Chatgpt-Based Didactic Strategies To Improve Students’ English Language Reading And Writing Skills

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ABSTRACT
At the present time, artificial intelligence (AI) has become a reality; it is no longer something to be dreamt of, but instead something to be used in our daily life. AI, more specifically, ChatGPT can be used by teachers and students to improve their learning, and the different processes that this conveys. The objective of this investigation was to design strategies based on ChatGPT to improve senior high school students’ English language reading and writing skills in Esmeraldas, 2023. The investigation followed a mixed approach, with the methods of analysis and synthesis, hermeneutics, descriptive statistics, inductive, and deductive. The scope of this research was descriptive, and the design was nonexperimental. The Population of Study was formed by 60 English teachers from different schools in Esmeraldas, either private or public. The main results showed that 70,50% of teachers had very many difficulties in class when developing reading and writing skills; the 84,7% showed marked interest in using ChatGPT for teaching; the main contents considered to include in strategies were how to express critical opinions, and organizing ideas, among others. The main themes diagnosed were free time activities and environment, together with short stories, and personal reflections. This diagnosis permitted the design of didactic strategies whose main stages were Preparation, Immersion Activities, and Free Language Use, with their corresponding objectives, procedures, and activities.

Key Words: strategies, reading skills, writing skills, artificial intelligence, ChatGPT

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Estrategias Didácticas Basadas en ChatGPT para Mejorar las Habilidades de Lectura y Escritura en Inglés de los Estudiantes

RESUMEN

En la actualidad, la inteligencia artificial (IA) se ha convertido en una realidad; ya no es algo con lo que soñar, sino algo que podemos utilizar en nuestra vida diaria. La IA, más concretamente ChatGPT, puede ser utilizada por profesores y estudiantes para mejorar su aprendizaje y los diferentes procesos que este conlleva. El objetivo de esta investigación fue diseñar estrategias basadas en ChatGPT para mejorar las habilidades de lectura y escritura en idioma inglés de estudiantes de bachillerato en Esmeraldas, 2023. La investigación siguió un enfoque mixto, con los métodos de análisis y síntesis, hermenéutica, estadística descriptiva, inductivo y deductivo. El alcance de esta investigación fue descriptivo y el diseño no experimental. La Población de Estudio estuvo formada por 60 profesores de inglés de diferentes colegios de Esmeraldas, ya sean privados o públicos. Los principales resultados mostraron que el 70,50% de los docentes tuvieron muchísimas dificultades en clase para desarrollar las habilidades de lectoescritura; el 84,7% mostró marcado interés en utilizar ChatGPT para la docencia; los principales contenidos que se consideraron incluir en las estrategias fueron cómo expresar opiniones críticas y organizar ideas, entre otros. Los principales temas diagnosticados fueron las actividades de tiempo libre y el entorno, junto con relatos breves y reflexiones personales. Este diagnóstico permitió diseñar estrategias didácticas cuyas principales etapas fueron: Preparación, Actividades de Inmersión y Uso Libre del Lenguaje, con sus correspondientes objetivos, procedimientos y actividades.

Palabras Clave: estrategias, habilidades de lectura, habilidades de escritura, inteligencia artificial, ChatGPT
INTRODUCTION

The English language has taken strength over so many languages and has become a fundamental piece of knowledge to be integrated in the teaching-learning process of students all over the world. Moreover, English is one of the most spoken languages worldwide becoming a lingua franca that allows people to understand each other even if English is not their first language. Additionally, it provides many different opportunities whether it’s in your work, or personal life. Definitively, teachers have the responsibility to seek new strategies, to innovate, and to select the best technological tools to increase student’s motivation and the proper functioning of learning English.

By teaching English in a traditional way only with materials such as a book, the chances of a better learning in our students are being reduced, since scholars are so used to using technology, which is their main source of information input. Technology has revolutionized the way people live, by presenting a lot of benefits, for example 20 years ago to obtain information on a book people had to find a library, and go through a process to obtain that book, now with a click in seconds the same information can be obtained.

At the present time, artificial intelligence has become a reality. It is no longer something to be dreamt of, but instead something to be used in our daily life. This kind of technology has many different real usages and has been created with the purpose of spreading information. A.I. more specifically ChatGPT is a tool to learn knowledge of all sorts or areas, that can be used by teachers and students to improve their learning, and the different processes that this conveys.

During some time at different high schools in Esmeraldas, it has been identified that students have difficulties in reading and writing skills in English as a foreign language. This is manifested by students’ having little vocabulary, lack of grammar, poor reading comprehension, in addition to problems organizing and writing ideas.

