractive blog layouts.
Chowdhury & Siddique (2024)	Interactive Features	Interactive elements foster community and active participation.	Recommends inclusion of quizzes and forums to boost engagement.
Liu et al. (2023)	AI in Teaching Writing	AI reduce cognitive load faced by the students	Emphasizes on the feedback given in brainstorming ideas in exercises.
Jack & Hashim (2023)	Content Alignment with MUET	Targeted practice materials improve student performance.	Underlines the necessity for

			component-specific resources.
Setyowati et al. (2018)	Contextual Learning	Connecting content to current events enhances critical thinking.	Suggests incorporating real-life examples to make learning relevant.
Cheek (2021)	Content Quality Assurance	Regular updates and expert reviews are essential for maintaining content credibility.	Emphasizes the need for ongoing content evaluation and updates.
Dhakal (2024)	Personalized Learning	Differentiated materials address individual learning needs effectively.	Advocates for adaptive content based on proficiency levels.
Ahuja (2023)	Access and Equity	Digital divide poses a barrier to adoption of instructional blogs.	Calls for strategies to ensure equitable access to digital learning tools.

From 2018 to 2024, research has repeatedly drawn attention to the fact that an effective instructional blog or any online learning platform should be well-organised, navigable, and visually appealing. Mah and Cheah (2022) mentioned that a strong framework that utilises the elements of theory and pedagogy in educational resources on blogging is important. WeCWI principles are designed to enhance students' language and cognitive abilities, leading to improved writing performance.

In the aspect of design, visuals, and features, these elements play a significant role in enhancing students' motivation, participation, and ease of use of the instructional blog. The integration of multimedia functions maintains the learners' motivation to learn as well as confidence in the materials presented (Saad, 2023; Wobbrock, 2019). The use of media such as videos, images, and interactive menus has also been found to influence learners' motivation and information retention.

Moreover, according to Chowdhury and Siddique (2024), interactive elements, which include quizzes, comments, and feedback tools, facilitate active learning and foster a community of practice. In addition, Liu et al. (2023) mentioned that the integration of AI not only encourages students' motivation and reduces anxiety but also helps lower cognitive load during the learning session. When it comes to preparing an instructional blog, studies underscore the value of blogs that contain focused materials for practice, including sample questions and model answers for each section (Jack & Hashim, 2023).

Blogs that integrate real-life examples or contemporary issues can elicit learners' more critical thinking and application (Setyowati et al., 2018). Another is the accuracy of content, as outdated or incorrect content can be a barrier to effective learning. To address this, scholars recommend regular updates and professional reviews of blog content (Cheek, 2021). According to Dhakal (2014), personalised content is important to cater to different proficiency levels, thereby addressing different demands and learning preferences of users or students.

However, despite the numerous advantages of this technology, several challenges remain. One of the biggest challenges is the digital divide that restricts the accessibility of students from underprivileged areas (Ahuja, 2023). Despite the potential to support MUET writing preparation, attention to design, content matching, learner engagement, and accessibility is necessary for the successful development of instructional blogs.

4.2. Analysis of Expert Review Form

The expert review form is a checklist form that consists of six elements focused on: content quality, feedback, motivation, design and usability, technology, pedagogical assessment, and material, which were analysed using descriptive analysis. The last part consists of semi-structured questions that require experts to provide their opinions on the strengths and suggestions of the prototype, which was analysed using thematic analysis.

4.2.1. Quantitative Analysis (Descriptive Analysis)

As shown in Table 2, the majority of the experts (66%) agreed that the blog design is clear and consistent, providing suitable instructions for navigation. However, two experts (33%) felt that this aspect could be improved. All experts (100%) agreed that the overall design and interface are consistent and predictable, showing that the blog maintains a stable and user-friendly layout. Most (83%) found that navigation allows users to return to the start menu, move within the blog, and exit easily, though one expert (17%) noted some limitations. The design of the instructional blog will be portrayed in Figure 2.

