

A Prototype of Web-based Supplementary Writing Instructional Media for Upper-Secondary Level Learners

Anisatul Faizah¹

Bambang Yudi Cahyono²

Francisca Maria Ivone³

¹²³Universitas Negeri Malang, Indonesia

¹anisatul.faizah.1802218@students.um.ac.id

²bambang.yudi.fs@um.ac.id

³francisca.maria.fs@um.ac.id

Abstract

In an era characterized by a symbiotic relationship between the rapid growth of technology and extensive use of English, English as a Foreign Language (EFL) learners are tremendously exposed to digital forms of the language. Digital writing, consequently, has become a fundamental EFL skill to master. Ironically, it has not proliferated in ways that give access to all students, notably for most upper-secondary school learners in Malang City, East Java, Indonesia, where one might expect that technology is widely accessible. To address such an adverse situation and to support learners in enjoying EFL writing activities, a research and development (R&D) study was carried out to develop a prototype web-based supplementary writing materials that incorporate instructional strategies and learning approaches that enhance EFL writing skills and develop effective writing strategies in an authentic setting. The R&D process implemented Dick and Carrey's (2001) instructional design framework which was integrated with Lee and Owen's (2004) instructional multimedia design framework. The study resulted in the development of a prototype of an E-Writing Site (EWS) to which the target users are encouraged to enjoy writing texts of their own choice at their own pace, as they engage in free voluntary writing within a social constructivist atmosphere. Experts and target users involved in the formative evaluation of the prototype perceived it to be useful and educative as it provides EFL learners with holistic, authentic, and meaningful writing practice. Moreover, some aspects of the prototype and its principles that require enhancement are addressed.

Keywords: *Web-based learning, supplementary Materials, Writing Materials, Prototype, EWS*

Introduction

To date, many learners finish their secondary education without adequate writing skills, both in English and in their First Language (L1), despite writing being an essential skill in not only academic life but also in all areas of contemporary life. This may indicate a gap between the theory of writing instruction and the classroom practices that are occurring in secondary schools, specifically in the context of this study on English as a Foreign Language (EFL). This realization served as the driving force behind the effort to improve the teaching and learning of EFL writing at the upper-secondary level in order to contribute to the enhancement of learners' writing skills.

The increasing dominance of the English language, particularly evident in Asia (Botha & Kirkpatrick, 2020; Sasaki, 2018a), along with the rapid proliferation of contemporary information and communication technology (ICT), has triggered a profound paradigm shift in our approach to acquiring and disseminating knowledge. With the trajectory of these cultural shifts, the value of skills in English writing has grown significantly in

comparison to speaking skills (I. Lee, 2017a; Sasaki, 2018a), with forecasters predicting that the demand for writing skills is likely to continue rising given the convenience and efficiency that new technology-based written communication affords. This, in turn, is reshaping the landscape of writing education. These expanded possibilities and opportunities indicate a much-needed “wake up call” on the renewal of teaching and learning of writing through the adoption of technology.

Regardless of the unobvious real-life immediate need for learning writing skills and the unpredictability associated with present English writing requirements, upper-secondary students who graduate with strong English-writing skills will have an edge. It facilitates students’ academic, occupational, social, and even personal attainments (Graham, 2019; Sasaki, 2018a), notably those from Asia (I. Lee, 2017a; Sasaki, 2018a). Thus, there should be serious concern on writing commencing at an earlier stage, as writing skills are honed through deliberate practice, rather than being an innate skill.

In the case of upper-secondary school in Malang City, East Java, Indonesia, as part of preliminary research, we conducted survey, interview, and observation in the middle of 2022, involving several random samples of English teachers and tenth-grade students from various schools. We found that both teachers and students recognized the importance of English writing skills for academic and future success. Therefore, it is ethically and ideologically imperative to provide adequate resources and support for the development of these skills, specifically in light of the implementation of *Merdeka Belajar* (Freedom on Learning) curriculum which is applied in Indonesia. Drawn from a socio-cognitive perspective, personal beliefs—one of the determinants of self-regulated learning indicate that the subjects are eager to learn to write (Wigfield & Cambria, 2010). Furthermore, both teachers and students expressed confidence in writing, which contradicts the common belief that writing is a difficult skill. To nurture this confidence, it is crucial to address the challenges mentioned by teachers and students in teaching and learning writing. Additionally, incorporating activities that leverage students’ reading abilities, which many students excel in, can enhance motivation, and significantly contribute to academic success. This approach can also lead to increased self-awareness, improved language skills, and enhanced overall performance in writing and other related areas, such as speaking.

While the intent of our study was to improve the success of learners in cultivating writing skills, the context of EFL in Indonesia presents a distinctive challenge. Nonetheless, with the premise that the more students engage in writing, the more proficient they become, leading to an increased appreciation for the writing process, forms the foundation for the provision of diverse authentic writing materials and an ample amount of time for writing. As such, information on the current state of writing practice in schools was gathered to explore how the situation can be productively improved.

As part of preliminary study, we prompted an exploration of the teacher’s teaching method and implementation of the writing process through survey and follow-up interviews. Information of the present situation was also gathered from mixed-method study designed to investigate teacher knowledge of Genre-based Approach (GBA) through survey, interview, and observation (Widiati & Basthomi, 2021) and teachers teaching pattern using Genre-Based Approach (GBA) through interview and observation (Suharyadi & Basthomi, 2020). Although the findings do not cover all aspects of writing instructions in all secondary schools in Malang, they do provide a recent update of how writing is now taught in schools.

In societies where technology ownership is high, such as in the context being studied where one might expect that technology is well supported, the preliminary research as well as relevant studies have acknowledged that classroom-based learning are quite restricted in providing learners with meaningful writing experience. If the primary source of learning does not fully meet the needs, then additional learning resources need to step in. It is, then, a logical reason to provide students with supplementary writing materials for outside-classroom learning since conscious writing practice and appropriate writing instruction is a critical cornerstone to cultivate writing skills. This stance is supported by Richards (2015) as he mentioned that learning inside and beyond classroom are two significant contributors of successful learning.

As ideally expected, the common thread linking all of these issues, one critical contributing factor that hinders writing and writing instruction, is time (Afrilyasanti et al., 2016; Graham, 2019; Hidayati, 2018; Sinta & Astutik, 2019). Suffice to mention here that having an overcrowded class makes teaching writing even more challenging (Sharndama, 2013). Such problems are not rare in the context being study. Furthermore, we assumed that the concern lies not so much in the abundance of materials to cover within the available time but rather in the difficulty of precisely tailoring them to align with both learning objectives and learners' needs—a notion confirmed by teachers during informal discussions and surveys.

