

# CHAPTER I

## INTRODUCTION

In this chapter, the following topics will be explained. This chapter contains the background of the study, identification of the problem, limitations and focus of the study, research questions consisting of three questions, aims of the research consisting of three aims, and the importance of the study theoretically and practically.

### **1.1 Background of the Research**

The ability to write in English is one of the basic skills that is important for junior high school students to master, especially in facing the 21st century curriculum. Writing skills support the development of critical thinking, reflection, and effective communication, which are essential competencies in modern education (Manidaki & Zafiri, 2021a, 2021b). Studies show that students who practice writing regularly through digital media, such as blogs or websites, show significant improvements in their writing structure and critical thinking (Fahri, 2022). Therefore, the development of web-based tools can be an innovative solution in facilitating the improvement of junior high school students' writing skills in a more interesting and interactive way.

Writing skills were chosen in this study because it has the highest cognitive complexity compared to other language skills. Writing integrates understanding of grammar, vocabulary, logical structure, as well as critical and reflective thinking skills that are essential in the academic and professional world (Yulvia et al., 2024). Research by Al-Jiboury (2024) confirms that writing skills not only support academic achievement but also strengthen reading and systematic thinking skills, making it an important foundation in English language learning for secondary school students. Thus, a focus on developing writing skills not only impacts students' exam performance but also prepares them for global literacy challenges that demand the ability to express ideas in writing clearly and effectively.

Writing is considered one of the most challenging skills for students because it requires careful attention to detail and adherence to specific standards at every stage. These standards include word choice, grammar, coherence, and cohesion (Sa'adah, 2020). Supporting this, research by Nico Setyono et al. (2021) found that most students face difficulties in various aspects of writing, such as grammar, vocabulary, mechanics, content, and organization. These findings highlight that writing is a complex skill and that many students struggle to meet the required standards, emphasizing the need for effective teaching strategies to help them improve their writing abilities.

The results of preliminary research from interviews with two eighth-grade English teachers at SMP Negeri 1 Patrol confirmed the urgency of creating a learning tool for writing skills. Interviews with two junior high school English teachers revealed that technology integration, particularly through websites, is highly relevant in addressing these challenges. The first teacher (G1) emphasized that *“learning using websites is very important, even essential, because we have now entered the digital era”*. Similarly, the second teacher (G2) stated that *“the use of digital media, particularly websites, is very useful and effective... today’s children are very close to digital media such as smartphones and computers”*. These statements demonstrate that teachers recognize the importance of adapting English learning to the characteristics of the digital generation, who tend to be more interested in bold media.

The use of technology in English language learning contributes significantly to increasing students' motivation and learning outcomes. In a recent study, the use of Web 2.0 tools was shown to be effective in increasing students' motivation and narrative writing skills at primary and secondary education levels (KIZILTAŞ & KULTAS, 2025). For example, the implementation of technologies such as Google Sites allows students to write collaboratively and receive immediate feedback, which results in improved writing skills (Wati & Trisusana, 2024). Thus, the integration of technology

through educational websites is considered very potential to be further developed in the context of learning in secondary schools.

Although many approaches have been taken, there is still a gap in the availability of learning tool that is contextualized and tailored to the local needs of junior high school students. Research by Cupido & Anthonissen (2022) shows that multimedia approaches through learning websites can improve creative writing literacy, especially in learners with limited access to textbooks. Specially designed educational websites allow for the integration of local content, automatic evaluation and self-learning, which addresses the challenges of learning English in resource-limited areas (Martinez, 2020). Therefore, it is important to conduct development research to create a learning website that suits the needs of grade 9 junior high school students in Indonesia.

This research is also relevant in the context of online learning after the COVID-19 pandemic, where the use of digital media has become an integral part of learning activities. According to Rodzi & Said (2024a), platforms such as Write & Improve have been shown to significantly improve the grammatical accuracy and organization of students' writing in online learning. Under these conditions, the development of a website as a medium for learning English writing for junior high school students becomes increasingly important and relevant to be researched and implemented systematically.

Grade 8 students were chosen as the focus of the study because they are in the transition stage of junior secondary education, where literacy skills determine success at the next level. Studies show that by the age of 15 (which is identical to grade 8), students face increasing academic challenges and require advanced literacy competencies to be able to compete globally (OECD, 2023). In the PISA 2022 report, Indonesia only achieved an average score of 371 in reading literacy, well below the OECD country average of 476, and more than 70% of participating students were from the junior high school level (OECD, 2023). This indicates the importance of developing

innovative learning tool such as websites, to strengthen students' writing literacy at this crucial phase of education.

Websites as learning tool have become an increasingly relevant solution in supporting the development of English writing skills, especially aids the changing learning styles of the digital generation. Web-based media allows students to access materials anytime and anywhere, adapting to the learning habits of the current generation who are more familiar with technology (Novia et al., 2024). Research by Wardani and her team shows that the use of platforms such as Wordwall-based websites is not only effective in improving writing skills, but also strengthens the understanding of vocabulary and sentence structure through fun interactive exercise features (Novia et al., 2024). Thus, a specially designed educational website can bridge students' academic needs and digital habits, while increasing their motivation in learning to write English independently and creatively.

