

MS Research Thesis

**CHATGPT AND COMMUNICATION SKILLS
DEVELOPMENT AMONG UNDERGRADUATE
STUDENTS: A MIXED METHODS
INVESTIGATION**



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A thesis submitted in partial fulfillment of the requirement for the degree of
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APPROVAL SHEET

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INVESTIGATION**

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This thesis has been accepted by the Department of Educational Leadership & Management (ELM), Faculty of Education, International Islamic University Islamabad in partial fulfillment of the degree of **MS Educational Leadership & Management**.

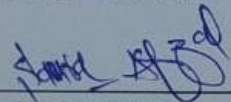
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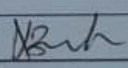
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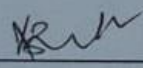

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AUTHOR'S DECLARATION


It is hereby declared that author of the study has completed the entire requirement for submitting this research work in partial fulfillment for the degree of MS Educational Leadership and Management. This thesis in its present form is the original work of the author except those which are acknowledged in the text. The material included in the thesis has not been submitted wholly or partially for award of any other academic certification than for which it is being presented.

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SUPERVISORS' CERTIFICATE

The thesis titled “ChatGPT And Communication Skills Development Among Undergraduate Students: A Mixed Methods Investigation” submitted by Ms. Hina Ashiq Reg. No. 46-FOE/MSELM/F23 as partial fulfillment of MS degree in Educational Leadership and Management, has been completed under my guidance and supervision. I am satisfied with the quality of student’s research work and allow her to submit this for further process as per IIUI rules and regulations.



Dr. Asad Abbas Rizvi

Dedication

I dedicate this piece of work to my Parents whose full support, cooperation and guidance paved the way of these achievements

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*All Praise be to Allah, the Sustainer of the World, the Merciful, the Compassionate!
And may His everlasting blessing and peace be upon Muhammad (SAW), the last of
His Messengers!*

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ABSTRACT

In today's world, AI tools are influencing every part of society. The integration of ChatGPT in educational settings is very crucial for developing communication skills among students. This study was to; analyze ChatGPT's role in improving verbal communication skills of undergraduate students; investigate ChatGPT's role in improving undergraduate students' confidence and performance during communication; explore the challenges faced by undergraduate students while using ChatGPT for the development of communication skills. This study employed a mixed methods approach, combining both quantitative and qualitative data collection and analysis methods. The quantitative method used a descriptive research design. The total population was 250 female students from 1st and last year, enrolled in the year 2024, from the Faculty of Education, IIUI. Random sampling technique was used. A sample of 186 female students was selected. One close-ended tailor-made questionnaire was administered to collect data from the targeted student population. The questionnaire's validity was ensured through expert reviews. The qualitative method used semi-structure interviews to explore students' experiences of ChatGPT in depth. Cronbach's Alpha was used to ensure the reliability of the research instruments. The reliability analysis was conducted using SPSS. The results revealed values ranging from 0.978. Convergent parallel design was used for data collection. Quantitative data from the questionnaire was analyzed using descriptive statistics, such as means to summarize trends in student perceptions. Qualitative data was analyzed by using thematic analysis. The quantitative findings suggested that ChatGPT had a positive impact on communication skills. It enhanced vocabulary, generate ideas, and boost students' confidence in expressing themselves. However, it contributed less to verbal fluency and communication. The quantitative findings suggest that students considered ChatGPT useful for clarity and vocabulary development; they did not perceive it as a replacement for traditional resources such as books. Respondents emphasized that ChatGPT helps with content-related confidence but not with the psychological aspects of confidence-building. The text-only limitation of ChatGPT was viewed as a major weakness in developing comprehensive communication skills. Integrating both quantitative and qualitative findings, the study concludes that ChatGPT serves as a supplementary learning aid not a standalone solution for communication skill development. Effective use requires balanced integration with traditional learning methods and interpersonal communication practice. It is recommended that students use ChatGPT as a supportive learning tool to develop communication skills, but avoid over-reliance. They should cross-check information with textbooks, lectures, and peer discussions. Encourage face-to-face discussions and practical exercises for oral communication. Policy makers should explore how teachers can create an AI-friendly learning environment in education settings. May also promote such professional development programs that enhance students' communication skills through the effective use of ChatGPT.

Key words: *ChatGPT, Undergraduate Students, Communication Skills*

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CHAPTER 1

INTRODUCTION

ChatGPT is an artificial intelligence language model. It is developed by OpenAI, which utilizes the GPT-4 architecture (Generative Pre-trained Transformer). It is designed to comprehend and produce natural language text. It facilitates meaningful conversations with users in a natural way. This AI model is widely used to answer questions, provide suggestions, and assist with numerous writing and communication tasks. ChatGPT responds according to the input it receives, making the interaction feel more personalized and effective (Mustafa, Siminto, & Ausat, 2024).

Communication is a process of exchanging information, where a sender conveys a message to a receiver using verbal or non-verbal methods. It involves the sharing of ideas, opinions, and information with a specific purpose in mind. In addition to oral communication, symbols can also be used to convey meaning. This process begins when the sender (speaker or writer) transmits a message to the receiver (listener or reader) through a channel or medium. This process is followed by the receiver providing feedback by coding and interpreting the information. Today, communication also happens through technology, and tools like AI. These AI tools are becoming a bigger part of how we interact (Iksan, et al., 2012).

ChatGPT is now being used to help students improve their communication skills. By chatting with ChatGPT, students feel more confident. Students can practice writing clearly, asking better questions, and organizing their thoughts. The technology helps build confidence and fluency in expression. So, it is a valuable resource for academic and professional development in communication (Kalla, Smith, & Kuraku, 2023).

1.1. Background of the Study

Effective communication is essential for individuals to convey messages clearly, logically, and coherently. Importance of good communication skills cannot be overlooked. Only those with proficient communication can convey his/her message in a clear, ordered and organized manner. In today's world, AI tools are influencing every part of society. The ChatGPT integration in educational environment is very crucial for developing communication skills among undergraduate students. ChatGPT is actually an artificial intelligence language model developed to comprehend and

generate natural language text. By analyzing how ChatGPT facilitates the development of communication skills, this research will offer valuable insights into the role of AI technologies like ChatGPT in education.

The purpose of the present research study is to investigate how ChatGPT supports the development of communication skills among undergraduate students. It aims to explore how ChatGPT contributes to vocabulary building, idea generation, and confidence in speaking. As well as the challenges students face while using it. The study uses a parallel convergent mixed methods design to gain a complete understanding of ChatGPT's role. And ultimately guiding educators, policymakers, and students toward innovative methods for verbal communication skills development.

1.2. Problem Statement

Effective communication is essential for individuals to convey messages clearly, logically, and coherently. In this era, effective and valuable communication skills are needed through which students can succeed both professionally and academically. However, many students face problems in developing effective communication skills. With the advancement in technology, AI has introduced new opportunities like ChatGPT to transform education and develop communication skills among undergraduate students. But how ChatGPT helps in communication skill development among undergraduate students is not clear. There is limited research on how female undergraduate students in Pakistani universities use ChatGPT to improve their communication skills. IIUI offers a diverse learning environment with both local and international students, making it a valuable setting to explore how ChatGPT improves verbal communication skills across different student backgrounds. Therefore, the problem to be investigated is what is the impact of ChatGPT on developing communication skills, assess its influence on students' communication confidence, and identify the challenges faced by students while using ChatGPT.

1.3. Objectives

The objectives of this research were to:

- i. Analyze the role of ChatGPT as a tool in improving verbal communication skills of undergraduate students.
- ii. Investigate ChatGPT's role in improving undergraduate students' confidence and performance in communication.

iii. Explore the challenges faced by undergraduate students while using ChatGPT for the development of communication skills.

1.4. Research Questions

Research question of this research were to:

i. How do ChatGPT facilitate the verbal communication skills of undergraduate students?

ii. In what ways the use of ChatGPT effects the performance and confidence level of undergraduate students during communication?

iii. What are the challenges faced by undergraduate students when using ChatGPT for the development of communication skills?

1.6. Significance of the study

For the academic and professional success of undergraduate students' communication skills are very important. This study seeks to find out how ChatGPT facilitates the development of communication skills among undergraduate students. As ChatGPT is an AI language model developed to comprehend and produce natural language text. So, it is expected that this research might provide valuable insights into the extent to which communication skills are being developed through ChatGPT.

This study seeks to identify effective use of ChatGPT to enhance communication skills among undergraduate students. So, they become more organized, clear and confident when they communicate. This study was also helpful for stakeholders in educational field such as teachers, students and policy makers. Policy makers and educators might use the findings of this study to effectively use ChatGPT as an effective tool to develop communication skills among students.

1.7. Delimitations of the study

This study was delimited to:

1. Female undergraduate students
2. Department of Educational Leadership and Management
3. Faculty of Education
4. International Islamic University Islamabad.

1.8. Operational Definition of Major Terms

1.8.1 ChatGPT

ChatGPT is an AI language model created by OpenAI. It helps students to improve their communication skills. It is developed to understand and produce human-like text. ChatGPT responds according to the input it receives. It can answer questions, provide suggestions, and assist with numerous writing and communication tasks. Students observe the language used by ChatGPT. They learn vocabulary, grammar, and apply the learned patterns in their own communication. ChatGPT gives instant responses that guide and correct their learning.

1.8.2 Communication Skills

Communication is defined as the process of sharing one's thoughts, feelings, and ideas to others while ensuring their understanding. During communication one listens, observe and speaks with other. It is the combination of learning, practicing, and refining interaction for effective understanding. Verbal communication is an important part of communication. It helps people express their ideas through spoken words. It shows how well a person can speak, express ideas, and build confidence while interacting with others.

1.9. Theoretical Framework

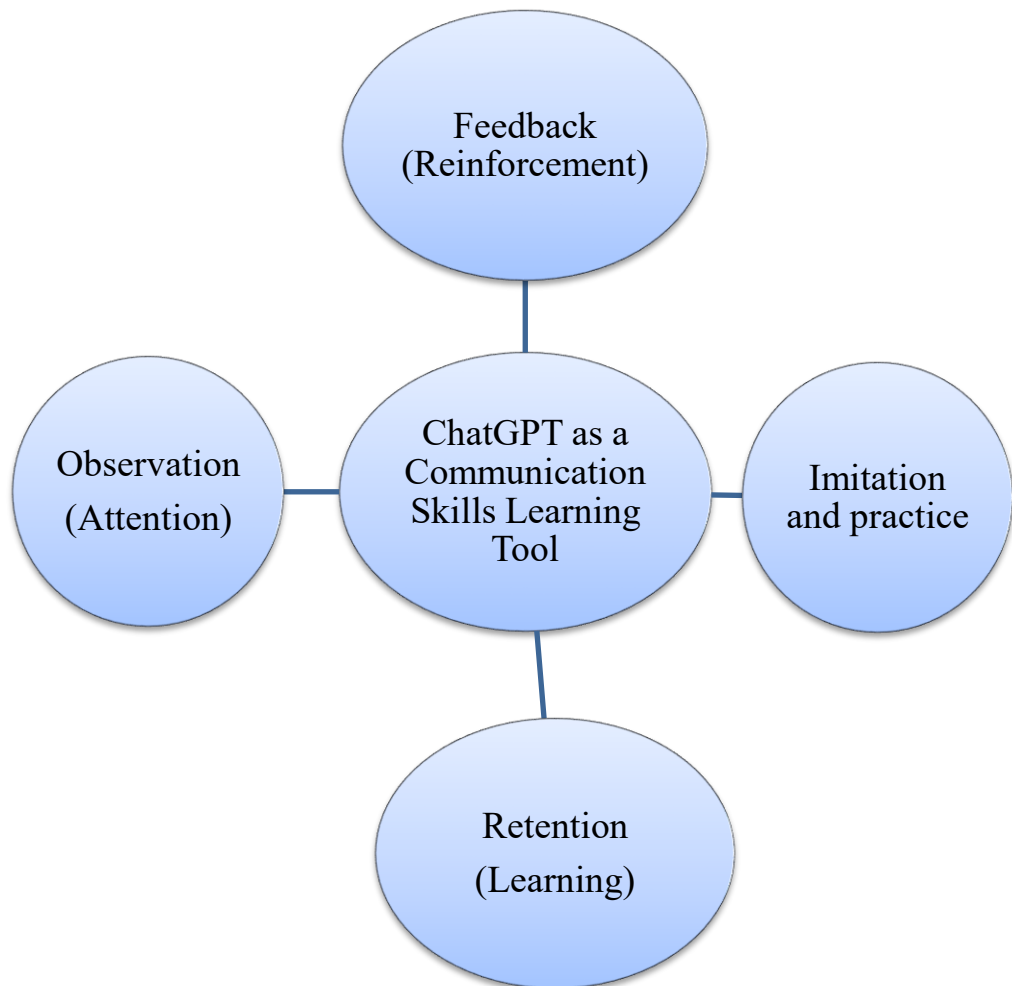
This theoretical framework is grounded in Social Learning Theory (SLT) presented by Albert Bandura. As discussed by Boone, Reilly, and Sashkin (1977) in their review of Albert Bandura's work. This theory emphasizes that skills are acquired through observation, imitation, and practicing. According to this perspective, new skills are developed by observation, retaining the observed information, practice, and receiving feedback that strengthens learning outcomes.

ChatGPT is an interactive AI tool which provide feedback to undergraduate students to improve their communication skills over time. The theoretical framework links the use of ChatGPT with the development of communication skills through the four core processes of Social Learning Theory. The four core processes of SLT are attention, retention, imitation, and feedback Students engage in observational learning by interacting with the ChatGPT and observing its responses. Through this interaction undergraduate students learn effective communication strategies to improve their confidents and performance. Then they retain these response sand store them in

memory for later use. Through imitation, students reproduce ChatGPT’s responses in their speaking, enhancing accuracy and fluency. Finally, feedback is provided by ChatGPT that allowing students to refine sentence structure. It also provides step-by-step feedback to correct grammatical mistakes and improve vocabulary. Through practices, imitation and step-by-step feedback students improve their communication competencies (Boone, Reilly, & Sashkin, 1977).

Figure 1:

Theoretical Framework



Source: Boone, T., Reilly, A. J., & Sashkin, M. (1977). *Social learning theory* [Review of the book *Social learning theory*, by A. Bandura]. *Group & Organization Studies*, 2(3), 384–385. <https://doi.org/10.1177/105960117700200317>

CHAPTER 2

LITERATURE REVIEW

The chapter offers an overview of existing research and scholarly works relevant to the studies focusing on analyzing ChatGPT in the development of communication skills among undergraduate students. Literature review serves as a platform for synthesizing diverse perspectives and identifying overarching themes and patterns in the literature. By integrating findings from various studies, I strive to construct a coherent narrative that contributes to our understanding of how ChatGPT influences the communication skills of undergraduate students and contribute to their skill development.

2.1. Communication and AI Tools

In the modern era, communication and technology are deeply interconnected. The rapid advancement of AI has significantly influenced how people communicate. Understanding the traditional concept of communication and how AI tools reshape it provides a foundation for exploring their role in education and interpersonal interactions.

2.1.1. Communication

Communication is the process of exchanging information, ideas or feelings between two or more people. It involves activities like talking, listening and understanding one another. Communication is also explain as the transformation of ideas, thoughts, behavior and a process of influencing one another. And also helping people grow. Communication helps students to exchange ideas and understanding each other's' knowledge, traditions, customs, culture and point of view. It is more than just sending messages. In this process both parties interact in a meaningful way. This interaction occurs in various settings such as at home, in school, or in social groups (Sharifirad, Rezaeian, Jazini, & Etemadi, 2012).

2.1.2. Artificial Intelligence tools

Gioradno, et al., (2024) found that technological changes, especially advancements such Artificial Intelligence (AI) tools, are transforming communication skills in personal and professional settings. These new technologies are reshaping how individuals engage, collaborate, and share information by introducing new ways of interacting with technology and other individuals. These AI tools like ChatGPT require

individuals to develop communication skills that are adaptable to both human-to-human and human-to-machine interactions.

AI technologies, such as ChatGPT, language processing tools, and collaborative platforms, play an important role in enhancing communication by automating repetitive tasks, facilitating quick responses, and enabling real-time collaboration. These technologies can assist users in crafting well-structured written content, improving public speaking skills through virtual simulations, and offering real-time feedback on communication strategies. These applications empower individuals to communicate more effectively in various settings.

ChatGPT is a type of Large Language Model (LLM) developed by OpenAI, released in November 2022. This technology is developed to comprehend and produce human language text. It involves deep learning to perform tasks like writing text, answering questions, and translating languages. It understands the context of the conversation and then responds. ChatGPT has become popular in higher education and is very helpful for undergraduate students in writing their assignments, making notes and also in the development of effective communication skills. It can help students learn by creating engaging resources like quizzes and flashcards. Since the launch of ChatGPT, it has faced many challenges especially in universities. Since the launch of ChatGPT, researchers have been examining its impact and the challenges (Rasul, et al., 2023).

2.1.3. ChatGPT's role in enhancing communication

Giordano, et al., (2024) found that ChatGPT's role in enhancing communication is evident in knowledge-intensive industries, where professionals rely on it for creating presentations, solving problems, and managing innovative processes. ChatGPT has become more integrated into workplaces, it encourages people to refine their digital communication abilities, adapt to new collaborative technologies, and engage with AI systems as part of their routine. The focus on new technologies in education and training programs is also growing, as these technologies can help individuals build confidence, improve clarity in expression, and overcome common barriers in communication. This evolving landscape underscores the importance of developing both traditional and digital communication skills to thrive in a technology-driven world.

Humans are continually enhancing their learning by embracing new technologies. One of the latest technologies in the modern era is ChatGPT. Which is defined as a machine-based system capable of making predictions, recommendations or decisions that impact real or virtual environments. As an AI-driven tool, ChatGPT has significant potential for communication skills development as it can generate predictive and diagnostic models that facilitate personalized learning and timely interventions. AI-driven tools have been classified into four categories. The first type is the intelligent tutor, which meets students' needs to achieve better outcomes. The intelligent tutee is another category that encourages learners take on tutoring roles, promoting active participation and enhancing communication skills. The third type, intelligent learning tools or partners, collects and analyzes student data to improve their learning experiences. Lastly, policy-making advisor applications assist administrators in analyzing trends and challenges in communication skills development, helping them implement effective strategies (Huang, et al., 2023).