The results of the preliminary study, supported by relevant research, confirm that teaching how to write appropriately is rarely emphasized. This may be because, as discussed by Sasaki (2018), it is excluded from high-stakes examinations—a problem that is common across the globe (Graham, 2019). These facts stand in contrast to the perspectives of experts who advocate that optimal writing learning occurs through purposeful practices that prioritize an apprenticeship approach. They recognize that literacy is not merely a skill but also a cultural achievement that presents notable cognitive challenges to learners' cognitive systems (Kellogg, 2008). Therefore, if these are catalysts in a learner's writing development, establishing suitable and positive learning materials and environment, improving confidence, and preventing factors that demotivate learners is essential.

Taking these aforementioned issues into consideration, the present study has been initiated with the purpose of making a meaningful contribution to the educational domain. It aims to empower secondary school students in Malang City, starting as early as grade ten, with deliberate writing practices that emphasize the significance of apprenticeship. As suggested experts, learners' progress from junior to senior high school needs positive and suitable learning environment to sustain learners' motivation in writing (I. Lee et al., 2018; Wu et al., 2020). With apprenticeship, the core objective is to foster the growth of metacognitive skills in writing, skills that hold undeniable significance in our contemporary era characterized by rapid evolution and change, while maintaining writing as social skills. Hence, it also offers students the guidance of more knowledgeable peers or teachers whenever necessary. It is also worth remembering that teaching writing is complex and challenging. Therefore, teachers are not only allowed to assist students in writing but also reflect on their teaching strategies and techniques, which later can be shared, discussed, and explored with other writing teachers as a means of professional development.

The results of this study are expected to support the government program, *Gerakan Literasi Nasional* (National Literacy Movement) 2016 or National Literacy Movement 2016 as a realization of the degree of the ministry of education and culture Number 23 the Year 2015. Learners are expected to improve their literacy skills, including reading

and writing skills. Thus, we consider strategizing secondary-level writing by including technology which are conceptually based and empirically supported. This is not only solely driven by the fact that technological proficiency, such as digital literacy as encouraged in regulation No. 16/2022 regarding the Standard of Process, is as essential for academic and professional achievement as writing skills, but also it brings a vast potential to language learning and teaching in terms of ubiquity, interactivity, personalization, and flexibility (Azmi, 2017; Cole & Kritzer, 2009; Dudeney & Hockly, 2007; Yunus et al., 2013)

Much literature has documented that a website is a valuable tool to teach writing. Hence, many researchers have tried to develop web-based writing media. Research on the development of web-based writing materials has focused on many aspects, including sources to support writing (Åberg et al., 2016; Sengupta, 2003), writing environment (J. C. Yang et al., 2005; S.-H. Yang, 2009) and writing approach (Imananda & Rachmajanti, 2006; Silcha et al., 2016). These studies showed that designing a website can facilitate teaching writing, allowing users to customize features and designs based on a particular preference, needs, and purpose to enhance pedagogical practice. Thus, the website can be made exclusively to facilitate teaching and learning writing.

To date, there is a scarcity of holistic set of writing materials characterised by the utilisation of technology-enhanced instructional systems for high school learners in Malang. The current study aims to fill this need by embarking on innovative ways of teaching writing in the Indonesian EFL context, as proposed by (Masduqi & Fatimah, 2017). This study also explores how to incorporate the use of multiple instructional approaches and principles to promote authentic and meaningful writing experiences.

Combining all the above, we want to develop web-based writing supplementary in a learning community atmosphere that will give both learners and teachers tailored opportunities to learn, share ideas, ask questions, and express their knowledge in an environment that is flexible in terms of time, pace and space. It will be equipped with features allowing interactive discussion and writing assistance, writing collaboration, and feedback. The web-based materials will be developed using *MOODLE* (Modular Object-Oriented Dynamic Learning Environment). As a result, E-Writing Site (EWS), the supplementary web-based writing instructional media are expected to have some potential to address the practical issue in real-life teaching and learning writing as well as to contribute to the sphere of instructional materials development.

Method

We employed this R&D (Research and Development) study by using a framework of instructional design by Dick and Carey (2001). This framework was used in conjunction with Lee and Owens' (2004) more detailed version of ADDIE (Analysis, Design, Development, Implementation, and Evaluation). In the first place, the needs *analysis* showed that learners needed more practice in areas such as sentence structure, variety of sentence, paragraph construction, and writing different genres of texts., i.e., descriptive text, review text.

In terms of *design* of the EWS prototype, we adapted some learning approaches: situated-learning environment, social constructivism, independent learning, and gamification. The EWS prototype consists of two main components: Writing Course (WC) and Writing Library (WL). The WC focuses on practicing writing concepts and developing writing skills through reading, enhancing macro skills like rhetorical forms, communicative function, and writing strategy. The WL provides learners with a platform

to publish their work and receive feedback. The interconnected platforms enable learners to access and learn from other writing models.

Following the determination of EWS design, the EWS *development* commenced with establishing the map of materials. To begin, we identified the skill focus based on the needs and preferences of the participants, which included sentence and paragraph construction as well as descriptive and review text writing. Next, the input, content focus, language focus, and tasks were determined. The input is mainly in the form of reading text. The content focus was based on trends gathered from surveying learners and observing social media. The language focus and tasks were selected considering the skill focus and input. Each writing unit also teaches learners specific strategies, which were selected by reviewing the literature.

In developing the materials for section one, writing concepts and theories were explored, reviewed, and summarized, i.e., theories of sentence structure, a variety of sentence structure and paragraph composition. Sample texts were adapted from various sources, such as online newspaper, and personal weblogs. We assembled materials into the EWS website to provide users with a platform for writing. The site features activities and exercises embedded in *MOODLE*, with copyable and downloadable materials designed using Canva. The website's front page includes a welcoming board, dashboard, and My Course page, while the EWS within *Google Site* is designed for learners' work publication. The Writing Site page integrates *MOODLE* sites, while the Writing Library page organizes users' published work based on text type. The educational animator designed the layout and interface.

After production, we tried to *implement* the developed EWS to see whether or not the website has been well established. To do so, we reviewed and tested the website for adherence to the map and design. The technical review ensured that all the materials were correct, covered, and presented in the correct sequence/group based on the content mapping. The instructional review focused on examining the consistency of strategy and design of the materials. The editorial review focused on checking whether the content free from are mechanical or grammatical errors. A standard review ensured that the content follows the standard design. The functional review aimed at testing the website features and system functionality.

In the *evaluation* stage, an attempt to get appraisals for improvement of EWS. Three experts were involved in evaluating the EWS draft simultaneously. These experts included an English teacher, a materials development expert, and an educational technology expert. Two experts were invited for materials validation. The first expert, an experienced teacher with a master's degree in TESOL, works in the materials. An experienced ICT expert and educator, certified by *Google*, conducted media validation on a website using *MOODLE*.