The previous studies related to the development of English writing skills among students can be grouped into several thematic clusters. The first cluster is Technology Use to Support Writing Skills, where researchers explored the application of digital platforms and general tools to assist writing activities, such as in the studies by Manidaki & Zafiri (2021c), Demirel et al. (2023), Izzah & Febriyanti (2023), Azlan & Yunus (2020), Kabaran et al. (2019), Tu (2022), and Vula et al. (2024). The second cluster is Collaborative Writing and Feedback Integration, focusing on the enhancement of writing skills through collaborative online activities and feedback mechanisms, as examined by Li (2023), Zhang (2022), Jee & Aziz (2021), and Liu (2023). Another important group is Motivation and Student Engagement through Digital Media, where studies by Göçen (2019), Aladini & Jalambo (2021), Phyu (2024), Basurto et al. (2024), and (Hidayati, 2018) emphasized how creative methods and digital tools can foster students' motivation and active participation in writing tasks. Additionally, there is the Use of Advanced or Emerging Technologies in Writing, including the innovative application of augmented reality and automatic assessment systems investigated by Al-

Hazmi & Al-Najami (2024) and A. Rodzi & Noraini Said (2024b). Finally, the Writing Skills and Academic Performance Relationship cluster, as seen in the works of Niyibizi et al. (2024) and Ba-Omar (2024), explored the correlation between students' writing competencies and their overall academic achievement. These clusters highlight that while numerous studies have positively impacted writing skills development through various methods, few have focused on the creation of a dedicated website tailored for 9th-grade junior high school students, thereby presenting a significant gap for the current research project.

Recent reviews of prior research (Göçen, 2019; Manidaki & Zafiri, 2021; Rodzi & Said, 2024) have revealed several critical research gaps concerning the development of English writing skills using digital media. Firstly, most studies tend to utilize existing digital tools such as Web 2.0 applications, social media platforms, or storytelling methods, rather than developing a dedicated website tailored specifically for junior high school students' writing development. Secondly, very few studies focus specifically on 8th-grade students, with most research directed towards undergraduates, general EFL learners, or elementary-level students. Thirdly, while engagement and motivation are frequently addressed, structured academic writing development—including aspects like paragraph organization and grammatical accuracy—remains relatively underexplored. Furthermore, there is a notable absence of integrated collaborative and feedback features within the learning tool utilized in previous studies. Additionally, no study was found to standardize or design a custom-built website focusing exclusively on English academic writing for junior-level learners.

In line with these gaps, three main critiques can be presented. First, most prior studies (e.g., Manidaki & Zafiri, 2021; Wardani et al., 2024) relied on general existing tools such as Google Docs or Wordwall without designing a specialized writing website. This limits the ability to address specific pedagogical needs such as writing scaffolds, feedback automation, and peer editing. Second, research on writing skill improvement often targets

university students (Azlan & Yunus, 2020; Izzah & Febriyanti, 2023) rather than junior high school learners, particularly 9th graders, who are at a crucial transition into academic and analytical writing. Consequently, methods designed for older students may not be developmentally appropriate for younger learners. Third, although feedback is critical for writing improvement (Hyland, 2019; Liu, 2023), prior studies such as those by Li (2023) and Zhang (2022) either relied on external teacher interventions or developed feedback systems that were separate from the writing platform itself. An integrated feedback system within a writing website would better enhance learners' autonomy and support effective self-directed learning.

This study "Developing a Website as a Tool to Enhance English Writing Skills of 8th-Grader Junior High School" is crucial because it addresses all these identified gaps. It proposes the development of a custom-made educational website, specifically tailored to the academic writing needs of 8th-grade students. Unlike previous studies, this research integrates real-time feedback, writing scaffolds, and peer collaboration features into a single dedicated platform, aiming for measurable improvements not only in motivation but also in academic writing competence, including organization, grammar, vocabulary, and critical thinking. Addressing these issues ensures that digital learning interventions are developmentally appropriate, pedagogically targeted, and supportive of junior high school students' transition to more complex academic literacy tasks.

This study aims to design and develop a website specifically to support the writing skills of eighth-grade junior high school students. Utilizing emerging technologies, this study will define student needs and then use these as a reference in developing the characteristics and features of the website itself.

## **1.2 Identification of the Issues**

Building on the gaps identified in previous studies, the present research aims to develop a website as a tool to enhance the English writing skills of 8th-grade junior high school students. Unlike previous research

projects that often-included experimental trials and broad participant scopes, the current study will specifically concentrate on the design and conceptual development of a website without conducting experimental implementation or field trials. Due to time constraints and practical limitations during the writing process, this study will not engage in a full testing phase. Additionally, the subject focus is strictly limited to 8th-grade junior high school students, acknowledging that this group is at a pivotal stage for preparing for more advanced writing requirements in senior high school and beyond.

### **1.3 Delimitation and Focus of the Study**

This study only examines the development of a website for training writing skills. The data obtained is also limited to one 8th grade class and two English teachers at a junior high school in Patrol. This study is also limited to the initial design stage and will not test or implement the results in class.