In this era, the integration of ChatGPT has gained significant attention in educational settings. Especially because of its potential to enhance communication skills among university students. ChatGPT has demonstrated various benefits by fostering personalized learning experiences and student engagement. It help students to interact in learning environment, develop creativity and improve their ability to articulate thoughts. This plays a key role in improving students' communication skills through both written and verbal practice. (Zhang & Tur, 2023).

Zhang & Tur, (2023) discuss that it is designed to generate human-like responses and offers opportunities for real-time conservation and step-by-step feedback. It also boosts student engagement in education settings and public speaking. It improves communication skills by engaging students in conversations, receiving grammar corrections, and engaging in creative writing activities. Without proper guidance, the quality of communication skill development may suffer. ChatGPT can be integrated into education to foster effective communication skills among university students. By identifying both opportunities and challenges, we can use it as an effective tool to develop communication skills among students.

2.2. Theory Behind the Study

Social learning theory presented by Albert Bandura. This theory is based on the idea that humans learn from their interactions with others in social settings. This theory highlights that observing the behaviors of others, help people develop similar behaviors. Especially when these actions are associated with positive experiences. Imitation is a key element of this learning process. After observing the behavior of others, individuals assimilate and imitate that behavior. This theory plays a crucial role in developing communication skills among undergraduate students (Nabavi & Bijandi, 2012).

SLT emphasizes that people learn from one another, via: observation, imitation, and modeling. According to this theory, individuals do not always need behavioral reinforcement to learn. Only observation alone can foster learning, this idea contrasts with behaviorism. Which suggests that learning requires changes in behavior. In 1961 Bandura's Bobo doll experiment highlighted, how children learn aggressive behavior by imitating adults, even without receiving any reward (Nabavi & Bijandi, 2012).

ChatGPT aligns well with Social Learning Theory by encouraging observation, imitation, and modeling. It supports undergraduate students in developing key communication skills such as fluency, confidence and correct grammatical mistakes. This research explores the relevance of ChatGPT for developing communication skills in undergraduate students, grounded in Bandura's Social Learning Theory. This theory emphasizes that humans learn skills through interaction and observation, ChatGPT serves as a virtual partner which response human language and provide effective feedback. It provides undergraduate students an interactive environment where students can engage in dialogues, receive feedback, and develop their communication skills. This AI tool improve learning outcomes by providing a digital learning environments to undergraduate students (Ali, et al., 2024).

In conclusion, Bandura's Social learning theory offers a comprehensive theoretical framework for understanding and analyzing the role of ChatGPT in the development of communication skills among undergraduate students. It's integration into communication training aligns well with Social Learning Theory by promoting interactive learning, modeling and provide step-by-step feedback to develop

communication skills. As undergraduate students engage with ChatGPT, they develop not only communication skills but also confidence and public engagement.

2.3. Empirical Review

With the rapid evolution of ChatGPT, researchers have increasingly examined its implications for communication, education, and ethical practice. The following empirical studies highlight different dimensions of ChatGPT's role in communication skills development.

2.3.1. Ethical Use of ChatGPT

Arguello, et al., (2024) discusses the ethical use of ChatGPT in educational settings and how it impacts communication skills of students and interaction. ChatGPT can be helpful and effectiveness depends on responsible management. ChatGPT can enhance communication or disrupt learning processes, depending on how it is used. It might hinder students from developing strong communication and writing skills if students totally rely on it. There should be some ethical dilemma to balance the benefits and misuse of ChatGPT while ensuring students learn to communication skills effectively and maintain academic integrity. Teachers need to adapt to new technologies such as ChatGPT to help students develop better communication skills. They must move beyond traditional teaching methods to develop communication skills and use modern technology to foster meaningful learning experiences.

2.3.2. The Importance of Effective Communication

Giray, (2024) emphasizes the effective communication is essential for success in any field. Whether it's doctors saving lives, teachers sharing knowledge, or engineers turning ideas into reality, professionals recognize the value of clear and impactful communication. To improve how they express ideas, thoughts, and research, many professionals are turning to tools like ChatGPT. While ChatGPT offers valuable features for enhancing communication, it's important to evaluate how it aligns with the 7Cs of effective communication: clarity, coherence, conciseness, concreteness, correctness, completeness, and courtesy.

By analyzing ChatGPT's strengths and weaknesses in relation to each of these principles, we can better understand how it helps or hinders effective communication. This analysis can provide insights into how AI shapes modern communication

practices. This knowledge will enable users to make better choices and use AI tools to maximize their communication's effectiveness (Giray, 2024).

2.3.3. Maximizing Communication Effectiveness with AI

Barrot explores how ChatGPT can support communication skill development across numerous areas of education. It offers various opportunities for personalized learning, academic assistance, content creation, and language practice. ChatGPT's ability to provide step-by-step feedback and adaptive responses helps students develop their communication skills based on individual progress. ChatGPT ensures more targeted learning experiences. It also plays a crucial role in students communication skills development by enabling students to engage in conversations, practice sentence construction, and receive immediate feedback. Therefore this enhance both spoken and written communication. It helps learners through grammar corrections, vocabulary suggestions, and comprehension exercises (Barrot, 2023).

In conclusion, the use of ChatGPT in education environment presenting new opportunities to enrich communication skills. By thoughtfully incorporating ChatGPT into education settings teacher can foster creativity, engagement, and develop communication skills among students. Overall, these studies suggest that the ChatGPT integration in education environment offers both opportunities and challenges in the development of communication skills. It can personalize learning and improve communication skills but we have to develop some effective strategies that maximize its benefits while minimizing potential downsides.

2.4. ChatGPT as a Language Learning Tool

Dempere, et al., (2023) found ChatGPT is an advanced AI-powered language model, launched by OpenAI in November 2022 to facilitate human-like communication. As a natural language processing (NLP) tool, it has revolutionized language learning by assisting users with vocabulary acquisition, grammar correction, pronunciation improvement, and conversational practice. Its ability to generate coherent and contextually appropriate text makes it a valuable tool for students, educators, and professionals. ChatGPT's underlying transformer model and self-attention mechanism, allow for personalized learning experiences, advanced text summarization, translation, and grammar refinement.

Despite its numerous advantages, concerns have emerged regarding over-reliance on AI, academic dishonesty, and the potential decline of critical thinking

skills. Some educators fear that students may depend too heavily on AI-generated content rather than actively developing their own verbal and written communication skills. However, when used responsibly, ChatGPT enhances language learning by providing instant feedback and interactive learning opportunities.

Its widespread impact is evident in the surge of global interest, surpassing major international topics in online searches. The rapid advancement of AI-powered language models has also raised discussions about ethical considerations, data privacy, and regulatory measures. While global leaders call for responsible AI governance, ChatGPT remains a powerful tool in education, offering new ways to improve verbal and written communication. The future of AI-driven language learning will require a balance between technological innovation and human-centric education, ensuring that AI complements rather than replaces critical language skills (Dempere, , et al., 2023).

2.4.1. Recent Advancements in ChatGPT

Recent advancements in ChatGPT have highlighted its potential as a powerful language-learning tool. OpenAI has been continuously upgrading its capabilities, with future versions like GPT-5 expected to bring significant improvements in natural language understanding and human-like interaction. Since its release on November 30, 2022, ChatGPT has sparked extensive research, demonstrating its effectiveness in assisting learners with grammar correction, vocabulary expansion, and real-time conversation practice. ChatGPT may enhance science education by automating assessments and providing personalized learning guidance.

ChatGPT fosters digital literacy, aiding learners in understanding and analyzing information effectively. In higher education, AI's ability to replicate human-written text highlights potential challenges to academic integrity. Additionally, ChatGPT's role in analyzing and interpreting complex language structures, makes it an essential tool for improving comprehension and communication skills. AI-driven language assistants can support self-regulated learning and promote collaboration in educational settings. Furthermore, ChatGPT's medical education applications show its ability to generate structured reports and summarize complex information effectively. ChatGPT's proficiency in generating academic abstracts, findings indicated that human reviewers could still distinguish AI-generated content. As AI-driven models evolve, their role in language learning will become increasingly significant, offering personalized, accessible, and interactive educational support. However, educators must

ensure ethical and responsible usage to balance AI-assisted learning with critical thinking and creativity (Dempere, , et al., 2023).

According to Barrot, (2023) ChatGPT is a valuable tool for language learning, offering accessible resources that help learners improve their reading, writing, vocabulary, grammar, and conversational skills. It is especially beneficial for individuals who lack access to traditional language learning opportunities or fluent speakers for practice, thus democratizing language education. In a digitally connected world, ChatGPT transcends geographical barriers, fostering cross-cultural language learning and communication. One of its strengths lies in its ability to provide personalized learning experiences, tailoring activities to learners' proficiency levels and learning styles. ChatGPT supported high school students by fostering self-directed learning and self-reflection, enabling them to take ownership of their education. This personalization allows learners to progress at their own pace, making language learning more flexible and adaptable to individual needs.

2.4.2. Immersive Language Learning with ChatGPT

Beyond theoretical knowledge, ChatGPT offers an immersive language learning experience that simulates real-world interactions. Through interactive conversations and contextual exercises, learners can practice language skills in a safe and supportive environment, similar to conversing with a native speaker. Students using ChatGPT experienced improvements in vocabulary, grammar, writing, and conversation skills. Additionally, ChatGPT provides instant, targeted feedback on writing, helping learners refine content, organization, and grammar. This immediate feedback serves as a motivator, enabling learners to track progress and accelerate language mastery. The tool also assists with writing tasks such as generating essay topics, creating outlines, and improving coherence.

However, issues like authorship, academic integrity, and the accuracy of AI-generated content must be considered. From a pedagogical perspective, ChatGPT encourages educators to reassess their teaching strategies by incorporating AI-assisted learning while maintaining teacher guidance. Learners can engage in self-assessment and automated feedback, evaluating AI-generated suggestions within their own context. Teachers can integrate ChatGPT at specific stages of language activities, such as brainstorming ideas or refining essays, while ensuring originality during the drafting phase. The AI tool is also effective for editing, helping learners improve grammar,

vocabulary, and clarity in their writing. By analyzing AI-generated corrections, learners can develop metalinguistic awareness and critical thinking skills (Barrot, 2023).

In conclusion, ChatGPT is a powerful tool for language learning, enhancing grammar, vocabulary, and conversational skills through personalized, interactive support. It promotes self-directed learning and accessibility but raises concerns about over-reliance, academic integrity, and critical thinking decline. While it fosters engagement and digital literacy, it cannot replace human interaction and creativity in education. Ethical considerations like AI bias and data privacy must be addressed for responsible use. A balanced approach integrating AI with traditional learning ensures its effectiveness in education.

2.5. ChatGPT vs Traditional Language Learning Methods

The growing popularity of conversational AI, driven by major technology firms like IBM, Facebook, and Google, has revolutionized various sectors, including education. Chatbots, virtual assistants, and automated systems are transforming online interactions by improving user engagement and streamlining processes. In the educational landscape, AI-powered Chatbots, particularly ChatGPT, have emerged as influential tools, reshaping language learning and communication training. While traditional language learning methods rely on textbooks, structured grammar lessons, and teacher-led instruction, ChatGPT introduces an interactive, AI-driven approach that fosters real-time engagement and personalized learning. Unlike conventional methods that emphasize rote memorization, ChatGPT enables students to practice conversations, receive instant feedback, and enhance their writing and speaking skills dynamically (Sain, Ayu, & Thelma, 2024).

2.5.1. Balancing AI and Human Interaction in Language Learning

Despite its advantages, ChatGPT also presents challenges compared to traditional language learning approaches. While AI-driven learning offers accessibility, adaptability, and instant responses, it may lack the depth of human interaction and cultural context provided by experienced language instructors. Additionally, concerns about over-reliance on AI, diminished problem-solving abilities, and a potential reduction in creativity have been raised (Sain, Ayu, & Thelma, 2024).

Sain, Ayu, & Thelma (2024) traditional language learning methods emphasize structured progression, human mentorship, and immersive experiences that AI tools may struggle to replicate fully. However, integrating ChatGPT with conventional

methods could offer a balanced approach, combining AI-driven efficiency with the depth and contextual understanding of traditional instruction. By leveraging AI tools alongside established pedagogical strategies, educators can create an enriched language learning experience that fosters both linguistic proficiency and critical thinking skills, ensuring students benefit from both technological innovation and foundational learning principles. ChatGPT and other AI-driven conversational tools have the potential to transform language learning, they also raise significant ethical and educational considerations.

2.5.2. The Need for Transparency in AI-Generated Content

Issues such as bias in AI training data, the impact on language teaching jobs, and the need for transparency in AI-generated content are important concerns. Research on learning preferences has explored various aspects of traditional and AI-based language instruction, including effectiveness, ease of use, personalization, and overall learning experience. Studies suggest that learners often find AI-powered language learning tools, such as ChatGPT, more engaging than traditional classroom-based methods due to their accessibility, speed, and adaptability. Unlike conventional approaches that rely on structured lesson plans and instructor-led teaching, AI-driven language learning offers real-time feedback, interactive conversations, and personalized learning experiences tailored to individual proficiency levels (Sakirin & Said, 2023).

According to Sakirin & Said (2023) AI-powered language learning presents advantages, it also has limitations compared to traditional methods. The accuracy of ChatGPT-generated content, the depth of language understanding, and its ability to provide culturally relevant communication practice are crucial factors affecting learner satisfaction. Traditional language instruction emphasizes structured grammar lessons, in-depth linguistic analysis, and human interaction, which AI tools may not fully replicate. Additionally, concerns regarding over-reliance on AI for learning, potential misinformation, and the lack of emotional connection with an instructor remain significant barriers.

Studies highlight the need to balance AI-driven and traditional learning methods, integrating AI as a supplementary tool rather than a complete replacement. Further research is required to explore the long-term effects of AI in language learning, its impact on student engagement and retention, and how demographic factors such as age and learning preferences influence its effectiveness. By addressing these

challenges, ChatGPT and similar AI tools can complement traditional language learning, offering an innovative and interactive approach to mastering new languages while preserving the essential benefits of conventional education methods (Sakirin & Said, 2023).

It is concluded that ChatGPT and AI-driven tools offer innovative, interactive, and accessible language learning experiences, enhancing engagement and personalization. However, they cannot fully replace traditional methods, which provide structured learning, cultural context, and human interaction. A balanced approach integrating AI with conventional instruction ensures effective language learning while addressing ethical and educational challenges.

2.6. Impact of ChatGPT on Students' Language Learning

According to Hakiki, et al., (2023) with the rapid advancement of technology in the digital era, technology-assisted learning has become a major component of modern education. One of the key challenges in language learning is ensuring effective student outcomes, which require active engagement, motivation, and interaction with learning materials and peers. To address this challenge, researchers have explored innovative tools such as ChatGPT (Generative Pre-trained Transformer) to enhance students' language learning experiences. ChatGPT, an advanced AI-powered language model, has emerged as a promising tool for facilitating language learning. By leveraging natural language processing and machine learning, ChatGPT enables interactive and personalized conversations that mimic human-like interactions. This AI-driven tool offers real-time feedback, tailored language exercises, and engaging discussions that foster an immersive learning experience. Integrating ChatGPT into language learning positively impacts students' proficiency by encouraging active participation, improving vocabulary retention, and enhancing writing and speaking skills.

The conversational nature of ChatGPT promotes student engagement, providing a more interactive and dynamic approach to learning. Through real-time feedback and personalized guidance, students receive instant corrections and suggestions, helping them refine their grammar, pronunciation, and sentence structures. Additionally, AI-powered Chatbots create a supportive learning environment where students feel comfortable practicing without fear of judgment, ultimately boosting their confidence in language use. While traditional methods rely on textbooks and instructor-led lessons, ChatGPT introduces a more flexible and

engaging approach, allowing students to practice language skills independently (Hakiki, et al., 2023).

2.6.1. ChatGPT as a Valuable Tool in Language Learning

ChatGPT as a valuable tool in language learning provides interactive and human-like responses to a wide range of prompts. It has pedagogical benefits, such as serving as a conversation partner, offering tailored feedback on writing, assisting in idea generation, and creating lesson plans and task-based activities. However, concerns have also been raised regarding its impact on academic integrity and student learning, including the risk of plagiarism, over-reliance on AI-generated content, and the potential for biased or inaccurate responses. To maximize the benefits of ChatGPT in language learning, students must develop digital literacy skills, understand how to interact effectively with AI tools, and critically assess the information provided. As generative AI becomes increasingly integrated into education, educators play a crucial role in guiding students toward responsible and productive use of ChatGPT, ensuring it enhances language acquisition rather than hindering independent learning (Javier & Moorhouse, 2023).

2.6.2. Communicative Language Teaching and AI Integration

The integration of artificial intelligence, particularly ChatGPT, in English language education has gained increasing attention from researchers and educators. Communicative Language Teaching (CLT), which emphasizes meaningful interaction and real-life communication skills, has been widely adopted in language classrooms. With advancements in technology, AI-powered tools like ChatGPT have introduced new opportunities to enhance language learning by providing interactive and personalized experiences. Chatbots and conversational agents simulate realistic language interactions, offering students a platform for continuous practice and engagement (Zhang Z., 2024).

According to Zhang Z., (2024) ChatGPT, utilizing Natural Language Processing (NLP), can support language learners by generating human-like responses and facilitating conversational practice. CLT-based approaches combined with AI can maximize learning outcomes, foster fluency, and create interactive and engaging language learning environments. By integrating AI-driven tools like ChatGPT into CLT frameworks, educators can provide learners with more opportunities for authentic communication, personalized feedback, and immersive language experiences. While traditional CLT methods have proven effective in language acquisition, the addition of

AI technologies presents a promising avenue for further enhancing students' learning outcomes and engagement in language education.