As soon as we finished revising the product based on the experts' feedback and no further revision required, a user evaluation was carried out to get the prospective user's opinion for the usefulness, ease of learning, ease of use, satisfaction (Albert & Tullis, 2022) of the EWS draft II. The user evaluation was carried out with a minimum number of participants of five to allow observation in progressively more authentic settings. The underlying reasons were that despite being a prototype design, large-scale implementation requires extra costs, involving wide networks of 'live' support and an extended research time frame. The evaluation of the website was conducted in two sessions: an in-class session and an out-of-class session.

During the in-class session, participants were given the opportunity to use EWS without specific tasks assigned. This approach provides a more authentic representation

of user experience. Simultaneously, an unstructured observation was conducted by recording relevant data to gain a more holistic understanding of the participants' experiences. At the end of the in-class session, all participants were invited to complete a questionnaire and engage in an informal discussion. The out-class session held a semi-structured interview with the learners who finished one unit on the basis of decided indicators.

Results

Results of Needs Analysis

The needs analysis reveals the need for web-based supplementary writing materials to improve current practices in teaching and learning writing for learners and teachers. Positive attitudes and confidence are evident, but gaps exist in target audience strengths and constraints.

Table 2. Strengths, Constraints, and Needs of the Current Learning and Teaching Situations

Strengths

Learners	They have varying English proficiency levels but is actively seeking opportunities to practice writing, showing confidence in their English skills and a strong motivation to enhance their writing skills.
Teachers	They are familiar with diverse writing activities and are keenly interested in teaching writing skills, including assisting struggling writers.
Situations	They commonly include writing in EFL instruction, possess experience in technology-enhanced language learning, and have adequate technological resources at their disposal.

Constraints

Learners	The group is predominantly female and faces challenges with limited independent writing, lack of familiarity with writing practice, a heavy assignment load, limited engagement with available materials, and inefficient use of the writing process.
Teachers	They have received minimal training in teaching writing throughout their teaching careers, are burdened by excessive teaching and administrative duties, struggle with finding and adapting available writing materials, tend to focus more on form than self-monitoring and self-publishing, and have limited time for providing comprehensive writing instruction to learners.
Situations	They have limited time, face unstructured writing assignments, lack sufficient writing instructions and guidance, are concerned about plagiarism, and tend to rely excessively on machine translation.

Needs of Target Audience

Necessities	They aim to reach a CEFR B1 level in written language proficiency. They want exposure to different text types, including descriptive and authentic texts, to improve their language skills. They aim to understand and create various written communication forms, adapting to their audience and achieving specific goals. They also want to develop academic writing skills, evaluated using rubrics and objective assessment.
Lacks	They require curriculum-aligned writing materials with support and feedback. They seek diverse writing strategies, more writing time, and real-world learning opportunities. They lack chances for online collaboration and prefer materials matching their interests and proficiency. They also need resources addressing sentence structure issues, writer's block, limited vocabulary, and grammar challenges.

Wants	They need more time for writing and want opportunities for written communication and a sense of community among writers. They value extra writing materials, especially for descriptive and review texts, and prefer relevant, regularly updated topics like entertainment. They find peer and teacher feedback, along with various assessment forms for revising and editing, important. Online writing tools, progress-saving options, access to resources like glossaries and plagiarism checkers, and interactive elements like gamification appeal to them, as do interesting visuals, quotes, and writing tips in their materials.
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Table 2 provides an overview of the positive aspects and limitations of the learners and the teaching/learning environment. It highlights the factors that may impact the success of the writing program, such as the proficiency level of the learners, their motivation, and the availability of resources and support. It also outlines the specific needs of the target audience, which are based on their characteristics and requirements as language learners. These needs include additional writing materials that focus on descriptive and review texts, current and engaging topics, reading texts as models, sufficient writing support, opportunities for feedback and publishing, and assessment forms for revising, editing, and reflection. The figure also suggests incorporating online writing tools and interactive materials, as well as providing interesting pictures, quotes, and tips to enhance engagement and motivation.

Results of Observation on Existing Instructional Aids

The researcher observed both existing textbooks and language learning websites. Many teachers during observation admitted that they use their own teaching module instead of standardized textbooks due to convenience. However, these modules often lack quality materials due to inadequate evaluation and adaptation. Teachers face excessive teaching load and administrative responsibilities, limiting their time to find and develop high-quality materials, which may result in suboptimal materials that do not fully meet learners' needs, especially in developing writing skills.

Following the textbooks observation, we conducted website observation and came across a site called writing.com. It is a writer's community website, and it offers writers the opportunity to share their writing and receive feedback from others. However, it may not be suitable for EFL learners, as it lacks materials and is disconnected from the curriculum. Zhang, (2013) suggests that learners prefer peers from similar cultural and linguistic backgrounds, while teachers' intervention is difficult in such environments. Despite this, writing.com provides valuable inspiration for developing a community of writers' websites for the present study.

Another web that caught researcher attention was Thoughtful Learning (<https://k12.thoughtfullearning.com/>), a commercial website specifically designed for writing. The website offers materials in various modes, including written and oral, and covers topics such as grammar, grammar adventure, writing, and learner models. All materials are available for download and are accompanied by specific rubrics and checklists. While the materials are not interactive, key answers are provided and the content is levelled to cater to different proficiency levels.

Inspired by the features offered by Thoughtful Learning, we aim to design a website that focuses on providing step-by-step guidance, key answers, feedback, writing samples, and specific rubrics for different genres of writing. Unlike existing materials, the proposed website will be designed to be interactive, allowing users to engage with

the content and with other users, thus promoting authentic learning activities and collaboration.

Results of Internal Review

The product underwent several modifications as result of an internal review, as seen in Table 3. First, we revised its structure and language to enhance clarity. Specifically, we combined the "objective" and "introduction to the lesson" into a single section labelled "lesson overview," to provide a more concise introduction. This was intended to ensure completeness and accuracy of the objective. Next, the review underwent grammatical and mechanical editing via Grammarly Premium Version to enhance its accuracy and readability.

Table 3. Results of Internal Review

Aspects	Sub-aspects	Action
Technical	-	-
Instructional	Lesson Outline	Simplify the outline by combining objectives and introduction into the lesson overview
	Objectives	Make the objectives and associated activity linear. Objectives are not complete in Unit 1.
Editorial	Mechanical error	Correct spelling and punctuation in writing concept Unit 1, punctuation in instruction, and grammar in model texts.
	Grammar mistakes	Correct the grammar in the materials.
Standard	Theme	Change the theme, make it more appealing and cleaner.
	Font type	Change the font type. Check the font type in the worksheets.
	Design	Redesign the layout of the worksheet by adding colours and icons
Functional	Configuration	Allow self-enrolment, self-registration, notification on teacher's feedback/submission.