Because of the previously mentioned deficiencies, students need innovative tools along with the proper guide from the teacher to help the development of their learning process. They currently do not know how to use innovative technological tools such as A.I. ChatGPT to stimulate their learning.
process. This demands the necessity to create new learning strategies to improve the skills under study. Consequently, the main question arises: Which didactic strategies based on ChatGPT may contribute to the improvement of Senior High School students’ English language reading and writing skills in Esmeraldas, 2023?

To give an answer to this problem, the general objective of this research was to design strategies based on ChatGPT to improve Senior High School students’ English language reading and writing skills in Esmeraldas, 2023. For its accomplishment, some specific objectives were stated: to diagnose English teachers’ perceptions about Senior High School students’ difficulties in reading and writing skills; to determine these teachers’ interest about didactic strategies with the use of ChatGPT to improve the aforementioned students’ reading and writing skills; to determine the contents, important themes and activities for the use of ChatGPT to improve the mentioned skills; and finally, to plan the required stages, procedures and activities focused on the use of ChatGPT for the purpose established.

Technological tools for English language teaching

About technological tools in teaching Qurat-ul-Ain, et al. and Yousaf (2019) stated: “Integration of technological tools will help teachers to the international requirement to use technology-based teaching and learning tools instead of traditional teaching methods. Most researchers agree on the significance of the use of technological tools in different education systems” (p.11). Students nowadays are so invested in technology, which has become a major part of their life. This is why this kind of tools must be integrated into the classroom, to not only keep the interest in the class, but to teach them in a very interactive way.

The traditional methods which are mainly based on lecturing and rote learning reduce English language learning to mechanical memorization and miserably fail in developing English language as a skill among the learners. New technologies like Internet, YouTube, Skype, tweeter, blogs, mobile phones, interactive boards and many more have added not only stimulus but also learners’ engagement and true interactivity within the classroom. The teachers can engage the learners to become skilled at
English Language by using the innovative ELT techniques like English songs, movieclippings, dramatics, advertisements, sports commentaries and many more (Chhabra, 2012, p.1).

Learning a new language conveys more than just learning a vocabulary, or how to pronounce words, it takes learning a new set of skills, with gestures and different forms of attitudes.

**Artificial Intelligence**

This type of tool has evolved over the years, becoming increasingly exceptional in its functionality. According to McCarthy (2007):

> It is the science and engineering of making intelligent machines, especially intelligent computer programs. It is related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable (p.2).

Scientists and engineers have focused the artificial intelligence inside the development of new programs, each program has a specific function. The form of daily use that regular people can give to this tool lies in the need found that requires to be solved. Individuals can choose which program with artificial intelligence to use.

**ChatGPT**

This tool created with artificial intelligence has become known worldwide and has been used by over 100 million users. The concept of ChatGPT can be found here:

> ChatGPT is a natural language processing (NLP) system developed by OpenAI. It is designed to generate human-like conversations by understanding the context of a conversation and generating appropriate responses. ChatGPT is based on a deep learning model called GPT-3, which is trained on a large dataset of conversations (Deng, J., & Lin, Y., 2023, p.81).

So, this type of program has been developed to spread information in a more personal or specific way, by tailoring the responses to the user. Each time the user asks the AI for an answer, the machine learns
the best way to present information according to your needs. With ChatGPT the typical manual conversations, like in other programs such as Google, are over by automatizing the whole discussion and making it even faster to find the right material.

Inside of this tool there are a lot of features that can be used in order to use the program in a more suited manner. One of these features are the prompts. This term related to the use of technology has become extremely popular over the past years, with the arrival of A.I. programs, so the concept can be found here:

Prompt engineering is an increasingly important skill set needed to converse effectively with large language models (LLMs), such as ChatGPT. Prompts are instructions given to an LLM to enforce rules, automate processes, and ensure specific qualities (and quantities) of generated output. Prompts are also a form of programming that can customize the outputs and interactions with an LLM (White, J., Fu, Q., Hays, S., Sandborn, M., Olea, C., Gilbert, H., ... & Schmidt, D. C., 2023, p.1)

Moreover, prompts help us to communicate better with artificial intelligence, it helps us get the specific results that are needed. ChatGPT experts recommend using prompts to make the A.I. more suited to you, in a way that the program responds in a customized form for you.

**Didactic strategies**

There are several ways in which our students can learn a new language. But it is essential that instructors use the right activities to share their knowledge. Which is why Enikő, (2013). Stated: “When examining the nature of the strategies in the teaching-learning, we have to uncover the effective ways and means of the functioning and operating of the educational process which lead to the successful realization of the didactic activity” (p.50).