In conclusion, ChatGPT enhances language learning by fostering interactive, personalized, and engaging experiences that support vocabulary retention, grammar improvement, and fluency. While it offers valuable pedagogical benefits, concerns about academic integrity and over-reliance must be addressed through responsible AI integration. Combining AI-driven tools with traditional methods, such as Communicative Language Teaching, can optimize language learning outcomes while ensuring independent skill development.

2.7. Improving Students' Confidence and Performance with ChatGPT

According to Wang, (2025) the integration of artificial intelligence (AI) into language education has significantly transformed English language learning, particularly through computer-assisted language learning tools. AI-powered platforms, including ChatGPT, have been widely adopted to provide tailored lessons, real-time feedback, and interactive learning experiences that enhance students' oral communication skills. By utilizing natural language processing (NLP) and voice recognition, these tools can evaluate pronunciation, provide contextual corrections, and simulate authentic conversations, fostering a more engaging and effective language-learning environment. However, s many students struggle with English communication due to language deficiencies, limited exposure to conversational practice, and anxiety in speaking. Challenges such as grammatical errors, pronunciation difficulties, and reliance on translation apps hinder their ability to communicate confidently and fluently in English. While AI applications have been developed to address these challenges, issues persist, necessitating further research into their effectiveness.

ChatGPT, particularly its latest versions, offers a potential solution by enabling students to practice dialogues in a low-pressure environment, helping to build confidence and fluency in communication. Students' acceptance and willingness to use AI tools play a crucial role in determining their effectiveness in learning. Students with positive attitudes toward ChatGPT are more likely to use it for language practice, leading to improved communication skills. However, concerns about over-reliance on AI and potential drawbacks such as plagiarism and lack of originality must be addressed. ChatGPT plays an essential role in improving students' confidence and

performance in English communication, bridging the research gap, and providing insights for educators, policymakers, and language learners (Wang, 2025).

ChatGPT plays a crucial role in improving students' confidence and performance in communication by offering personalized learning experiences tailored to their needs. Through analyzing students' previous interactions, learning patterns, and performance, ChatGPT can identify specific weaknesses and provide targeted exercises to address communication gaps. This adaptive learning approach ensures that students receive relevant and customized content, maximizing their language development. Additionally, ChatGPT supports diverse learning styles by presenting information in multiple formats, including text, audio, and visual aids. By incorporating multimedia elements such as videos, images, and interactive simulations, it enhances students' comprehension and engagement, catering to different learning preferences. Real-time assistance is another key benefit, as students can ask questions and receive immediate feedback during lessons, discussions, or independent practice, helping them keep up with the pace of learning and reducing hesitation in seeking clarification (Garane, Sigane, & Rajabova, 2024).

2.7.1. ChatGPT Fosters Personal Development

Beyond linguistic skills, ChatGPT fosters personal development by promoting critical thinking, problem-solving, and effective communication through real-life scenarios and analytical exercises. Moreover, its multilingual capabilities enable students from diverse linguistic backgrounds to overcome language barriers, facilitating smoother learning experiences for non-native English speakers. As an AI-driven tool, ChatGPT continuously improves its responses based on user interactions, ensuring that its feedback remains up-to-date and aligned with evolving educational needs. This iterative learning process enhances its effectiveness in assisting students with their communication skills. Furthermore, in resource-constrained environments where access to qualified instructors or learning materials may be limited, ChatGPT serves as an additional support system, providing explanations, examples, and practice opportunities to supplement traditional education. Overall, ChatGPT has the potential to transform communication learning by fostering confidence, fluency, and engagement, ultimately equipping students with the skills needed for academic and professional success (Garane, Sigane, & Rajabova, 2024).

In conclusion, ChatGPT significantly enhances students' confidence and performance in English communication by providing personalized learning, real-time

feedback, and adaptive exercises tailored to individual needs. It fosters engagement through multimedia elements, supports diverse learning styles, and helps students overcome language barriers in a low-pressure environment. Additionally, ChatGPT promotes critical thinking, problem-solving, and accessibility, particularly in resource-limited settings. However, responsible use is essential to mitigate concerns about over-reliance and academic integrity. By integrating AI with traditional teaching methods, educators can maximize its benefits while ensuring students develop independent and authentic communication skills.

2.8. Enhancing Students' Pronunciation Skills with ChatGPT

Pronunciation instruction has gained considerable attention in language education over the past two decades. Evolving from a neglected aspect of learning to a crucial component of communication. Language learning involves acquiring the necessary skills to communicate effectively in a foreign or second language, such as English. One of the crucial aspects of mastering a language is pronunciation, which significantly impacts a learner's ability to be understood by native speakers. Traditional digital language learning technologies (TDLLT), such as software programs, online platforms, and mobile applications, have been widely used to support language learning. These tools provide interactive exercises, vocabulary practice, and pronunciation training, but they often lack real-time feedback and personalized correction (Shaikh, et al., 2023).

With advancements in AI, particularly the rise of generative models like ChatGPT, educators are exploring new ways to integrate technology into language teaching. ChatGPT, developed by OpenAI, is a widely adopted AI tool with the ability to process complex language instructions and generate human-like responses. While it cannot directly correct pronunciation, its capabilities in grammar, vocabulary, and structured language practice make it a valuable resource for pronunciation training (Wallace & Lima, 2023).

ChatGPT supports pronunciation development by serving as a brainstorming tool for educators, helping them create lesson plans, interactive exercises, and customized learning materials. It can generate word lists, tongue twisters, dialogues, and role-play scenarios designed to target specific pronunciation challenges. Additionally, students can use ChatGPT to receive structured feedback on their spoken responses, enhancing their clarity, coherence, and fluency. Although ChatGPT 3.5 lacks direct audio capabilities, integration with text-to-speech tools and voice-

controlled plugins enables learners to hear modeled speech and refine their pronunciation (Wallace & Lima, 2023).

2.8.1. ChatGPT Functions as a Virtual Conversation Partner

ChatGPT functions as a virtual conversation partner, allowing students to engage in real-time language practice. By prompting ChatGPT for structured dialogues or discussion-based exercises, learners can improve their pronunciation in meaningful communication contexts. Mobile applications and browser extensions further enhance this experience by enabling voice interaction and immediate feedback on intelligibility. While AI offers significant support in pronunciation instruction, the role of educators remains essential in guiding, personalizing, and evaluating the learning process. The combination of AI-driven assistance and expert human instruction can lead to a more engaging and effective pronunciation learning experience (Wallace & Lima, 2023).

ChatGPT, as a conversational AI, offers an interactive and engaging platform for students to practice spoken English. It can assess pronunciation accuracy, provide instant feedback, and suggest improvements, thereby creating a more effective learning experience. Chatbots in language learning have several advantages, including 24/7 availability, an extensive knowledge base, and the ability to simulate real-world conversations. Studies indicate that Chatbots can help learners enhance their pronunciation by offering speech recognition features and tailored feedback. Despite these benefits, challenges such as evaluating response quality and ensuring contextual accuracy remain (Shaikh, et al., 2023).

In conclusion, ChatGPT enhances pronunciation learning through structured language practice, interactive exercises, and AI-driven feedback. While it lacks direct audio correction, integration with speech tools and educator guidance ensures effective pronunciation development. Combining AI support with expert instruction fosters fluency and confidence in spoken English.

2.9. Improving Students Motivation with ChatGPT

Student motivation plays a crucial role in academic performance and engagement. Key factors such as autonomy, competence, and relatedness significantly influence motivation. Engaging activities, positive role models, supportive feedback, and strong interpersonal relationships are essential for fostering motivation. In academic settings, GPA serves as a reliable indicator of success, influenced by intelligence, personality, and motivation, with conscientiousness identified as a key predictor. However, maintaining student engagement through traditional teaching

methods remains a challenge. Artificial intelligence (AI) tools like ChatGPT offer innovative solutions by providing flexible and personalized learning experiences, making complex concepts more accessible and enhancing problem-solving skills. The integration of AI in classrooms presents an opportunity to boost both motivation and academic performance. Among AI-driven tools, ChatGPT stands out due to its adaptability, real-time feedback, and conversational nature, making it a valuable asset in education. ChatGPT, may enhance student motivation and achievement more effectively than traditional methods (Afkarin & Asmara, 2024).

ChatGPT offers numerous advantages in language learning by providing instant feedback, personalized assistance, and accessibility regardless of time and location. These features help students stay engaged and motivated in their learning journey. Motivation plays a crucial role in language acquisition, as it directly influences students' willingness to participate in activities and their perseverance in achieving academic goals. By offering immediate feedback and guidance, ChatGPT enhances students' confidence and motivation in learning a new language. Additionally, ChatGPT supports students in writing tasks by providing constructive comments and suggestions, helping them refine their skills. When combined with communicative language teaching (CLT), educators can design more challenging, goal-oriented assignments that promote a sense of accomplishment and intrinsic motivation (Zhang Z., 2024).

In conclusion, ChatGPT enhances student motivation and academic performance by offering personalized, real-time feedback and flexible learning experiences. Its ability to make learning more engaging and accessible fosters confidence and perseverance in language acquisition. When integrated with traditional teaching methods, ChatGPT can effectively support student achievement and motivation.

2.10. Personalized Learning and Adaptive Feedback

According to Abas, et al., (2023) ChatGPT offers significant advantages in personalized learning by providing immediate feedback and tailored instruction, ensuring that students receive individualized support regardless of time or location. A key factor in successful learning is motivation, which is closely linked to students' willingness to engage in activities and persist in achieving their goals. ChatGPT enhances this process by offering real-time language feedback, helping learners identify areas for improvement while boosting their confidence. In writing tasks,

ChatGPT acts as an intelligent tutor, providing structured guidance and constructive comments, enabling students to refine their work independently. When integrated with communicative language teaching (CLT), ChatGPT allows educators to design more complex, goal-oriented activities that encourage self-directed learning. Through personalized after-school exercises, students can engage in targeted practice, fostering greater autonomy and motivation.

AI-assisted learning tools significantly improved academic research writing and also increasing student interest in such assignments. AI-enhanced writing instruction led to higher engagement levels due to ChatGPT's interactive features and immediate feedback. By simplifying complex learning tasks and personalizing content based on student needs, ChatGPT ensures a more adaptive and engaging educational experience. Its ability to analyze student responses and tailor exercises accordingly makes it a powerful tool for enhancing learning outcomes. While ChatGPT cannot replace traditional instruction, it serves as a valuable supplement, offering individualized learning paths that cater to different proficiency levels. As AI continues to evolve, integrating ChatGPT into educational settings can provide a more dynamic, student-centered approach, ensuring learners receive the adaptive support they need for academic success (Abas, et al., 2023).

2.10.1. Advancement in Artificial Intelligence

The rapid advancement of artificial intelligence (AI) has significantly impacted various industries, including education. AI-powered tools are reshaping traditional classrooms by fostering more adaptive, inclusive, and efficient learning environments. One of the most transformative aspects of AI in education is its ability to offer personalized and engaging learning experiences tailored to individual student needs. Initially developed for online learning platforms, AI has now become an essential component of modern classrooms, enabling customized instruction and real-time feedback. The impact of AI on personalized learning extends across different educational fields. It emphasizes its ability to provide tailored instruction and enhance student engagement. In language education, AI-based applications are proving to be valuable tools for developing English as Foreign Language (EFL) skills. AI-enhanced learning environments improve students' speaking abilities by providing adaptive feedback and personalized support. AI's ability to analyze student progress, identify learning gaps, and adjust instructional content accordingly makes it a powerful tool for optimizing language acquisition. As AI continues to evolve, integrating it into

education can revolutionize personalized learning and adaptive feedback, ensuring that students receive targeted, effective support that meets their unique needs (Afkarin & Asmara, 2024).

In conclusion, ChatGPT and AI-powered tools play a crucial role in enhancing personalized learning by providing real-time feedback, adaptive instruction, and tailored support. These technologies boost student motivation, engagement, and academic performance, particularly in language education. While AI cannot replace traditional teaching, its integration into classrooms offers a dynamic, student-centered approach that fosters autonomy and academic success.

2.11. Possible Impact of ChatGPT on Teaching Strategies

The integration of ChatGPT into educational settings has brought a significant transformation in teaching and learning strategies. The following key aspects of ChatGPT's potential impact on teaching strategies: authentic communication and continuous practice.

2.11.1. Authentic Communication

ChatGPT enables real-time interactions between learners and a virtual conversation partner, fostering authentic communication. Engaging in natural conversational settings helps students improve their accuracy, fluency, and confidence in using the language. Educators can design activities that simulate real-world interactions, such as ordering food at a restaurant, making phone calls, or participating in job interviews and business meetings. By creating immersive communication scenarios, ChatGPT allows students to practice language skills in meaningful contexts, preparing them for real-life situations. Additionally, ChatGPT can introduce students to different communication styles and cultural norms, promoting cross-cultural awareness. Teachers can facilitate discussions on intercultural communication, helping students develop the flexibility and understanding needed for effective interactions in diverse environments. Engaging with ChatGPT as a native or proficient speaker also enhances fluency and deepens language comprehension (Zhang Z., 2024).

2.11.2. Continuous Practice

ChatGPT provides students with the opportunity for continuous language practice beyond the classroom. With access to the AI tool through web browsers and mobile applications, learners can engage in language exercises anytime, anywhere. This accessibility enhances language acquisition and encourages self-directed learning, allowing students to practice English at their own pace and convenience. Regular

interaction with ChatGPT ensures consistent skill development, as students receive instant corrections and feedback. Whether improving language proficiency, solving math problems, or reinforcing other academic concepts, ChatGPT offers immediate guidance. As part of adaptive learning, ChatGPT adjusts its responses based on the learner's proficiency level. It starts with simpler tasks and gradually introduces more complex challenges, ensuring a progressive and personalized learning journey.

2.11.3. Instant Feedback and Adaptation

One of ChatGPT's key advantages is its ability to provide instant feedback on language usage, enabling learners to correct mistakes and enhance their proficiency in real-time. Its adaptability ensures that learning experiences are customized to individual student needs and skill levels. Teachers can track student progress using data provided by ChatGPT, identifying patterns of improvement and areas that require additional support. This data-driven approach allows educators to modify their instructional strategies to provide targeted assistance. Furthermore, ChatGPT creates a valuable feedback loop for teachers, helping them refine their teaching methods based on student performance and AI-generated insights. The AI's capacity to offer immediate feedback and adapt learning activities based on student responses significantly enhances teaching strategies. It promotes a more dynamic, flexible, and personalized learning environment that supports continuous student development and engagement.

2.12. ChatGPT in Education

The emergence of ChatGPT has significantly accelerated the integration of AI-driven chatbots into educational settings, offering various benefits while also raising concerns. One of its primary advantages is the ability to enhance learning outcomes by providing instant, personalized feedback and facilitating administrative tasks. ChatGPT can tailor instruction based on students' interactions and performance, offering additional resources for struggling learners while challenging advanced students with more complex tasks. This personalized approach ensures a more effective and engaging learning experience. Additionally, ChatGPT can create interactive learning environments that foster student engagement and motivation through question-based discussions, feedback mechanisms, and reward-based learning. By facilitating group discussions and collaborative activities, ChatGPT helps promote meaningful interactions among students, making the learning process more immersive and enjoyable (Guner, et al., (2024).

According to Guner, et al., (2024) beyond engagement, ChatGPT provides students with easy access to relevant educational materials by offering personalized recommendations for books, articles, and online resources. This capability enhances learning outcomes and supports academic success by directing students to high-quality resources tailored to their needs. However, despite its potential, ChatGPT also presents challenges. A major concern is academic integrity, as students may misuse the tool for plagiarism or unethical academic practices. Privacy and security issues are also critical considerations, given the potential risks of data breaches and misuse of student information, such as personal details and learning preferences. Furthermore, ChatGPT's inability to fully comprehend complex or nuanced language may lead to incorrect responses, which can be problematic when students require deeper clarification on challenging concepts. Despite these limitations, ChatGPT remains a powerful tool in education, offering significant potential for improving learning experiences when used responsibly and with appropriate safeguards in place (Guner, et al., (2024).

2.12.1. Role of ChatGPT in Enhancing Teaching and Learning

Information and Communication Technology (ICT) is crucial in enhancing the teaching and learning process by offering various tools for teachers and students to explore. ChatGPT emphasizes its potential to facilitate personalized learning in higher education, as it operates as a language model based on the GPT-3.5 architecture. Personalized learning has been widely recognized as an effective educational approach that accommodates diverse student needs by allowing learners to progress at their own pace, receive customized feedback, and engage in activities suited to their learning styles. ChatGPT can support personalized learning by providing adaptive and individualized learning experiences, fostering student autonomy, and promoting self-regulated learning. Integration of ChatGPT into customized learning environments can significantly enhance student engagement, motivation, and academic performance. As AI-driven tools continue to evolve, ChatGPT presents new opportunities to create dynamic and responsive educational experiences that cater to the unique learning needs of students (Abas, et al., 2023).

ChatGPT has the potential to be a valuable tool in educational settings, offering various applications that enhance learning and research. It can assist in designing assessments, generating essays, translating languages, answering diverse questions, summarizing texts, and engaging in interactive discussions. Additionally, ChatGPT

demonstrates creativity in writing across various topics, from short paragraphs to comprehensive research articles that appear convincing or nearly so. Similarly, higher education could benefit significantly from ChatGPT and similar language models, which can be utilized for writing support, language learning, research, and administrative tasks. These capabilities suggest that ChatGPT can be a useful educational and research tool. However, despite its advantages, ChatGPT also has notable drawbacks. For instance, ChatGPT did not consistently provide accurate responses to questions about anatomical facts, indicating reliability issues in specific domains. This demonstrates that while ChatGPT offers various benefits, it also presents certain limitations that need to be addressed (Sok & Heng, 2023).