This study focuses on identifying students' needs to help develop their writing skills. After that, this study focuses on the characteristics and features of this website based on the results of the needs analysis that has been carried out. Finally, this study creates a website based on the characteristics and features obtained from the results of the student needs analysis.

### **1.4 Research Questions**

Based on the gaps in previous research and the limitations and focus of the research above, the research questions can be formulated as follows:

- 1) What are the needs and challenges faced by 8<sup>th</sup>-grade junior high school students in learning English writing skills?
- 2) What are the characteristics of YourWrites as a tool to enhance English academic writing skills of 8<sup>th</sup>-grade students?
- 3) How to develop YourWrites as learning tool that interests junior high school students and supports their writing development?

### **1.5 Aims of the Research**

From the research questions above, the objectives of this research are as follows:

- 1) To identify the needs and challenges faced by 8<sup>th</sup>-grade junior high school students in learning English Writing skills.
- 2) To explore the essential characteristics and features of YourWrites as an effective tool for enhancing English academic writing skills among 8<sup>th</sup>-grade students.
- 3) To develop YourWrites as learning tool that is attractive, accessible and pedagogically suitable for 8<sup>th</sup>-grade junior high school students to support their English writing development.

## **1.6 Significances of the Research**

There are two significant outcomes expected from this study, covering both theoretical and practical aspects, which are intended to benefit teachers, students, and future researchers.

### **1.6.1 Theoretically Significance**

This study will contribute to the body of literature in Teaching English as a Foreign Language (TEFL) by providing insights into the development of web-based learning tools specifically designed to support English writing skills. By focusing on the conceptualization and design aspects, the research addresses the existing gaps regarding how customized digital platforms can assist in language learning, particularly academic writing for junior high school students. It extends the theoretical framework by offering a clearer understanding of the features and structures that educational websites should possess to foster better writing outcomes in the digital era.

### **1.6.2 Practically Significance**

This study offers valuable guidance for educators and educational technology developers. For teachers, it provides design-based recommendations on the characteristics that should be prioritized when selecting or creating digital learning resources for writing instruction. While the developed website is conceptual, the outlined features and pedagogical considerations can assist educators in identifying effective components for integration into classroom practices. Furthermore, it offers developers

practical insights into creating more accessible, engaging, and pedagogically sound web-based writing platforms tailored to junior high school learners' needs, thus contributing to future improvements in language education technology.

## **1.7 Theoretical Foundation**

By addressing a notable gap in the existing literature on web-based educational tools aimed specifically at enhancing students' English writing skills, this study contributes meaningfully to the growing body of knowledge in language education and educational technology. Through the exploration and identification of effective web-based learning resources, this research offers deeper insights into how digital tools can facilitate language development, particularly in writing. Furthermore, it enriches the theoretical framework for integrating technology into language instruction by presenting new perspectives on both the pedagogical benefits and the instructional challenges associated with the use of web-based writing platforms.

### **1.7.1 Definitions of Website According to Experts**

As information technology evolves, the understanding of what constitutes a website also continues to develop. Scholars have provided definitions from various viewpoints, which, while distinct, often share complementary insights.

Yudin et al. (2025) describe a website as a digital resource that connects documents both locally and globally. They further explain that users navigate through these documents using hypertext links, which may reside on the same server or on different ones. This highlights the interconnected nature and navigational capabilities that are central to websites. Hence, a website functions as an integrated information ecosystem that is easy to access.

Meanwhile, Rahmi et al. (2023) define a website as a collection of informational pages made available through the internet, accessible from any location as long as there is a network connection. This emphasizes the role of the internet as a primary infrastructure enabling universal website

accessibility, eliminating geographic constraints. Thus, internet connectivity becomes a key element in utilizing a website's full potential.

Additionally, Hakim & Meilina (2022) describe a website as a hypertext-based platform for presenting various types of content, including text, images, audio, animations, and other multimedia elements. These elements are interconnected to provide users with an engaging and dynamic experience. This definition highlights the website's capacity to deliver multimodal information in an interactive format.

Based on the perspectives of Yudin et al. (2025), Rahmi et al. (2023), and Hakim & Meilina (2022), a website can be defined as a multimodal digital platform composed of interlinked informational pages via hypertext, hosted on servers, and universally accessible via the internet. It serves as a medium for displaying and navigating various forms of information while enabling interactivity—capturing the essence and function of websites in the digital era.

### **1.7.2 Website Characteristics**

Based on various definitions put forward by experts, websites have a number of key characteristics that make them unique and multifunctional digital platforms. These characteristics reflect the structure, function, and purpose of websites in the modern digital ecosystem.

#### **1) Hypertext-based and Interconnected Pages**

A website has a structure consisting of pages that are interconnected through a hypertext system. Users can move from one page to another using links, both within a single server and across servers. This shows that inter-document navigation is one of the main features of a website (Yudin et al., 2025; Hakim & Meilina, 2022).

#### **2) Hosted on a Server and Accessible Online**

Every website is hosted on a server, either locally or globally, and can only be accessed if the user's device is connected to the internet. This network availability gives websites universal accessibility that is not bound by geographical location (Yudin et al., 2025; Rahmi et al., 2023).