Implementing the successful didactic activity is crucial in the process of language learning, students need to feel involved and engaged in each activity.
Writing skill

There are several skills that are required to master a language. While taking into consideration the writing skill, it is found that Selvaraj, M., and Aziz, A. A., (2019) stated: “Mastering writing skills is important due to its need in almost all the professions which need documentation, especially in this era. It is necessary to enter any modern workplace with good writing skills” (p.452).

Furthermore, this skill helps us put out everything that is going on in our brains. Giving us an output that is much needed when learning a second language. There can be found several benefits for mastering this skill, it can bring benefits not only in your personal life, but also in your work/student life.

Elements of writing


When teachers use all these elements to help the improvement of the students’ writing skills, scholars can successfully acquire the said skill.

Writing coherence

Inside the skill of writing, there are a lot of features that must be considered, in this case writing coherence, in which Johns, A. M. (1986) stated: “Coherence in written text is a complex concept, involving a multitude of reader- and text-based features. Perhaps because of this, we are writing instructors and the textbooks we use often discuss coherence in a vague or incomplete manner” (p.247).

A text must have coherence to be understood by anyone. Without coherence, there would be just a mix of words and sentences without an actual path to be read and understood. Students must be able to learn how to write with coherence, this feature is an important part of the writing skill process.
Cohesion

It is found that Salkie (1995, as cited in Liu, 2000) stated: “Lexical cohesion refers to the coherence of a text formed by the use of repetition, synonyms, antonyms, superordinates/hyponyms, related words” (p. 29). It is important to help students to achieve writing cohesion for them to successfully acquire the writing skill.

Writing strategies

There are many benefits to using writing strategies, which is why it is found that:

Before we teach writing strategies, we should acknowledge that students may come to us unaware of the strategies they already possess; it’s our job to help them identify and make controllable any effective strategies they already use. Sometimes students’ writing strategies can be tricky to identify because they are invisible; even experienced writers may be unaware of many of their own strategies. Part of our teaching may involve helping students recognize their invisible strategies (Dean, D, 2010, p.4). One of the benefits is that by using the correct strategy instructors can achieve several goals of the class, this is by engaging the students in a meaningful activity. Moreover, a good writing strategy can assistance scholars to go from beginners to intermediate writers.

Reading comprehension skill

Involving the reading skill, the concept can be found here:

Reading is one of the language skills which is very important to be learned by students. Through this activity, students can improve their own language and experience. They will get information and ideas which they need to know. Moreover, they will be able to know what they do not know before (Wibowo, Y. E. W., Syafrizal, S., & Syafryadin, S., 2020, p.20).

This is another skill that must be taken into account when learning a second language, in this case, English. This skill provides students with vocabulary and word recognition, helping them develop their understanding of the language.
Regarding the reading comprehension, Tojiboyev Isaqjon. (2022) stated: “The outcome of reading comprehension is the mental representation of a text meaning that is combined with the readers’ previous knowledge. This is called a mental model or situation mode. This model defines what has been learned” (p.94).

The sole purpose of a text is to be comprehended, to be analyzed, and understood by its readers. Reading comprehension is a main key to mastering the reading skill. There are several ways in which students can learn how to comprehend a text, by connecting ideas, by relating the words to their personal experiences, by looking up the words that are difficult to understand, and so on.

One of the benefits that the reading comprehension skill can provide to students is the ability to use critical thinking. In the process of teaching, professors must teach how to think. Which is why teaching critical thinking is important in the classroom. The concept can be found here:

Critical thinking includes the component skills of analyzing arguments, making inferences using inductive or deductive reasoning, judging or evaluating, and making decisions or solving problems. Background knowledge is a necessary but not a sufficient condition for enabling critical thought within a given subject. Critical thinking involves both cognitive skills and dispositions. These dispositions, which can be seen as attitudes or habits of mind, include open-mindedness, inquisitiveness, flexibility, a propensity to seek reason, a desire to be well-informed, and a respect for and willingness to entertain diverse viewpoints (Lai, E. R., 2011, p.2)

Additionally, this skill is one of the most important factors for our students to learn to analyzed text, audios, conversations, and situations that are involved in a second language learning environment.

**Reading techniques**

Regarding the reading techniques, Tojiboyev Isaqjon. (2022) stated: “Effective reading strategies and techniques are essential skill which should be focused on and worked on to improve and get more successful results in learning new languages” (p.94).
There are multiple forms to teach students how to read, and teachers must come up with these strategies to help scholars to develop this skill.

**Skimming**

There are several techniques which can be used to improve students’ reading comprehension skill, one of which is skimming. It is discovered that:

- Skimming is used to quickly identify the main ideas of a text. When you read the newspaper, you’re probably not reading it word-by-word, instead you’re scanning the text. Skimming is done at a speed three to four times faster than normal reading.
- People often skim when they have lots of material to read in a limited amount of time.
- Use skimming when you want to see if an article may be of interest in your research (Liao, 2011, p. 303).

