

Artificial Intelligence Applications Used by Teachers in the Development of Communication Skills in Secondary School Students. Cajamarca Region, 2025

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Abstract– Artificial intelligence applications are fundamental tools for the development of communication. However, they are not planned or implemented in the educational process, despite the fact that Sustainable Development Goal (SDG) 4 calls for their use to reduce inequality and develop equitable education. The research started from the general objective: to identify the artificial intelligence applications used by teachers in the development of oral and written communication in secondary school students in the Cajamarca Region, 2025. It followed a descriptive observational approach, under the parameters of a qualitative, flexible, and interactive case design, seeking to analyze the planning and implementation of artificial intelligence in communication development. The sample consisted of twenty-two teachers in the area of communication, who facilitated the annual program, units, and learning sessions, analyzed using a documentary analysis guide. The results reveal that the artificial intelligence applications used by teachers in the development of oral and written communication are ChatGPT, Copilot, text generators, grammar correction assistants, voice synthesizers, and automatic feedback tools, which improved clarity, cohesion, and coherence in oral and written production.

Keywords. Artificial Intelligence, Planning, Application, Inclusion, and Communication.

I. INTRODUCTION

Artificial Intelligence (AI) applications are tools that facilitate the extension of communication skills in schoolchildren around the world. They are characterized by offering great opportunities, and their implementation in educational institutions is carried out in accordance with clear ethical principles, since it is teachers who promote their use in the development of learning.

Currently, the use of AI applications in the global education system is becoming a tool that facilitates interaction between students and teachers in the acquisition of new knowledge and planned learning. Reference [1] highlights that in order to achieve Sustainable Development Goal (SDG) 4, the 193 countries of the United Nations are required to design policies that guide the appropriate use of AI applications, which are increasingly useful for reading, listening, and producing oral and written texts, planning activities, sessions, and work that are inclusive of gender inequality; in 2023, 450 institutions were observed between basic and university education, where only 10% use AI, in 2022, seven countries designed AI programs for teachers, and 15 included contents

for AI training, in high-income countries, the use of AI exceeded two-thirds. By 2023, 40% prohibited the use of mobile devices, and 24% used them. AI applications develop learning, reinforce communication, and mitigate difficult-to-solve problems.

In the education systems of Latin American countries, the use of AI applications is subject to learning planning, guided by principles of equity and inclusion in order to achieve SDG 4 set by UNESCO for 2030. In an effort to use AI in learning, UNESCO promoted the course “AI Transforming Education in Latin America,” which was attended by 27,000 teachers who strengthened their skills in the use of AI technologies, between the present and the future. The use of AI among teachers and students varies from 0.8 points in primary school, 0.9 points in secondary school, and 1 point in higher education [2]. The three countries that use AI in human talent development are Chile with 74.3 points, Uruguay with 62.11 points, and Costa Rica with 46.99 points. In research, development, and adaptation, 19 countries stand out, led by Brazil with 79.15 points, Chile with 75.36 points, Uruguay with 66.89 points, and Mexico with 66.18 points [3]. The use of AI applications strengthens the achievement of communicative competence, addressing inequalities and human development.

The Peruvian education system pursues SDG 4 through the National Education Project, which states that digital technology not only enables communicative interaction but also provides new teaching and learning tools and strategies, such as AI, Big Data, machine learning, the Internet of Things, Gamma, ChatGpt, Copilot, etc., which in pedagogical practice achieve communicative perfection [4]. The Asia-Pacific Economic Cooperation (APEC) forum, in its AI for education workshop, discussed the benefits of AI in instruction. Renato Reyes emphasized of AI is a tool that improves and strengthens the learning, technological, and digital skills of students and teachers, Mario Lafitte, Samsung's agent in Latin America, argues that AI complements pedagogical work and learning achievement; for his part, Morgan Quero echoed the importance of AI in teaching by reinforcing articulate and persuasive language in learning [5]. The planning and execution of AI applications promotes communicative learning in the short and medium term.

The promotion of the use of AI in the communication process among schoolchildren in the Cajamarca regional education system is based on the educational agreements set out in the Regional Education Project, decentralized in the Local Education Projects, which, in conjunction with the PEN, contribute to the achievement of SDG 4. Cajamarca's Regional Education Project 2036, in its strategic axis 3 on research, innovation, technology, and entrepreneurial culture, establishes as a guideline and responsibility access to the use of ICTs in order to strengthen the development of learning in various educational environments [6]. The implementation of educational actions in the region is carried out by local governments, which, with their Local Participatory Council, promote the development of the PEL at the UGEL level. The achievement of policies is transferred to educational institutions, which, based on the pedagogical management of the Institutional Educational Project, plan the annual program, units, activities, or learning sessions around the areas of the curriculum.

The reality leads to the general question: What artificial intelligence applications do teachers use in the development of oral and written communication in secondary school students in the Cajamarca Region in 2025? Highlighting the specific problems: How is the use of artificial intelligence applications planned in the development of oral and written communication? How is the use of artificial intelligence applications implemented in the development of oral and written communication? And what AI applications do teachers program and use in learning sessions for the development of oral and written communication in students at a secondary educational institution in the Cajamarca region in 2025?