### 3) Multimodal and Supports Various Content Formats

Websites not only present text but can also display images, audio, video, animations, and other multimedia elements. The ability to present content in various formats makes websites a visually rich and informative platform (Hakim & Meilina, 2022).

### 4) Interactive and Dynamic

Websites are dynamic because they allow users to interact with the content presented. This interactivity can take the form of navigation between pages, form filling, media playback, or the use of search or content personalization features. This characteristic distinguishes websites from static information media such as brochures or printed magazines (Hakim & Meilina, 2022).

### 5) Function as an Information Ecosystem

A website functions as a digital ecosystem that integrates various types of information into a single interconnected system. Through organized pages, users can access and navigate information in a structured and efficient manner (Yudin et al., 2025).

Considering the five characteristics above, it can be concluded that a website is a flexible information medium that is widely accessible and capable of supporting interactive communication with diverse content presentation. The existence of websites is crucial in supporting digital activities across various fields, including education, business, government, and social sectors.

## 1.7.3 Types of Website

The classification of websites is typically based on their function and the specific purpose behind their development. According to Miftahuljannah & Suharso (2023), websites can be grouped into the following types:

### **1.7.3.1 Static Website**

A static website features fixed content that does not change automatically. All visitors see the same information, and the site is usually built with simple HTML without any dynamic interaction.

### **1.7.3.2 Dynamic Website**

A dynamic website displays content that can change based on user interaction or time. It typically uses server-side programming languages and databases to manage flexible and updatable content.

### **1.7.3.3 Personal Website**

A personal website is created by individuals to showcase personal content, such as portfolios or blogs. Its primary purpose is to support personal branding and self-promotion.

### **1.7.3.4 E-Commerce Website**

This type of website serves as an online store, allowing users to purchase products or services digitally. It includes features such as shopping carts, payment gateways, and product catalogs.

### **1.7.3.5 Business Website**

Business websites are used by companies to support digital marketing efforts, provide information about their products or services, and enhance their corporate image.

### **1.7.3.6 Social Media Website**

Social media platforms enable users to interact, communicate, and share content with others. These websites often include features such as messaging, commenting, and content feeds.

### **1.7.3.7 Blog**

A blog is a website that functions as an online journal or space for publishing articles, reviews, and other written content on a regular basis. It may be personal or professional in nature.

This classification highlights the diverse purposes websites can serve, ranging from static informational pages to interactive platforms that foster user engagement and commercial transactions.

#### **1.7.4 Concept of Tools in Learning**

Learning tools are an important component in the educational process because they can bridge abstract concepts into more concrete forms that are easier for students and educators to understand. Learning tools are designed to transform abstract theories into materials that can be seen, touched, and understood directly, so that learning becomes more meaningful (Parwata & Sudiarmika, 2020). This function of learning tools aligns closely with their role in increasing task effectiveness in learning activities.

Furthermore, the use of tools can be understood through two main types of behavior, namely mechanical actions to change target objects and communicative actions that function to convey information between users and their surroundings. Thus, learning tools not only play a functional role, but also serve as interactive media that enable educational communication between students, teachers, and learning resources (St Amant & Horton, 2008). These roles illustrate the comprehensive contributions of learning tools in improving the quality of teaching and learning processes.

Based on the explanation above, it can be concluded that learning tools are aids used to concretize abstract concepts, increase learning efficiency, and support interaction and communication in the teaching and learning process. The strategic integration of these tools should therefore be considered in the planning and implementation of effective educational practices. This will be further elaborated in the following discussion on the types and functions of learning tools in the classroom context.

#### **1.7.5 Technology-Enhanced Language Learning/TELL**

In the 21st century, technology-based language learning has become increasingly embedded in educational systems worldwide, giving rise to the concept of Technology-Enhanced Language Learning (TELL). This term refers to the strategic integration of digital tools and information communication technologies (ICT) to support and enhance both teaching and learning processes, especially in the context of language education (Price & Kirkwood, 2014).

TELL environments have been shown to boost student motivation by enabling better access to language input, encouraging more meaningful output, and providing immediate, relevant feedback. Shadieff & Yang (2020) emphasize that digital platforms not only support language skills but also streamline content delivery and improve teacher-student communication. Moreover, TELL platforms facilitate the development of learner autonomy, foster real-time interaction, and provide multimodal resources that appeal to diverse learning preferences.

According to Farikah et al. (2023) technology plays three core roles in language education: (1) providing access to rich language input and authentic materials, (2) supporting collaborative knowledge-building among learners, and (3) enhancing the efficiency and effectiveness of the overall learning process. These functions are particularly significant in remote or hybrid learning contexts. Building on these ideas, Buddha et al. (2024) outline six primary benefits of using technology in language instruction: improved language proficiency, increased learner motivation, development of metacognitive strategies, more positive attitudes toward learning, improved material retention, and expanded opportunities for collaborative and self-directed learning. In Technology-Enhanced Language Learning (TELL) serves as a theoretical and practical foundation for modern language pedagogy, combining technological affordances with learner-centered strategies to maximize both engagement and achievement in language classrooms.

The TELL (Technology-Enhanced Language Learning) framework as proposed by Kranthi (2017), provides guidelines in the development and utilization of technology-based learning resources for language learning. This framework consists of two main aspects: Content/Format/Design and Assessment/Evaluation.

