Developing Oral Speech Skills Using Artificial Intelligence in High School Students

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The Barcelona Conference on Education 2025
Official Conference Proceedings

Abstract

The incorporation of artificial intelligence (AI) in education has generated both positive and negative changes. At PrepaTec, between January and May 2025, we conducted a study to examine how AI can positively impact the development of oral skills and foster adaptive and differentiated learning within a safe environment. Fifty-seven 10th-grade students participated, aged between 15 and 16 years old (35 male and 22 female). As part of the participatory action methodology, the Microsoft Teams Speaker Progress tool was used. This facilitated the provision of fair feedback: kind, accurate, and timely feedback on tone, volume, pronunciation, use of inclusive and varied language, and body language. This allowed for personalized teaching due to adaptation to the individual needs of each student, promoting more effective learning and citizens with a global and ethical vision in the use of technology. As a result, a notable improvement in students' oral skills was observed; 80.70% obtained a grade between 90 and 95, and 83% showed motivation in completing the activities. In short, immediate feedback helped students identify specific areas for improvement and work on them more efficiently. In conclusion, AI, used ethically and responsibly, can be a valuable tool for aligning learning with the individual abilities, strengths, and interests of each student.

Keywords: artificial intelligence, oral skills, adaptive learning, high school, feedback

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Introduction

In the 21st century, education faces various challenges in preparing students for an interconnected and constantly changing world, where cognitive skills must be complemented by social and ethical competencies. Today's education, which continues to use traditional methods such as the standardization of teaching and learning methods, has proven insufficient to address the diversity of individual styles, paces, and needs of each student. That is why adaptive and differentiated learning responds to this, along with the enhancement of artificial intelligence (AI), which has emerged as a fundamental pedagogical solution. This not only optimizes the acquisition of knowledge by generating a personalization of content and evaluations, but also fosters student autonomy and motivation, laying the foundations for more effective and equitable personalized teaching. Diwan et al. (2023) e*xplain that AI-based systems can generate formative assessments that encourage learners to reflect on both content and cognitive processes.*

Currently, the educational mission goes beyond just transmitting information. It is essential to train citizens with a global and ethical vision, through education that allows students to understand and act on complex issues such as climate change, inequality, and respect for cultural diversity. Educators should view education as a fundamental tool for developing empathy, critical thinking, and a sense of social and personal responsibility. In this context, technology allows for the adaptation of content learning, while also functioning as a tool to foster civic and ethical awareness (Nussbaum, 2011).

Oral Communication Skills as a Pillar of Global Communication and Constructive Feedback

Within the framework of global citizenship, one of the essential competencies is oral communication skills. Effective communication not only requires correct verbal expression but also encompasses key elements such as tone, volume, pronunciation, the use of inclusive and varied language, and body language. Mastering these components enables individuals to convey ideas clearly and confidently, facilitating connections with diverse audiences and navigating the complexities of intercultural interaction. According to Sumiati (2025), language plays a crucial role in life. In today's global era, communication skills, such as public speaking, are essential and indispensable. Sometimes, education underestimates the importance of practicing and providing feedback on these skills, which can create a gap in students' communicative competencies. In adolescence, this gap is especially critical as it is a vital stage for the development of identity and social skills, where peer perception and emotional vulnerability impact communicative confidence and the willingness to receive and accept feedback (Blakemore & Mills, 2013; Steinberg, 2008). For the development of correct oral skills, feedback is essential. However, for maximum effectiveness, it must be fair, kind, accurate, and timely (Wiggins, 2012). Fair feedback means having transparent criteria and objectives; kindness entails delivering with empathy and respect; accuracy involves identifying specific areas for improvement rather than providing vague comments; and timely feedback refers to providing feedback to students promptly for immediate modification (Black & Wiliam, 1998; Brookhart, 2019). In summary, traditional feedback methods often lack the consistency and objectivity necessary to drive meaningful progress (Hattie & Timperley, 2007), in addition to often not being immediate, so innovative approaches are needed.