Table 2: Percentage for Design and Usability of Instructional Blog

No	Item	Yes	No
B1	The design is clear and consistent, and provides appropriate instructions for navigation.	66% (n=4)	33% (n=2)
B2	The design and interface are consistent and predictable.	100% (n=6)	-
B3	Navigation provides users with a way to return to the start menu, navigate within the learning object and exit from it.	83% (n=5)	17% (n=1)
B4	Audio and video components are present.	100% (n=6)	-
B5	Hyperlinks and buttons function effectively.	100% (n=6)	-
B6	Images and graphics are used appropriately.	100% (n=6)	-
B7	Colour is used appropriately throughout.	100% (n=6)	-
B8	The instructions given are clear and understandable.	83% (n=5)	17% (n=1)

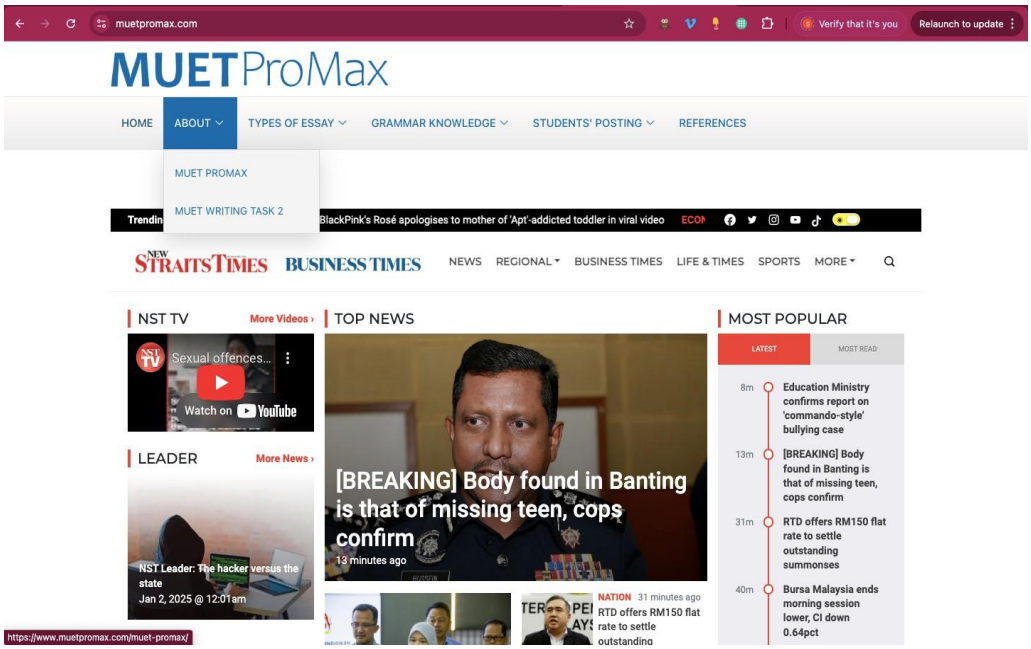
As shown in Figure 2, the design of the WeCWI-AI-Enabled Instructional Blog, namely MUETProMax, demonstrates a user-friendly interface with clear instructional elements and intuitive navigation. The homepage is the main gateway, offering users easy access to writing tasks with AI help, plus resources like essay samples, notes, grammar info, and newsfeed. It has a consistent design that ensures visual coherence and reduces cognitive load. Clear labels on menus, buttons, and links help users efficiently navigate, return home, or exit the platform without confusion.

All six experts confirmed the presence of audio and video components, the proper functioning of hyperlinks and buttons, the appropriate use of images and graphics, and consistent use of colour throughout the blog. This indicates strong multimedia integration and a focus on visual clarity. However, while most (83%) agreed that the instructions provided are clear and understandable, one expert (17%) felt the instructions could be made clearer.

Overall, the blog's design and usability were positively received, with only minor areas for improvement in navigation clarity and instructional guidance. For feedback features, all

six experts agreed that the feedback offered by the blog supports positive learning outcomes, showing that it plays a helpful role in improving students' performance. Experts also unanimously confirmed that learners receive timely responses when answering questions or submitting information, indicating that the blog encourages active and responsive engagement.

Figure 2: Design of WeCWI- AI-Enabled the Instructional Blog



Source: Sharifuddin (2025)

In addition, all experts agreed that the feedback compares learners' performance with relevant criteria and provides guidance on how to improve, which is essential for developing writing skills. The language used in the feedback was also seen as encouraging, helping to motivate learners and build confidence. Lastly, all reviewers confirmed that the blog includes mechanisms for students to receive feedback on their writing, such as peer review features or automated feedback tools. These findings highlight that the blog provides a strong and supportive feedback system that aligns with best practices in writing instruction.

As shown in Table 3, all six experts (100%) agreed that the learning environment offers appropriate and engaging opportunities, includes realistic and interactive learning activities, and clearly defines expectations and standards for success. These findings suggest that the blog effectively captures learners' interest and sets meaningful goals. However, one expert (17%) felt that the directions and support provided for engaging in the blog's activities could be improved, although the majority (83%) believed the support was adequate. Overall, the blog is to enhance guidance.