This technique can be applied in the classroom when students have large amounts of reading materials, it can provide them with a sense whether the material is of their interest or not. Giving scholars an idea of what the text is going to be about.

**Scanning**

On the other hand, the scanning technique it is used when readers need to find specific information on a large reading material. The main idea of this technique can be established here:

- Scanning is a technique you often use when you search for key words or ideas. In most cases, you know what you’re looking for, so you’re concentrating on finding a particular answer. Scanning involves moving your eyes quickly down the page seeking specific words and phrases (Liao, 2011, p. 303).

Teachers must prepare students to understand that most of the time this technique goes hand by hand with the skimming technique. In order to analyze a large piece of text, and to see if it is going to answer our requests, scholars first need to look for the specific information or the specific word, once they see the text is going to be helpful, then they proceed to skim it. Following that path will help students to
gain the main idea of what the text is going to be about. So, with the use of both techniques the reading comprehension skill can be improved in students of English learning as a foreign language.

**The Sociocultural approach to language teaching**

There are several theories that support this investigation, in this case this approach by Vygotsky, that was cited by Villamil, O. S., & de Guerrero, M. C. (2006) stated:

> SCT is a system of ideas on the origin and development of the mind. Mind and consciousness are, from an SCT perspective, predominantly social in nature. They are fundamentally the result of the internalization of socially and temporally bound modes of thinking, feeling, and behaving. Within this theory, learning is also a social phenomenon embedded in specific cultural, historical, and institutional contexts. Whereas other theories of learning recognize the importance of social factors in learning and particularly in L2 acquisition, SCT, unlike other approaches to mirid, such as the information-processing approach, views the social element as constitutive of cognition - and thus of learning - not just as one more variable affecting processes that reside mainly in the learner's head (Villamil, O. S., & de Guerrero, M. C., 2006, p.23)

This theory helps display how society takes part into the process of learning. Helping to understand how humans can learn with the help of their surroundings.

**The Zone of Proximal Development**

The English language teaching-learnings process includes this theory as one of the main ones to take into consideration. While citing Vygotsky, the investigators: Shabani, K., Khatib, M., & Ebadi, S. (2010) stated: “The idea is that individuals learn best when working together with others during joint collaboration, and it is through such collaborative endeavors with more skilled persons that learners learn and internalize new concepts, psychological tools, and skills” (p.238).

People learn in a better way when they are close to more skilled individuals, in this way, helping each other is an important part of the process in order to advance their knowledge.
The Critical Progressive Approach to Educational Innovation

To create these types of strategies, and to plan how to implement them in the classroom there are several approaches the professors must take into account. One of which is the critical progressive approach to educational innovation. Ahrin & Cormier (2007) stated that: “educators are obligated to use creative strategies to educate a post-modern generation of students who possess distinct characteristics, particularly related to teaching and learning” (p. 562).

Teachers of English as a second and foreign language must be updated to today’s society, that means that new strategies and activities must be created. To innovate in the field of teaching not only help our students in a specific classroom, but by sharing that knowledge educators can help scholars from all over the world. Which is why the approach to educational innovation is important.

Materials Design

Approaching this concept, McGrath (2002) stated that “Teaching materials play a crucial role in teaching and learning. When these take the form of a textbook it is essential that the textbook, be carefully selected to meet both, external requirements, and the needs of the teachers” (p. 101).

Teachers must help themselves with all the materials that are available to them. A lot of the times, professors must create some sort of suited materials for the students, since not every student is the same, and not every scholar learns in the same form.

Antecedents

Some studies related to Artificial Intelligence in Education have been conducted and must be considered.

One of the investigations was carried out by Woolf (1991) at the University of Massachusetts, in Amherst, Massachusetts. The research focused on A.I. in Education, and the need of intelligent environments for teaching and learning. The investigation explored many domains and has explored some non-traditional pedagogical strategies, such as partnering, mentoring, and scaffolding. Nonetheless, a lot of the rich and detailed tutoring methods used by talented teachers still elude researchers, and the next generation of systems will require development of accessible shells and
testbeds to facilitate further experimentation and development. It was found that such technologies should facilitate the study of human learning and teaching as well as accelerate the emergence of new systems and the willingness of new authors to develop them.

Moreover, another research was done in Ontario, Canada. At the University of Waterloo, by Jones (1985) which was focused on Applications of Artificial Intelligence Within Education. This investigation concluded that computers have been used in field of education for many years, often with disappointing outcomes. But current research of artificial intelligence is having a positive impact on educational applications. For instance, currently exist ICAI (intelligent computer-assisted instruction) systems to teach many different subjects. To add-on, there are CAI (computer-assisted instruction) systems, they discuss the enhancement of learning environments that are designed to facilitate student-initiated learning. A third application is the use of expert systems to assist with educational diagnosis and assessment. During the discussion of these three major application areas, they indicate where AI has already played a major role in the development of such systems.