### **1.7.5.1 Content, Format, and Design**

In terms of content, format, and design, a good learning resource should fulfill several criteria, namely:

- 1) Supports and is consistent with the local and provincial curriculum.
- 2) Developed by competent authors and producers, and of high quality in terms of both factual content and presentation.
- 3) Appropriate to the field of study and takes into account the age, emotional development, ability level, learning style, and social development of the learners.
- 4) Contains aesthetic, literary, and/or social values.
- 5) Has a physical format and visual appearance appropriate for its intended use.
- 6) Use various types of media (multimedia) in presenting the material.

Furthermore, learning resources should be:

- 1) Activity-based, rather than lecture-based.
- 2) Encourage cooperative learning in groups and individual student development.
- 3) Offer hands-on activities and an applied approach to the subject matter.
- 4) Encourages students to think critically, question, reflect and make decisions.
- 5) Provides choice and flexibility to meet students' different abilities, learning styles, multiple intelligences and interests.

### **1.7.5.2 Assessment and Evaluation**

In terms of assessment and evaluation, learning resources should:

- 1) Support individualized continuous learning
- 2) Provide formative and summative assessment mechanisms as needed.
- 3) Relevant to the needs of students as learning subjects.

This framework provides an important reference in designing technology-based learning resources that are not only visually appealing, but also pedagogically and evaluatively effective (Kranthi, 2017).

### **1.7.6 Constructivism in Language Learning**

Constructivism is a learning theory that focuses on how individuals actively construct their knowledge through interaction with the environment and experience. This theory believes that learning is not simply receiving information from outside, but is an active internalization process by learners based on experiences and pre-existing knowledge schemes (Santrock, 2011)

#### **1.7.6.1 Jean Piaget and Cognitive Constructivism**

Piaget (1954) is a major figure in the cognitive constructivism approach, he stated that the learning process occurs through assimilation and accommodation in existing mental schemes. Piaget developed stages of cognitive development that describe how children understand the world differently at each age stage.

According to Piaget, meaningful learning occurs when learners actively construct new knowledge based on direct experience.

Learning according to Piaget must be exploratory and based on direct experience, because learners must build their own understanding of the concepts learned.

#### **1.7.6.2 Lev Vygotsky and Social Constructivism**

In contrast to Piaget, Vygotsky (1978) emphasized the role of social and culture in cognitive development. Vygotsky believed that learning is a social process that occurs through interaction with more capable others, such as teachers or peers.

Key concepts in Vygotsky's social constructivism include:

- 1) Zone of Proximal Development (ZPD), Zone of Proximal Development (ZPD) is the distance between a child's current ability, i.e. what he can do on his own, and the ability he can achieve with the help of an adult or a more expert friend. This concept suggests that human learning is

social in nature, as children grow and develop intellectually through interaction and co-operation with those around them.

- 2) Scaffolding, Scaffolding refers to the temporary assistance provided by teachers, parents or more expert peers to children in the learning process. This assistance aims to help children complete tasks that they cannot yet do on their own, but can achieve with help.
- 3) Social Interaction, Learning in humans occurs through a social process, where children develop intellectually by interacting and learning from those around them.

According to Vygotsky, language has an important role in the learning process as it serves as a tool for thinking and communication. Therefore, verbal interaction in collaborative learning is highly recommended in the context of social constructivism.

Thus, both Piaget's and Vygotsky's constructivist theories offer a solid theoretical foundation for the development of a web-based writing platform. By providing interactive, contextualized, and socially mediated learning experiences, such a tool reflects and applies core principles of constructivist pedagogy to modern language education.

### **1.7.7 Writing Skills**

In the context of language learning, writing skill is one of the complex productive abilities because it involves integration between linguistic, cognitive, and affective aspects. One approach that has proven effective in improving writing skills is the cognitive model, as researched by Ashraf et al. (2021)

The cognitive model of writing emphasizes the importance of the thinking process in writing activities. This approach emphasizes the activation of higher-level thinking skills such as planning, organizing ideas, evaluating the structure of writing, and revising independently. Ashraf et al. (2021) proved that the systematic application of cognitive model strategies can improve the writing ability of learners, including those with hearing impairments, through a phased intervention that includes:

- 1) Planning, Students are taught to organize their ideas systematically before starting to write.
- 2) Organizing and Translating, This stage directs students to translate ideas into coherent paragraphs using appropriate sentence structures.
- 3) Revising (Reviewing and Editing), Involves the process of revising content and language to ensure clarity, cohesiveness, and accuracy of information.

Ashraf et al. (2021) suggest that these skills are not only transferred through writing practice alone, but also require the support of learning tool and strategies that allow students to reflect, evaluate and improve their writing independently. Thus, designed learning tool, such as interactive websites, are well suited to accommodate the principles of this model as they can provide a self-directed learning environment, automatic feedback, and gradual intervention according to the stages of the writing process.

Furthermore, the study also showed that cognitive-based writing learning can increase students' motivation and confidence in writing, which are important aspects in the context of junior high school students who are still in the stage of self-development and abstract thinking.