The Future of Education

AI, Skills, and Values

This article explores the convergence of these fundamental dimensions: AI-mediated adaptive learning, the formation of global citizens with ethics, and the development of oral skills. Our goal has a dual purpose: first, to demonstrate that AI systems such as Microsoft Teams' Speaker Progress provide fair and objective feedback on oral skills, analyzing elements such as fluency, coherence, and the use of non-verbal language. Secondly, to demonstrate and argue that the integration of these technological tools allows teachers to focus on a more human and ethical dimension of teaching, such as promoting critical thinking, empathy, and responsibility. Baker and Siemens (2014) point out that the interaction of AI systems with students identifies best practices in the implementation of automated feedback. Natural language processing (NLP) can offer precise and objective feedback on the technical aspects of speech, while interface designs can promote the use of inclusive language and a respectful tone. In accordance with Caukin et al. (2024), artificial intelligence is capable of providing real-time feedback to students, allowing them to identify areas for improvement and adjust their learning process accordingly. This instant feedback is crucial for autonomous learning and the continuous improvement of students. It is expected that the evaluation of this study will serve as a guide for educators, technology developers, and educational policymakers in technological innovation seeking to build more efficient, inclusive, and ethical educational systems (Gouseti et al., 2024).

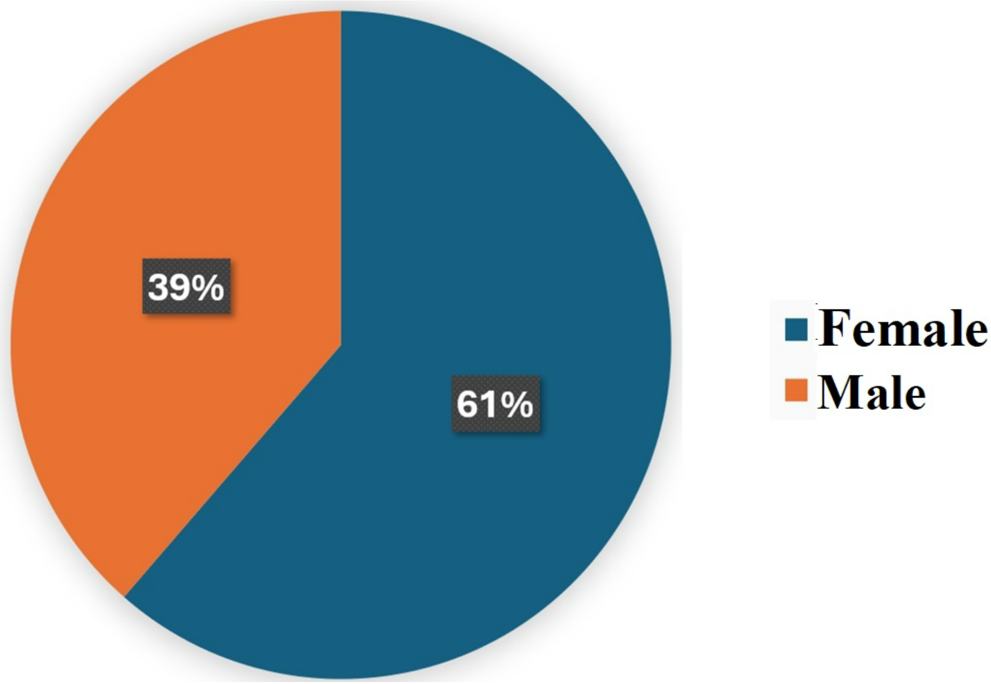
Through a literature review and the implementation of the Speaker Progress tool, this research aims to provide a theoretical and practical framework for creating a new educational paradigm. A model that combines the efficiency of technology with the richness of human interaction, preparing future generations to be not only competent professionals but also conscientious, critical, and effective global communicators.

Methodology

Type of Study

In the participatory action research study, the sample consisted of 57 students from PrepaTec, Campus Mexico City, of which 35 were female and 22 males. As shown in Figure 1, women made up a higher percentage, 61% compared to 39% men. This demonstrates an inclusive environment, a key factor in combating inequality and stereotypes at the institution to transcend discourse and become a reality (De la Cruz, 2020).

Figure 1
Study Population



Note. High school students

The only inclusion criterion was that students had Advanced English I. This allows for the development of study methods and discursive skills: effective communication, critical thinking, adaptability, and problem-solving. In other words, participants already had a certain level, so their challenge was to strengthen and enhance their ability to convey ideas, analyze information objectively, adapt to new situations, and find effective solutions to be persuasive before a general audience with their oral discourse.