The layout of the site also changed from Enlightenment to *Moove*. The consideration was that the *Moove* theme is free yet allowed more personalization options, such as the colour scheme and font type. Texts, backgrounds, and fonts are more uniform, clear, and interesting, potentially increasing the effectiveness of web design (Cook & Dupras, 2004; Macgregor & Lou, 2004).

Some configurations were also changed, like self-registration and self-enrolment settings. These features are suitable for learning platforms intended for community learning. Self-registration allows learners to register themselves, while self-enrolment allows them to enrol themselves in courses. These settings give learners greater flexibility and control over their learning experience and may help to promote a sense of community among learners.

Results of Product Evaluation

The EWS Draft I underwent a series of evaluation intended to examine its quality and validity which refers to the EWS appropriateness and an internally consistent fashion—including any information on clarity and potential impact—of the product, which is useful for the main product revision (Borg, Gall & Gall, 1983). The materials evaluation resulted in quantitative as well as qualitative findings, which are presented consecutively as follows.

The experts evaluated the quality of the materials to which the results are presented in Table 4. The experts evaluated EWS materials as to the following aspects: 1) materials

design—compromising content, language, presentation, and graphics; and 2) course design—consisting of principal and purpose, with each of these aspects compromising several indicators. The data revealed that the sub-variables "Objectives", "Cultural Consideration", "Language", "Visuals", and "Purpose of Development" were rated as "excellent" by both experts, indicating that no revisions were needed for those areas.

Table 4. The Mean Scores of Materials Validations

No	Variable	Sub-variable	Score	Qualification	Action
Material Design					
1	Content	Objectives	100.00	Excellent	No revision
		Input	92.26	Excellent	No revision
		Activity	88.99	Good	Minor revision
		Assessment	87.50	Good	Minor revision
		Cultural	92.19	Excellent	No revision
2	Language	Language	93.75	Excellent	No revision
3	Presentation	Arrangement	79.69	Average	Partial revision
4	Graphic	Visuals	92.19	Excellent	No revision
Course Design					
5	Methodology	Principle	90.63	Good	Minor revision
6	Aims	Purpose	95.83	Excellent	No revision

The feedback from the experts was utilised to revise the courseware to make it more feasible. The points of revision are described in Table 5.

The next step is media evaluation. The media evaluation resulted in quantitative as well as qualitative findings. The experts evaluated EWS media as to the following aspects: 1) the design of e-worksheets, which includes visual design, and 2) the web design, which includes the website's overall rating in terms of accessibility and user interface, interface designs (visual design and information presentation), and system design (personalised learning control and interaction design), with each of these aspects comprising several indicators. The expert evaluations were recorded and presented in Table 6.

Table 5. The Summary of Qualitative Feedback for Materials Revision

Aspects	Action
Activity	<ol style="list-style-type: none"> Re-check for the consistency Re-check answer key and scoring Add sample answers to the open-ended questions Add feedback and reinforcement Make the structure of the descriptive text in outlining the task more explicit Make the guided questions in the planning stages more straightforward (avoid repeating asking similar questions)
Assessment tool	<ol style="list-style-type: none"> Make the statement more simple Make the statement more direct to what is learned in the lesson
Presentation	<ol style="list-style-type: none"> Split the first chapter into smaller units Split the content into three kinds of materials: grammar, mini course, writing course.
Principle of the Development	<p>Write a brief guideline on the Home page stating that the courseware:</p> <ol style="list-style-type: none"> The learners only need to do activities they see fit or need The learners are expected to navigate this material autonomously, with little teacher guidance.

Table 6. The Mean Scores of Media Validation

No	Variable	Sub-variable	Score Worksheet	Qualification	Action
1	Visual Design	Layout	7.50	Good	revision
		Multimedia Elements	00.00	Excellent	ision
		Colour	7.50	Good	revision
		Typography	7.50	Excellent	ision
Websites					
Overall ratings					
1	General	Accessibility	3.75	Excellent	ision
	Statements	User Interface	00.00	Excellent	ision
Interface Design					
2	Visual Design	Layout	7.50	Good	revision
		Multimedia Elements	00.00	Excellent	ision
		Colour	1.67	Excellent	ision
		Typography	00.00	Excellent	ision
3	Information Presentation	Content Information	1.67	Excellent	ision
System Design					
4	Personalisation	Registration	2.50	Poor	Revision
		Customization	0.00	Bad	ement
		Security	5.00	Average	Revision
		Function Button	5.00	Good	revision
		Navigation	3.33	Good	revision
5	Interaction Design	Transition	00.00	Excellent	ision
		Content	2.50	Poor	Revision
		Platform integration	7.50	Good	revision
		Key Features	4.44	Excellent	ision

The expert provided qualitative feedback on various indicators, including indicator related to the efficiency of content information. The expert recommended simplifying the language and a reduction of content information length to improve comprehension for learners and minimise potential misunderstandings. Additionally, the expert noted issues with broken links between activities. The expert also found that the notification system for user feedback was not yet activated. We took these suggestions and made appropriate revisions to address these issues. The points of revision are described in Table 7.

Table 7. The Summary of Qualitative Feedback for Media Revision

Aspects	Action
Layout	<ul style="list-style-type: none"> a. Edit the worksheet in terms of design, layout, typography b. Add symbols to identify the activity corresponding to that of the site. c. Revise the <i>Google Site's</i> interface d. Simplify the content on the Dashboard page e. Rearrange the home page in the information sequence
Personalization	<ul style="list-style-type: none"> a. Provide notification and administrators' contact for sign-up problem b. Maintain the dashboard customization page c. Improve user privacy
Navigation	<ul style="list-style-type: none"> a. Provide General user guidelines on the Home page
Content	<ul style="list-style-type: none"> b. Use Canva to present the embedded files. c. Allow online text submission d. Notify teachers to download the file
Suggestions	<ul style="list-style-type: none"> a. Use the Facebook comment box plugin. b. Upgrade hosting service

Following up the previous quantitative evaluation on “Personalisation”, there were some notes regarding self-registration and customization. An issue with email authentication for self-registration was found. However, the researcher with the help of the IT Expert worked on the issue. Alternatively, a notification with a direct link to the administrator's contact person was provided for prospective users to contact the administrator for manual user account confirmation.

Next, the expert recommended disabling Dashboard page customization so that the learners could focus on learning. We decided to enable such customization with respect to learner autonomy which may benefit learners in terms of self-regulated learning (Roberts et al., 2017). Another rationale behind the establishment of customization is that it offers wide variation in control and flexibility, thus simultaneously foster ownership on behalf of the users. Regardless, *MOODLE* allows administrators to reset Dashboard for all users. Viewing the argument reasonable, the expert agreed with we and so no revision was needed.