Additionally, another investigation was conducted by Lo (2023), in Hong Kong, China. At The Education University of Hong Kong, title What Is the Impact of ChatGPT on Education? A Rapid Review of the Literature. This investigation focused on a rapid review of the literature that aimed to improve the understanding of ChatGPT’s skills through different subjects, how it can be used in education, and potential issues raised by researchers. The result of the research suggested that the performance of ChatGPT across different class subjects, go from outstanding, corresponding to economics, and satisfactory, like in programming, to unsatisfactory, corresponding to mathematics. While this technological tool has the capacity to assist as an aide for teachers and a virtual instructor for students, there were challenges related to its use (e.g., generating incorrect or fake information and bypassing plagiarism detectors). Proceedings should be taken to update the assessment methods. Teacher training and scholar education are necessary to reply to the impact of ChatGPT on the educational environment.
Furthermore, a related investigation was found in the United States at the Florida Polytechnic University, by Topsakal, O. & Topsakal, E. (2022) focused on Framework for A Foreign Language Teaching Software for Children Utilizing AR, Voicebots and ChatGPT (Large Language Models). It was proposed a framework for developing a language learning software tool employing Augmented Reality (AR), Voicebots, and ChatGPT technologies to present an exceptional product for small kids to teach a foreign language. The competences of ChatGPT will be applied to resourcefully create the content for the software tool. With ChatGPT will generate interactive dialogs that will be hosted at Google DialogFlow. It is thought that the framework and the design principles proposed in the research can be a blueprint for advancing highly effective foreign language teaching software.

In the same manner, Jeon and Lee (2022) carried out a research in the United States based on Large language models in education: A focus on the complementary relationship between human teachers and ChatGPT. In this investigation, the connection between ChatGPT and educators was explored with a particular focus on identifying the complementary roles of each in education. Eleven language teachers were asked to use ChatGPT for their instruction during a period of two weeks. Then participated in individual interviews regarding their experiences and provided interaction logs produced during their use of the technology. Throughout qualitative analysis of the data, four ChatGPT roles and three teacher roles were identified. Centered on the results, an in-depth discussion of teacher-AI collaboration is presented, highlighting the importance of teachers’ pedagogical expertise when using AI tools.

Comparatively, Kohnke, Moorhouse, & Zou (2023), carried out a research in Hong Kong, China, title ChatGPT for Language Teaching and Learning. In the investigation it was explored the affordances of the generative AI chatbot ChatGPT for language teaching and learning. Also, it presents debates and drawbacks of ChatGPT. Lastly, it presents the digital skills professors and students need in order to utilize this tool ethically and effectively to support language learning.

In addition, the investigation done by Jeon (2021) at the Seoul National University of Education, in South Korea. The research focused on Exploring AI chatbot affordances in the EFL classroom: young
learners’ experiences and perspectives. This exploratory study meant to produce an inventory of affordances that chatbots offer in the primary English as a foreign language (EFL) classroom and to explore how the affordances affect psychological aspects in language learners, particularly regarding their motivation to learn English through chatbots. Thirty-six Korean primary school learners participated in a 16-week EFL course that utilized customized chatbots. These chatbots were created using Google’s Dialogflow. This research used a qualitative analysis. Depending on the student, the chatbot affordances were perceived differently; each affordance acted as either an opportunity or a constraint for English language learning. Also, the investigation specifically discussed how these chatbot affordances might have affected psychological states in language learners. Future recommendations about the use of chatbots in language classrooms were suggested.

Finally, Zai (2023) carried out an investigation focusing on ChatGPT and AI: The Game Changer for Education, at University of Georgia in the United States. This research studies the effect of artificial intelligence (AI) on education, especially the role of ChatGPT. The authors discuss that the incorporation of AI and ChatGPT in education has the potential to enhance students’ learning effectiveness, advance the distribution of educational resources, and improve the oversight of educational quality. The article indicates that education must prioritize the development of students’ creativity and critical thinking skills. The use of AI technologies, specifically ChatGPT, has provided new opportunities and strength to traditional teaching processes and methods, converting the learning process to become more student-centered.

METHOD

Context

This research was carried out with English teachers from different educational institutions in Esmeraldas, in the year 2023.

Type of investigation

The investigation that was carried out followed a mixed approach, which, according to Leite, et al. (2021), embraces the association of procedures to collect and analyze data as well as the combination...
of quantitative and qualitative techniques. In this investigation numerical data as well as qualitative data were processed.