Tools

During the January-May 2025 school term, Microsoft Teams' Speaker Progress AI was used, facilitating the discursive development of second-year high school students in the subjects of Spanish, art, and literature. Due to immediate feedback, it offered both students and the teacher the ability to observe their progress and the specifics of the following areas: tone and volume, pronunciation, use of inclusive language, varied language, and body language. These were observed and evaluated according to a rubric that established advanced, satisfactory, intermediate, and elementary levels. Table 1 shows the evaluated criteria designed according to the specific needs of the class.

Table 1
Rubric: Criteria and Cognitive Levels Evaluated

Speaker Progress: Communication Skills				
Criteria	**Advanced 20-18**	**Satisfactory 19-14**	**Intermediate 13-8**	**Elementary 7-0**
Tone and Volume (Pitch Variation Quotient)	Maintains a pitch variation quotient (PVQ) of 150 or higher, with appropriate variations in tone and volume to emphasize key ideas.	Maintains a PVQ of 120-149 with noticeable variations in tone and volume.	PVQ between 90-119, with some variations in tone and volume, but inconsistent.	PVQ below 90 with little or no variation in tone or volume, resulting in monotony.
Pronunciation	Pronounces all words clearly and accurately, with no errors detected by the system.	Makes a few pronunciation errors that do not affect the overall understanding of the speech.	Makes frequent errors that occasionally affect comprehension but recover quickly.	Makes numerous errors that hinder the understanding of the message.
Inclusivity	Uses fully inclusive language, avoiding culturally insensitive phrases entirely.	Uses generally inclusive language with one or two minor slips that do not seriously affect perception.	Uses several culturally insensitive phrases that could be perceived as inappropriate.	The frequent use of culturally insensitive or inappropriate phrases can significantly impact the overall perception.
Repetitive Language	Varies of language excellently, with no unnecessary repetitions.	Shows some repetitions, but they do not significantly distract.	Repeats words or phrases noticeably, affecting the fluency of the speech.	Excessive use of repetition interrupts the natural flow of the presentation.
Body Language	Maintains constant eye contact, proper distance, and an open posture, achieving a great connection with the audience.	Generally, maintain eye contact, proper distance, and a professional posture.	Inconsistent eye contact, inadequate distance, or a posture that occasionally distracts.	Little or no eye contact, inappropriate distance, or movements that significantly distract.

Note. Points per criterion

To structure the objectives of improving oral skills, topics related to the course were assigned for research, production of a script, and recording audio (see Table 2). In the research phase, the use of other artificial intelligences, such as ChatGPT, Google Bard, and Microsoft Pilot, was allowed. The information obtained from these tools had to be cross-referenced with reliable sources, to learn to use different applications consciously and ethically. This phase was conducted outside the classroom, as was the production phase, as a course assignment. It supported the reinforcement of student self-management, responsibility, and commitment. In the production phase, each oral activity had to last between 2 and 4 minutes. Once the speech was recorded, students automatically received qualitative feedback generated by the AI, with detailed descriptions of each element and their quantitative results.

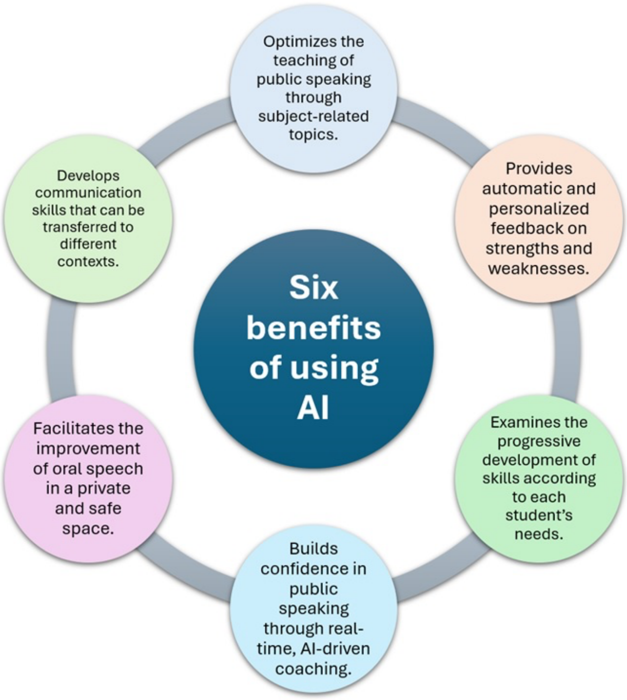
Table 2
Table of Topics

Week	**Topics**
Week 1	Activity 1. Symbols Activity 2. Literary topics
Week 3	Activity 3. Symbolic meaning of lion, she-wolf, and panther. What does the topic of love beyond death consist of?
Week 8	Activity 4. What does the jungle symbolize? What does the topic of the descent into the underworld consist of?
Week 13	Activity 5. What does the labyrinth symbolize? What does the concept of intertextuality mean? Indicate in which artistic or literary Works you identify the presence of the labyrinth.