Table 3: Percentage for Motivation Received by the Users

No	Item	Yes	No
D1	The learning environment provides appropriate and engaging learning opportunities.	100% (n=6)	-
D2	The learning object provides true- to-life learning activities and interctivity whenever possible.	100% (n=6)	-

D3	The learning object defines realistic expectations and standards for success.	100% (n=6)	-
D4	Learners are given adequate directions and support to engage in the learning object activities.	83% (n=5)	17% (n=1)

As illustrated in Table 4, all six experts (100%) agreed that the blog provides clear navigation for students to seek further help, loads quickly across various devices and internet speeds, is fully functional on different platforms, and integrates well with third-party tools such as Padlet and AI-generated applications, which enhances its functionality. These findings suggest that the blog offers a smooth and user-friendly technological experience.

Table 4: Percentage for Technological Aspect

No	Item	Yes	No
E1	The blog provided connected links to additional resources (e.g., further reading and writing resources (search engines, videos and others)	83% (n=5)	17% (n=1)
E2	There is clear information and navigation on where students can get further help or ask questions (e.g., contact form, FAQ section).	100% (n=6)	-
E3	The blog loads quickly on various devices and internet speeds, minimising wait times for users.	100% (n=6)	-
E4	The blog is fully functional across different devices (desktop, tablet, smartphone) and operating systems.	100% (n=6)	-
E5	The Integration with third-party tools (e.g., Padlet, AI-generated applications, and search engines works smoothly and enhances functionality.	100% (n=6)	-

However, one expert (17%) noted that the blog could improve in providing connected links to additional learning resources, although the majority (83%) found the resource links sufficient. Overall, the blog's technological features are perceived as highly effective, with only slight improvement in external resource accessibility.

As for the pedagogical quality of the instructional blog. All six experts (100%) confirmed that the topics and themes are well-suited for MUET Writing Task 2, and that the tasks and activities are authentic, reflecting real-world writing situations learners may face. They also agreed that the blog includes features that promote a sense of learning community by encouraging interaction and peer support.

Additionally, experts acknowledged the blog's role in enhancing digital literacy skills, which are essential for learners in today's technology-driven academic environment. This indicates that the blog is pedagogically sound and effectively supports both writing development and 21st-century learning competencies.

Additionally, as depicted in Table 5, most experts (66%) agreed that the blog effectively breaks down information into manageable lessons, although two experts (33%) felt this could be improved. Despite this, all six experts (100%) agreed that the exercises come with clear instructions and examples, making them easy to follow. They also confirmed that the blog provides self-assessment tools to help learners monitor their progress, and that the practice tasks are well-aligned with MUET assessment criteria, ensuring students understand what is expected.

Table 5: Percentage for Assessment and Materials of Instructional Blog

No	Item	Yes	No
G1	The blog chunks information into manageable lesson.	66% (n=4)	33% (n=2)
G2	Exercises given come with clear instructions with example.	100% (n=6)	-
G3	The blog includes tools for self-assessment, allowing students to gauge their progress.	100% (n=6)	-
G4	Practice exercises and examples are aligned with the MUET assessment criteria, helping students understand what is expected.	100% (n=6)	-
G5	The blog includes interactive elements (e.g., quizzes, and discussion prompts) that engage the readers and encourage active participation.	100% (n=6)	-

Furthermore, all experts agreed that the inclusion of interactive elements such as quizzes and discussion prompts supports learner engagement and encourages active participation. Overall, the blog is viewed as a strong instructional and assessment tool, with a minor recommendation to improve the segmentation of lesson content.

4.2.2. Qualitative Analysis (Thematic Analysis)

After the data collection process is completed, the findings of the expert review forms are tabulated and explained below. Table 6 displays the thematic analysis of the interview, and the findings reveal five interconnected themes that highlight the strengths of the newly designed and developed instructional blog. One prominent theme is Structured Instructional Design, which reflects how the blog supports learners through a systematic approach. Experts stated that the structure is clear, noting how the blog "*provides a step-by-step breakdown of MUET Task 2, including essay structures, sample responses, writing techniques*" (MUET).