The scope of this research was descriptive. Hernández et al. (2007) noted that with descriptive studies, the aim is to specify the properties and important characteristics of any phenomenon that is analyzed. In the same manner, this investigation was carried out to present a proposal, and it was described with all the involving elements.

The design was nonexperimental.

Population and sample

The Population of Study was formed by 60 English teachers from different educational institutions in Esmeraldas, either public or private. The sample, which was chosen intentionally since they were professors of the same province as the researchers, coincided with the population.

Methods

Analysis and Synthesis: Peck and Devore (2011) stated: “Data analysis is a process that begins with careful planning, followed by data collection, data description using graphical and numerical summaries, data analysis, and finally interpretation of results” (p.7). Regarding these methods the bibliography was examined and the theories that support this investigation were synthesized. Likewise, these methods were used to analyze the results and synthesize the relevant data.

Hermeneutics: Seebohm (2007) noted that such analysis is the duty of understanding, including different levels, including both the pre-methodical understanding of texts and the transition to the first reflections on methodical viewpoints in the development of the understanding of texts. This method was used to recognize the pertinent data in the theoretical framework, and it supported the application of the different techniques. Moreover, it helped in the interpretation of the data.

Descriptive statistics: It was used to manage the data found with the application of the techniques.

Inductive: With the help of this method, conclusions were taken into consideration from the specific to the general.
Deductive: Regarding this method, it was possible to analyze the ideas or the progress of the investigation from general ideas to specific ones.

Techniques

The techniques that were used are:

Documentary review: Fifteen updated articles on the subject in indexed journals from the last three years were reviewed.

Survey: It was applied online to 60 English teachers from different educational institutions in Esmeraldas.

Data processing

The data from the survey were analyzed and processed, then taken to tables, charts, and figures using the Microsoft Excel program.

RESULTS

Regarding the exploration of the students’ difficulties in the development of their reading and writing skills, (figure 1), the majority of teachers, represented by 70,50%, said that students had very many difficulties in class when developing reading and writing skills,

Figure 1. Exploration of students’ difficulties in their development of reading and writing skills.

Source: Survey applied to teachers

According to the teachers’ interest to have a didactic material that displays strategies on how to use ChatGPT to teach Senior High school students’ reading and writing skills, (figure 2), the 84,7% of teachers answered affirmatively.
Figure 2. Teachers’ interest to have a didactic material with strategies to show how to use ChatGPT to teach Senior High school students’ reading and writing skills.

Source: Survey applied to teachers.

In relation to the contents that the surveyed teachers consider important to include in didactic strategies to improve Senior High school students’ reading skills using ChatGPT as a tool, (figure 3), most teachers considered all the contents important: How to express critical opinions 70,50%, How to understand the meaning of a text 60%, How to determine the main ideas 59%, How to create new ideas from the story written 54,1%, How to appreciate the authors 44,3%, How to answer questions about 36,1%, and how to identify the main vocabulary 31,1%.

Figure 3. Contents to be used in strategies based on ChatGPT to improve reading skills.

Source: Survey applied

Continuing with the topic of contents that the surveyed teachers need in order to engage students’ interest in the classroom using ChatGPT as a tool to improve reading and writing skills, (figure 4), most teachers considered all the activities important: How to organize the main ideas of what to write 70%,
How to use cohesive devices (conjunctions, Grammatical concordance) 61.7%, How to write those contents creatively 55%, How to write coherent texts 53.3%, How to use the main grammatical structures appropriately 46.7%. This shows the importance of teaching with different contents to maintain an interesting class.

**Figure 4.** Contents to be used in strategies based on ChatGPT to improve students’ writing skills.

Source: Survey applied

About the themes teachers would like to utilize to improve their students’ English reading and writing skills, (figure 5), most of them considered all the themes important, in particular: Environment 68%, Free time activities 67%, Music, Science and Education 45%, Health 39.3%, Films 37%, and Networks 36%.

**Figure 5.** Themes to be used in strategies based on ChatGPT to improve reading and writing skills.

Source: Survey applied

In relation to the necessary activities to engage students’ attentiveness in the classroom using ChatGPT as a tool to improve reading and writing skills, (figure 5), most teachers considered all the activities
important: Tales 74%, Personal reflection 65.6%, Short stories 62.3%, Argumentative Essay 47.5%, and the others follow in a lesser order than 13.11%.

**Figure 6.** Activities to be used in strategies based on ChatGPT to improve reading and writing skills.

![Bar chart](chart.png)

**Source:** Survey applied

The diagnosis made allowed the design of didactic strategies based on ChatGPT to improve Senior High School students’ reading and Writing Skills.