The theoretical justification is based on the acquisition of knowledge of pedagogical practice, drawing on contributions from Vygotsky's theory of language, autonomous learning focused on learning management using appropriate resources; the contribution of media communication theory promoted by the use of AI in the communicative context, Bandura's social learning theory, and the communicative competence approach that seeks language mastery, with AI being a tool that facilitates oral and written communication processes.

The methodological justification is based on the processes of planning the use of AI in the communicative achievement of participants, following the constructivist approach with collaborative project-based learning to use AI and communicate with each other, the verification of learning through teamwork, as well as the sequence followed by teachers and students in the generation of new knowledge using AI, according to the information collection instrument.

In practice, the justification lies in the pedagogical processes that teachers use to promote oral and written expression using AI applications with students, since the existence of new AI tools allows them to generate text, clone voices, review writing, and correct grammatical errors, improving the clarity, cohesion, and coherence of the communicative text produced. These are valuable tools that serve to strengthen pedagogical practice.

The study began with the general objective: to identify the artificial intelligence applications used by teachers in the development of oral and written communication in secondary school students in the Cajamarca Region, 2025, specifying the following specific objectives: to verify how the use of AI applications is planned in the development of oral and written communication; to ascertain how the use of AI applications is implemented in the development of oral and written communication; and to verify which AI applications teachers program and use in learning sessions for the development of oral and written communication in secondary school students in the Cajamarca region, 2025.

The international background that serves as the basis for this work is the article referenced in [7], which was carried out with the aim of investigating the impact of Artificial Intelligence on communicative competence in the Communication course. The study, which took a quantitative, correlational approach and involved 45 students who completed two questionnaires, indicates that 73% use chatbots (AI) at an intermediate level and 60% are in the process of reaching communicative competence. It concluded that AI is not significantly related to communicative competence in the area of communication ($0.470 > 0.05$).

Reference [8] in its study aimed to diagnose the state of communication in the classroom and interpersonal relationships among students, descriptive, qualitative research, conducted with 83 students and 5 tutors, analyzed with a checklist and a survey. They found that there are shortcomings between communicative practice in the classroom and the influence of the interrelationships between participants, affecting the processes followed in the development of activities. They concluded that in order to undertake communicative work in the classroom in interrelation with students, a diagnosis must be made in order to plan learning.

Reference [9] in his article, which was written with the aim of exploring how generative artificial intelligence impacts students' reading and writing, was conducted using a qualitative, exploratory approach with four participants, who provided the documentation for analysis. The results indicate that the use of Generative Artificial Intelligence (GAI) contributes to the development and revision of draft texts, leading to the improvement of teachers and students, inducing greater efficiency and diversification in education, with the aim of promoting the development of communication processes and critical thinking skills. The study concluded that GAI transforms reading and writing, offering personalization and efficiency in the educational process, requiring transparency and self-regulation of information.

Reference [10] in his paper, developed with the aim of demonstrating how artificial intelligence can serve as a tool for learning Spanish, an exploratory and theoretical work, worked on with learning resources for students and teachers, where the benefit of AI in programming and assessing learning is analyzed, specifies the benefit of the various spaces that promote the linguistic development of schoolchildren. The study concludes that AI planning in communication

development serves as a stimulating tool for listening, expressing oneself, and producing texts using reading comprehension.

As national background, there is the study referenced [11], developed with the aim of analyzing the integration of artificial intelligence in the development of communication skills in early-stage students in Lima, Peru. This qualitative, phenomenological, exploratory work observed four experts and found a notable increase in confidence and communication skills, attracted by AI in the construction of learning and feedback, enriching language, socialization, and communication. It concluded that planning learning using AI increases participation and confidence in communication skills.

Reference [12] in the paper worked with the aim of identifying the use of generative artificial intelligence as a tool for supporting and personalizing learning, ethical aspects, literacy, and new ways of teaching, a qualitative study of systematic analysis based on learning experiences from 35 articles, where the results indicate that the use of GAI has high potential to transform learning achievement, its use is adaptable to learning needs, and it is used as motivation and feedback for learning. The study concluded that planning and implementing the ethical use of AI enhances learning achievement and strengthens student communication and socialization.

Reference [13] in the paper, which aims to describe the integration of AI in university writing and research within the classroom, a qualitative case study, analyzed the planning and implementation phase of text production by 100 students in a written composition course. The results revealed that there are favorable perceptions regarding the planning and implementation of AI in the development of writing skills; they concluded that the incorporation of AI as a tool for writing academic texts is essential for achieving the planned communication skills.

The article referenced in [14], which was written with the aim of analyzing the efficiency of integrating chatbots in various contexts, is a qualitative study that used the PRISMA method to systematically review 60 articles obtained from the Scopus database. The results showed that linking chatbots to various communicative contexts has both positive and negative consequences. Used consistently in any context, it is a tool that generates oral and written communicative knowledge. The study concluded that: The use of chatbots in various learning contexts proves to be a fundamental tool for efficiently increasing communication in the context in which it is used.