## **1.8 Previous Research**

A variety of recent studies have explored the integration of digital tools into English writing instruction, showing both the breadth of approaches and the benefits of technological support. Rodzi & Said (2024) conducted one of the most relevant studies, investigating the impact of web-based language learning on writing skills. Their findings emphasize the role of teacher involvement and the importance of sociocultural theory in facilitating learner development, aligning strongly with the use of web-based instruction. Similarly, Göçen (2019) and Demirel et al. (2023) both demonstrated that web-assisted creative writing practices significantly improved digital writing skills, habits, and self-efficacy among teachers and students alike, though neither focused on structured academic writing in students.

Manidaki & Zafiri (2021) and Ba-Omar (2024) supported the effectiveness of digital platforms, particularly Web 2.0 tools and cooperative learning technologies, for enhancing writing performance. Li (2023) provided further empirical evidence that online collaborative writing tools such as Tencent Docs lead to greater writing performance and motivation compared to traditional methods. Additionally, Izzah & Febriyanti (2023) and Azlan & Yunus (2020) found that students generally had positive perceptions of using social networking sites for writing practice, indicating increased motivation and engagement when digital platforms are integrated.

Other studies offered complementary insights. Niyibizi et al. (2024) highlighted the role of diverse writing forms—such as poetry, essays, and agendas—in improving academic performance, while Zhang (2022) focused on how automated writing assessment systems can enhance feedback efficiency. Tu (2022) discussed the role of educational technology in grammar instruction, indirectly supporting writing skill development. Likewise, Liu (2023) underscored the importance of integrating reading and writing with feedback, even in the absence of advanced technologies.

Less central to the focus on digital tools, Jee & Aziz (2021) and Vula et al. (2024) examined pedagogical strategies, such as the process-based approach and ESL writing strategies, to support proficiency. While their studies affirm the value of structured writing instruction, they do not specifically engage with web-based or digital platforms. Meanwhile, Basurto et al. (2024) and Hidayati (2018) explored more traditional tools and challenges, such as worksheets and manual instruction, providing important context but limited relevance to web-enhanced methodologies.

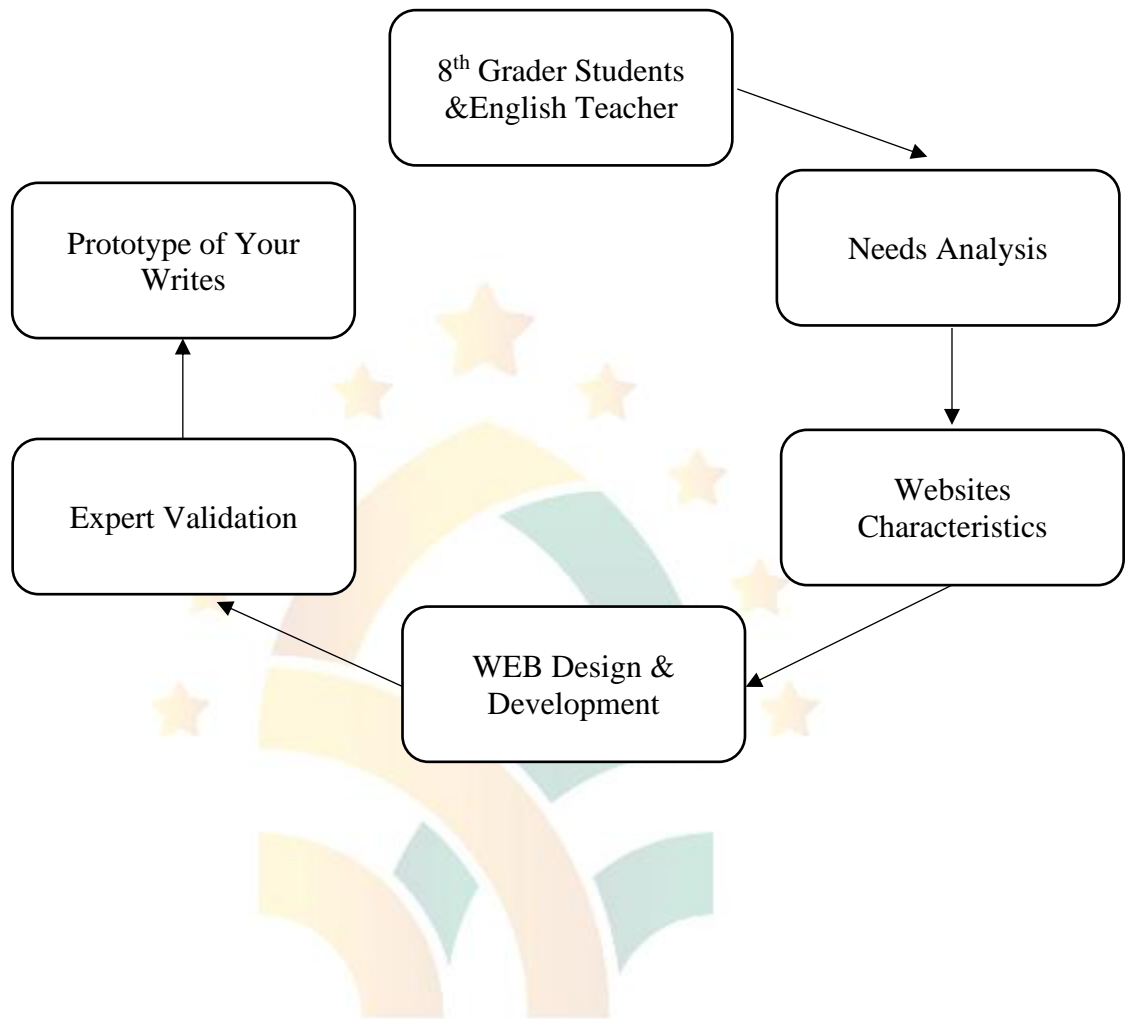
In conclusion, while numerous studies have demonstrated the effectiveness of technology in enhancing writing instruction, most focus on either experimental outcomes or learners at different educational levels. However, there remains a gap in research that specifically addresses the design and development of a web-based learning platform tailored to support structured academic writing in junior high school students. This study seeks