Objective: To provide English teachers with strategies based on ChatGPT to improve Senior High School students’ English language reading and writing skills in Esmeraldas’ city.

Each strategy has three main stages:

**Stage I. Preparation**

**Objective:** To get the students to be prepared for the immersion with ChatGPT activities

**Procedures:**

- To activate the students’ mental schemata for learning
- To introduce how to use ChatGPT for learning English language reading and writing skills
- To introduce important prompts necessary to develop each activity
- To teach how to use ChatGPT, considering some ethical principles

**Stage II. Immersion activities with ChatGPT**

**Objective:** To get the students to interact with ChatGPT in different practical communicative activities
Procedures:

- To get the students to develop the activities planned (either individually, for homework, or in pairs, working collaboratively in class)

- To introduce the prompts carefully into the chat

- To get the students to consider the different answers provided by ChatGPT

- To get the students to keep on interacting with ChatGPT

- To get the students to interact with their partners

Stage III. Free use of the language

Objective: To get the students to use the skills learned in class interaction

Procedures:

- To get the students to exchange information learned with other partners

- To get the students to present summaries of what they have learned to the whole class

Suggested classroom organizational structure:

Group work

Pair work

Contents to improve students’ reading skills using ChatGPT.

- Identification of main ideas

- Understanding meaning of ideas

- Answering questions about a text

- Identifying the main vocabulary

Contents to improve writing skills using ChatGPT.

- Organizing main ideas

- Using cohesive devices

- Writing creatively

- Writing coherently
Themes to use with ChatGPT to improve Senior High School students’ reading and writing skills.

- Environment
- Music
- Science
- Films
- Festivities
- Food
- Social Media

Main activities to include in the proposal to improve reading and writing skills using ChatGPT.

- tales
- personal reflection
- short stories

Example of immersion activities using ChatGPT to develop reading skills

**Activity:** “The Fast and the Furious Trials”

**Objective:** To develop reading comprehension with skimming.

**Prompt:** “Give me a short story with intermediate (depending on the case) vocabulary, the theme must be random”

The educator asks the students to form two lines, each set of students must ask the A.I. ChatGPT the prompt, so the pair must start reading the text and the first one to correctly give the main idea wins a point, the game continues until the end of the line to see which group won the trials.

**Activity:** “Sum up your tale”

**Objective:** To develop reading comprehension with skimming.

**Prompt:** “Tell me a long story to practice my reading comprehension, with advanced (depending on the case) vocabulary, you decide the theme, and make it to have a moral learning.”

With the guidance of the tutor, students must use the technological tool to ask for a long story, by using the prompt. Furthermore, students proceed to summarize the story with their own words.
focusing on the main ideas of the text. There are multiple forms to help students develop their reading skills, now it is only up to the teachers to come up with these strategies in order to help scholar to develop this skill in a meaningful way, and actually internalizing the knowledge.

**Example of immersion activities using ChatGPT to develop writing skills**

**Activity:** “Interactive Storytelling”

**Objective:** To improve coherence

**Prompt:** “Tell me a short story to practice my reading fluency in English, with beginners (depending on the case) vocabulary, with the theme of (the scholar must choose a theme that it is interesting to them), make the story interactive so I can choose what path the main character must take.”

This way students can start practicing the required skill with a topic and a tool that is interesting to them, then the professor asks them to read in front of the class the story, while mentioning the options of path the ChatGPT gave them, and which one was chosen.

**Activity:** “Grammar and sentence structure”

**Objective:** To develop writing accuracy.

**Prompt:** “Help me with the following grammar exercise and correct the sentences or questions that do not use the proper grammatical focus.”

First, the teacher must select grammar section to focus on. Second, students ask the A.I. interrogations or sentences that involve the use of the targeted grammar or sentence structure. Next, with the results scholars must write back sentences with different errors, so it is possible to compare both sentences’ structures, and see how the chat responds to it, so it is possible for them to internalize the grammar.

At the end, the students will present what they have learned to the whole class.

**DISCUSSION**

This investigation had similar results to those obtained by Woolf (1991) at the University of Massachusetts, about A.I. in Education and the need of intelligent environments for teaching and learning has a lot of similarities to this research. In both investigations it was shown the need for guidance regarding A.I. in Education. Woolf’s investigation focused on non-traditional pedagogical
strategies, along with tutoring methods. In the same manner, it was essential that this research makes a diagnosis of the teachers' needs to have a didactic material with strategies to show how to use ChatGPT to teach Senior High school students’ reading and writing skills.