2.12.2. Innovative Learning With ChatGPT

ChatGPT offers innovative and interactive learning opportunities. As an advanced generative AI, it helps educators create customized teaching materials, such as lesson plans, quizzes, and activities tailored to different student needs. In foreign language instruction, ChatGPT plays a crucial role in generating exercises, facilitating conversation practice, and providing instant feedback on writing. Its ability to understand and respond in multiple languages makes it a valuable tool for language learners. One of its key benefits is automatic feedback, allowing students to receive real-time corrections and improvement suggestions. ChatGPT can assess grammar, vocabulary, and coherence in writing, guiding learners toward better proficiency. Additionally, it serves as a conversational partner, enabling students to practice dialogues in real-life scenarios, such as medical consultations or travel situations. This feature enhances speaking and comprehension skills, making learning more engaging and practical (Perez-Nunez, 2023)

According to Perez-Nunez (2023) despite these advantages, challenges exist. AI-generated content may contain inaccuracies, requiring educators to verify information before using it in lessons. Another major concern is academic integrity, as students might misuse ChatGPT to complete assignments or exams dishonestly. Teachers must develop strategies to ensure fair assessment methods and emphasize critical thinking over rote memorization. Furthermore, issues of originality and authorship arise since AI-generated responses are derived from vast datasets, raising concerns about plagiarism. Educators should encourage students to use AI as a learning aid rather than a shortcut to completing tasks. By fostering responsible AI usage, institutions can maximize the benefits of ChatGPT while minimizing its drawbacks.

Overall, ChatGPT holds great potential in education, but its effectiveness depends on thoughtful integration. It should be viewed as a support tool rather than a replacement for human instruction. Continuous research and ethical guidelines are essential to optimizing its use in classrooms worldwide, ensuring that AI enhances learning without compromising educational values.

2.13. Educational Benefits of ChatGPT for Students

ChatGPT, has gained significant recognition and influence in higher education, offering numerous benefits for students. Beyond creating an innovative learning environment, it enables students to engage deeply with diverse information sources, fostering exploration and knowledge acquisition. Through personalized and interactive conversations, ChatGPT enhances students' understanding of academic concepts from multiple perspectives while stimulating their critical thinking and creativity. In language education, particularly in English writing, ChatGPT serves as a valuable tool for grammar checking and feedback, assisting students in refining their writing skills. However, concerns about academic integrity and potential plagiarism persist, prompting ongoing discussions regarding its responsible use in education. ChatGPT plays multiple roles in education, acting as an interactive learning partner, content provider, teaching assistant, and evaluator. To maximize its benefits, educators must strategically integrate AI tools into their teaching methodologies, inspiring students to take a proactive approach to learning while fostering awareness of AI ethics. ChatGPT provides personalized learning experiences and reduce teachers' workload (Tu, 2024).

2.13.1. Revolutionizing Learning Experience With ChatGPT

ChatGPT offers numerous educational benefits for students, revolutionizing the learning experience through personalized and interactive engagement. It provides a dynamic platform for exploring diverse information, allowing students to deepen their understanding of academic concepts from multiple perspectives. By facilitating critical thinking and creativity, ChatGPT serves as a valuable tool for enhancing cognitive skills. In language education, especially in English writing, it plays a supportive role in grammar checking and feedback, helping students refine their writing and improve overall proficiency. Beyond language learning, ChatGPT functions as a learning assistant, content generator, and evaluator, offering tailored support for various subjects. It reduces teachers' workload by assisting in lesson planning and providing instant feedback, thereby creating a more efficient learning environment. Furthermore, student attitudes toward ChatGPT influence their willingness to use it for both

academic and informal learning. Positive perceptions can enhance motivation and engagement, making AI a valuable tool for self-directed education. ChatGPT's role in education extends beyond convenience it has the potential to reshape learning experiences, provided it is used thoughtfully and responsibly (Beck & Levine, 2023).

The integration of ChatGPT into education presents numerous benefits for students by enhancing personalized learning experiences and fostering skill development. ChatGPT can adapt to diverse learning styles and needs, offering customized feedback that improves students' comprehension and academic performance. It plays a significant role in higher education by assisting in writing, research, and critical analysis, helping students refine their writing skills, summarize complex information, and identify grammatical or stylistic errors. Additionally, ChatGPT enables students to explore new dimensions of their subjects, encouraging deeper understanding and critical evaluation (Silva, et al., 2024).

2.13.2. ChatGPT as a Multifunctional Educational Tool

Beyond writing support, ChatGPT aids in lesson planning, professional development, language learning, and assessment, serving as a versatile tool across various educational disciplines, including medicine, chemistry, journalism, and education science. While it offers advantages in learning, some concerns arise regarding its potential impact on creativity, critical thinking, and academic integrity. Students must use AI tools responsibly, ensuring that they critically analyze AI-generated content and avoid over-reliance on automated responses. Moreover, ChatGPT can support problem-solving by providing explanations, answering questions, and generating practice exercises. However, it should complement traditional learning methods rather than replace human instruction. Ethical considerations, such as maintaining academic integrity and mitigating biases, remain essential when incorporating AI into education. By using ChatGPT responsibly alongside teacher guidance, students can enhance their learning experiences, develop problem-solving skills, and engage in meaningful academic exploration (Silva, et al., 2024).

2.13.3. Personalized Tutoring

ChatGPT can serve as an effective tool for personalized tutoring, offering tailored feedback based on each student's learning needs and progress. Generative model-based conversational agent, like ChatGPT, significantly enhanced math tutoring by addressing students' misconceptions and adapting explanations to their level of

understanding. The study demonstrated that such AI-driven tutoring could lead to improved learning outcomes by providing customized guidance and support (Baidoo-Anu & Ansah, 2023).

2.13.4. Automated Essay Grading

According to Baidoo-Anu & Ansah (2023) ChatGPT can be trained to grade student essays, giving teachers more time to focus on other aspects of teaching. ChatGPT trained on a dataset of human-graded essays could accurately grade essays written by students. It is able to identify key features of well-written essays and provide feedback similar to that provided by human graders.

2.13.5. Language Translation

According to Baidoo-Anu & Ansah (2023) ChatGPT can facilitate the translation of educational materials into multiple languages, enhancing accessibility for a broader audience. ChatGPT, trained on bilingual sentence pairs, achieved state-of-the-art results on various translation benchmarks. It can comprehend sentence meanings in one language and generate accurate translations in another, making educational content more inclusive and widely available.

2.13.6. Interactive Learning

ChatGPT can enhance learning by creating interactive experiences where students engage with a virtual tutor in a conversational format. ChatGPT is a generative model-based conversational agent that effectively supports students learning English as a second language, leading to improved language proficiency. It is able to comprehend students' questions and provide relevant, appropriate responses, making learning more engaging and effective (Baidoo-Anu & Ansah, 2023).

2.13.7. Adaptive Learning

According to Baidoo-Anu & Ansah (2023) ChatGPT can be used to create adaptive learning systems that adjust their teaching methods based on a student's progress and performance. An adaptive learning system based on a generative model (ChatGPT) could provide more effective support for students learning programming, resulting in improved performance on programming assessments. ChatGPT is able to understand students' knowledge and to adjust the difficulty of the problems it generated accordingly.

Overall, ChatGPT has the potential to be a valuable tool for enhancing education by offering personalized tutoring, automated essay evaluation, language translation, interactive learning, and adaptive learning experiences.

2.14. Limitations of Using ChatGPT

According to Baidoo-Anu & Ansah (2023) ChatGPT offers numerous benefits in education, but it also presents several drawbacks that must be considered. One major limitation is the lack of human interaction, as AI cannot replicate the emotional intelligence, adaptability, and personal engagement of a real teacher or tutor. Students benefit more from interactions with virtual tutors that mimic human affective behavior than from those that lack such traits.

ChatGPT's understanding is based on statistical patterns rather than true comprehension, making it difficult to tailor explanations and feedback to individual student needs. Another significant concern is bias in training data, as generative models reflect the biases present in their datasets, potentially leading to unfair outcomes. Furthermore, these models often struggle with creativity, generating responses based only on learned patterns, which can limit originality in AI-generated music. Their effectiveness is also highly dependent on the quality and relevance of their training data, poor performance is observed in a generative model-based question-answering system when training data is insufficient (Baidoo-Anu & Ansah, 2023).

Additionally, generative AI models lack contextual awareness, often producing responses that are inappropriate or irrelevant in nuanced conversations. Students also face challenges in personalizing instruction to meet the unique learning needs of individual students. Privacy concerns are another issue, as the use of AI in education raises questions about data security and the protection of student information. Ultimately, while ChatGPT and similar AI tools can enhance learning experiences, they should not be viewed as replacements for human educators. Instead, they should be integrated responsibly alongside traditional teaching methods that emphasize human interaction, critical thinking, and adaptability (Baidoo-Anu & Ansah, 2023).

2.14.1. Accuracy and Reliability Concerns

One of ChatGPT's most significant limitations is its accuracy and reliability. Substantial factual inaccuracies in ChatGPT's responses, particularly on controversial topics. Beyond the educational field, accuracy concerns persist in other fields like healthcare. ChatGPT's performance on a chemistry test was poor. Further, the model failed to achieve the necessary passing grade on a general practitioner (GP) medical exam. Reliability issues were also present. There are inconsistencies in ChatGPT's responses to identical questions, making it unsuitable for use as a reference for exams (Cong-Lem, Soyooof, & Tsering, 2024).

2.14.2. Limitations in Critical Thinking and Problem-Solving

Another major limitation of ChatGPT is its ability to engage in critical thinking, problem-solving, and mathematics. It is observed that the model performs better with general questions but falters when faced with problem-solving or skill-specific queries. ChatGPT favors memory-based responses over those requiring critical analysis. In educational settings, ChatGPT's poor performance on critical thinking and mathematical tasks is noted, with incorrect responses outnumbering correct ones. ChatGPT's ability to complete a graduate-level instructional design assignment and found that its responses were superficial and lacked customization or justification. ChatGPT's mathematical capabilities and reported dissatisfaction with its ability to generate and correct code, highlighting weaknesses in basic problem-solving skills.

ChatGPT barely passed an introductory physics course, its responses contained many of the same misconceptions and errors commonly made by beginning learners. Inconsistencies in ChatGPT's performance in coding tasks, with the Chatbot struggling to complete codes—even those it had generated itself (Cong-Lem, Soyoof, & Tsering, 2024).

2.14.3. Impact on Learning and Development

The use of ChatGPT also raises concerns about its impact on users' learning and cognitive development. A key issue is the risk of overreliance on the tool, which may lead to a decline in critical thinking skills. Additionally, bias and incomplete information in ChatGPT's responses are notable concerns, along with potential psychological effects on vulnerable individuals seeking guidance from AI. ChatGPT has the potential to provide reliable answers to test questions but warns against excessive dependence on the tool. But irresponsible usage could contribute to "human unintelligence and unlearning". An overreliance on ChatGPT may foster passivity and reduce users' critical thinking abilities.

ChatGPT's role in education and test preparation is useful for general tutoring and reading comprehension. But its limited scientific and mathematical capabilities make it an unreliable independent study tool. Additionally, they raised concerns about cheating and unfair advantages in standardized exams. Biases in ChatGPT's responses, suggesting that its training data may reflect Western-centric political and philosophical viewpoints. These biases can lead to skewed information, where outdated or incomplete responses pose a risk to learners (Cong-Lem, Soyoof, & Tsering, 2024).

2.14.4. Technical Constraints in Input and Output

ChatGPT's effectiveness is also limited by technical constraints, particularly in fields that require symbolic representation, such as mathematics and chemistry. ChatGPT struggled with chemistry-related tasks involving reaction structures. Additionally, ChatGPT performed better on single-choice questions than on multiple-choice one, suggesting that question format affects its performance. Prompt phrasing also influences ChatGPT's responses. Response clarity and effectiveness depend on how prompts are formulated. ChatGPT's word limit can lead to incomplete answers, reducing comprehension (Cong-Lem, Soyoof, & Tsering, 2024).

2.14.5. Ethical, Legal, and Privacy Concerns

Academic integrity, plagiarism, privacy, and copyright concerns are significant issues associated with ChatGPT. Moreover, it is found that Turnitin failed to detect ChatGPT-generated content, raising concerns about its impact on academic honesty. Additionally, educators face difficulties distinguishing between students' original work and AI-generated responses, complicating assessments. ChatGPT's accuracy could obscure students' true abilities. Concerns also extend to data privacy and potential biases in ChatGPT's responses, highlighting the need for regulatory measures in AI's educational use (Cong-Lem, Soyoof, & Tsering, 2024).

In conclusion, while ChatGPT offers numerous educational benefits, it also presents several limitations, including a lack of human interaction, accuracy concerns, and challenges in critical thinking and problem-solving. Overreliance on AI may hinder cognitive development, and ethical concerns such as plagiarism, data privacy, and bias must be addressed. Despite these drawbacks, responsible integration of ChatGPT alongside traditional teaching methods can enhance learning experiences while maintaining academic integrity and student engagement.

2.15. Summary of Literature Review

This literature review examines how ChatGPT contribute to the development of communication skills among undergraduate students. The review synthesizes diverse perspectives. It highlights how ChatGPT enhance communication skills by fostering personalized learning, engagement, and interaction. And also discuss the challenges related to the over-reliance on ChatGPT that effects students.

The integration of ChatGPT, aligns with social learning theory presented by Albert Bandura, suggest that interaction, observation, and imitation can help students

develop communication skills. It serves as a virtual learning partner. It provides step-by-step feedback, correcting grammar, and facilitating real-time conversations. This interaction promotes confidence and fluency of undergraduate students. However, with some benefits of ChatGPT there are some disadvantages of over using it. Students become overly dependent on it.

The literature review examines ChatGPT's role in language learning, emphasizing its benefits and challenges. ChatGPT enhances vocabulary, grammar, pronunciation, and conversational skills through real-time feedback and personalized learning. It fosters engagement, confidence, and fluency by simulating real-world interactions. AI-driven tools provide accessibility and adaptability but raise concerns about over-reliance, academic dishonesty, and reduced critical thinking. Traditional methods offer structured instruction and cultural context, which AI may not fully replicate. A balanced approach integrating ChatGPT with conventional learning can maximize benefits. Ethical concerns such as data privacy and AI bias are also discussed. ChatGPT supports students in overcoming language barriers, particularly in resource-limited settings.

AI-driven tools like ChatGPT improve language acquisition, academic research writing, and problem-solving skills by offering tailored support and continuous practice. While ChatGPT fosters autonomy, fluency, and real-world communication, concerns about academic integrity, data privacy, and reliability remain. Its integration in education promotes dynamic, student-centered learning but requires ethical considerations and responsible use. Overall, ChatGPT complements traditional teaching methods, enriching educational experiences while addressing its limitations.

ChatGPT offers significant educational benefits, enhancing personalized learning, critical thinking, and creativity while reducing teachers' workload. It supports academic writing, grammar checking, automated essay grading, language translation, and adaptive learning. However, concerns arise regarding academic integrity, bias, accuracy, and overreliance on AI, which may hinder cognitive development.

To address these gaps, this study adopts a parallel convergent mixed-methods design. Combining both quantitative and qualitative data. This approach allows a deeper understanding of not only what impact ChatGPT has on communication skills. But also how and why it influences students' learning and confidence. Quantitative

data reveal measurable trends, while qualitative insights provide contextual understanding together producing a more holistic picture.

In conclusion, this literature review provides a comprehensive overview of the influences of ChatGPT in the development of communication skills among undergraduate students. But it must have to be use in a responsible way. Teachers should use ChatGPT in an effective way to develop communication skills among undergraduate students. Rooted in Bandura's social learning theory, ChatGPT enhances personalized learning by providing real-time feedback, grammar correction, and interactive conversations, fostering fluency and confidence. It supports vocabulary development, pronunciation, and academic writing while serving as a virtual conversational partner. However, concerns arise regarding over-reliance, reduced critical thinking, and academic dishonesty. Educators must integrate ChatGPT with traditional pedagogical methods to balance AI-driven learning with structured instruction. Despite limitations in complex problem-solving and subject-specific tasks, it remains a valuable educational tool. A balanced approach can maximize its benefits while mitigating risks. Ultimately, ChatGPT complements traditional education, enriching student learning when used responsibly.

CHAPTER 3

RESEARCH METHODOLOGY

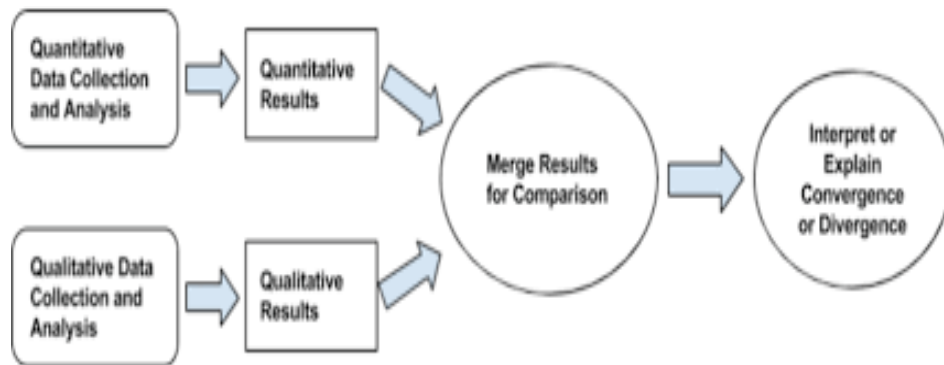
This chapter outlined the discussion on the methodology of the study, detailing its research design, procedure of data collection, population and sampling, selection of participants for research, the collection of data and analysis of data of this research. This chapter also covered the specific instruments selected for the research, data collection tools including management of data and data analysis. Ethical considerations and data collection strategies was also addressed in this chapter.

3.1. Research Design

This study utilized parallel convergent design of mixed methods approach, integrating both quantitative and qualitative data collection and analysis methods to provide a comprehensive understanding. Both quantitative and qualitative data were collected simultaneously. Researcher then analyzed the data independently to ensure balanced insights from numerical trends and respondents' personal experiences. During the interpretation phase, the results were then merged to identify areas of convergence, divergence, and complementarity. Quantitative data were gathered through closed-ended tailor-made questionnaire. Qualitative data were collected via semi-structured interviews offering deeper insights into students' experiences, perceptions, and challenges they faced in use of ChatGPT for the development of communication skills. The researcher analyzed how ChatGPT contributes in the development of communication skills among undergraduate students.