The experts also identified some issues with the embedded content in terms of functionality and compatibility. One issue was with the embedded PDF files, which did not function properly on smartphones, a major concern as most learners uses their smartphones to access content. One alternative suggested was to use URL integration with *Google Docs* or web pages (.html), but the web pages format had issues with loading pictures. URL integration with *Google Docs* was another option, but it resulted in layout changes and text coverage. As a result, we explored other platforms, eventually settling on using the embedded feature of Canva.

After inviting the learners and English teachers who had previously participated in the needs analysis process, seventeen learners and two English teachers responded and volunteered to join the user evaluation. The quantitative data is presented in Table 8 for the evaluation scores from the learners and Table 9 from the teachers.

The findings suggest that the website is perceived to be useful and has the potential in enhancing the learning and writing process. However, attention should be paid more to the website. First, it is important improve the accessibility of the website, including the sign-up process and instructions for use, to enhance the learners' learning experiences. Addressing these issues could result in higher satisfaction scores and a more positive experience for users. As for the teachers, the website may need to be further adapted to meet the specific needs of teachers, and clear guidelines should be provided regarding the role of teachers in the learning process.

Table 8. The Evaluation Scores from The Learners

No.	Variable	Sub-variable	Score	Qualification	Action
		Ease of learning	83.46	Good	Minor revision
1	Learning Materials	Satisfaction	79.41	Average	Partial revision
		Usefulness	83.33	Good	Minor revision
2	Interface Design	Satisfaction	82.72	Good	Minor revision
		Usefulness	85.78	Good	Minor revision
3	Experience	Ease of use	81.37	Good	Minor revision
		Satisfaction	84.31	Good	Minor revision

Table 9. The Evaluation Scores from The Teachers

No	Variable	Sub-variable	Score	Qualification	Action
		Ease of learning	96.88	Excellent	No revision
1	Learning Materials	Satisfaction	90.63	Excellent	No revision
		Usefulness	95.83	Excellent	No revision

2	Interface Design	Satisfaction	93.75	Excellent	No revision
		Usefulness	91.67	Excellent	No revision
3	Experience	Ease of use	91.67	Excellent	No revision
		Satisfaction	83.33	Good	Minor revision

The second issue identified by the learners pertained to the interface of the site. They suggested that the layout could be simplified. While they generally appreciated the colour design, which supported (Kuo et al., 2022), they expressed the need of more complementary colour to enhance its appeal. However, it should be noted that the site prototype is built on the *MOODLE* platform, which provides limited options for customization. While it may seem limiting in terms of colour, this decision was made to ensure that the site is optimised for effective learning.

From the teachers, it was suggested to add more pictures. However, the researcher has decided to only include necessary visual aids. This decision was based on consideration of the role of visual aids in enhancing engagement and understanding, while also minimising potential distractions that may hinder learning (Cook & Dupras, 2004). Further exploration may be helpful for the researcher to gather more feedback from both teachers and learners on the effectiveness of the existing visual aids in the learning materials, and to use this feedback to inform any future decisions on whether to include additional visual aids.

To enhance the user experience, it is suggested that the providing clearer guidelines and additional resources would be advantageous in facilitating effective navigation and utilisation of the website's features. The research incorporating textual information guidelines into visual presentation to facilitate effective information processing (Jiang et al., 2017). This pictorial representation was developed prior to the creation of the video tutorials, with the aim of providing a clear and concise visual reference for users.

During the user evaluation, it was discovered that some learners encountered difficulties during the registration process on the website, which led to them spending more time than anticipated to complete this step. The learners reported needing approximately 30 minutes to sign-up as well as to explore the different features and functionalities of the website, which they attributed to their unfamiliarity with the website's layout. It is suggested that the website would benefit from a more intuitive and streamlined user interface that would help learners navigate and access the materials more efficiently.

Final Prototype

The project resulted in main site of the EWS Prototype. It consists of three sections that provide a comprehensive approach to supporting writing instruction, as presented in Figure 5.

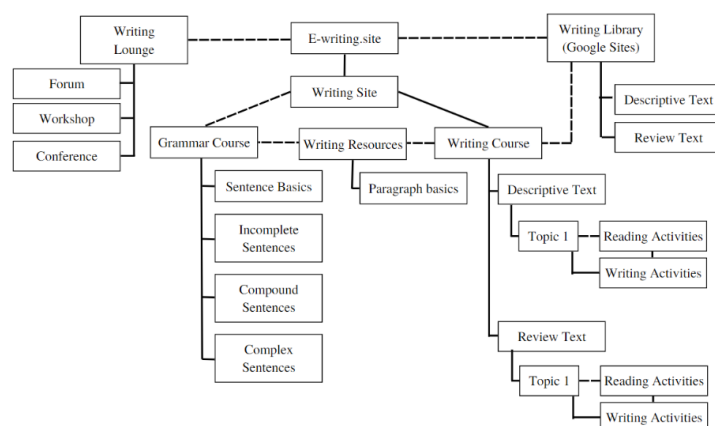


Figure 5.

Final Materials Content Outline

The materials outline falls into three categories: supplementary courses consisted of (1) writing resources and (2) grammar courses and obligatory courses consisted of genre-specific writing. The dashes in Figure 5 indicate that materials are not always required. It demonstrates that users can immediately go to the writing activity.

The first section focuses on grammar materials, which is essential for developing strong writing skills, as grammar is the foundation of effective writing. Providing learners with an understanding of grammar units relevant to different writing genres will better equip them to produce high-quality written work in a variety of contexts. In this prototype, grammar course provides learners with activities that help users to learn constructing simple sentences and avoiding sentence fragment to more variety sentences (compound and complex sentences).

The second section of the main site is the writing resource, which focuses on writing concepts such as paragraph structure, editing, and revising. These concepts are crucial for developing the overall writing skills of learners and can help them to improve the quality of their work. With a range of mini courses, the site caters to the needs of learners at different levels of proficiency. In this prototype, the focus is on constructing coherent paragraph.

The writing texts section of the E-Writing Site Prototype I offers a wealth of resources to support learners in their writing development. By providing reading-writing materials focused on model text analysis, writing strategies, the writing process, and authentic resources, learners can gain valuable insights into how to approach different writing tasks. In addition, the section includes other learners' published work, which can serve as models and inspiration for learners looking to improve their own writing skills. This section is particularly useful for learners who are looking for inspiration for their writing. Further, the Writing Lounge provides users with space for general discussion, writing workshops, and writing conferences. The Writing Library as side website consisting of writing publications is another essential aspect of the EWS Prototype I. It connected to the e-writing site, vice versa. It provides a platform for learners to share their work and receive feedback from a wider audience, creating a more authentic and engaging learning experience. Additionally, it helps to develop learners' sense of audience, which is a vital skill in writing. Receiving feedback from a broader range of readers also assists learners in identifying areas for improvement and further refining their writing skills.