The category of artificial intelligence applications is defined as tools that promote the development of communicative learning by allowing students to interact. It is a set of systems that develop activities based on the actions that a person can perform, whether inherent to learning or decision-making sought in communicative development [15]. For this reason, the variable demand for actions generates the

development of communicative learning in students in any educational context.

Another definition is proposed in reference [16], which highlights that the technological tools implemented by AI serve to automate tasks, solve problems, or be used in various teaching-learning contexts. They can be classified according to the interest, need, and complexity of the area of study in which they are to be used, in the case of the study, to develop the communication process.

The category of artificial intelligence applications is presented as a technology that enhances educational knowledge and is essential for improving the performance of students and teachers during the learning process [17]. Its use requires ethical responsibility in planning and execution, encouraging teachers and students to generate information in accordance with their mother tongue and interculturality.

Subcategories include planning, defined as the use of intelligent applications linked to AI algorithms, with an emphasis on content generation in oral and written communication structures; and implementation, which is the process of integrating AI applications according to students' learning needs, encouraging them to use it to produce written and oral texts, review texts, read, and clone voices, depending on the difficulty of AI learning [17]. Another classification is: learning styles, which grade the planning of activities; the adaptation of teaching methods, which addresses learning rhythms; and personalized feedback, to level communicative learning [18]. Two other subcategories are: study, which seeks its usefulness in written and oral communicative development; and everyday use, in communicative activity [19]. The study will use the subcategories proposed by reference [17] within the framework of planning and executing the use of AI.

The category is based on cognitive theory, defined as the interaction of the brain's neural networks to generate new learning. Reference [20] specifies that it is supported by the functional organization of the brain interconnected in artificial neural networks with learning and natural human language, where AI perfects applications and analysis based on algorithms, computers, and symbols. It contributes to the understanding of learning based on the active and internal processes that AI promotes in students, leading them to construct their own learning.

The category of communication development is conceptualized as a skill that encourages the expression of ideas in order to convey opinions, emotions, or contextualized information using speech. It allows for instant or real-time interaction and facilitates oral and written comprehension using information that highlights rhythm, intonation, and nonverbal elements in communicative expression [21]. Oral communication is represented by speech, while written communication graphs or describes information.

Communication is a category that uses speech to convey various types of messages through the use of oral or written linguistic codes between a sender and a receiver, allowing for the exchange of ideas or interaction of thoughts. Reference [22] defines it as the development of oral and written skills

that are used to interact comprehensively with imaginary or real reality, using language in an ethical and responsible manner.

Communicative development is the process by which students refine, improve, and acquire various skills to express their thoughts, ideas, and emotions. It is used in the comprehension and interpretation of information they receive from their peers or other people and contributes to the growth of their ability to communicate effectively with different interlocutors in diverse contexts, whether verbal, nonverbal, visual, or written [23].

Reference [21] identifies two subcategories: oral expression, defined as the verbal process that allows students to express ideas through oral texts generated with AI; and written expression, defined as the transmission of information in messages or written texts drafted with AI support. Reference [24] classifies communication as: cognitive, to capture and process information; affective-motivational, to encourage the production of texts; metacognitive, to reflect on learning; and communicational, to demonstrate what has been learned.

Reference [25] proposes the subcategory referential, to acquire knowledge and build communication; interreferential, for the student's social interrelation; and self-referential, to reflect on what has been learned. Reference [22] presents three competencies: communicating orally in one's native language, for active interaction, creating ideas and feelings according to communicative intent; reading various types of texts in one's native language, to interrelate the reader, the text, and the sociocultural environment, according to reading positions; and writing various types of texts, to communicate using writing according to communicative intent.

Communication is based on Vygotsky's theory of language, which seeks to acquire ideas using symbols that activate higher mental processes and integrate them into internal functioning. According to reference [26], language and social interaction act as essential means for cognitive and creative improvement of knowledge. Language functions as an intermediary to relate the external to the internal.

The theory of autonomous learning focuses on managing learning using the appropriate resources. Reference [27] specifies that learning autonomy is oriented toward the willingness to make judgments in the evolution of learning, through self-assessment and self-regulation. This implies that students accept internal control and are responsible for planned learning procedures.

Media communication theory promotes the use of AI in various forms of communication within the context. Reference [28] points out that social media influences the construction of media opinions that are assumed to be possible truths. This is expressed in concepts of fixation and mediatization of agents, influencing the personal development of learners.

Bandura, in his social learning theory, emphasizes that reciprocity between cognition, behavior, and environment acts in the course of learning. Reference [29] posits that student learning occurs through observation, imitation, and

identification of models to guide the communication process. It is the most conducive medium for sharing attitudes, values, and models of thinking.

Communicative competence involves mastering oral expression through speech and text composition. It is a skill that promotes communication using AI tools and manifests itself in students' ability to express themselves orally and in writing ([30]).

Oral communication skills are actions that integrate speech and listening in the development of effective communication. They use personal interaction to increase comprehension skills, decoding verbal and nonverbal communication in the inferences produced in the information presented by the reality of learning [31].

Written communication skills are the ability of students to express their ideas, judgments, and feelings through writing, leading to the development of skills for planning, drafting, revising, and editing texts, using the structures required for written communication [32].