to contribute to that area by focusing on the initial phase of product development starting with a thorough needs analysis to inform the creation of a digital platform that is both contextually relevant and pedagogically sound. By addressing this foundational step, the research provides a critical basis for future implementation and evaluation, ensuring that the final product aligns closely with students' learning needs and classroom realities.

### **1.9 Frame of Thoughts**

Technological developments have occurred very quickly in the past decade. This affects almost all sectors of human life and education is no exception. Technology provides opportunities for the development of teaching and learning techniques in the classroom or outside the classroom. In this case, the use of the internet in the classroom is one of the important factors in teaching and learning. By using the TELL framework as well as concepts in education such as constructivism proposed by Piaget and then developed by Vygotsky, this research seeks to design a learning tool for English writing skills in the form of a website. To design it, firstly, find out the needs and challenges that occur in the field. Then, with the data of needs and challenges gathered, it will become a reference in the development of this website. After that, the website will be reviewed by experts to assess its suitability for its target users, in this case, 8th grade students.





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## **1.10 Research Method**

This section describes 5 things, namely research design and steps of the research, sources and types of data, data collection techniques and instruments, data analysis techniques, and research timeline.

### **1.10.1 Research Design and Steps of the Research**

This study used mixed-methods research, with a convergent Research & Development (R&D) research design adapted from Creswell (2018) who describes R&D as an approach used to develop and refine educational products based on systematic procedures and field data. The goal of convergent design is to gain a more complete understanding by combining quantitative and qualitative data, mutualising results from two different approaches, and comparing different levels within a system (Sharma et al., 2023). The main objective of this research is to design and develop a prototype web-based learning tool tailored to the needs of 8th - grade students to support their English writing skills. This development process consists of 3 stages, namely Needs Analysis, Product Design, and Initial Product development. This design is suitable to answer the research questions which seek to (1) identify the needs and challenges faced by 9<sup>th</sup>-grade junior high school students in learning English Writing skills, (2) To explore the essential characteristics and features of a website as an effective tool for enhancing English academic writing skills among 9<sup>th</sup>-grade students. (3) To develop a web-based learning tool that is attractive, accessible and pedagogically suitable for 9<sup>th</sup>-grade junior high school students to support their English writing development.

### **1.10.2 Source and Type of Data**

The data from this study were obtained from teachers and students. This is because teachers are people who practice directly in the field so that they become a source of data that is very relevant to what happens in the field while students understand more about what they experience and what they need in learning in class, especially for English lessons. The under-

construction of learners' language itself is a significant type of evidence that might reveal details about the different facets of their continuous difficulties in developing their new language (Mirhosseini, 2020). The type of data for this research is transcripts from open-ended interviews and close-ended questionnaires, as the data collection method is the form of interviews and questionnaires.

### **1.10.3 Data Collection Technique and Instruments**

In this study, data collection techniques were used through interviews with English teachers and questionnaires that would be distributed to students.

#### **1.10.3.1 Interview**

According to Creswell (2018) When conducting qualitative interviews, the researcher speaks with individuals in person, over the phone, or in focus groups with six to eight respondents per group, in this study it is face-to-face. The purpose of this interview is to extract opinions and viewpoints from the participants through a limited number of unstructured, typically open-ended questions (Creswell, 2018). Interviews give interviewees the opportunity to reflect on and retell their viewpoints, attitudes, and impressions (Mirhosseini, 2020).

The instrument used in this study was a open-ended interview. Open-ended interviews are flexible, where new questions arise as a consequence of the interviewee's answers about the themes being asked (Ruslin et al., 2022). In this study there are twelve open-ended questions, the interview questions were designed to explore themes related to technology enhanced language learning (TELL), Kranthi's TELL framework, constructivism in language learning, & cognitive model of writing. This approach allowed for flexibility in responses while still maintaining a focus on key areas relevant to the research objectives. A complete list of the interview questions is provided in Appendix.