Figure 2:

Parallel Convergent Design



Source: Razali, F. M., Aziz, N. a. A., Rasli, R. M., Zulkefly, N. F., & Salim, S. A. (2019). *Using convergent parallel Design mixed method to assess the usage of Multi-Touch hand gestures towards fine motor skills among Pre-School children. International Journal of Academic Research in Business and Social Sciences, 9(14).* <https://doi.org/10.6007/ijarbss/v9-i14/7023>

3.2. Population

The population of the study was female undergraduate students from the Department of Educational Leadership and Management, Faculty of Education, International Islamic University Islamabad (IIUI), enrolled in the academic year 2024. The population included students from both the first year and the final year of the BS Education program.

These two groups were deliberately selected to provide a comprehensive perspective on the development of communication skills. The 1st year students were included to understand the initial stage of learning. Where students are building foundational communication skills and adapting to the university environment. On the other hand, the last year students have gained substantial academic exposure, experience, and practical knowledge. Which allows them to reflect on their communication skills and on how tools like ChatGPT can support their learning. They have more academic exposure and learning experience. Including both groups helped to understand perspectives about how they used ChatGPT in the development of communication skills.

Table 3.2:*Population of the study*

S No.	Year	Population
1	1 st	160
2	4 th	90
Total		250

3.3. Sample

The sample size (n = 186) was determined using Krejcie and Morgan's (1970) sample size determination table. Which suggested a sample of 186 respondents for a population of 250 at a 95% confidence level. A sample of 113 female undergraduate students was selected from the 1st year and 73 from the last year from the Department of Educational Leadership and Management IIUI. Random sampling technique was used to ensure that every student had an equal chance of being selected. Data were collected during the examination period when all students were present. From the attendance sheet random respondents were selected. Only those who willingly agreed to participate were included in the study. This approach ensured fairness and minimized bias in selection while respecting students' consent and availability.

Table 3.3:*Sample*

S No.	Year	Population	Sample
1	1 st	160	113
2	4 th	100	73
Total		260	186

3.4. Instrumentation

Researcher developed and used two instruments were developed for data collection. Both instruments were designed in accordance with the objectives of the

study. Close-ended tailor-made questionnaire was used to collect data from the targeted student population. The questionnaire's validity was ensured through expert reviews. There were 34 items in questionnaires. This tailor-made questionnaire was to assess how often students use ChatGPT and how effective they find ChatGPT in improving their communication skills. Each item was rated on a five-point Likert scale with the following scoring key: Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), and Strongly Disagree (1). The questionnaire consisted of five sections that were *Use of ChatGPT*, *Communication Skills*, *Confidence*, *Challenges in the Use of ChatGPT*, and *General Perception*. Items included under these sections were: “ChatGPT helps me feel more prepared when studying for exams,” “ChatGPT has improved my ability to convey messages clearly,” and “ChatGPT’s lack of verbal interaction limits its effectiveness for developing my verbal communication skills.” Etc.

The communication skills section focused on key verbal sub-skills, including fluency, clarity, pronunciation, and vocabulary. These sub-skills were selected because they are core components of effective communication. Fluency and clarity ensure smooth and understandable expression. Pronunciation enhances listener comprehension, and vocabulary strengthens precision in speech. Collectively, these verbal skills align with the study’s focus on exploring how ChatGPT contributes to the development of students’ communication competence.

The instrument’s validity was established through expert reviews by four faculty members in the field of Education. Based on their feedback, necessary revisions were made. A pilot study was conducted with 20 students, and the Cronbach’s Alpha value of 0.9 confirmed the internal consistency and reliability of the questionnaire.

Semi-structured interviews were conducted to exploring students' perceptions and experiences of ChatGPT in depth. Semi-structured interview guide was developed by the researcher to gain deeper insights into students’ experiences, perceptions, and challenges. The guide included 12 open-ended questions designed to explore how students use ChatGPT, how it has contributed to their verbal communication skills, how it has contributed to their confidence development, what challenges they face in its use and their overall perception. Questions included: “Can you describe how often and in what ways you use ChatGPT in your studies?” “How has ChatGPT helped you improve your verbal communication skills?” and “What challenges have you faced while using

ChatGPT for communication skill development?” Validity of the instrument was checked through experts' opinions. Minor modifications were made to improve question clarity and relevance to the study objectives.

3.5. Pilot testing

A pilot test was carried out and its results were used to calculate the reliability of questionnaire. For this purpose, 20 female undergraduate students of Department of Educational Leadership and Management from the accessed population, were given the questionnaire forms, and data were obtained.

3.6. Validity and Reliability

The questionnaire’s validity was ensured through experts’ opinion. Four experts from the Faculty of Education, International Islamic University Islamabad (IIUI) reviewed the instruments. The detail of experts is available in in appendix D. They ensured clarity, relevance, and alignment with the study objectives. They assessed whether each item accurately represented the intended construct. Based on their valuable feedback, minor revisions were made. That included the rewording of some statements for clarity and addition of 10 more statements. The suggestions provided by these experts helped to improve the overall quality and relevance of the questionnaire.

Cronbach Alpha was applied to check the reliability of the instruments. In this study, Cronbach’s Alpha was used to ensure the reliability of the research instruments. The reliability analysis was conducted using SPSS. The results revealed value 0.978. That indicate acceptable to high internal consistency across the scales.

Table 3.6a:

Cronbach’s Alpha values for each component

Sr. No	Statements	Cronbach's Alpha
1.	I use ChatGPT to learn about new topics in my studies.	.977
2.	ChatGPT has made the study more interactive by providing instant responses.	.977

3.	ChatGPT helps me feel more prepared when studying for exams.	.977
4.	ChatGPT has a friendly interaction with me.	.977
5.	ChatGPT has enhanced my vocabulary	.978
6.	I seek help from ChatGPT for my assignment.	.977
7.	In case of doubt, I consult ChatGPT instead of using books.	.977
8.	ChatGPT has improved my ability to convey messages clearly.	.977
9.	I have noticed an improvement in my fluency when speaking after using ChatGPT.	.978
10.	ChatGPT has helped me to improve my selection of words in verbal communication.	.977
11.	I improved my verbal communication skills by using ChatGPT.	.977
12.	ChatGPT enhanced my verbal communication skills by providing more effective responses compared to traditional methods.	.977
13.	ChatGPT provides me with useful feedback to improve my verbal communication.	.977
14.	I believe my classmates will start using ChatGPT to improve their verbal communication skills	.977
15.	Using ChatGPT has made me more confident during communication.	.977
16.	ChatGPT provides a safe space to practice my verbal communication skills without the fear of judgment.	.977
17.	Practicing with ChatGPT has made it easier for me to handle difficult or unexpected questions during communication.	.977

18.	I feel more prepared for presentation in class after practicing with ChatGPT.	.977
19.	ChatGPT's guidance has made me more comfortable during communication by allowing me to practice various conversation scenarios.	.977
20.	ChatGPT has provided me with strategies for managing my speech during presentations, which has improved my content.	.977
21.	ChatGPT's feedback helps me improve my weak points in speaking.	.978
22.	I find it difficult to use ChatGPT effectively for practicing communication techniques.	.977
23.	ChatGPT's lack of verbal interaction limits its effectiveness for developing my verbal communication skills.	.977
24.	I find it difficult to translate ChatGPT's feedback into actual improvements in my verbal communication.	.977
25.	ChatGPT's responses are sometimes too complex, making it challenging to apply them in spoken communication.	.978
26.	ChatGPT has limitations in simulating real-life speaking situations, which impacts my practice.	.978
27.	Compared to YouTube videos, ChatGPT does not seem to be better than listening to someone explaining.	.977
28.	I think ChatGPT might be harmful to me as I might be tempted to use it whenever necessary.	.977
29.	I believe that ChatGPT is a valuable tool for improving my communication skills, despite some limitations.	.977
30.	I would recommend ChatGPT to other students looking to improve their communication skills.	.977

31.	I feel that ChatGPT enhances my learning experience.	.977
32.	I believe my classmates will start using ChatGPT to help them in the development of communication skills	.977
33.	Interacting with ChatGPT has enhanced my ability to respond spontaneously in discussions.	.977
34.	ChatGPT's feedback has helped me correct mistakes in my spoken communication.	.977

The scale measuring “Use of ChatGPT” showed a Cronbach’s Alpha value “0.886”. “Communication Skills” showed a Cronbach’s Alpha value “0.869”. The scale measuring “Confidence” showed a Cronbach’s Alpha value “0.869”. The scale measuring “Challenges in use of ChatGPT” scale demonstrated a reliability coefficient of 0.690. Although lower but still falls within the acceptable range for exploratory studies. And the scale measuring “General Perception” showed a Cronbach’s Alpha value “0.800”.

Table 3.6b:

Cronbach’s Alpha values for each scale

Sr. No.	Scale	Cronbach’s Alpha values
1.	Use of ChatGPT	0.886
2.	Communication Skills	0.869
3.	Confidence	0.869
4.	Challenges in use of ChatGPT	0.690
5.	General Perception	0.800

These reliability scores suggest that the questionnaire items were coherent and consistent. They measured the intended constructs. And enhance the credibility of the quantitative findings.

3.7. Data Collection

For the collection of quantitative data, the researcher conducts a survey. The survey makes use of the questionnaire. The items on the questionnaire were closed-ended, where each response was based on a five-point Likert scale, including 5 for strongly agree, 4 agree, 3 neutral, 2 disagree and 1 strongly disagree. Researcher personally visited the International Islamic University Islamabad and administered the research instrument after giving necessary instructions to fill the questionnaire. Data was collected from BS Education female students of Department of Educational Leadership and Management, Faculty of Education. For the collection of Qualitative data Semi-structured interviews was conducted. Convergent parallel design was used for data collection.

3.8. Data Analysis

This research adopted a convergent parallel mixed methods design. Both quantitative and qualitative data were collected and analyzed independently. Then integrated to obtain a comprehensive understanding of the research problem. Quantitative data from the questionnaire was analyzed using descriptive statistics, i.e means. Which summarized students' responses regarding the use of ChatGPT for communication skill development among undergraduate students. Qualitative data through semi-structured interviews was analyze through thematic analysis. Following the six-step framework proposed by Braun and Clarke (2006). This process involved familiarizing with the data, generating initial codes, searching for themes, reviewing, defining, and naming themes, and finally producing a detailed report. Thematic analysis was used to identify key patterns, themes, and insights. The quantitative and qualitative findings were integrated to provide a comprehensive understanding of the research topic. How ChatGPT facilitates the development of communication skills among undergraduate students.

Inferential statistics were not applied, as the aim was to analyze students' perceptions, ChatGPT effects on students' communication confidence and identifies any challenges they face while using ChatGPT rather than to compare groups. This ensured a balanced interpretation of quantitative patterns and qualitative insights within the same phase of data collection.

Table 3.8:*Data Analysis Technique*

Sr. No.	Objectives	Research Questions	Data Analysis Technique
1.	To analyze the role of ChatGPT as a tool in improving verbal communication skills of undergraduate students.	How do ChatGPT facilitate the verbal communication skills of undergraduate students?	Quantitative Data Analysis: Mean Qualitative Data Analysis: Thematic Analysis
2.	To investigate ChatGPT's role in improving undergraduate students' confidence and performance in communication.	In what ways the use of ChatGPT effects the performance and confidence level of undergraduate students during communication?	Quantitative Data Analysis: Mean Qualitative Data Analysis: Thematic Analysis
3.	To explore the challenges faced by undergraduate students while using ChatGPT for the development of communication skills.	What are the challenges faced by undergraduate students when using ChatGPT for the development of communication skills?	Quantitative Data Analysis: Mean Qualitative Data Analysis: Thematic Analysis

3.9. Ethical Consideration

The following ethical guidelines was established for the duration of the research:

- 1- The dignity and well-being of students will be safeguarded at all times.
- 2- The research data will kept remain confidential throughout the study, and the researcher will obtain the students' permission to use their information in the research report.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATIONS

This chapter “Data Analysis and Interpretation” comprises the analysis and interpretation of both quantitative and qualitative data. Researcher used a mixed-methods convergent parallel design. Both quantitative and qualitative data were collected simultaneously and analyzed separately. Quantitative data collected through questionnaires were analyzed using descriptive statistics i.e mean. While qualitative data collected through semi-structured interview were analyzed thematically.

4.1 Descriptive Techniques Used For Data Analysis

Quantitative data was collected from undergraduate students through a closed-ended questionnaire. For the analysis of quantitative data, the researcher used descriptive statistics, “mean”. Tables were made for the representation of quantitative data. For the convenience of understanding, the mean scores had been divided into three levels representing the degree of agreement. Since the Likert scale ranged from 1 to 5, the range (4 points) was divided into three equal intervals following the method suggested by Joshi et al. (2015).The interpretation of mean scores was as follows:

1. Low 1.00 to 2.33
2. Medium 2.34 to 3.66
3. High 3.67 to 5.00

Low (1.00 to 2.33): Indicates that students’ responses reflect a lower agreement or perception regarding the item or statement.

Medium (2.34 to 3.66): Indicates a moderate level of agreement or perception, showing that students somewhat agree or have an average perception of the item.

High (3.67 to 5.00): Indicates a strong agreement or positive perception, suggesting that students highly endorse or support the item.

Table 4.1

Interpretation of Mean Scores

Rating Scale	Mean Score Range	Descriptive Level
4+5	(3.67 - 5.00)	High
3	(2.34 -3.66)	Moderate
1+2	(1.00 – 2.33)	Low

4.1.1 Use of ChatGPT Mean Score Analysis

Table 4.2

Use of ChatGPT Mean Score Analysis

Sr. No.	Statements	Descriptive Level	Mean
1.	I use ChatGPT to learn about new topics in my studies.	High	3.81
2.	ChatGPT has made the study more interactive by providing instant responses.	High	3.87
3.	ChatGPT helps me feel more prepared when studying for exams.	High	3.85
4.	ChatGPT has a friendly interaction with me.	High	3.82
5.	ChatGPT has enhanced my vocabulary	Moderate	3.65
6.	I seek help from ChatGPT for my assignment.	High	3.74
7.	In case of doubt, I consult ChatGPT instead of using books.	Moderate	3.46

Above table representing the mean scores of I use ChatGPT to learn about new topics in my studies ($M = 3.81$), ChatGPT has made the study more interactive by providing instant responses ($M = 3.87$), ChatGPT helps me feel more prepared when studying for exams ($M = 3.85$), ChatGPT has a friendly interaction with me ($M = 3.82$), I seek help from ChatGPT for my assignment ($M = 3.74$), and In case of doubt, I consult ChatGPT instead of using books ($M = 3.46$).

4.1.2 Communication Skills Mean Score Analysis

Table 4.3

Communication Skills Mean Score Analysis

Sr. No.	Statements	Descriptive Level	Mean
1.	ChatGPT has improved my ability to convey messages clearly.	Moderate	3.55
2.	I have noticed an improvement in my fluency when speaking after using ChatGPT.	Moderate	3.26
3.	ChatGPT has helped me to improve my selection of words in verbal communication.	Moderate	3.38
4.	I improved my verbal communication skills by using ChatGPT.	Moderate	3.04
5.	ChatGPT enhanced my verbal communication skills by providing more effective responses compared to traditional methods.	Moderate	3.17
6.	ChatGPT provides me with useful feedback to improve my verbal communication.	Moderate	3.27
7.	I believe my classmates will start using ChatGPT to improve their verbal communication skills.	Moderate	3.54

Above table representing the mean scores ChatGPT has improved my ability to convey messages clearly (M = 3.55), I believe my classmates will start using ChatGPT to improve their verbal communication skills (M = 3.54), ChatGPT has helped me to improve my selection of words in verbal communication, (3.38), I have noticed an improvement in my fluency when speaking after using ChatGPT (3.26), and ChatGPT enhanced my verbal communication skills by providing more effective responses compared to traditional methods (3.17).

4.1.3 Confidence Mean Score Analysis

Table 4.4

Confidence Mean Score Analysis

Sr. No.	Statements	Descriptive Level	Mean
1.	Using ChatGPT has made me more confident during communication.	Moderate	3.21
2.	ChatGPT provides a safe space to practice my verbal communication skills without the fear of judgment.	Moderate	3.20
3.	Practicing with ChatGPT has made it easier for me to handle difficult or unexpected questions during communication.	Moderate	3.42
4.	I feel more prepared for presentation in class after practicing with ChatGPT.	Moderate	3.53
5.	ChatGPT's guidance has made me more comfortable during communication by allowing me to practice various conversation scenarios.	Moderate	3.30
6.	ChatGPT has provided me with strategies for managing my speech during presentations, which has improved my content.	Moderate	3.46
7.	ChatGPT's feedback helps me improve my weak points in speaking.	Moderate	3.37

Above table representing the mean scores I feel more prepared for presentation in class after practicing with ChatGPT (M = 3.53), ChatGPT has provided me with strategies for managing my speech during presentations, (M = 3.46), Practicing with ChatGPT has made it easier for me to handle difficult or unexpected questions during communication (3.42), and ChatGPT provides a safe space to practice my verbal communication skills without the fear of judgment (M = 3.20).

4.1.4 Challenges in Use of ChatGPT

Table 4.5

Challenges in use of ChatGPT

Sr. No.	Statements	Descriptive Level	Mean
1.	I find it difficult to use ChatGPT effectively for practicing communication techniques.	Moderate	3.21
2.	ChatGPT's lack of verbal interaction limits its effectiveness for developing my verbal communication skills.	Moderate	2.92
3.	I find it difficult to translate ChatGPT's feedback into actual improvements in my verbal communication.	Moderate	2.96
4.	ChatGPT's responses are sometimes too complex, making it challenging to apply them in spoken communication.	Moderate	3.24
5.	ChatGPT has limitations in simulating real-life speaking situations, which impacts my practice.	Moderate	2.98
6.	Compared to YouTube videos, ChatGPT does not seem to be better than listening to someone explaining.	Moderate	3.44
7.	I think ChatGPT might be harmful to me as I might be tempted to use it whenever necessary.	Moderate	3.05

Above table representing the mean scores Compared to YouTube videos, ChatGPT does not seem to be better than listening to someone explaining (M = 3.44), ChatGPT's responses are sometimes too complex, making it challenging to apply them in spoken communication (3.24), ChatGPT's lack of verbal interaction limits its effectiveness for developing my verbal communication skills (M = 2.92), and I find it difficult to translate ChatGPT's feedback into actual improvements in my verbal communication" (M = 2.96).