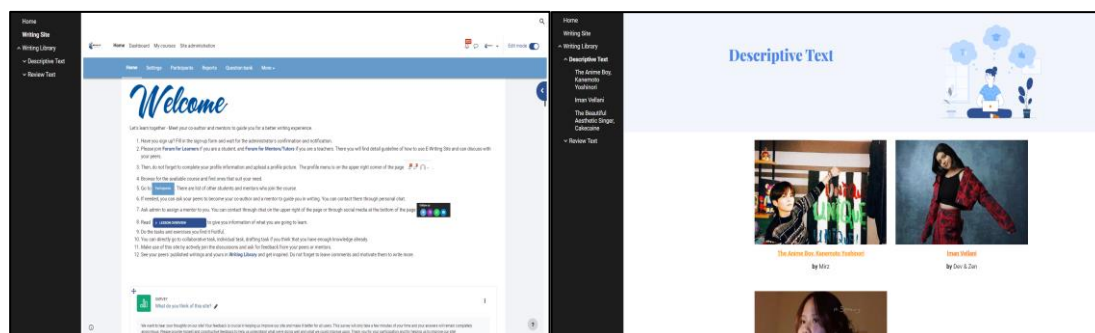


Figure 6.

Integration of Moodle and Google Site

Discussion

This section presents the discussion of the developed product, which in part gives the answer to why it was developed and deals with aspects and quality of EWS. Additionally, the section highlights the key issues that arose during the EWS's development.

The EWS project is an initiative that leverages technology to implement learning theories and principles, with the aim of bridging the existing disparity between the current state and the potential of writing instruction. Traditionally, learners received guidance from teachers. Often, such guidance was general, situational, contextual, and problem oriented organized in classroom sessions. This was due to the common constraints of time limitations and overcrowded classes in the EFL learning environment, which certainly did not allow for any meaningful language skill practices to take place. Insufficient materials and topics were also insufficient, causing low motivation and remoteness from students' interests and experiences. Despite teachers providing various materials, there was a lack of critical examination and weak planning, further exacerbated the situation.

In addition, paper-based learning was time-consuming and impractical thus not always a satisfying way to help learners and teachers alike. While technology has been incorporated into writing instruction, the researcher noted that it has not been fully utilized. Consequently, the teaching and learning of writing remained a challenge. With e-learning materials, such as EWS, these issues could potentially be addressed and improved upon, leading to a potential revolution in the way writing is taught and learned.

The project focuses on providing holistic writing materials that foster personalized, interactive, and collaborative language learning. The project's characteristics include closeness to users' needs, implementation of various instructional strategies, and utilization of various platforms. The data analytic feature offers valuable insights into the design of learning, revealing how students actively select and utilize resources. This approach has the potential to benefit users and encourage further discussion on web-based instructional materials for teaching and learning writing skills.

Instructional Writing Materials

These materials are presented functionally in the sense that they serve what they are designed for, i.e., offering a comprehensive set of writing materials including grammar instructions, writing resources and genre-specific writing. Graham and Perin (2007) suggests that instructional materials should include a variety of components to cater to individual learner needs. To address this point of functionality, the instructional materials' writing scripts were developed by adapting the Dick and Carey models of materials writing combined with Lee and Owens of multimedia instructional design. The scripts, which have been validated by materials experts, are divided into three sections.

The first two sections of the instructional materials designed for low-level proficiency students include grammar courses and Writing Resources, which focus on sentence-level construction and sentence combining. Grammar Course equips learners with the necessary knowledge and skills to use English grammar accurately and effectively. Writing Resources focuses on developing specific writing skills, including paragraph construction, topic sentences, supporting sentences, and concluding sentences. These exercises and tasks reinforce concepts and encourage collaborative learning, ensuring students develop essential writing skills in English. Section three for genre-specific writing was designed for students to write specific genre texts. Currently, the prototype

comprises two units, i.e., descriptive and review texts. These units include reading-to-writing activities that have been specifically designed to help learners who may still need to learn the rhetorical forms and structures of the target genre.

The sequence of activities takes different forms depending on the section. Section one and two were provided to accommodate the ESA with which learners learn to write sentences and one paragraph level construction, a mini composition in nature. With these ESA activities, learners practice the concept in interactive exercises to be done individually and activate their knowledge through application in writing tasks to be done both individually and collaboratively. Therefore, learners have the opportunity to practice their skills by working out the activities in such a way that there is a balance as to the use of both form-focused and meaning focus activities. In this way, learners can develop both their language accuracy and proficiency, as well as their communicative competence.

Section Three was designed to accommodate the three-phase reading technique within PGA framework with which learners learn to read and write a specific genre text. The reading activities scaffold learners in analysing the rhetorical forms of a model text, understanding how the writer addresses the text's purpose and target audience as well as how the writer organizes and develops ideas using specific writing strategies, i.e., mind mapping and journalist's questions. The scaffolding and peer review process are both central features of the Process-Genre Approach, which emphasizes the importance of understanding both the writing process and genre conventions in order to produce effective written works (Badger & White, 2000; Graham & Perin, 2007), allowing them to become more confident and proficient writers regardless of their level of proficiency (Kurniasih et al., 2022).

Instructional Media to Deliver the Materials

Being part of the instructional design, the website was intended to enhance learning and teaching conditions on the part of both students and teachers. It was designed to be flexible, attractive, and authentic by taking advantage of several learning platforms such as *MOODLE*, *Google Site* and *Google Docs* and software applications such as *Canva* and *I-Spring*.

For educational reasons, second most used tool is a free customized learning management system (LMS) and *MOODLE* (Ghounane, 2020). *MOODLE* is highly adaptable, allowing for both personalization and cooperation. The platform's open-source nature and large user community allow for additional customisation. *MOODLE*'s dynamic content, rich material sources, and self-paced learning provide students with a compelling and individualized learning experience. Through record-keeping tools, it also aids in assessing learning progress and identifying areas for growth. Data analytics, action logs, and surveys can help understand user involvement and behaviour.

The website was created to enhance accessibility for learners by providing downloadable and editable materials through *Google Docs*. These materials are linked to authentic resources and model texts created by other learners, promoting a relatable and meaningful learning experience. *Google Site* is used to showcase learners' work and receive feedback from a wider audience, helping them develop a sense of audience and maintain a portfolio of their work. The website also incorporates gamification through quizzes and interactive exercises with immediate feedback and grading, encouraging learner motivation and independent learning.

The Overall Quality of the EWS

This set of EWS developed has answered the need for web-based supplementary writing materials so that reorienting the teaching and learning of writing in a more meaningful and authentic way can be embodied. However, the degree to which it may be labelled as valid, practical and have potential impact is difficult to pinpoint to this phase 1 of EWS development. The experts and users' reactions showed that EWS, to some extent, does meet the criteria of validity and usability, but not without certain caveats.