II. METHODOLOGY

Following the proposal in reference [33], this is a basic, descriptive-observational study that seeks to verify and confirm the planning and implementation of AI use in oral and written expression as subcategories of communication. The information provided allowed for analysis, interpretation, and understanding of innovation in verbal and textual communication production. It is based on the observation of the planning and implementation of the use of AI in linguistic production undertaken in the pedagogical programming of the teachers under study [34].

The work was carried out using a qualitative approach, aimed at understanding the information and promoting innovation in the planning and implementation of AI use in communication progress. An analysis of documents planned for learning was applied [33]. Qualitative studies seek to interpret facts and elements of the observational context, content analysis, or interviews. Their flexible nature makes them an ideal tool for descriptive research in education [35].

The research adopts a flexible and interactive case design, focused on analyzing the curriculum planning of teachers in the field of communication. Its purpose is to understand the use of AI in communication development through observation and content analysis of short- and medium-term programming; it seeks to identify processes linked to innovation and technology [33]. It adapts to the needs of the study through in-depth analysis of experiences and triangulation of sources to validate the facts [36].

The category of artificial intelligence applications is defined as a technology that enhances educational knowledge. It is a fundamental tool for improving communication between students and teachers, complementing the development of mental processes in the conduct and interaction of communication learning [17].

Two subcategories emerge from artificial intelligence applications: planning, understood as the design of the use of intelligent applications based on AI algorithms to integrate content into oral and written communication; and implementation, referring to the incorporation of AI applications into learning activities. In this process, students are key players, using these applications to develop speeches, review texts, generate speech, summarize, and present assignments [17].

The subcategory of planning the use of AI has as its indicator the planning of the use of AI applications to undertake oral and written communication in PA, UA, and SA; and the subcategory of executing the use of AI has as its indicator the use of AI applications in the promotion of oral and written communication in PA, UA, and SA.

The category of communication development is defined as a skill that promotes the expression of ideas in order to convey opinions, emotions, or contextualized information using speech, allows for instant or real-time interaction, and facilitates oral and written comprehension using information that highlights rhythm, intonation, and nonverbal elements in communicative expression [21].

It presents the following subcategories: oral communication with AI, based on the comprehension and production of oral texts using AI; and written communication, which involves the comprehension and production of written texts using AI applications.

Indicators of oral expression include the expression of oral texts using AI and the production of oral texts using AI; indicators of written communication include the comprehension of written texts using AI and the production of written texts using AI.

The study uses teachers in the communication department of a secondary school in the Cajamarca region as its unit of analysis. The unit of analysis, which is each subject or essential element that forms part of a research study, is the agent that provides information according to the context of the items derived from each subcategory, based on the category of study [35].

Each unit of analysis was selected taking into account the inclusion and exclusion criteria. The first took into account teachers who freely and voluntarily wished to provide information, according to the items presented in the data collection instrument. The second did not take into account teachers who rejected the proposal and did not agree to be part of the research.

The population, conceptualized as a group of individuals engaged in a similar or identical activity within an institution or space, performs the same functions and has similar characteristics [37]. The study selected eighty-five teachers who teach communication in secondary educational institutions in the Cajamarca region.

The sample for a research project can be determined probabilistically or non-probabilistically, depending on the type, approach, and design of the study [37]. In this study, the sample is defined non-probabilistically, that is, it is census-

based, targeted, and intentional, consisting of 22 teachers who use some AI application in programming, units, and learning sessions to be applied in class with students. No sampling technique is needed because it is a small sample [35].

The data collection technique was linked to documentary observation, seeking to systematically and documentary observe the planning, implementation, and use of AI applications in oral and written expression in the annual program (AP), learning units (LU), and learning sessions (LS) of each participating teacher, following a guide where the information required by the study objectives was recorded [37].

The instrument used was the document analysis guide, which allowed for the examination of the PA, UA, and SA planned by teachers, verifying the planning, implementation, and use of AI in the communicative development of students. The information was organized into subcategories linked to each objective, serving to present the results [35]. Previously, the instrument was validated by three research specialists, who evaluated the adequacy, clarity, consistency, and relevance of the items according to categories, subcategories, and indicators of the study.

The information was collected with institutional authorization and teacher consent; the participants provided the documentation, which was reviewed according to proposed items, then the responses were organized in a triangulation matrix, from which tables were prepared with analysis and interpretation linked to the specific objectives. Finally, the discussion was developed by contrasting results with background information and theoretical approaches.

The study is reliable, given that the information collected was careful and thorough, following the logic of each item broken down into each indicator, subcategory, and category, as shown in the results. Reference [37] argues that scientific rigor in qualitative work is based on the reliability and generalization of information according to space, time, procedures, and theoretical vision to show the analysis that corresponds to each result.

The qualitative analysis method, following references [36] and [35], was based on content inspection to identify and code information according to categories, subcategories, indicators, and items; Thematic analysis was included to verify the planning and implementation of AI applications in the comprehension and production of oral and written texts, as well as narrative analysis and comparison, highlighting the educational use of these tools in student communication achievement.