4.1.5 General Perception Mean Score Analysis

Table 4.6

General Perception Mean Score Analysis

Sr. No.	Statements	Descriptive Level	Mean
1.	I believe that ChatGPT is a valuable tool for improving my communication skills, despite some limitations.	Moderate	3.40
2.	I would recommend ChatGPT to other students looking to improve their communication skills.	Moderate	3.31
3.	I feel that ChatGPT enhances my learning experience.	Moderate	3.57
4.	I believe my classmates will start using ChatGPT to help them in the development of communication skills.	Moderate	3.50
5.	Interacting with ChatGPT has enhanced my ability to respond spontaneously in discussions.	Moderate	3.45
6.	ChatGPT's feedback has helped me correct mistakes in my spoken communication.	Moderate	3.56

Above table representing the mean scores I feel that ChatGPT enhances my learning experience (M = 3.57), I believe my classmates will start using ChatGPT to help them in the development of communication skills (3.50), Interacting with ChatGPT has enhanced my ability to respond spontaneously in discussions (M = 3.45), and I would recommend ChatGPT to other students looking to improve their communication skills” scored a mean of 3.31.

4.2 Qualitative Data Analysis

Semi-structured interview was developed to obtain in-depth data from 20 female undergraduate students of Department of Educational Leadership and Management IIUI. The interview contained 12 questions. Question 1 was related to explore how often undergraduate students used ChatGPT. Questions 2-4 were related to how ChatGPT develop verbal Communication Skills among undergraduate students. Questions 5-6 were related to confidence developed in undergraduate students in verbal communication after the use of ChatGPT. Questions 7-10 were related to general perception of students about ChatGPT and communication skills development. And questions 11-12 is related to challenges that undergraduate students face in use of ChatGPT to develop Communication skills. As the semi-structured interview was used for qualitative data collection, the researcher added the questions during interview based on respondents' response. Researcher used thematic analysis for the analysis of data. Thematic analysis is a qualitative research method. It was used to identify, interpret, and report patterns or "themes" within a dataset to understand experiences, thoughts, or perceptions of undergraduate students about the use of ChatGPT in the development of communication skills. It is a flexible method that involves familiarizing researcher with the data. It generating codes, searching for potential themes, reviewing and defining those themes, and producing a report to answer a specific research question.

4.2.1. Steps for Qualitative Data Analysis

Following are the steps researcher used for thematic analysis.

4.2.1.1 Familiarizing with your data

Initially interview data were transcribed in notebook. The effort was made to include all raw and relevant data that is observed in the transcription. . According to Braun and Clarke (2006), familiarization involves reading and re-reading the data. To become fully immersed in it and to gain an overall understanding. In this research, researcher transcribed data were reviewed and evaluated again and again for accuracy.

4.2.1.2 Generating initial codes

After the transcription, initial coding was made which highlighted the meaningful text and memos. Braun and Clarke (2006) describe this stage as systematically coding interesting features across the data set. All responses that were related to the same concept or question was organized under the same heading. So that

all relevant responses were under the same heading. Detail coding is available in appendix C

4.2.1.3 Searching for themes

Axial coding helps in grouping the initial codes or nodes (items) which are connected into a set or in a tree node. That finally belong to the core themes conceptually and systematically. Themes were created after transcribed interviews so that main concepts can be identified and related statements can be observed. The main headings used for organizing the data were:

- Use of ChatGPT
- Communication Skills
- Confidence
- Challenges in Use of ChatGPT
- General Perception

4.2.1.4 Reviewing themes:

The themes were reviewed to ensure that all codes within each theme formed a coherent pattern. each theme accurately reflected the meaning of the data. This stage also involved refining or merging overlapping themes to create a clear thematic structure (Braun & Clarke, 2006).

4.2.1.5 Defining and naming themes:

Each theme was clearly defined to explain its importance in relation to the research objectives. This process helped ensure that each theme represented a distinct aspect of students' experiences using ChatGPT for communication skill development.

4.2.1.6 Producing the report:

Finally, the themes were organized into a coherent narrative supported by participants' direct quotations. According to Braun and Clarke (2006), this stage involves weaving the themes together to tell a meaningful story about the data that connects back to the research questions.

Figure 3:

Themes for analysis of interview

ChatGPT & Communication Skills Development				
<p>Use Of ChatGPT</p> <ul style="list-style-type: none"> • Understanding of Complex Topics • Interactive • Brainstrom Ideas <ul style="list-style-type: none"> • Instant Response • Friendly Conversation • Enhance Vocabulary • Helps In Assignment, Presentation And Lecture Notes • Relevant Answer In Short Time • Provide Summary, Flowcharts Etc. • Provide Relevant Website Link • For Deta il Use Books 	<p>Communication Skills</p> <ul style="list-style-type: none"> • Convey Message Clearly • Effective Feedback • Translate Difficult Concept Into Easy Wordng • Get Answer Quickly • Vocabulary Enhancement <ul style="list-style-type: none"> • Practice English • Give Better Words • Practice of Communication Skills • Response In Conversational Style <ul style="list-style-type: none"> • Followup Questions • Self Practice • Donot help much in verbal communication skills 	<p>Confidence</p> <ul style="list-style-type: none"> • Provide Safe Platform To Practice • Prepared For Presentation <ul style="list-style-type: none"> • Practice Various Conversation Scenarios • Strategies <ul style="list-style-type: none"> • Improve Weak Points • Donot Judge <ul style="list-style-type: none"> • Reduce Anxiety • Build Confidence • ChatGPT Content Can Be Guess Easily • Stage Fear • Outdated Information 	<p>Challenges In Use Of Chatgpt</p> <ul style="list-style-type: none"> • Complex Response <ul style="list-style-type: none"> • Over Dependence • Precise Answer • Grammer Mistakes • Canot Use Premier Features • Donot Give Me Relevant Answer • Dealing With Stage Fear • Face-to-face Conversation • Communicat ion Anxiety 	<p>General Perception</p> <ul style="list-style-type: none"> • Valuable Tool <ul style="list-style-type: none"> • Enhance Learning Exprience • Respond Spontaniously In Discussion • Correct Mistakes • Side Helping Tool • Faster Than Other Search Engines <ul style="list-style-type: none"> • Voice Conversation • Video Based Feedback <ul style="list-style-type: none"> • Friendly Teacher • Screen Sharing • Personal Tutor <ul style="list-style-type: none"> • Increase Its Limit • Real-time Feedback • Death Of Creativity

4.3. Data Interpretation

Researcher used a mixed-methods convergent parallel design. Both quantitative and qualitative data were collected simultaneously and analyzed separately. Quantitative data collected through questionnaires and qualitative data

collected through semi-structured interview were analyzed thematically. The researcher used the words most and a few whiles analysis the responses of the participants. Most is used when above 50% participants agreed on a statement or responded in a similar manner. A few has been used for less frequent responses as below 50%.

4.3.1 Use of ChatGPT

4.3.1.1 Quantitative Data Interpretation

Quantitative data from the questionnaire showed that students generally rated on statements; I use ChatGPT to learn about new topics in my studies (M = 3.81), ChatGPT has made the study more interactive by providing instant responses (M = 3.87), ChatGPT helps me feel more prepared when studying for exams (M = 3.85), ChatGPT has a friendly interaction with me (M = 3.82), I seek help from ChatGPT for my assignment (M = 3.74), ChatGPT has enhanced my vocabulary (M = 3.65) and In case of doubt, I consult ChatGPT instead of using books (M = 3.46).

4.3.1.2 Qualitative Data Interpretation

It is analyzed through the responses of most respondents that ChatGPT is almost used in everything. It is a very helpful tool. In this era, we want shortcuts and ChatGPT give us relevant answer in a very short time. We don't need to visit on different websites for relevant answer. Most of the respondents said that ChatGPT helps them in their assignment, presentations, exam preparation, notes making and also in classroom participation like discussion. Use of ChatGPT helps in getting main points related to the topic. ChatGPT translate notes into easy wording that can be easy to understand. It enhances students' vocabulary. It provides meaning and synonyms of difficult words. Students do not need to read the whole pdf of 20-30 pages; they just upload the document on ChatGPT. ChatGPT analyze the document and provide summary in easy wording. It also highlights the main point. Students get the answer of any question easily without reading document in few seconds.

Most of the respondents prefers ChatGPT as compare to Google and other search engines. They are of the view that they get exact answer on ChatGPT as compare to google and other search engines. With the advancement in AI tools, we get exact and correct answer in very short time. Unlike struggling on google and other search engines to get answer. The answers from google are difficult, that answers can

be translate into easy wording with the help of ChatGPT. We do not have to visit different websites to get relevant answer. Just copy and paste question on ChatGPT and get the answer. It can also provide links related to topic for detail study.

ChatGPT is an interactive AI tool. It responds in friendly manner. It tries to make the user feel comfortable without judging him. Whether we are asking questions or sharing thoughts it give answer in friendly way. Many students enjoy talking to ChatGPT due to its voice mode feature. It listens you attentively and give instant feedback without judgement.

4.3.1.3 Triangulation

Both quantitative and qualitative results indicates positive and consistent use of ChatGPT in educational tasks. Both qualitative and quantitative data showed that ChatGPT play an important role in study. It provide instant responses and improve vocabulary. The mean score for statement related to the use of ChatGPT showed the constant use of it in study, exam and assignment preparation. It responds in friendly manner. It tries to make the user feel comfortable without judging him. Whether we are asking questions or sharing thoughts it give answer in friendly way. Its instant responses to questions, and enhance vocabulary indicate that it is a very helpful used AI tool.

But the mean score for consulting ChatGPT instead of books was lower that indicates that ChatGPT is widely used but it is not a full replacement for traditional resources. Qualitative responses also showed that students used books and other websites for detail study. However, in case of detail study ChatGPT provide links of different websites. The answers from google are difficult, that answers can be translate into easy wording with the help of ChatGPT. We do not have to visit different websites to get relevant answer. Just copy and paste question on ChatGPT and get the answer. It can also provide links related to topic for detail study.

4.3.2 Communication Skills

4.3.2.1 Quantitative Data Interpretation

Quantitative data from the questionnaire showed that students generally rated on statements; ChatGPT has improved my ability to convey messages clearly (M = 3.55), I believe my classmates will start using ChatGPT to improve their verbal communication skills (M = 3.54), ChatGPT has helped me to improve my selection of

words in verbal communication (M = 3.38), ChatGPT provides me with useful feedback to improve my verbal communication (M = 3.27), I have noticed an improvement in my fluency when speaking after using ChatGPT (M = 3.26), I improved my verbal communication skills by using ChatGPT (M = 3.04) and ChatGPT enhanced my verbal communication skills by providing more effective responses compared to traditional methods” received a modest mean score of 3.17.

4.3.2.2 Qualitative Data Interpretation

It is analyzed through the responses of most respondents that ChatGPT improves the ability to convey messages clearly. It helped them in selection of words while speaking. It enhances students’ vocabulary by providing multiple synonyms of a word. It translates difficult concepts in to easy concept. It provides effective responses compared to traditional methods to improve verbal communication skills. It suggests different tips and strategies to improve students verbal communication skills. Also suggest better words that can be use in a specific conversation.

It is analyzed through the responses of most respondents that ChatGPT response in Conversational Style. It is like a friend who helps in difficult time. We can practice our English communication skills. It provides different scenarios for self-practice. It suggests how to behave in a specific situation and give examples. And also provide follow-up questions. It helps in learning how to explain thoughts clearly. Many respondents used it to practice how to speak more clearly. They used it to practice how to speak more confidently and how to organize their thoughts.

Few of the respondents were of the view that ChatGPT do not helps much in the development of verbal communication skills. As communication is two-way process. But ChatGPT responds only in written form. It listens us but do not respond using voice. It accepts voice input but replies only in text. Voice replies were not accessible for all users. This limits the opportunity to practice real-time speaking and listening practice. Without voice responses, users miss out on natural conversation flow. And pronunciation cues, facial gestures and tone recognition etc.

4.3.2.3 Triangulation

Both qualitative and quantitative data showed that ChatGPT supports certain aspects of communication. It help particularly in clarity, vocabulary, and organized thoughts. But its impact on holistic verbal communication is less pronounced. We can

practice our English communication skills. It provides different scenarios for self-practice. It suggests how to behave in a specific situation and give examples. And also provide follow-up questions. It helps in learning how to explain thoughts clearly. It can provide strategies and tips how to improve verbal communication skill. Also suggest better words that can be use in a specific conversation but as a whole don't play significant role. As communication is a two-way process but ChatGPT answer only in written form. It can be effective if it responds in voice or provide videos. Its advanced features are restricted to premium users. Both quantitative and qualitative data converge on ChatGPT's limitation of non-verbal and oral practice. This data also highlighting the gap between AI-driven written interactions and authentic spoken communication experiences.

4.3.3 Confidence

4.3.3.1 Quantitative Data Interpretation

Quantitative data from the questionnaire showed that students generally rated on statements; I feel more prepared for presentation in class after practicing with ChatGPT (M = 3.53), ChatGPT has provided me with strategies for managing my speech during presentations, (M = 3.46), Practicing with ChatGPT has made it easier for me to handle difficult or unexpected questions during communication (M = 3.42). The mean score for ChatGPT's feedback helps me improve my weak points in speaking is (M = 3.37). ChatGPT's guidance has made me more comfortable during communication by allowing me to practice various conversation scenarios received a mean of 3.30 . Using ChatGPT has made me more confident during communication (M = 3.21). And ChatGPT provides a safe space to practice my verbal communication skills without the fear of judgment (M = 3.20).

4.3.3.2 Qualitative Data Interpretation

Most of the respondents were of the view that they feel confident in class presentation after using ChatGPT. As it provides information about the presentation topic and organize key points. It also suggests how to structure the presentation. It also provides interactive and innovative PowerPoint slides to grasp attraction. Students can ask follow-up questions for deeper understanding. This makes them feel more prepared and confident. It also suggests what kind of question may be asked by other during presentation. With better content and clarity, students feel more confident. Which reduces students' anxiety and improves delivery.

It provides safe platform to practice for communication skills. Students can practice various conversational scenarios with this AI tool to improve their speaking without any kind of judgement. Students feel safe as they know that no one will comment on them about their accent, grammar mistakes, pronunciation etc. It provide instant feedback in friendly way to improve weak points. It also suggests different tips and strategies for better conversation.

Most of the respondents were of the view that ChatGPT helps them prepare better for presentation. Because they know what to say and how to say. Which makes them feel more relaxed while speaking in front of class. It helps in organizing thoughts and practice answer to possible questions. It also gives confidence with vocabulary and sentence flow.

Few of the respondents were of the view that they do not feel confident after using ChatGPT. As its content can easily be guessed. Sometimes the material getting from ChatGPT is not authentic. It may contain outdated information. This can lead to hesitation while presenting. Students may worry about the accuracy and originality of what they're sharing. May be what they are sharing is wrong.

4.3.3.3 Triangulation

The findings of both quantitative and qualitative data show convergence on the role of ChatGPT in preparation of presentation. It provides information about the presentation topic and organize key points. It also suggests how to structure the presentation. It also provides interactive and innovative PowerPoint slides to grasp attraction. Students can ask follow-up questions for deeper understanding. This makes them feel more prepared, confident and reduce anxiety for presentations. Both quantitative and qualitative data showed that it provide safe practice environment and strategic guidance.

The divergence lies in trust. The quantitative data indicates moderate confidence. The quantitative findings show that practicing with ChatGPT has made it easier for to handle difficult or unexpected questions during communication. Also helps in improving weak points in speaking. Using ChatGPT has made them more confident during communication. But qualitative data indicates uncertainty about content authenticity. Sometimes the material getting from ChatGPT is not authentic. It may contain outdated information. This can lead to hesitation while presenting.

Students may worry about the accuracy and originality of what they're sharing. Maybe what they are sharing is wrong.

4.3.4 Challenges in use ChatGPT

4.3.4.1 Quantitative Data Interpretation

Quantitative data from the questionnaire showed that students generally rated on statements; Compared to YouTube videos, ChatGPT does not seem to be better than listening to someone explaining (M = 3.44), ChatGPT's responses are sometimes too complex, making it challenging to apply them in spoken communication (M = 3.24), I find it difficult to use ChatGPT effectively for practicing communication techniques had a mean of 3.21. On the other hand, several items received means below the midpoint of the 5-point scale. That indicate more neutral to slightly disagreeing responses. For instance, ChatGPT's lack of verbal interaction limits its effectiveness for developing my verbal communication skills (M = 2.92), ChatGPT has limitations in simulating real-life speaking situations, which impacts my practice (M = 2.98) and I find it difficult to translate ChatGPT's feedback into actual improvements in my verbal communication" (M = 2.96).

The statement "I think ChatGPT might be harmful to me as I might be tempted to use it whenever necessary" had mean 3.05.

4.3.4.2 Qualitative Data Interpretation

ChatGPT offer many advantages but students also face some challenges. Most of the respondents were of the view that ChatGPT gives precise answers. But sometimes, we need detailed answers for deeper understanding. And to explore the topic in detail. Due to this limitation many important points left and students feel difficult to understand the topic. Sometimes ChatGPT provide incorrect vocabulary or information which make it difficult to understand.

It is analyzed through the responses of most respondents that one major drawback of ChatGPT is the lack of verbal interaction that is not accessible for all users. Its advanced features are restricted to premium users. Which makes communication feel less natural. Sometime, responses are complex that make it difficult for beginners to fully grasp the information. There's also the risk of overdependence. Students may rely too much on AI for answers. As a result, students

lose confidence in their own problem-solving abilities. Grammar mistakes may also occur, which can cause confusion.

Few of the respondents were of the view that without access to premium features may find themselves limited in functionality. These technical limitations unable them to explore more advanced capabilities. ChatGPT may fail to give answers that are truly relevant to the question and sometime provide outdated information. Students may feel frustrated after receiving outdated information. Sometimes the answer sound too formal or robotic. And it cannot judge how I sound while speaking or how my audience might react.