The experts generally valued the appropriateness of the materials which help learners understand the concept and engage with the learning process. Similarly, participants also generally found the learning materials easy to understand. Whereas some concern was expressed that EWS did not always provide easy to learn explanations. This highlights the need for alternative ways to explain the instructional materials, such as incorporating illustrations in the form of pictures or videos to foster multimodality and embedding written information into visual displays to encourage active learning, as proposed by (Jiang et al., 2017).

Most participants felt that the materials were congruent with their learning needs so that they could see the potential benefits of using EWS as a tool to improve their writing skills and would expect to see more varied and interesting activities. Certainly, e-learning has the merit of personalised learning materials, but at the same time it is among the two main challenges of e-learning (Moubayed et al., 2020). Thus far, determining where EWS's validity and practicality should be placed on a quality continuum remains difficult.

The participant reactions indicate that the interface and system are subject to less dispute than the content of the program, interestingly. While most were satisfied with the interface, opinions varied with respect to the system design. Most participants reported minimal issues with the alternative scenario; however, to some users, the website was not easy to use and access despite the instructions being quite understandable. While the majority appreciated the interactive activities and interconnectedness of the content, as well as the features of the website, they also expressed the need for more time to become familiar with it and expected a more streamlined design.

Issues in Introducing the New Tools: Learning Engagement

The website was designed with several platform integrations to provide learners with rich material sources in a more interactive, authentic and meaningful learning environment, thus it was expected to be engaging and motivating for learners to learn. Nonetheless, in general, this research took the stance with that of Stockwell (2013) and Stockwell and Reinders (2019) saying that the implementation of technology and its impact on motivation are somewhat more complex and go beyond what is evident by much literature.

The teachers' participation was far less dominant than that of the learners. Teachers would need to be more involved as their presence is imperative in an online learning environment, especially for writing (A. Herrington & Herrington, 2005; J. Herrington, 2006). In a study by Zhang (2013), it was found that while most participants enjoyed online discussions, some were lost without guidance from teachers. As learners highly value teachers' knowledge (Zhang, 2013), teachers can respond to learners' comments to clarify or at least keep the discussion going. Such scenarios will likely keep teachers actively checking the discussion; learners will notice that the teachers are online and available for necessary support. This stance is supported by Stockwell (2013) in that the

inability to address problems as they arise can inadvertently damage learners' motivation to study. Furthermore, Silcha et al. (2016) assert that teachers' participation in online discussions can contribute to maintaining a positive learning environment. This is because teachers' active participation can help to model appropriate behaviour, encourage respectful dialogue, and provide support and guidance to learners.

It should be noted, however, that the learners evaluated the courseware less favourably than the teachers. They exhibited 'delayed' engagement during initial introduction to EWS. This was the case since the learners were initially disengaged upon facing difficulties when signing up. Indeed, access is found among the problems of utilising technology in language learning (Bhuana & Apriliyanti, 2021). Nonetheless, their view changed upon receiving technical support, as reported during the interview. The provision of immediate support, indeed, has been shown to retain learners' engagement and interest, as highlighted by Stockwell (2013). In a similar vein, Shadiev and Yang (2020) assert that timely and relevant support needs to be provided to prevent negative perceptions when learners encounter technical difficulties upon trying new technology.

The survey results indicated that learners experienced distress as they required more time to become familiar with the new tools' features and layout, which hindered their performance. The survey and interview results indicate that learner participants held negative attitudes towards the ease of use and negative view on the layout. This was likely due to the absence of ample time of training in using the new tools (Shadiev & Yang, 2020). As such, course developers and instructors should consider implementing adequate training (Joy et al., 2020), providing online tutorials, introducing technology gradually, and making technical support readily available to ensure that both learners and teachers can execute the program well, thereby fostering participant engagement and positive perceptions of the courseware (Bahari & Gholami, 2022; Shadiev & Yang, 2020).

Despite their initial negative impressions, the findings also indicate that the use of technology can increase both the amount and quality of engagement as evidenced by much literature. In the context being studied, learners demonstrated increased behavioural engagement upon trying out the EWS, even for learners at no and beginner level. This was observed in the discussion for warm-up activities to which learners showed engagement to interact with peers despite the pressure to use English. First, this echoed (Takahashi, 2008) in that learners' good self-perception on English as well as writing, lower anxiety that refrain them from 'speaking' in target language. This is also possible since asynchronous interactions offer a less threatening atmosphere thus benefiting learners' engagement in class discussions (Chen, 2016; Zhang, 2013). Additionally, topics that are seen as personally engaging and relevant serve as factors that promote both enthusiasm and a readiness to engage, underscoring the significant role of interest as a 'task-facilitating emotion' (Reeve, 2012).

Further, the opportunities for asynchronous and synchronous interaction are, indeed, among most important part of e-learning (Jung, 2011, as cited in Stockwell, 2013) leading to behavioural engagement (Luan et al., 2020) to which many e-learning situation has found to be lacking (Stockwell, 2013). Interacting with real people and being part of a community, overcoming isolation, deemed as a possible factor in enhancing and sustaining motivation in online learning (Hollister et al., 2022).

Learner-instructor interaction is the heart of learning while learner-learner interaction is key to successful learning (Kennedy, 2020). In the present study, both were observed with the latter more frequently occurring than the former. As Zhang

(2013) noted that learners often feel apprehensive about using inappropriate language or register and making errors when communicating with their instructors through written means, despite the importance of teachers' presence in an online learning environment (Chakraborty & Nafukho, 2015; A. Herrington & Herrington, 2005; Stockwell, 2013; Zhang, 2013).

While this technology-mediated interaction benefits most learners, it impedes some others, as indicated by the findings that few learners were not engaged in the discussion. Zhang (2013) found the fear of making mistakes and having them permanently recorded may cause anxiety and hinder engagement. The pedagogical implication that follows from this could be that a supportive learning environment should be maintained. Debattista (2018) highlights that participants should be made aware of regulation, policies and ethics to build a community that supports teaching and learning. Also, instructors' intervention should be made available (Silcha et al., 2016; Zhang, 2013) without burdening the teacher's workload as Suharyadi et al. (2020) and Widiati et al (2021) and Stockwell (2013) assert that teachers themselves are individuals who face daily pressures be it from institutional or personal goals.

It is important to mention that the researcher cannot discard the possibility that the participants, both learners and teachers, engaged in 'impression management' behaviour during the evaluation sessions (Franz & Neves, 2019) thus giving overly positive feedback as to reduce confidence in the findings. When learners are physically present in a classroom setting, they may feel a sense of accountability and motivation in ways that learners modify their behaviour to portray themselves in a positive light and stay engaged on the task at hand, even when they are not being monitored closely by the teacher. Stockwell (2013) and Stockwell and Reinders (2019) argue that learners engage actively under 'supervised' conditions than they would otherwise be the case. Yet, the outcomes and dynamics in situations where teachers are indirectly present are somewhat less clear, potentially impacting their performance and engagement as has been extensively discussed in the literature.