### **1.10.3.2 Questionnaire**

This research used questionnaire to gather quantitative data. The questionnaire is a data collection technique that is done by providing a set of questions or written statements to respondents to answer (Sugiyono, 2019). By examining a sample of a population, a survey design can quantitatively describe its trends, attitudes, and views or look for correlations between its characteristics (Creswell, 2018). In this study, the researcher used a questionnaire design as the primary data collection instrument. The questionnaire contains 12 statements on the topics of technology enhanced language learning (TELL), Kranthi's TELL framework, constructivism in language learning, and cognitive models of writing. Therefore, the use of this questionnaire allowed me to obtain comprehensive data, encompassing descriptive, correlational, and predictive aspects in accordance with the research objectives. In the context of this research, the questionnaire aims to find data that answers descriptive questions.

### **1.10.4 Data Analysis Technique**

In research with a mixed methods approach, especially convergent R&D design, data analysis is carried out in three main stages. First, qualitative data is analysed through the process of coding and grouping codes into major themes. Second, quantitative data is analysed based on statistical results. Third, both types of data are combined through mixed analysis to gain a more comprehensive understanding (Creswell, 2018). The data obtained from the research will be analysed as follows:

#### **1.10.4.1 Interview (Qualitative Data)**

To analyse data from interviews in this study, researchers used thematic analysis. Thematic analysis is a qualitative data analysis method used to find and group themes and subthemes based on existing frameworks or theories, thus emphasizing meaning rather than in-depth coding processes (Mirhosseini, 2020). In practice, thematic analysis involves several general steps (Creswell, 2018).

The interview data analysis process involves several systematic steps to ensure the validity and depth of the findings. First, the researcher begins by preparing and organizing the data, which includes transcribing the interviews and structuring the files to facilitate analysis. Next, the researcher thoroughly reads the data to gain a comprehensive understanding of the participants' responses and identify initial impressions or significant patterns. This is followed by a coding process, where specific data segments are labeled with meaningful codes representing key ideas or recurring concepts. Based on these codes, the researcher develops descriptions and themes that summarize and categorize the essence of the participants' experiences. Finally, the researcher interprets the findings comprehensively, linking the themes to the research questions and relevant theoretical frameworks to draw meaningful conclusions from the interview data..

#### **1.10.4.2 Questionnaire**

The data analysis technique used in this research is descriptive statistical analysis (Creswell, 2018). Descriptive statistics are statistics used to analyse data by simply describing or explaining the data that has been collected as it is without the intention of making conclusions that apply to the public or generalizations (Sugiyono, 2019). Descriptive statistics also used to summarize and present data in numerical form for easy understanding (Rana et al., 2021). This analysis does not aim to test hypotheses, but to describe students' needs based on the questionnaire results. Descriptive statistics are carried out through three approaches:

In analyzing the quantitative data collected in this study, the researcher employed several statistical methods to ensure an accurate and comprehensive interpretation of the results. First, the researcher conducted a frequency analysis to determine the number of respondents who selected each response category. The frequency data were then presented in percentage form to facilitate clearer comparison and interpretation. Next, measures of central tendency were applied to identify the general or central value of the dataset. These measures included the mode, representing the

most frequently occurring value; the median, which indicates the middle value after the data has been arranged in ascending order; and the mean, calculated by dividing the total sum of all values by the number of respondents. Through these procedures, the researcher obtained a detailed and reliable understanding of the quantitative data collected in this study.

The data obtained was analysed using SPSS software. SPSS provides deeper data analysis, enhancing efficiency and insight generation (Rahman & Muktadir, 2021). The type of data in this questionnaire is on a Likert scale, which allows the use of mean and standard deviation analysis to obtain an overview of student needs.

#### **1.10.4.3 Integration**

After analyzing the quantitative and qualitative data, the findings were integrated using a side-by-side comparison approach as proposed by Creswell (2018). In this approach, the researcher first presents the results of the quantitative data analysis, which typically include statistical results such as frequencies, means, and standard deviations. These results provide an overview of the trends and patterns identified in the numerical data. Next, the qualitative findings are presented and discussed, particularly the emerging themes derived from the interview analysis. These themes are then used to support, explain, or contrast the quantitative results. Through this sequential process, the side-by-side comparison approach allows for a more comprehensive understanding of the research problem by integrating numerical evidence with participant perspectives, thereby strengthening the overall interpretation and validity of the research findings.

### 1.10.5 Research Timeline

<b>Timeline</b>	<b>Activity</b>
<b>December 2024</b>	<b>Preparation and Literature Review</b>
Week 1	Identify research topic and objectives
Week 2	Conduct literature review on relevant theories (Genre Theory, Process writing Approach, Connectivism, Cognitive Load Theory, Multimedia Learning Theory)
Week 3	Draft research proposal
<b>February 2025</b>	<b>Data collection and evaluation</b>
Week 1 – Week 2	Conduct interviews with teachers, distribute and collect questionnaires from students
Week 3	Analyse interview and questionnaire data
Week 4	Evaluate initial test results and draft interim report
<b>March 2025</b>	<b>Website development</b>
Week 1 – week 2	Initial design of website interface
Week 3	Integrate collaborative and interactive learning features
Week 4	Initial testing and revision based on internal feedback (from development team or educational experts)
<b>April 2025</b>	<b>Report Writing and Finalization</b>
Week 1	Draft final report
Week 2	Revise report based on feedback from advisor or experts
Week 3	Finalize report research