The study is based on the Code of Ethics in Research, which requires six essential principles: intellectual honesty, with truthful use of information; rigor, through deductive reasoning and relevant sources; objectivity and impartiality, oriented toward academic purposes; transparency, in access to and handling of data; respect, evidenced by sources, confidentiality, and diversity; and responsibility, assumed throughout the academic and professional process.

III. RESULTS

To identify the AI applications used by teachers in the oral and written communication of students at a secondary school in the Cajamarca Region, a document analysis guide was used to examine the annual program (AP), learning units (LU), and sessions, organizing the responses in a triangulation matrix according to objectives.

TABLE 1
PLANNING OF AI APPLICATIONS FOR THE DEVELOPMENT OF ORAL AND WRITTEN COMMUNICATION IN SECONDARY SCHOOL STUDENTS IN THE CAJAMARCA REGION, 2025

Code	Items	Synthesized documentary evidence
PA	AI applications planned by teachers to develop oral and written communication in the annual program.	- The twenty-two teachers plan to use ChatGPT, Gamma, Microsoft Immersive, Copilot, Text-To-Speech (TTS) – Google Dictation, Microsoft Dictate, legible fonts, OpenDyslexic, Arial, Comic Sans, Duolingo Max, and educational platforms – Khan Academy, Smartick, and Ghotit Real Writer in the PA. - Five teachers highlight other applications such as TalkPaI, Grammarly/Quillbot, Voiceitt, and Speechify/Natural Reader to develop skills, communicate orally, and write various oral texts. - All twenty-two teachers agree on the planning of cross-curricular skills, functioning in virtual environments generated by ICT, and promoting the creation of digital materials such as presentations, videos, documents, designs, etc.
UA	AI applications planned by the teacher to develop oral and written communication in the learning unit.	- The twenty-two UAs analyzed consider the use of ChatGPT, Gamma, Microsoft Immersive, Copilot, Text-To-Speech (TTS) – Google Dictation, Microsoft Dictate, legible fonts, OpenDyslexic, Arial, Comic Sans, Duolingo Max, and educational platforms – Khan Academy, Smartick, Ghotit Real Writer, and the use of AI to develop oral communication skills and write various types of text. - Five units also consider TalkPaI as a conversational tutor, Grammarly/Quillbot as a writing assistant, Voiceitt for inclusive voice recognition, and Speechify/Natural Reader.
SA	AI applications that teachers plan to develop oral and written communication in learning sessions.	- The thirty-six sessions analyzed show that ChatGPT, Gamma, Microsoft Immersive, Copilot Text-To-Speech (TTS) – Google Dictation and Microsoft Dictate, OpenDyslexic Arial, Comic Sans. - Six sessions highlight the use of Duolingo Max, educational platforms-Khan Academy, Smartick, Ghotit Real Writer-to - Ten sessions emphasize the use of TalkPaI; Grammarly/Quillbot, Voiceitt specifically, Speechify/Natural Reader

The information presented in the table shows systematic and progressive planning for the use of AI applications at different levels of educational programming (PA, UA, and SA). It demonstrates vertical and consistent alignment between the three levels of educational planning, ensuring that the use of AI is not isolated or improvised, but rather part of a comprehensive institutional strategy. There is a balance between generalist tools such as ChatGPT, Copilot, Gamma, and educational platforms; and specialized tools such as

Voiceitt, TalPaI, Speechify, and inclusive fonts, which respond to the need for educational inclusion and accessibility for students with learning disabilities.

The planning shows an innovative and conscious commitment on the part of the participating teachers, who recognize that AI applications not only enhance traditional teaching, but also open up opportunities for equity and personalization in oral and written communication for students with learning difficulties. This approach strengthens the cross-cutting competence of functioning in virtual environments and promotes the creation of digital materials, consolidating an inclusive and digitally transformed educational culture.

TABLE 2
IMPLEMENTATION OF AI APPLICATIONS FOR THE DEVELOPMENT OF WRITTEN COMMUNICATION IN SECONDARY SCHOOL STUDENTS IN THE CAJAMARCA REGION, 2025

Indicator	Item	Summary of information obtained from document analysis
Use of AI applications in oral communication	AI applications implemented in the development of oral communication	- Twenty-six teachers use ChatGPT to generate personalized dialogues and exercises. - Five teachers implement TalkPaI for conversation simulation and pronunciation correction. - Eight teachers use Voiceitt to transform non-standard pronunciations into clear text, promoting inclusion. - Six teachers use Duolingo Max to reinforce English speaking practice. - TTS is used to transcribe speech into text to support oral expression. - Four teachers use Speechify/Natural Reader to facilitate listening comprehension of texts.
Use of AI applications in written communication	AI applications implemented in the development of written communication	- Twenty-two teachers use Copilot to generate and correct written texts. - Twenty-two teachers use Gamma to organize and present texts. - Eight teachers used Microsoft Immersive Reader to aid text comprehension. - Twelve teachers use Grammarly/QuillBot to correct grammar, style, and coherence in texts. - Nine teachers implemented the use of Ghotit Real Writer to guide the writing process for students with learning difficulties. - Five teachers use accessible fonts to facilitate visual reading. - Fourteen teachers used Khan Academy and Smartick to offer interactive exercises and writing.
Pedagogical aspects implemented	AI applications implemented in the development of learning sessions.	- At the beginning, the twenty-two teachers use ChatGPT to generate motivating questions and initial dialogues, Gamma to present introductory texts, TTS to activate prior knowledge through reading aloud, and accessible fonts for students with learning disabilities. - During development, teachers use Copilot to produce written texts, Grammarly/QuillBot to correct texts, TalkPaI to simulate dialogues and oral practice, Voiceitt to promote speech in inclusive students, Speechify/Natural Reader for listening comprehension of texts; Khan Academy, Smartick, and Ghotit Real Writer for interactive exercises and guided writing; and Duolingo Max for English language practice. - At the end, they implement Chat GPT to present a synthesis of what they have learned by generating summaries, Gamma to generate PowerPoint presentations and present conclusions, Microsoft Immersive to assess reading comprehension, and Copilot for the final correction of texts produced.