Active engagement in out-of-class activities has been found to be closely associated with successful language development (I. Lee, 2017c; I. Lee et al., 2018) highlighting the importance of out-of-class learning in education. However, this poses the second main challenge in e-learning (Bhuana & Apriliyanti, 2021; Moubayed et al., 2020). This challenge is particularly evident in massive open online courses (MOOCs) (Jordan, 2014) and authentic learning environments (A. Herrington & Herrington, 2005) It should be noted, however, that engagement is a complex and evolving process that occurs over various periods, and the trajectory of engagement may vary depending on the level of detail and perspective used to study it (Sulis, 2022).

The result of the present study, similarly, dealt with the issue of engagement during out-of-class evaluation. The findings echoed a study by Zyad (2016) who found that while learning management systems (LMSs), such as *MOODLE*, can extend learners' discussions and course activities beyond class time, and enable continuous qualitative control of the mastering of the material, the patterns of engagement varied from high to poor. In similar vein, Sinaga and Pustika (2021) noted that despite *MOODLE* utilization getting favourable, learners find it difficult in the implementation of learning beyond classroom setting. The trends observed here closely resemble those in Appel and Mullen (2002) study which noted that individual learners engaged in e-learning outside of a classroom setting sent fewer messages than when they interacted with the platform during class. In certain instances, message activity ceased entirely, and only highly motivated and responsible learners continued to utilize e-learning beyond the

classroom. This was likely due to all the work they undertake is self-directed whereas learners lack self-management is often identified as culprits for low engagement in e-learning among learners (Joy et al., 2020; Sinaga & Pustika, 2021)

As Herrington (2003) explains, authentic learning has renewed interest and benefit learners, but not without problems that may cause delayed engagement. She further argues that this possibly due to an unfamiliar and discomforting shift from teacher-centred modes of instruction to learner-centred learning, notably for Asian learners that were usually other-ruled than autonomous learners (Zhang, 2013). Further, A study by Cirocki et al. (2019) reveal that many upper secondary learners were generally not familiar and not ready with the concept of autonomy coupled with moderate motivation, skills and competences. Thus, findings are in line with what has been highlighted by Stockwell and Reinders (2019) stating that it appears highly unlikely that technology will directly foster autonomy; Rather, technology holds the potential to offer opportunities for engagement with the target language to learners who already possess a certain degree of autonomy. In similar vein, a study by Azmi (2017) suggests that the digitalization of class content for productive written skills is more likely to benefit high-achieving learners.

As such, serious effort should be made to adapt the use of ICT to meet the learners' requirements, notably the needs of low achievers; otherwise, learners with low motivation or bad study habits may fall behind (Azmi, 2017). J. Herrington and Oliver (2000) suggests that providing teacher and peer support in the early weeks of immersion can be effective strategies to assist learners who may be hesitant to engage with learner-centred learning. In the context being studied such strategies have been implemented and achieved initial engagement. Thus, for sustaining the motivation to learn, there may be a need for welcoming participants to encourage interaction as well as regulation and role awareness (Debattista, 2018). Further, it has been long argued that motivation is subject to influences from social support systems (Williams & Burden, 1997) notably in the case of writing tasks (Goodson, 2012). As previously alluded, Stockwell (2013) suggests that context plays a crucial role in changing how writing is taught, or in this context, learned. Thus, it may be necessary to require support from differ stakeholders such as policy makers, institutions to teachers as well as parents, if possible, for it to be successful (Graham, 2019; Joy et al., 2020). In fact, *MOODLE* offers features that can facilitate parent involvement in this process. Additionally, according to Zyad (2016), even an LMS can contribute to learner engagement in outside classroom activities, and engagement would be even greater if there were rewards for their invested efforts.

It is important to note that only one learner requested help during the writing process, citing shyness at the prospect of having their writing read by others. This raises an important point: as Goodson (2012) argue, effective writing often requires learners to feel comfortable throughout the writing process, including sharing both early and late versions of their work. Unfortunately, many learners lack experience in discussing their writing blocks and feel that asking for help is a sign of weakness. Whereas it could potentially enhance their writing quality and thereby confidence in publishing their work. In such cases, pseudonyms and anonymity can be another alternative effective teaching strategy that not only reduces anxiety (Beauvots, 1995 as cited in Stockwell, 2013) but also induces higher online participation (Miyazoe & Anderson, 2011; Ting, 2023). By incorporating such strategies, learners may feel more comfortable interacting with their peers, discussing their work, seeking help, and improving their writing quality.

Conclusion

This research has resulted in the development of a prototype of an E-Writing Site (EWS). The EWS prototype has the potential to enhance the teaching and learning of writing. While the website was recognized as important by all users, many did not engage with it further. Thus, it needs the significant role of effective teaching practices, which remain primarily the responsibility of teachers, especially in traditional classrooms. Therefore, teachers should be able to utilize the strengths of both online and traditional teaching to maximize engagement, motivation, and ultimately improve learning outcomes. It is important to note that all participants, including both learners and teachers, expressed a desire for more improvements in various aspects of the EWS. Their suggestions for enhancement reflect their appreciation for the website and its potential. This feedback provides valuable insights for ongoing development and refinement, ensuring that the website can meet the evolving needs and expectations of its users.

We admit that the short duration and limited sample size in this study make it difficult to generalise the findings, and further research is necessary to validate them. This is possibly true since the sample method employed was convenient snowball sampling, which relies on the interest, availability and willingness of participants to participate in the study may have been subject to the possible bias. The participants had interest and good confidence in learning EFL writing. Hence, our participants' needs and interests, as well as their attitudes towards EFL Writing and technology and level of digital literacy may not be representative of the general population. Further, the data for needs analysis was limited to 286 students and twelve teachers in Malang. Further research may benefit from involvement of wider audience, not only students but also teachers. It may also conduct collaborative data analysis and interpretation that were carried out in conjunction with other parties, including research assistants, developer group, and critical friends, in order to minimize the possibility of systematic error. This can also mitigate the potential influence of (any) personal biases to which the issue in the present study raised in the following.

The present study was based on assumption that high school learners and teachers are aware of the elements of teaching and learning of writing, therefore, understood the basic concepts underlying each item and share similar understanding. It was also difficult to determine whether teachers practise appropriately and if it was effective, although assumption was made under consideration of other items, such as teaches reported lack of training. In this regard, the next research needs to add extensive descriptions of each item. It also needs to be supplemented by research data where practices are observed rather than solely self-reported because it potentially become subject to response biases and may not always accurately reflect participants' actual behaviours or experience. Further, it may require validation from learners' views. Nonetheless, these would have required the use of an extensive or even a different research methodology.

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