Table 6: The Strengths of Designed and Developed Instructional Blog

No	**Sub Categories**	**Excerpt from Interviewee**	**Field of Expertise of Respondent**
1	Structured and Systematic Instructional Design	*This blog tackles that challenge head-on by providing a step-by-step breakdown of the essay task. From dissecting the structure of introductions, thesis statements, and body paragraphs to outlining various essay types (argumentative, problem-solution, etc)*- MUET	MUET Expert
		The blog can break down complex writing components (Task 1: Report writing and Task 2: Extended essay) into manageable, student-friendly segments aligned with the Malaysian University English Test (MUET) band descriptors. This makes exam-focused preparation more digestible and effective.- IT	IT Expert

2	Language Development and Skill Building	*Beyond essay structures and content, the blog also provides grammar tips, useful videos, and language notes tailored to the writing task. This helps students improve not only their exam performance but also their overall linguistic accuracy and fluency- a key CEFR-aligned goal in MUET*	MUET Expert
		I would say the exercises. It highlights spelling errors and gives appropriate prompts to put forward their arguments.- IT	IT Expert
3	Flexibility and Accessibility	*A blog that's available 24/7 gives students the flexibility to learn at their own pace, revisit tricky concepts, and build their skills progressively. This democratization of access is something we fully support in MUET policy.*- MUET	MUET Expert
		It supports flipped learning, extending the classroom beyond school hours—especially beneficial for students who need additional practice or missed lessons.- IT	IT Expert
4	Interactive and Engaging Learning Experience	*The blog isn't just a static repository of information-it's an interactive platform. By enabling comments, Q&A threads, and even writing prompts, it transforms passive reading into active learning.*- MUET	MUET Expert
		Students can revisit lessons, sample essays, and tips at their own pace, reinforcing their learning. Embedding activities like guided writing exercises, vocabulary boosters, and grammar checklists enhances engagement and retention.- IT	IT Expert
5	Authentic Learning Resources	*It's one thing to explain the theory behind good writing; it's another to show it in action. What impressed me most is the inclusion of model essay- complete with analysis- that mirror the level and format expected in actual MUET.*- MUET	MUET Expert

This structured guidance extends to argumentative, discursive and problem-solution essays, enabling learners to approach writing with greater confidence and coherence. One respondent emphasised that the blog "*manageable, student-friendly segments aligned with the Malaysian University English Test (MUET) band descriptors.*" (IT), showcasing its role in scaffolding students' understanding on MUET Writing.

Another key theme is Language Skill Development, with experts highlighting the blog's support for enhancing grammar and vocabulary. It offers "*grammar tips in the form of videos and notes that are applicable and relevant to MUET Writing Task 2"* (MUET), which not only supports exam performance but also fosters long-term language accuracy. A related excerpt noted that *"it highlights spelling errors and gives appropriate prompts to put forward their arguments"* (IT), indicating a focus on accuracy and self-correction.

Additional themes, such as Flexibility and Accessibility, where the blog is lauded as a "self-paced learning" platform, are accessible *"anywhere, and anytime"* (MUET), and Interactive Engagement, which includes features like comment threads and exercises to enhance retention, further demonstrate the blog's multidimensional utility. Finally, the blog's Authentic Learning Resources, including "model essays… that mirror the level and format expected in actual MUET" (MUET), underscore its alignment with real-world assessment criteria and instructional integrity.

Next, the researcher also included questions related to suggestions and improvements on the developed instructional blog to the experts. After analysing the data, the researcher found that there are several key points of recommendation suggested by experts and the data is explained below.

Table 7 shows the suggestions and improvements made to the designed and developed instructional blog based on the feedback from experts. The thematic analysis suggested six suggestions for a better instructional blog, the first being the stronger alignment with MUET band Descriptors and CEFR; followed by technological elements in websites; task fulfilment and genre awareness; Clearer Theoretical and Pedagogical Framing; feedback clarity and students' self-assessment; and Language Range and Accuracy Focus. The Table 8 shows the excerpt suggesting improvement to the instructional blog.

Table 7: Suggestions and Improvements of the Designed and Developed Instructional Blog

No	Suggestions and Improvements
1	Stronger Alignment with MUET Band Descriptors and CEFR (19.2%)
2	Technological Elements in websites (46.1%)
3	Task fulfillment and genre awareness (11.53)
4	Clearer Theoretical and Pedagogical Framing (3.84)
5	Feedback clarity and student self-assessment (15.38%)
6	Language Range and Accuracy Focus (3.84%)

Table 8: Suggestions to Improve an Instructional Blog

No	Suggestions to Improve an Instructional Blog
1	*Integrate explicit commentary that maps sample responses to specific MUET bands. For instance: "This introduction demonstrates Band 5 qualities in coherence and task fulfillment; The lack of lexical variety here reflects features of Band 3 Writing."*
2	*Downloadable worksheets and essay templates- offer writing templates to help students structure their essays. So, the students can practice writing offline as well.*
3	*Provide corrections and suggestions by using AI, after the student answers the exercise question, so that the student can improve their knowledge.*
4	*Essays are explained structurally, but there is a limited emphasis on responding to the task fully- a key scoring criterion.*

Based on Table 8, the expert suggested integrating explicit commentary, essay samples and scoring that follows a specific MUET band. This is believed to provide sufficient guidance for students during the learning process. Next is the suggestion of technological elements in websites, which carried the major percentage of the suggestions. This covers subtopics in technical issues such as accessibility of learning material, instructional support from learning aids, interface usability, cognitive load concerns and convenient task mechanism. The improvement in technical issues can facilitate students in the process of practising their writing skills.