The information in the table shows that teachers moved from planning to the concrete implementation of AI applications in oral and written communication, demonstrating diversified and pedagogically structured use in learning sessions. The results reflect pedagogical maturity; teachers do not limit themselves to incorporating tools in isolation, but integrate them into a teaching process that encompasses motivation, development, and closure. There is a balance between generalist applications such as ChatGPT, Copilot, and Gamma, and specialized applications such as Voiceitt, Ghotit Real Writer, and accessible fonts, ensuring textual quality for students with learning disabilities.

It should be noted that participating teachers demonstrate that they are transforming the implementation of learning by generating inclusive digital use, where AI applications become a strategic pedagogical ally to strengthen the development of oral and written communication. Through consistency in implementation using a variety of tools and attention to accessibility, they reflect a teaching commitment to innovation and educational equity.

TABLE 3
AI APPLICATIONS PROGRAMMED AND USED BY TEACHERS IN LEARNING SESSIONS TO DEVELOP ORAL COMMUNICATION SKILLS IN SECONDARY SCHOOL STUDENTS IN THE CAJAMARCA REGION, 2025

Code	AI applications programmed and used in the development of oral communication
PA	- ChatGPT and Copilot planned for generating dialogues and oral exercises - Microsoft Immersive and Gamma for presenting texts and reinforcing oral communication. - Text-To-Speech (Google Dictation, Microsoft Dictate) for transcribing voice and supporting oral expression. - Duolingo Max, for oral practice of the English language. - TalPaI AI and Voiceitt considered for dialogue simulation and inclusive voice recognition. - Speechify/Natural Reader for reading aloud and listening comprehension.
UA	- ChatGPT and Copilot, for oral production in activities - Microsoft Immersive and Gamma for oral comprehension and expression of texts. - Duolingo Max, to reinforce pronunciation and vocabulary. - TalPaI AI, as a conversation tutor for dialogue simulation. - Voiceitt, considered for students with speech difficulties. - Speechify/Natural Reader, for reading aloud and listening comprehension.
SA	- ChatGPT, implemented in twenty-six sessions to generate personalized dialogues. - Copilot, to support oral production and correction of spoken texts. - Microsoft Immersive and Gamma to improve comprehension of spoken texts. - Text-To-Speech (Google Dictation, Microsoft Dictate) for real-time voice transcription. - Duolingo Max, developed in six sessions for oral practice of the English language. - TalPaI AI, used in ten sessions to simulate conversations and correct pronunciation. - Voiceitt, used in ten sessions to transform non-standard pronunciations into clear texts. - Speechify/Natural Reader, programmed in ten sessions to improve listening comprehension.

The analysis in Table 3 shows that teachers have systematically incorporated various AI applications into learning sessions, strengthening student communication. The PA shows comprehensive planning with tools such as ChatGPT and Copilot to generate dialogues, Microsoft Immersive Reader and Gamma to present texts, and dictation applications such as Text-To-Speech (Google Dictation, Microsoft Dictate) to support oral expression. They integrate specialized resources such as Duolingo Max, TalPaI AI, Voiceitt, and Speechify/Nature Reader to address specific needs for inclusion and listening comprehension.

In the UA, implementation is consistent with the PA, but focuses on more specific activities. ChatGPT and Copilot are used in oral production, while Microsoft Immersive and Gamma reinforce text comprehension and expression. Noteworthy is the use of Duolingo Max for pronunciation and vocabulary, along with TalPaI AI as a conversational tutor and Voiceitt for students with speech difficulties. Speechify/Natural Reader ensures reading aloud and listening comprehension, consolidating an inclusive approach.

The SA demonstrates the practical and operational application of AI resources. ChatGPT is implemented in thirty-six sessions to generate personalized dialogues, while Copilot supports oral production and text correction. Microsoft Immersive and Gamma improve comprehension of oral texts, and Text-To-Speech (Google Dictation, Microsoft Dictate) facilitates real-time voice transcription. In addition, Duolingo Max is used in six sessions for oral English practice, and TalPaI AI, Voiceitt, and Speechify/Natural Reader are used in ten sessions, reinforcing inclusion and listening comprehension. Together, they reflect an innovative and conscious pedagogical strategy that integrates AI with communicative development.