Note. Activities per week

These activities in the application enhanced the strengthening and development of communication skills, optimization of work, and feedback. They also allowed for the practice of improvements and observing an immediate change in student performance (See Figure 2).

Figure 2
Six Benefits of Using Speaker Progress



Note. Oral communication skills

Results and Discussion

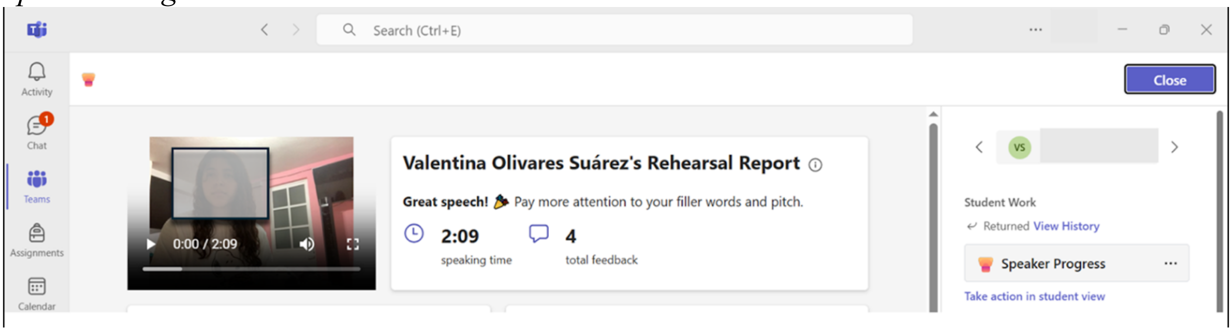
Data obtained from the use of Speaker Progress was generated in three stages:

1. After students research an assigned topic and rehearse the oral presentation, they individually record the oral discourse directly in the application. They only have one chance.
2. The AI offers qualitative feedback.
3. The teacher assigns a grade and provides feedback based on the criteria previously established in the rubric. Regarding the grade, students can observe both individual and group achievement. This allows them to identify the group's average, as the group percentage is generated.

Stage 1. Oral Speech With Goal-Oriented Feedback

Feedback, undoubtedly, has the potential to powerfully influence student learning. Because of this, it should be accompanied by timely comments that promote better performance. According to Moreno (2021), feedback must be timely as it provides the basis for student autonomy. This section provides an example of the elements considered by AI to achieve information communicated with the goal of motivating continuous improvement. To ensure confidentiality, names are omitted from the example, and the rest of the participants' details are covered. Figure 3 shows motivational phrases like "Great Speech," the recording duration (2 minutes 09 seconds), and the total number of comments students find to improve their discourse.