It is analyzed through the responses of most respondents that AI tools like ChatGPT cannot help with personal challenges. It does not help with dealing with stage fear. face-to-face conversation anxiety, body language, tone, pronunciation etc. These are things you can only improve with real-life practice. ChatGPT cannot help with real-world practice and also with Communication anxiety.

4.3.4.3 Triangulation

The findings of both quantitative and qualitative data showed that ChatGPT offer many advantages but students also face some challenges. The data converges on precise answers. Sometimes, we need detailed answers for deeper understanding. And to explore the topic in detail. Due to this limitation many important points left and students feel difficult to understand the topic. Sometimes ChatGPT provide incorrect vocabulary or information which make it difficult to understand. Due to lack of verbal interaction students may feel less natural during communication with ChatGPT. Sometime, responses are complex that make it difficult for beginners to fully grasp the information. There's also the risk of overdependence.

The quantitative data reflects these issues moderately but qualitative feedback add detail of these challenges. The qualitative data explain real-life consequences. Such as reduced creativity, outdated information, frustration, and inability to address non-verbal communication aspects. Students may rely too much on AI for answers. As a result, students lose confidence in their own problem-solving abilities. Grammar mistakes may also occur, which can cause confusion. ChatGPT may fail to give answers that are truly relevant to the question and sometime provide outdated information. Students may feel frustrated after receiving outdated information.

Sometimes the answer sound too formal or robotic. And it cannot judge how I sound while speaking or how my audience might react. It does not help with dealing with stage fear. face-to-face conversation anxiety, body language, tone, pronunciation etc. These are things you can only improve with real-life practice. ChatGPT cannot help with real-world practice and also with communication anxiety.

4.3.5 General Perception

4.3.5.1 Quantitative Data Interpretation

Quantitative data from the questionnaire showed that students generally rated on statements; I feel that ChatGPT enhances my learning experience (M = 3.57), ChatGPT's feedback has helped me correct mistakes in my spoken communication (M = 3.56), "I believe my classmates will start using ChatGPT to help them in the development of communication skills" (M = 3.50), Interacting with ChatGPT has enhanced my ability to respond spontaneously in discussions (M = 3.45), I believe that ChatGPT is a valuable tool for improving my communication skills, despite some limitations" received a mean score of 3.40 and I would recommend ChatGPT to other students looking to improve their communication skills" scored a mean of 3.31.

4.3.5.2 Qualitative Data Interpretation

It is analyzed through the responses of most respondents that ChatGPT is a valuable and helpful tool. It explains things in a simple way and gives me new ideas when I'm stuck. They used ChatGPT mostly when they need support with writing or speaking tasks. It would be nice if it could give voice feedback or tell me how natural my sentence sound. Also, if it could simulate real conversation with tone or expressions that would help more. It is very helpful tool for self-practice and building confidence. It offers 24/7 guidance, which is great for students who can not afford tutors.

Most of the respondents were of the view that it is easier to use, helps you get better at communicating your thoughts and also organizing thoughts. Most important it is available at anytime when you need help or stuck in any difficulty. Especially when someone finds it hard to express themselves, it can be good supporting tool. It's like having a personal tutor. It adapts according to someone's level and gives instant support in a friendly tone.

ChatGPT helped in preparing presentation according to topic with great summary which helps a lot. It makes someone feel more comfortable while

presentation. And also helped to practiced communication by correcting pronunciation, English grammar and provides information about communication skills. ChatGPT is an excellent learning tool that provides short notes with good vocabulary of every topic related to my studies.

Few of the respondents were of the view that they are planning to use ChatGPT for improving professional email writing, mock interviews and practicing public speaking content. They also planned to use it for resume building, brainstorming ideas for presentations, and refining communication strategies. And also, to translate documents in easy wordings.

Few of the respondents were of the view that use of ChatGPT is death of creativity. Relying too much on AI-generated content might discourage original thinking. Which reduce the need for students to think, their problem-solving ability and students' creativity.

Few of the respondents were of the view that ChatGPT should increase its limit of premium features. That will more helpful for students in their studies and also improve their creativity. Students simply upload the document on it and get summary of it. Also get the main points in bullet form.

4.3.5.3 Triangulation

The findings converge in recognizing ChatGPT as a beneficial learning tool. Especially in providing feedback, idea generation, and confidence-building. It explains things in a simple way and gives me new ideas when I'm stuck. It would be nice if it could give voice feedback or tell me how natural my sentence sound. It is very helpful tool for self-practice and building confidence. It offers 24/7 guidance, which is great for students who can not afford tutors. It is easier to use and helps you get better at communicating your thoughts and also organizing thoughts. ChatGPT helped in preparing presentation according to topic with great summary which helps a lot. It makes someone feel more comfortable while presentation. And also helped to practiced communication by correcting pronunciation, English grammar and provides information about communication skills. ChatGPT is an excellent learning tool that provides short notes with good vocabulary of every topic related to my studies.

Divergence appears in qualitative results about overdependence and creativity loss that is less visible in the quantitative means. Relying too much on AI-generated

content might discourage original thinking. Which reduce the need for students to think, their problem-solving ability and students' creativity. This causes the death of creativity.

4.4 Summary of the Chapter

This chapter "Data Analysis and Interpretation" comprises the analysis and interpretation of both quantitative and qualitative data. Researcher used a mixed-methods convergent parallel design. Both quantitative and qualitative data were collected simultaneously and analyzed separately. Quantitative data was collected from undergraduate students through close ended questionnaire. For the analysis of quantitative data, researcher used descriptive statistics "mean". Tables were made for the representation of quantitative data. While qualitative data collected through semi-structured interview were analyzed thematically. Semi-structured interview was developed to obtain in-depth data from 20 female undergraduate students of Department of Educational Leadership and Management IIUI. The interview contained 12 questions to explore how often undergraduate students used ChatGPT to development communication skills.

The integration of quantitative and qualitative results showed convergence. It showed ChatGPT's positive role in enhancing communication skills. Particularly in vocabulary enhancement, idea generation, instant response, clear doubts and quick explanation of concepts. Divergences appeared that quantitative data indicates moderate confidence while qualitative data indicates uncertainty about content authenticity. The material from ChatGPT is not authentic. It may contain outdated information. This can lead to hesitation while presenting. Students may worry about the accuracy and originality of what they're sharing. May be what they are sharing is wrong. Divergence also appears in qualitative results about overdependence and creativity loss that is less visible in the quantitative means. Relying too much on AI-generated content might discourage original thinking.

Overall, both datasets suggest that while ChatGPT is a valuable and effective learning tool. It works best as a complementary tool alongside conventional study method. ChatGPT is widely used but it is not a full replacement for traditional resources. Students used books and other websites for detail study. However, ChatGPT gives precise answer but it.

CHAPTER 5

SUMMARY, FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

The purpose of the study was to analyze role of ChatGPT on the development of communication skills among undergraduate students. This chapter mainly focuses the summary, findings, conclusions and recommendations that bases on the analysis of the collective data. The quantitative data was collected through close-ended questionnaire and qualitative data was collected through semi structured interview of the students.

5.1 Summary

This study aims to analyze role of ChatGPT on the development of communication skills among undergraduate students. Chapter 1 provides an overview, emphasizing the pivotal role of ChatGPT integration in educational environment for developing communication skills among undergraduate students. The objectives of the study were to; analyze the role of ChatGPT as a tool in improving verbal communication skills of undergraduate students, investigate ChatGPT's role in improving undergraduate students' confidence and performance in communication, explore the challenges faced by undergraduate students while using ChatGPT for the development of communication skills.

This study offers theoretical underpinning, linking the current study to existing knowledge, covering topics such as communication and AI tools, ethical use of ChatGPT, ChatGPT as a language learning tool, ChatGPT vs traditional language learning methods, impact of ChatGPT on students' language learning, improving students' confidence and performance with ChatGPT, enhancing students' pronunciation skills with ChatGPT, improving students motivation with ChatGPT, personalized learning and adaptive feedback , possible impact of ChatGPT on teaching strategies, ChatGPT in education, educational benefits of ChatGPT for students and limitations of using ChatGPT.

Researcher utilized a parallel convergent design of mixed methods approach, integrating both quantitative and qualitative data collection and analysis methods. The data were analyzed and interpreted using both quantitative and qualitative methods to get a complete understanding of how ChatGPT helps students develop communication

skills and what challenges they experience while using it. Quantitative data collected through questionnaires were analyzed using descriptive statistics i.e mean. While qualitative data collected through semi-structured interview were analyzed thematically.

5.2 Findings

5.2.1 Quantitative Data Findings

The first objective was to analyze the role of ChatGPT as a tool in improving verbal communication skills of undergraduate students. In this regard, the quantitative findings were:

5.2.1.1 The role of ChatGPT was found very important. Students frequently use of ChatGPT in their studies. The highest mean ($M = 3.87$) fell in the high range, showing its strong role in enhancing learning. Other high scores were for exam preparation ($M = 3.85$), interaction ($M = 3.82$), and learning new topics ($M = 3.81$). Vocabulary support ($M = 3.65$) and reliance on ChatGPT as a substitute for books ($M = 3.46$) were in the medium range, indicating moderate use. (Table 4.1).

These directly address Objective 1 that showed ChatGPT's significant role in supporting students' learning and understanding. The findings indicate that students used ChatGPT for academic preparation. And indirectly contributes to their verbal communication development through exposure to new vocabulary and structured explanations.

5.2.1.2. Students showed improvement in certain aspects of communication skills after the use of ChatGPT. The highest mean ($M = 3.55$) was in the medium range, indicating better message clarity. Peers' willingness to adopt ChatGPT ($M = 3.54$) also scored high. Other areas, such as feedback support ($M = 3.27$), fluency ($M = 3.26$), and effective responses ($M = 3.17$), were in the medium range, reflecting moderate improvement. The lowest mean ($M = 3.04$), also medium, suggested a limited effect on overall verbal communication skills. (Table 4.2).

This finding address Objective 1, as it highlights that ChatGPT contributes to improve the clarity and organization of students' verbal messages. However, the moderate range of scores shows that the tool's impact on actual oral fluency and real-time speaking ability is limited.

5.2.1.3. Regarding second objective Students felt more confident in speaking after the use ChatGPT, particularly in presentations. The highest mean ($M = 3.53$), in

the moderate range, showed that students felt more prepared for presentations. Relatively higher scores were also seen for managing speech ($M = 3.46$) and handling unexpected questions ($M = 3.42$), both within the medium range. Comfort in communication ($M = 3.30$) and feedback for weak points ($M = 3.37$) also fell in the medium range, reflecting moderate improvement. The lowest means ($M = 3.21$ and $M = 3.20$), still in the medium range, suggested only slight gains in confidence and feeling safe while practicing with ChatGPT. (Table 4.3).

These findings clearly align with Objective 2. Indicating that ChatGPT enhances students' confidence in structured communication settings such as classroom presentations. However, the moderate means suggest that while students feel more prepared and supported. ChatGPT does not completely eliminate anxiety or replace real audience interaction that is necessary for full confidence development.

5.2.1.4. Regarding third objective students faced several challenges in use of ChatGPT. The highest mean ($M = 3.44$), within the medium range, showed that students considered ChatGPT less effective compared to alternatives such as YouTube explanations. Other medium scores ($M = 3.21$ – 3.24) indicated difficulties in applying ChatGPT's responses and using it effectively for practice. The lowest means ($M = 2.92$, 2.96 , and 2.98), in the medium range, highlighted clear limitations in verbal interaction, translating feedback, and simulating real-life speaking situations. (Table 4.4).

These findings address Objective 3. This showed that ChatGPT supports learning and confidence. Students encounter challenges such as lack of voice interaction. These barriers reduce the overall effectiveness of ChatGPT in developing complete verbal communication skills.

5.2.1.5. Regarding general perception of students in use of ChatGPT for the development of communication skills; students generally had a positive perception of ChatGPT. The highest mean ($M = 3.57$), in the moderate range, showed that students felt ChatGPT enhanced their overall learning experience. This was followed closely by providing useful feedback for correcting spoken mistakes ($M = 3.56$), also high. Other relatively high scores were noted for classmates' likelihood of adopting ChatGPT ($M = 3.50$) and improved spontaneous responses in discussions ($M = 3.45$), both within the medium range but leaning toward high. Moderate means ($M = 3.40$ and $M = 3.31$) indicated that although students recognized certain limitations, they still considered ChatGPT valuable and recommendable for communication skill development. (Table 4.5).

This finding connects with all three objectives. As it reinforces the idea that ChatGPT is viewed as an important learning aid that helps improve understanding, confidence, and communication practice, despite existing challenges.

5.2.2 Qualitative Findings

5.2.2.1. Regarding first objective the qualitative findings revealed that Students used ChatGPT for presentation preparation, assignments, exam preparation, and also to understand difficult concepts. ChatGPT's instant responses saved time and reduced study stress. But not a complete replacement of traditional sources. Some students still preferred traditional sources such as books and lectures for detailed study of topics (Theme 1).

This supports Objective 1 by showing that ChatGPT plays a complementary role in the learning process. It strengthen conceptual understanding and content organization that contribute indirectly to communication skill development.

5.2.2.2. There is improvement in student's vocabulary and organization of ideas through ChatGPT. However, many students said that ChatGPT could not support speaking fluency, pronunciation, or natural interaction (Theme 2).

This means that ChatGPT facilitates the cognitive and linguistic aspects of communication. But it is less effective for practicing oral fluency, an essential element of verbal skill development.

5.2.2.3. Regarding second objective the qualitative findings revealed that ChatGPT gave outlines, examples, and practice material to undergraduate students for presentation preparation. However, ChatGPT could not reduce stage anxiety. And also could not replicate the experience of real audience interaction. (Theme 3).

This supports Objective 2 by indicating that ChatGPT assists in structural preparation and content confidence. But has limited influence on emotional or psychological confidence in live communication settings.

5.2.2.4. Regarding third objective the qualitative findings revealed that Semi-structured Interviews showed similar challenges. Such as ChatGPT's responses were sometimes too complex or lengthy, advanced features is restricted to premium users. Some respondents also noted that ChatGPT's inability to understand context or provide concise answers affected their learning experience etc. These challenges limited its usefulness for oral communication. Some respondents still preferred YouTube videos or peer discussion for the development of verbal communication skills (Theme 4).

These findings directly relate to Objective 3. They highlight that practical limitations restrict ChatGPT's usefulness in developing verbal communication skills.

5.2.2.5. The qualitative findings regarding general perception of students in use of ChatGPT for the development of communication skills showed that ChatGPT is a valuable and innovative learning tool. They acknowledged its role in improving academic preparation and communication practice. But emphasized that the overuse of ChatGPT is dangerous. We could call death of creativity (Theme 5).

This integrates all three objectives. It showed that ChatGPT contributes to learning, confidence, and practice, its role should remain supportive and balanced with traditional learning methods.

5.2.3 Mixed Findings

5.2.3.1. Both quantitative and qualitative data showed that students widely use ChatGPT in their studies. But they do not view it as a complete replacement for traditional resources such as books. The results of both datasets converge on the point that ChatGPT is useful for clarity and vocabulary enhancement. But it does not help much in the enhancement of verbal fluency and oral communication. (Table 4.1, 4.2, Theme 1 & 2).

This directly addresses Objective 1, showing convergence between quantitative and qualitative data. That showed the supportive but partial role of ChatGPT in improving communication skills.

5.2.3.2. Both datasets suggested that ChatGPT boosts content-related confidence. But does not fully help with the psychological aspects of confidence-building in communication (Table 4.3 & Theme 3).

This fulfills Objective 2. ChatGPT contributes to preparation-based confidence but not to psychological aspects.

5.2.3.3. Both datasets confirm that the restriction of advanced features is the main weakness for communication skill development (Table 4.4 & Theme 4).

This directly addresses Objective 3. That confirmed technical and interactional constraints limit ChatGPT's effectiveness in developing communication skills.

5.2.3.4. Both datasets revealed that students see ChatGPT as a helpful supplementary tool. But not as a standalone solution for communication skills development (Table 4.5 & Theme 5).

This integration aligns all three objectives. Confirming that ChatGPT positively influences learning and confidence. But students faced limitations that restrict its full potential in verbal communication enhancement.

5.3 Discussion

The purpose of this study was to investigate the role of ChatGPT in the development of communication skills among undergraduate students. The Researcher used a parallel convergent mixed methods design. The findings of both qualitative and quantitative datasets highlighted students' use of ChatGPT, its impact on communication skills development and confidence. Undergraduate students actively used ChatGPT to improve their communication skills. It enhanced vocabulary, generate ideas, and clarify concepts. ChatGPT also contributed to improving students' confidence in presentations by providing instant, friendly, and judgment-free feedback. And also the challenges they faced and overall perceptions. Both datasets showed that ChatGPT positively contribute in the development of communication skills. Particularly, in vocabulary enhancement, ideas generation and clarity of thoughts etc. ChatGPT enhanced students' confidence in presentations by giving instant feedback in comfortable and friendly manner. But it did not deal with stage fear or anxiety. Students faced challenges in use of ChatGPT such as complex responses, lack of speech simulation, and over-reliance on it etc. Despite these challenges, students generally perceived ChatGPT as a useful supplementary tool. It enhanced their learning experience.

The result of the study supported by the study of Wallace & Lima (2023), who described ChatGPT functions as a virtual conversation partner. That allows students to engage in real-time language practice. By prompting ChatGPT for structured dialogues or discussion-based exercises, learners can improve their pronunciation in meaningful communication contexts. While AI offers significant support in pronunciation instruction, the role of educators remains essential in guiding, personalizing, and evaluating the learning process. The combination of AI-driven assistance and expert human instruction can lead to a more engaging and effective pronunciation learning experience. Similarly, the present study found that ChatGPT promoted clarity in communication. But it could not fully replicate real human interaction. This supports

the idea that AI tools should complement rather than replace teacher-led or peer-based communication practice (Wallace & Lima, 2023).