In addition, the expert also suggested using AI to provide feedback for correction immediately after students participate in exercises. This is to improve students' knowledge during the learning process. As for task fulfilment suggestion, the experts stated that there is a limited focus on completing task response, where there is a need for a key scoring criterion when students respond to the task. This is believed to enhance students' understanding of the scope of discussion of each essay.

5. Discussions

The findings from both the comprehensive literature review and expert review form provide a robust foundation for evaluating the development of the blog. The review of literature spanning from 2018 to 2024 reveals a strong consensus on the core components that constitute effective instructional blogs. These include sound pedagogical underpinnings (Mah & Cheah, 2022), engaging multimedia integration (Saad, 2023), clear aesthetic design (Wobbrock, 2019), and alignment with assessment criteria (Jack & Hashim, 2023).

The research also highlighted the increasing need for instructional platforms to be interactive, contextually relevant, and personalised (Cheek, 2021; Chowdhury & Siddique, 2024; Setyowati et al., 2018). These criteria were used as the basis for designing the blog prototype, ensuring that the platform meets both educational standards and learners' digital expectations.

The expert review data support and validate many of these theoretical claims, confirming the blog's alignment with the MUET syllabus and its appropriateness for learners' proficiency levels. Notably, all experts agreed that the content is relevant, goal-oriented, and accessible to the target audience. However, a small number of experts pointed to areas for refinement, particularly in how the blog structures the sequence of writing steps and the clarity of navigation.

From a usability perspective, most experts praised the blog's multimedia features, such as the use of audio, video, graphics, and hyperlinks, which were seen to enhance the user experience (Saad, 2023). Nevertheless, the relatively lower score (66%) on design clarity and chunking of lessons (G1) suggests the need to further optimise user pathways and cognitive load management. Literature supports this concern, as blog structure and readability have been shown to influence learner motivation and trust (Wobbrock, 2019).

Pedagogically, the instructional blog has been successful in implementing interactive and authentic tasks, with unanimous agreement on its contribution to building real-world writing skills, a sense of learning community, and digital literacy (Setyowati et al., 2018). Furthermore, the feedback mechanisms were strongly endorsed, with experts recognising the blog's ability to provide timely, encouraging, and criteria-referenced responses, aligning with best practices in formative assessment.

Technologically, the blog appears to meet expectations in terms of responsiveness, cross-platform compatibility, and integration with external tools. However, the call to strengthen linked resources (noted by one expert) indicates room for curating additional enrichment materials to support diverse learning needs. In addition, besides meeting experts' expectations, there are suggestions for future improvements, including aligning the website with the CEFR framework and enhancing technological features.

6. Conclusions

In conclusion, the development of the WeCWI-AI-enabled instructional blog is strongly supported by both the literature and expert evaluations. It demonstrates pedagogical soundness, technological robustness, and user-centred design, making it a promising tool for enhancing ESL learners' preparedness for MUET Writing Task 2.

Nonetheless, continuous refinement is necessary, particularly in streamlining lesson structure and improving navigational clarity. Future work should also consider empirical user testing with students to assess the blog's effectiveness in real instructional settings and its impact on learner performance and engagement.

To strengthen the study, future research should conduct empirical action research with real MUET candidates to assess how the blog impacts students' writing, autonomy, and engagement. A quasi-experimental study could measure pre- and post-instruction gains and examine users' attitudes toward using blogs for MUET writing.

Also, qualitative feedback from students (interviews or focus groups) could enrich the understanding of students' experiences and the value of blog features. Future research could also investigate the long-term effect of AI-embedded feedback on students' self-regulated learning behaviours, and the applicability of such instructional platforms across diverse educational settings or other aspects of language learning, such as skills.

Ethics Approval and Consent to Participate

The researchers used the research ethics provided by the Research Ethics Committee of Universiti Teknologi MARA (UITM). All procedures performed in this study involving human participants were conducted in accordance with the ethical standards of the institutional research committee.

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Conflict of Interest

The authors declare no conflict of Interest.

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