Figure 3
Speaker Progress Feedback

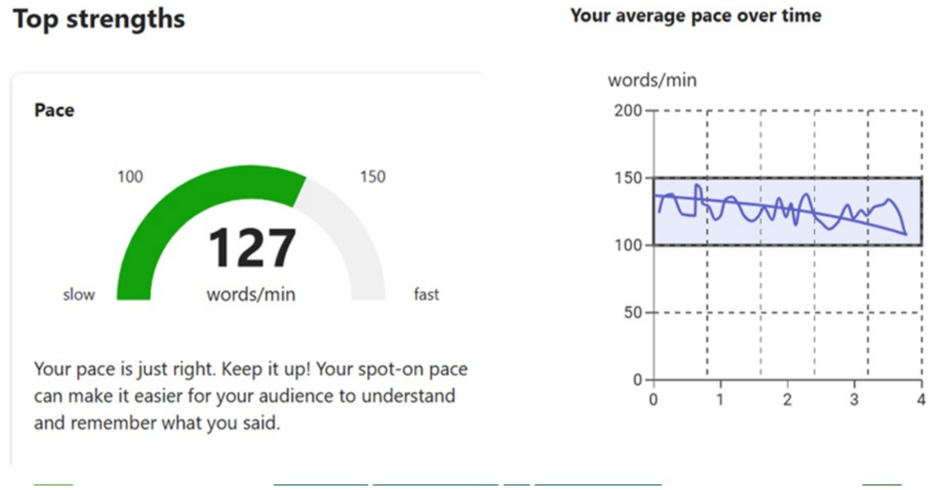


Note. Timely feedback

Stage 2. Qualitative AI Feedback

At this point, the type of qualitative feedback generated by AI can be observed, evaluating posture, whether students look at the camera, how language is handled: varied and inclusive, volume of voice, tone, and pronunciation. Always from a positive, timely, and specific perspective.

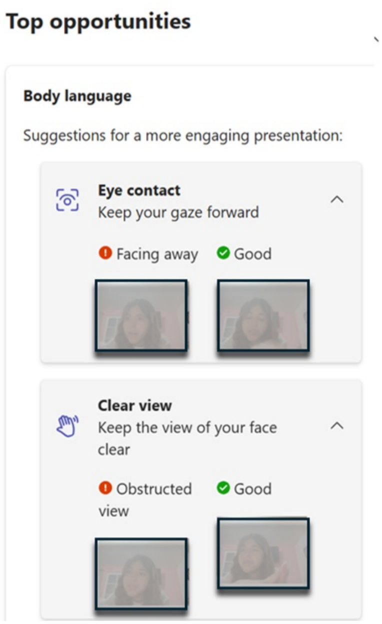
Figure 4
Feedback Aimed at Improving Voice Use



Note. Consider the skills

AI provides feedback oriented towards specific achievements in a respectful and constructive manner. This facilitates the process of reflecting on both strong and weak areas, applying what has been learned to other contexts, and developing necessary skills, knowledge, and attitudes. Figure 6 shows an example of how the AI communicated results highlighting students' "main strengths." In this case, it indicates speaking at a rate of 100 to 150 words per minute, within the ideal parameters of 100 to 165 (Microsoft, 2025). Thus, students begin reviewing results positively, focusing on achievements. According to Campuzano et al. (2021), achievement is key in learning because it is directly linked to established objectives; therefore, focusing on this contributes to students being receptive to improvement areas, facilitating decisions to practice assertive strategies positively impacting academic performance linked to methodologies and teaching resources. As a result, effective feedback provides meaningful information about areas needing improvement.

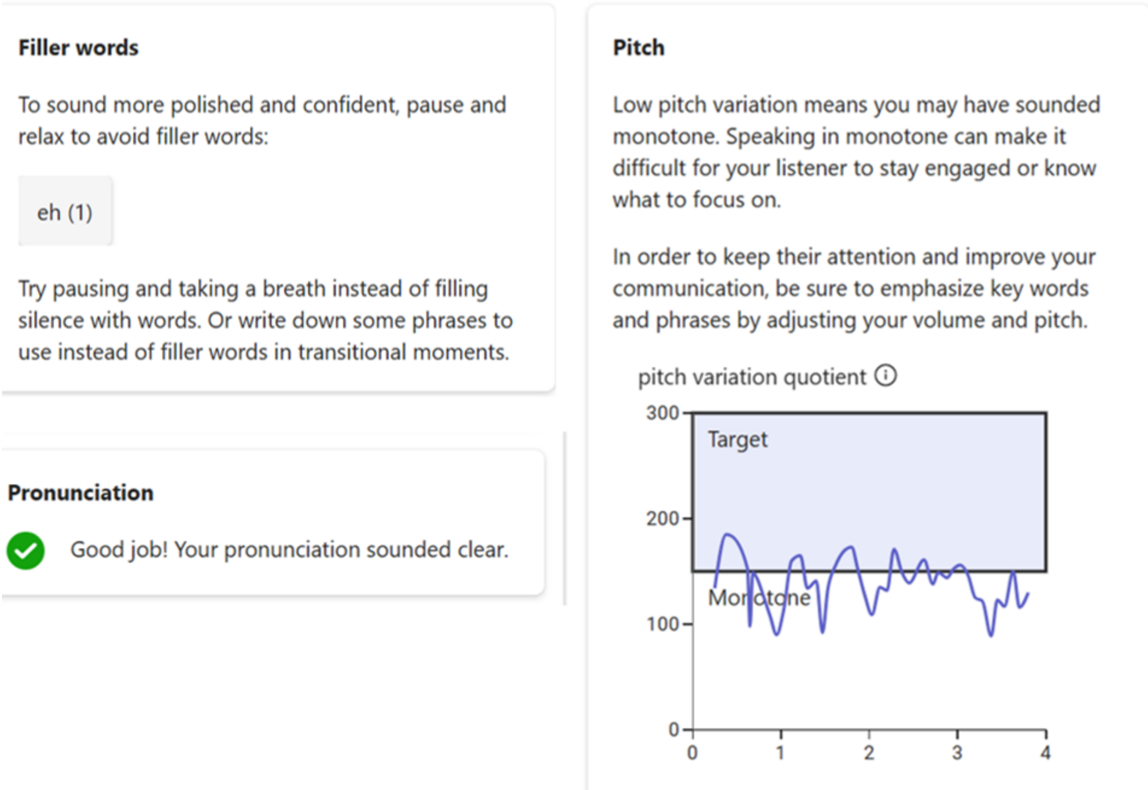
Figure 5
Constructive Feedback on Body Language