TABLE 4
AI APPLICATIONS PROGRAMMED AND USED BY TEACHERS IN LEARNING SESSIONS FOR THE DEVELOPMENT OF WRITTEN COMMUNICATION IN SECONDARY SCHOOL STUDENTS IN THE CAJAMARCA REGION, 2025

Code	Aplicativos de IA programados y utilizados en el desarrollo de la comunicación Escrita
PA	- ChatGPT and Copilot designed to generate and correct written texts. - Gamma, for organizing and presenting written texts. - Microsoft Immersive Reader to improve comprehension of written texts. - Text-To-Speech (Google Dictation, Microsoft Dictate) to transcribe speech into text. - Legible fonts (OpenDyslexia, Arial, Comic Sans) to facilitate writing for students with writing difficulties. - Duolingo Max, to reinforce writing in English. - Educational platforms (Khan Academy, Smartick, Ghotit Real Writer), to encourage guided writing. - Grammarly/QuillBot, for grammar and style correction.
UA	- ChatGPT and Copilot planned for the production of written texts in activities. - Gamma and Microsoft Immersive Reader for comprehension and analysis of written texts. - Grammarly/QuillBot used as a writing assistant. - Educational platforms (Khan Academy, Smartick, Ghotit Real Writer) to support students with writing difficulties and interactive writing exercises.

	- Legible fonts (OpenDyslexis, Arial, Comix Sans) to improve text readability.
SA	- ChatGPT implemented in thirty-six sessions to generate drafts and summaries. - Copilot to correct and improve the presentation of written texts. - Gamma, to present the written texts produced. - Microsoft Immersive Reader to reinforce comprehension of written texts. - Grammarly/QuillBot, used in ten sessions to improve consistency in text writing. - Educational platforms (Klan Academy, Smartick, Ghotit Real Writer) to guide writing in interactive exercises with students with difficulties. - Legible fonts (OpenDyslexis, Arial, Comix Sans) to facilitate writing for students with writing problems.

The analysis in Table 4 shows that teachers have designed a comprehensive plan for the development of written communication, incorporating AI applications at different levels of pedagogical programming. In the PA, tools such as ChatGPT and Copilot are programmed to generate and correct texts, Gamma to organize and present written texts, and Microsoft Immersive Reader to improve text comprehension. Resources such as Text-To-Speech (Google Dictation, Microsoft Dictate) are integrated to transcribe voice into text, Legible Typography (OpenDyslexis, Arial, Comix Sans) to address writing difficulties in students, and educational platforms (Klan Academy, Smartick, Ghotit Real Writer) to encourage guided writing. Grammarly/QuillBot reinforces grammatical and stylistic correction, consolidating an inclusive and diversified approach.

In the UA, implementation is consistent with the PA, but is geared toward more specific use in concrete activities. Here, ChatGPT and Copilot are used for the production of written texts, while Gamma and Microsoft Immersive Reader support the comprehension and analysis of written texts. Noteworthy is the use of Grammarly/QuillBot as a writing assistant and educational platforms (Klan Academy, Smartick, Ghotit Real Writer) to support students with writing difficulties through interactive writing exercises. In addition, legible fonts (OpenDyslexis, Arial, Comix Sans) are used to improve readability, demonstrating a pedagogical focus on diversity and accessibility in the writing process.

In SA, the practical and operational application of AI applications is observed to strengthen written communication. ChatGPT is implemented in thirty-six sessions to generate drafts and summaries, while Copilot corrects and improves the presentation of texts. Gamma facilitates the presentation of written work, while Microsoft Immersive Reader reinforces comprehension. Grammarly/QuillBot improves writing coherence, and educational platforms (Klan Academy, Smartick, Ghotit Real Writer) guide writing through interactive exercises, especially for students with difficulties. The use of legible fonts (OpenDyslexis, Arial, Comix Sans) ensures that writing is clear and understandable. Taken together, this reflects an innovative pedagogical strategy that integrates the use of AI with the development of writing skills.

In response to the overall objective, analysis of the PA, UA, and SA documentation indicates that secondary school teachers participating in the research have systematically integrated various AI applications to strengthen oral and written communication in students with learning difficulties, demonstrating an inclusive and consistent pedagogical strategy. Overall, this implementation reflects an innovative and conscious commitment on the part of teachers, who recognize that AI is a fundamental resource for ensuring equity, personalization, and inclusion in the development of communication skills.

IV. DISCUSSION

The information that specifies the first specific objective confirms systematic and progressive planning for the use of AI applications at different levels of educational programming (PA, UA, and SA), shows vertical and consistent alignment between the three levels of educational planning, and reveals a balance between generalist tools such as ChatGPT, Copilot, Gamma, and educational platforms; and specialized tools such as Voiceitt, TalPal, Speechify, and inclusive fonts, which respond to the need for educational inclusion and accessibility for students with learning disabilities. The findings coincide with reference [13], highlighting that AI planning in academic writing is essential for achieving communication skills; it differs from reference [8], emphasizing the need for prior diagnosis to plan communication in the classroom. The methodological difference lies in the fact that the study is based on a documentary analysis of teachers' technical and pedagogical documentation, while reference [8] used surveys and direct observation, which explains the greater presence of shortcomings in their research.