Moreover, another research related was done at the University of Waterloo, by Jones (1985) which was focused on Applications of Artificial Intelligence Within Education. In both investigations it was found that artificial intelligence can have a positive effect on educational settings. Jones’ research focuses on intelligent computer-assisted instruction systems to teach many different subjects and how A.I. has already played a major role in the development of such systems. In the same manner, our investigation focuses on how ChatGPT an A.I. based system can improve reading and writing skills in students. In both investigations it was found that there is a need for integrating this A.I. based system into the educational settings to make a positive effect on student’s learning.

In addition to that, the research conducted by Lo (2023), in China, about the Impact of ChatGPT on Education. A Rapid Review of the Literature, Lo’s research focused on the understanding on how ChatGPT can be used in education through different subjects. The researcher found that the technological tool was helpful in some subjects, such as programming, and unhelpful in other subjects. In our investigation it was presented in the results a variety of themes that can be used with ChatGPT to improve student’s language skills such as: environment, music, science, health, films. In both investigations it was found that ChatGPT can be used to teach different subjects / topics.

Furthermore, a related investigation was found in the United States, by Topsakal, O and Topsakal, E. (2022) focused on Framework for A Foreign Language Teaching Software for Children Utilizing AR, Voicebots and ChatGPT. The research presented an exceptional product for small kids to learn a foreign language. They used ChatGPT to create the content for the software. In the same manner, in our current investigation it was found which contents teachers find most helpful to use in order to improve students’ skills, such as tales, personal reflection, short stories.

In the same manner, Jeon and Lee (2022) carried out a research in the United States based on the complementary relationship between human teachers and ChatGPT. The connection between
ChatGPT and educators was explored with a particular focus on identifying the complementary roles of each in education. It was found how important the teachers’ pedagogical expertise when using AI tools is. In the same way, Kohnke, Moorhouse, & Zou (2023), carried out a research in China, about Language Teaching and Learning, presenting the digital skills professors and students need in order to utilize this tool ethically and effectively to support language learning. In our investigation, it was found that teachers have not received any methodological preparation to use ChatGPT as a tool in the classroom, consequently, ChatGPT has not play any role in their teaching, and lacking the digital skills professors might need to properly use this technological tool. These investigations analyzed the roles of this technological tool with teachers, and which skills or strategies teachers might need to improve students’ learnings.

Finally, our results also were related to the investigation done by Jeon (2021) in South Korea. The research focused on Exploring AI chatbot affordances in the EFL classroom: young learners’ experiences and perspectives. This exploratory study meant to produce an inventory of possibilities that chatbots can offer in the primary English as a foreign language (EFL) classroom. In addition, Zai (2023) carried out an investigation focusing on ChatGPT and AI: The Game Changer for Education, at University of Georgia. Zai focused on the effects of artificial intelligence on education, especially the role this technological tool, and its potential to enhance students' learning effectiveness, advance the distribution of educational resources, and improve the oversight of educational quality. In our investigation, it was found the different possible options of content / themes that can be used with ChatGPT in our classroom, for example, we can use it to teach our students how to express critical opinion, how to understand meaning of texts, how to determine the main idea of stories, how to create new ideas from the story written, and so on. These investigations present the different affordances that ChatGPT can offer while teaching a second language.

**CONCLUSIONS**

English teachers’ perceptions about the difficulties the students have about reading and writing skills were diagnosed, showing that most of the students have real trouble in their development,
something that demands some educational intervention on the field. The teachers also showed a marked interest regarding some didactic strategies using the ChatGPT to teach students’ reading and writing skills, something that reveals that this is a necessity that needs to be covered by educational research on English language teaching.

The contents teachers found necessary to use with ChatGPT to improve students’ reading skills were identified, among which the most relevant ones were in relation to how to understand the meaning, how to determine the main idea, how to answer questions about a text, and how to identify the main vocabulary in a text. This gives the researcher the precise information about the contents to be included in the strategies proposed to improve students’ reading skills.

The contents teachers found important to use with ChatGPT to improve writing skills were also determined, revealing the importance of including: how to organize the main ideas of what to write, how to use cohesive devices, how to write those contents creatively, and how to write coherent texts. This covers relevant information about the contents to be considered to include to practice and improve the students’ writing skills.

The themes teachers found essential to include in the strategies using ChatGPT were identified and were summarized as: Environment, Music, Science, Films, Festivities, Food, and Social Media. This gives a clear idea of the topics to be used in the design of the different activities, either to improve reading or writing skills.

The main activities that that teachers found crucial for including in the strategies to improve reading and writing skills, were tales, personal reflection, and short stories. These are activities that are adequate for learning vocabulary, grammar, fluency, organization of ideas, through oral and written expression.

Some stages, procedures, and activities, including the contents and themes identified were planned and allowed the final design of didactic strategies based on the use of ChatGPT to improve senior high school students’ English language reading and writing skills.
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