Note. Skills to develop

Constructive feedback (Fong et al., 2021) implies that students receive information enabling them to be aware of their learning and have the time and space to practice improving their performance. For this reason, timely feedback generated by AI from the first to the fifth activity is a new learning opportunity. This is shown in Figures 6 and 7. The first indicates correct positions regarding eye contact. AI indicates when the gaze is directed outside the camera's focal point simulating the audience and when it is accurate. It also suggests maintaining a clear view for better communication with possible interlocutors.

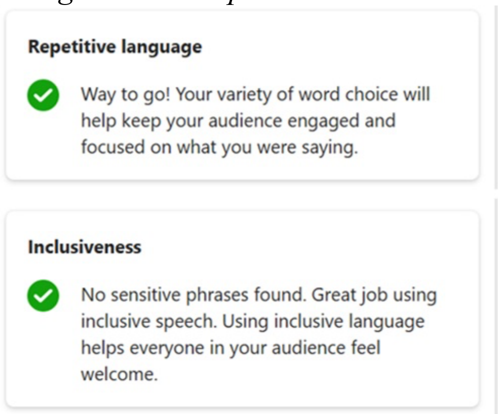
Figure 6
Use of Language and Expressions



Note. Filler words and tone as an area of opportunity.

In terms of Figure 6, it shows areas needing improvement in the use of fillers, tone, and pronunciation. Recommendations are made to achieve clear and effective speech, such as making pauses or having supporting phrases to avoid meaningless vocabulary repetition, varying the tone to keep the audience's attention, and adjusting volume and tone to emphasize certain ideas. Finally, AI indicates the importance of practicing to achieve clear pronunciation, especially if the speech includes difficult or unknown words. This type of information facilitates each student critically appropriating their learning and considering it part of their professional identity construction (López-León, 2021), since timely feedback is also a tool for learning to make decisions and being receptive to continuous improvement. In this context, another educational challenge is ensuring academic performance information serves as a strategy to empower students by recognizing their strengths.

Figure 7
Strengths That Empower



Note. Repetitive and inclusive language as a central part of the discourse

As seen in Figure 7, AI uses motivational phrases like "Well done!" for varied word usage, detailing positive aspects related to inclusive language and indicating an "Excellent job." This helps strengthen student confidence and empowers them to value learning and be receptive to improvement areas. It is noteworthy that using Speaker Progress also positively enriches language and verbal fluency.

Stage 3. Quantitative Feedback

Timely feedback from teachers remains essential; however, the descriptive and detailed evaluation by AI makes grading fair, objective, and significant, as autonomously, students understand why certain grades were assigned (Ossa & Willat, 2023). Table 3 presents results from five class activities, showing the impact of variables like application novelty and student motivation. Table 3 initially presents results from Activity 1 on two key literary analysis concepts: symbol and literary topics. This exercise reveals the novelty in application use, with 54 of 57 students completing it, indicating classroom innovation motivates learning. It also highlights topic interest, as 46 students scored between 85 and 90, and three achieved the maximum score of 100. In contrast, Activity 2 shows five students uninterested in practicing oral discourse. Nonetheless, 45 of 57 students scored between 85 and 90, two obtained top scores, and two scored 95. Therefore, disinterest decreased by 3.5% compared to the previous exercise; scores suggest easy application use with clear information on oral performance progress. In Activity 3, Table 3 shows application interest decreased by 7.02% compared to Activity 2 and 10.5% compared to Activity 1.