The information that specifies the second specific objective highlights how participating teachers moved from planning to the concrete application of AI applications for the development of oral and written communication, demonstrating a diversified and pedagogically structured use in the learning sessions. There is a balance between generalist applications such as ChatGPT, Copilot, and Gamma, as well as specialized applications such as Voiceitt, Ghotit Real Writer, and accessible fonts, which guarantees both the quality of textual production and the inclusion of students with learning difficulties. The findings coincide with reference [11], which reports that the implementation of AI increases confidence and participation in communication skills, and with reference [10], which points out the usefulness of AI in stimulating text production and reading comprehension. It differs from reference [7], which, in its quantitative approach, found no significant relationship, whereas here a positive impact is observed. The methodological explanation is that the present qualitative study directly analyzes documented pedagogical practice, while reference [7] is limited to statistical correlations.

The information that specifies the third specific objective shows that teachers systematically incorporate various AI

applications into the development of learning sessions, with the aim of strengthening student communication. They programmed ChatGPT to generate personalized dialogues; Copilot to support oral production and text correction; Microsoft Immersive and Gamma to improve comprehension of oral texts; Text-To-Speech (Google Dictation, Microsoft Dictate) for real-time voice transcription; Duolingo Max for oral practice of the English language; TalPaI AI to simulate conversations and correct pronunciation; Voiceitt to transform pronunciations; and Speechify/Natural Reader to improve listening comprehension. The results coincide with reference [14], highlighting that chatbots generate oral and written communicative knowledge, and with reference [21], conceptualizing oral expression as a communicative process that can be enhanced by AI. It differs from reference [8], which identifies shortcomings in communicative practice due to a lack of planning, while the participating teachers do integrate specific tools into the sessions. It is explained that this study analyzes pedagogical documents such as activity programming, while reference [8] is based on direct observation of classroom interaction.

The results corresponding to the fourth specific objective show that teachers systematically use AI applications to support the writing, revision, and improvement of texts in students with learning difficulties. Among the most widely used tools are: ChatGPT, for generating drafts and summaries; Copilot, for correcting and improving the presentation of written texts; Gamma, for organizing and presenting texts; Microsoft Immersive Reader, which reinforces reading comprehension; and Grammarly/QuillBot, which contributes to coherence and grammatical correctness. In guided writing, educational platforms such as Khan Academy, Smartick, and Ghotit Real Writer are used, offering interactive exercises and support in text production; Legible Typography (OpenDyslexis, Arial, Comix Sans) to facilitate writing for students with writing difficulties. The findings coincide with reference [9], which states that generative AI contributes to drafting and revising, and with reference [13], which highlights the importance of AI in the production of academic texts. It differs from reference [7], which found no significant relationship between AI and writing skills, because its study was correlational; AI applications strengthen written communication in students when their use is planned and implemented in an ethical and contextualized manner.

Regarding the general objective, the information shows that the teachers participating in the study use AI applications such as ChatGPT, Copilot, and grammar checkers in the planning and execution of pedagogical activities, although they are used only partially. It has been found that these tools contribute to improving the clarity, cohesion, and coherence of texts, as well as the oral expression of students with learning difficulties. This finding coincides with reference [9], which specifies that generative AI contributes to the preparation and revision of draft work, and with reference [12], which highlights the potential of AI to personalize learning and strengthen communication. However, it differs from the report

in reference [7], which highlights that AI is not significantly related to communicative competence, a difference that can be explained methodologically because it presents a quantitative study, as opposed to research that pursues a qualitative approach based on the documentary analysis of learning programs, units, and sessions, which provides evidence of teaching practices in the development of educational activities.

V. CONCLUSIONS

The artificial intelligence applications used by teachers to develop oral and written communication in students with learning difficulties in secondary education in the Cajamarca Region in 2025 were identified as ChatGPT, Copilot, text generators, grammar correction assistants, voice synthesizers, and automatic feedback tools, which improved clarity, cohesion, and coherence in oral and written production.

It was verified that teachers plan the use of AI applications in the development of oral and written communication, incorporating them into the annual program, units, and learning sessions, under principles of equity and inclusion, with the purpose of strengthening communication skills and addressing the needs of students with learning difficulties.

It was found that teachers apply the use of AI applications in the development of oral and written communication, using technological resources to generate voice, clone voice, review writing, and correct errors, which facilitated communication, increased student participation, and promoted collaborative learning in the classroom.

It was verified that the AI applications programmed and used by teachers in learning sessions for the development of oral communication in students at a secondary school in the Cajamarca region are voice synthesizers, pronunciation assistants, interactive chatbots, and oral feedback platforms, which promote comprehension, production, and improvement of spoken discourse.

It was verified that the AI applications programmed and used by teachers in learning sessions for the development of written communication in students at a secondary school in the Cajamarca region are text generators, automatic proofreaders, style checkers, and collaborative editing tools, which allowed for the planning, writing, reviewing, and refinement of students' textual production.

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