The result of the study supported by the study of Barrot (2023), is that ChatGPT provides an immersive language learning experience by simulating real-world interactions through interactive conversations and contextual exercises. Students reported improvements in vocabulary, grammar, writing, and conversational skills, supported by instant feedback. That motivates students for learning and enhances their progress. It also assists students in many tasks like generating essay ideas, refining outlines, and improving coherence. But there is still concern remain regarding authorship, academic integrity, and accuracy of AI-generated content. From a pedagogical perspective, ChatGPT encourages educators to integrate AI at specific stages of learning. While maintaining teacher guidance to ensure originality and critical thinking. Overall, ChatGPT is a powerful tool that enhances communication skills and self-directed learning. But it should be used in a balanced way alongside traditional instruction. In both studies, students benefited from ChatGPT. By instant feedback, improved vocabulary, and better organization of ideas. However, consistent with Barrot's concerns, the current study also observed challenges. Challenges related to authenticity, accuracy, and academic integrity. Some students became overly dependent on AI-generated responses. This highlights the need for guided use of ChatGPT under teacher supervision (Barrot, 2023).

The result of the study were also supported by the study of Sakirin & Said (2023), ChatGPT make language learning more engaging through accessibility, real-time feedback, and personalized interaction. Important concerns remain about issues such as bias in AI data, limited cultural relevance, lack of emotional connection, and risks of over-reliance. This highlight its limitations compared to traditional methods. Students find AI tools more adaptable than classroom instruction, yet traditional teaching still provides structured grammar learning, deeper linguistic analysis, and human interaction. Therefore, ChatGPT should be viewed as a supplementary tool rather than a replacement. But further research needed on its long-term effects and impact on different learner groups. Both studies acknowledge similar limitations such as bias in AI data. This explained why students in the present study still preferred traditional learning resources for deeper understanding and human interaction.

Therefore, ChatGPT may be considered as supplementary tool. That enhances but does not replace the communicative role of instructors and peers (Sakirin & Said, 2023).

Overall, the discussion suggests that ChatGPT contributes significantly to the development of communication skills. Especially in the areas of vocabulary enhancement, clarity of thought, and presentation confidence. However, it is not effective in addressing affective aspects of communication such as anxiety. The convergence between the present findings and prior literature confirms that ChatGPT can enhance learning outcomes but must be integrated carefully. Within a balanced instructional framework that maintains human guidance and emotional engagement.

5.4 Limitations of the Study

Although the study achieved its objectives, certain limitations should be acknowledged. ChatGPT lacked a voice or speech feature during data collection, which limited its effectiveness for practicing oral fluency and pronunciation. Future studies could explore AI tools that integrate speech interaction. Compare ChatGPT's influence across diverse educational settings to provide a broader understanding of its role in communication skill development.

Furthermore, while the researcher included both first-year and final-year students to represent different academic stages. A detailed comparison between the two groups could not be conducted due to time constraints and the limited scope of the present study. As a result, the findings primarily reflect the overall trends rather than specific differences between academic levels. Future research could address this limitation by conducting a comparative or longitudinal study. This would explore variations in ChatGPT's influence across different stages of undergraduate learning.

5.5 Conclusions

It is concluded that ChatGPT plays a supportive role in the development of communication skills among undergraduate students. As evidenced by both quantitative and qualitative findings.

1. In relation to the first objective "to analyze the role of ChatGPT as a tool in improving verbal communication skills of undergraduate students", it is concluded that students widely adopt ChatGPT as a study aid for exam preparation, presentations, assignments, and clarification of complex concepts (finding 5.2.1.1&5.2.1.2). ChatGPT's ability to provide instant explanations and generating

structured content enhanced undergraduates' students' vocabulary and clarity of ideas (finding 5.2.2.1&5.2.2.2). ChatGPT contributes positively to idea organization. Consequently, ChatGPT indirectly supported verbal communication skills development through better understanding and content preparation. So it was concluded that ChatGPT helps students in communication skills (finding 5.2.3.1).

2. In relation to the second objective, “to investigate ChatGPT’s role in improving undergraduate students' confidence and performance in communication”. It was found that ChatGPT enhanced students’ confidence in preparing content, structuring responses, and practicing explanations. This preparation support allowed students to feel more secure and ready for academic tasks (finding 5.2.1.3). But it did not directly reduce presentation anxiety or stage fear, as these aspects require real-world practice (finding 5.2.2.3).

3. Regarding the challenges students face while using ChatGPT for communication skills development, it is concluded that the overall perception of ChatGPT was positive. But there are notable limitations (finding 5.2.1.4 & finding 5.2.1.5). The major concern is the restriction to advanced features, risk of over-reliance, which may hinder creativity. Students also mentioned that ChatGPT sometimes doesn’t understand the context and gives wrong or incomplete answers. Other challenges included internet issues and worry about plagiarism. Additionally, ChatGPT alone cannot replicate the human interaction and experiential learning. Both of them are necessary for overcoming communication barriers. These challenges show that ChatGPT is helpful but students need proper guidance. Undergraduate students need to use ChatGPT in a balanced way to get real benefits for communication skill development (finding 5.2.2.4 & finding 5.2.2.5).

It is concluded that ChatGPT serves as a supplementary learning resource rather than a replacement for traditional learning experiences. It supports independent learning, improves content organization, and enhances academic preparedness. However, effective communication skill development still requires human practice, interaction, and creativity. So, its role remains supportive rather than substitutive.

5.6 Recommendations

The aim of this research was to analyze ChatGPT on the development of communication skills among undergraduate students. On the basis of the findings from current research, the following were the recommendations:

1. Educational policymakers may develop clear and practical guidelines for the ethical and purposeful integration of ChatGPT in higher education. These guidelines may promote the use of ChatGPT as a supportive resource. This may improve students' verbal communication skills through activities that enhance vocabulary, clarity of expression, and idea organization. Policies may ensure that AI use remains aligned with learning objectives, academic integrity, and the development of authentic communication competence. (Conclusion 1).

2. ChatGPT was found to be effective in enhancing students' confidence by helping them prepare, organize, and practice content. But it did not directly address presentation anxiety or stage fear. So, it is recommended that ChatGPT should be integrated as a supplementary tool rather than a standalone solution. Teachers may encourage students to use ChatGPT for ideas generation, structuring response, and rehearsing explanations. Simultaneously providing real-world opportunities such as classroom presentations, group discussions, and role-play activities to overcome stage fear. And build confidence (Conclusion 2).

3. Students generally had a positive perception about ChatGPT. But its use might be balanced and guided to address its limitations. So, it is recommended that university administration may organize AI literacy seminars to promote responsible and ethical use of ChatGPT. They may give proper access to students to use ChatGPT with clear guidance. So, they may use it for genuine learning purpose (Conclusion 3).

4. Students may use ChatGPT as a supportive learning tool to develop communication skills, but avoid over-reliance. So, it is recommended that they may cross-check information with textbooks, lectures, and peer discussions. Undergraduate students may encouraged to face-to-face discussions and practical exercises to improve oral communication and develop confidence (Conclusion 3).

5.6.1 Recommendations For Future Research

Here are some recommendations for future research:

1. An experimental study on the effectiveness of ChatGPT in enhancing academic presentation skills, focusing on clarity, and fluency of speech. (Conclusion 1).

2. Examining the relationship between the use of ChatGPT and real-world practice and their impact on presentation anxiety and stage fear among undergraduate students. (Conclusion 2).

3. Exploring students' experiences with ChatGPT's voice mode as a tool for enhancing oral communication skills. (Conclusion 3).
4. Investigate the long-term effects of ChatGPT's use on students (Conclusion 3).

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APPENDICES

APPENDIX A

ChatGPT and Communication Skills Development among Undergraduate Students: A Mixed Methods Investigation

Dear Students

I am a student of MS Educational Leadership and Management. I am conducting research on “ChatGPT and Communication Skills Development among Undergraduate Students: A Mixed Methods Investigation”. Please spare your 10-15 minutes to fill this questionnaire. I assure that your specific answers will be kept confidential.

Name: _____ (Optional) Semester: _____

Scoring key: Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), Strongly Disagree (1).

Sr. No	Statements	1	2	3	4	5
Use of ChatGPT						
1.	I use ChatGPT to learn about new topics in my studies.					
2.	ChatGPT has made the study more interactive by providing instant responses.					
3.	ChatGPT helps me feel more prepared when studying for exams.					
4.	ChatGPT has a friendly interaction with me.					
5.	ChatGPT has enhanced my vocabulary					
6.	I seek help from ChatGPT for my assignment.					
7.	In case of doubt, I consult ChatGPT instead of using books.					

Communication Skills					
○ Clarity					
8.	ChatGPT has improved my ability to convey messages clearly.				
○ Fluency					
9.	I have noticed an improvement in my fluency when speaking after using ChatGPT.				
○ Vocabulary					
10.	ChatGPT has helped me to improve my selection of words in verbal communication.				
○ Overall verbal communication improvement					
11.	I improved my verbal communication skills by using ChatGPT.				
12.	ChatGPT enhanced my verbal communication skills by providing more effective responses compared to traditional methods.				
13.	ChatGPT provides me with useful feedback to improve my verbal communication.				
14.	I believe my classmates will start using ChatGPT to improve their verbal communication skills				
Confidence					
15.	Using ChatGPT has made me more confident during communication.				

16.	ChatGPT provides a safe space to practice my verbal communication skills without the fear of judgment.					
17.	Practicing with ChatGPT has made it easier for me to handle difficult or unexpected questions during communication.					
18.	I feel more prepared for presentation in class after practicing with ChatGPT.					
19.	ChatGPT's guidance has made me more comfortable during communication by allowing me to practice various conversation scenarios.					
20.	ChatGPT has provided me with strategies for managing my speech during presentations, which has improved my content.					
21.	ChatGPT's feedback helps me improve my weak points in speaking.					
Challenges in use of ChatGPT						
22.	I find it difficult to use ChatGPT effectively for practicing communication techniques.					
23.	ChatGPT's lack of verbal interaction limits its effectiveness for developing my verbal communication skills.					
24.	I find it difficult to translate ChatGPT's feedback into actual					

	improvements in my verbal communication.					
25.	ChatGPT's responses are sometimes too complex, making it challenging to apply them in spoken communication.					
26.	ChatGPT has limitations in simulating real-life speaking situations, which impacts my practice.					
27.	Compared to YouTube videos, ChatGPT does not seem to be better than listening to someone explaining.					
28.	I think ChatGPT might be harmful to me as I might be tempted to use it whenever necessary.					
General Perception						
29.	I believe that ChatGPT is a valuable tool for improving my communication skills, despite some limitations.					
30.	I would recommend ChatGPT to other students looking to improve their communication skills.					
31.	I feel that ChatGPT enhances my learning experience.					
32.	I believe my classmates will start using ChatGPT to help them in the development of communication skills					

33.	Interacting with ChatGPT has enhanced my ability to respond spontaneously in discussions.					
34.	ChatGPT's feedback has helped me correct mistakes in my spoken communication.					

Thank You for your Response

ChatGPT and Communication Skills Development among Undergraduate Students: A Mixed Methods Investigation

Semi-Structured Interview Guide

Dear Undergraduate Students:

I am a student of MS Educational Leadership and Management. I Am conducting research on “ChatGPT and Communication Skills Development among Undergraduate Students: A Mixed Methods Investigation”. Please spare your 10-15 minutes for this semi-structured interview. I assure that your specific answers will be kept confidential.

1. Can you describe how often and in what ways you use ChatGPT in your studies?
2. What motivated you to use ChatGPT for communication skill development rather than other search engines?
3. How has ChatGPT helped you improve your verbal communication skills?
4. Can you provide specific examples of activities or conversations where ChatGPT played a role in enhancing your speaking abilities?
5. Do you feel more confident during class presentations after using ChatGPT?
 - I. If yes then why?
 - II. If not then why not?
6. How has ChatGPT helped you practice communication?
7. Is there any aspect of communication skills that you feel ChatGPT cannot help with? Please specify.
8. How would you describe your experience with ChatGPT as a learning tool?
9. How do you plan to continue using ChatGPT to enhance your communication skills in the future?
10. What improvements would you suggest to make ChatGPT more effective in developing communication skills?
11. What challenges have you faced while using ChatGPT for communication skill development?
12. Would you recommend ChatGPT to others for communication skill development?
 - i. If yes then why?
 - ii. If not then why not?

Thank You for your Response

Open & Axial Coding

Use of ChatGPT

- | | |
|------------------------------------|--|
| 1. Understanding of Complex Topics | 7. Helps In Assignment, Presentation And Lecture Notes |
| 2. Interactive | 8. Relevant Answer In Short Time |
| 3. Brainstorm Ideas | 9. Provide Summary, Flowcharts Etc. |
| 4. Instant Response | 10. Provide Relevant Website Link |
| 5. Friendly Conversation | 11. For Detail Use Books |
| 6. Enhance Vocabulary | |

Communication Skills

- | | |
|--|---|
| 1. Convey Message Clearly | 7. Give Better Words |
| 2. Effective Feedback | 8. Practice of Communication Skills |
| 3. Translate Difficult Concept Into Easy Wording | 9. Response In Conversational Style |
| 4. Get Answer Quickly | 10. Follow-up Questions |
| 5. Vocabulary Enhancement | 11. Self-Practice |
| 6. Practice English | 12. Do not help much in verbal communication skills |

Confidence

- | | |
|--|--|
| 1. Provide Safe Platform To Practice | 7. Reduce Anxiety |
| 2. Prepared For Presentation | 8. Build Confidence |
| 3. Practice Various Conversation Scenarios | 9. ChatGPT Content Can Be Guess Easily |
| 4. Strategies | 10. Stage Fear |
| 5. Improve Weak Points | 11. Outdated Information |
| 6. Do not Judge | |

Challenges In Use Of ChatGPT

- | | |
|---------------------|-----------------------------------|
| 1. Complex Response | 4. Grammar Mistakes |
| 2. Over Dependence | 5. Cannot Use Premier Features |
| 3. Precise Answer | 6. Do not Give Me Relevant Answer |

7. Dealing With Stage Fear
8. Face-to-face Conversation

9. Communication Anxiety

General Perception

1. Valuable Tool
2. Enhance Learning Experience
3. Respond Spontaneously In Discussion
4. Correct Mistakes
5. Side Helping Tool
6. Faster Than Other Search Engines
7. Voice Conversation
8. Video-Based Feedback
9. Friendly Teacher
10. Screen Sharing
11. Personal Tutor
12. Increase Its Limit
13. Real-time Feedback
14. Death Of Creativity

Name of Experts for Questionnaire Validity

Sr. No.	Expert Name	Designation
1.	Dr. Munazza Mahmood	Associate Professor
2.	Dr. Fouzia Ajmal	Associate Professor
3.	Dr. Fatima Batool	Associate Professor
4.	Dr. Fatima Maqsood	Associate Professor



INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD PAKISTAN
FACULTY OF EDUCATION
Department of Educational Leadership & Management

TO WHOM IT MAY CONCERN

Dear Sir /Madam,

I hope this message finds you well.

On behalf of the Department of Educational Leadership and Management, Faculty of Education, International Islamic University Islamabad, I am writing to formally request your permission to allow our MS Education Scholar **Ms. Hina Ashiq** who is working on the topic "**ChatGPT and Communication Skills Development among Undergraduate Students: A Mixed Methods Investigation**" to conduct data collection as part of their academic research.

As part of the degree requirements, our postgraduate students are expected to undertake empirical research related to various aspects of educational theory and practice. This includes collecting data through tools such as questionnaires and interviews, depending on the nature of their research topics.

We would like to request your kind cooperation in granting access to your institution for the following purposes:

- Conducting research aligned with ethical and academic standards
- Ensuring minimal disruption to your regular academic activities
- Maintaining complete confidentiality and anonymity of all participants involved

Ms. **Hina Ashiq** has been trained in research ethics and will ensure that the rights, privacy, and dignity of participants are fully respected. Moreover, collected data will be used for academic purposes only and will be shared with you upon request.

Thank you for considering this request. We look forward to your positive response and the opportunity for meaningful academic collaboration.

Dr. Syed Asad Abbas Rizvi

Assistant Professor/ In-Charge Academics

Thesis Advisor (email drasad.rizvi@iiu.edu.pk)

INSTRUMENT VALIDATION CERTIFICATE

This is to certify that the research instrument entitled:

Questionnaire and Semi-Structured Interview Guide developed by researcher Hina Ashiq (46-FOE/MSELM/F23), intended for use in the research study:

**"Chat GPT and Communication Skills Development among Undergraduate Students:
A Mixed Methods Investigation"**

has undergone a validation process to assess its validity and appropriateness for data collection.

The instrument has been reviewed and confirmed to be appropriate for measuring the intended variables. The validation process included expert judgment and content validity, ensuring that the instrument meets the necessary standards for academic research.

This certificate is issued as evidence of the validation process completed on

Validator Name: Dr. Munazza Mahmood
Validator Designation: Assistant Professor
Institution: IIU
Signature: [Handwritten Signature]
Stamp: DR. MUNAZZA MAHMOOD
INCHARGE
Deot Educational Leadership & Management
Faculty of Education
International Islamic University Islamabad

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collection.


The instrument has been reviewed and confirmed to be appropriate for measuring the
intended variables. The validation process included expert judgment and content validity,
ensuring that the instrument meets the necessary standards for academic research.

This certificate is issued as evidence of the validation process completed on

Validator Name: Dr. Fouzia Ajmal

Validator Designation: AP DTE

Institution: 1101

Signature: 

Stamp: **Dr. Fouzia Ajmal**
Assistant Professor
Department of Teacher Education
International Islamic University
Islamabad

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ensuring that the instrument meets the necessary standards for academic research.

This certificate is issued as evidence of the validation process completed on

Validator Name: Dr. Fatima Batool

Validator Designation: AP

Institution: IU

Signature: (Signature)

Stamp: Dr. Fatima Batool
Assistant Professor
Department of Teacher Education
Faculty of Education
International Islamic University
Islamabad Pakistan

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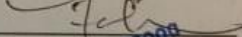
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This certificate is issued as evidence of the validation process completed on

Validator Name: Dr. Fatima Maqsood

Validator Designation: Assistant Professor

Institution: UOI

Signature: 

Stamp: 