The percentage remains minimal compared to 89.5% completing the task. However, only 30 of 57 students scored between 85 and 90, indicating a performance drop, though two scored 100 and three 95. It's important to note that AI is adaptive, raising the cognitive challenge when initial standards are met, as AI learns, adapts, and improves with data and environment changes (González et al., 2024; Mestre & Romero, 2025), effectively distinguishing elements like discourse fluency, varied language creativity, tone and volume control, and inclusion. Activity 4 shows a 53.33% improvement over Activity 3, with 46 students scoring between 85 and 90. Additionally, the number of students not completing the oral discourse dropped to three. A five-week interval between activities suggests considerable time between tasks maintains application interest and engagement in practice, requiring research, script creation, rehearsal, recording, and critical result review.

The final activity reveals significant improvement in discourse production, with top scores of 100 and a minimum of 90. Approximately 80.70% of students scored between 90 and 95. Therefore, instructions were comprehended, achieving a high level in oral discourse generation and presentation. This success is attributed to student participation and timely, detailed AI feedback, facilitating reflection on achievements and improvement strategies. It can be said that using Speaker Progress also promoted decision-making development, as students assumed learning responsibility by deciding how to utilize AI-provided information. Descriptive feedback aids student development, as discussed in earlier sections; however, numeric evaluation allows visible progress and justified grading through clear course objectives and immediate AI feedback.

Table 3
Quantitative Activity Results. Part 1

Student	Activity 1	Activity 2	Activity 3	Activity 4	Activity 5
1	90	90	0	80	0
2	90	90	88	95	100
3	90	90	90	90	90
4	90	90	80	85	90
5	90	90	85	0	95
6	87	85	80	88	90
7	90	90	90	85	95
8	90	90	90	90	95
9	90	85	95	90	0
10	90	90	100	90	0
11	85	90	85	85	95
12	87	90	80	85	90
13	85	87	80	90	90
14	85	85	0	85	95
15	80	90	80	80	0
16	80	88	85	88	95
17	85	90	85	90	95
18	88	85	88	90	90
19	80	90	80	85	90
20	88	90	80	85	95
21	90	85	95	90	90
22	90	90	80	80	95
23	85	85	85	85	0
24	90	90	85	85	90
25	90	85	0	85	90
26	100	90	87	90	90
27	90	80	87	90	90
28	90	90	85	85	95
29	85	90	85	85	90
30	90	90	88	85	95

Student	Activity 1	Activity 2	Activity 3	Activity 4	Activity 5
31	85	95	0	0	0
32	90	90	85	85	90
33	90	90	87	95	90
34	88	80	85	90	95
35	85	100	85	85	90
36	90	90	80	85	90
37	87	0	0	85	90
38	88	90	85	88	95
39	90	95	80	80	95
40	90	90	80	80	90
41	0	0	0	95	100
42	88	90	100	90	100
43	80	90	90	90	90
44	100	100	80	88	90
45	88	85	88	85	90
46	0	0	90	85	90
47	87	90	95	85	95
48	85	80	90	85	90
49	85	85	0	0	0
50	80	0	0	90	0
51	90	90	80	85	90
52	85	85	85	90	95
53	85	85	80	80	90
54	0	0	0	85	90
55	88	85	90	85	95
56	90	90	90	90	90
57	100	90	85	90	90

Note. Activities per week

Assessment of Averages Across Five Assignments

To conclude evaluation aspects, Table 3 shows results for all participants, considering two significant variables: 1) AI is adaptive, learning, and raising challenges, striving for discourse perfection, and 2) Some students lacked motivation to complete assignments. Meanwhile, Table 4 reveals a four-point drop in overall evaluation, which may seem unfavorable; however, correlating data with numeric feedback shows maximum activity 1 scores of 100 and a minimum of 80, with only three students not completing the task. Activity 5 shows top scores of 100 and a minimum of 90, with improved learning, though eight of 57 participants did not submit, a 166.67% motivation drop, causing an average decline. Despite this, the application enhances verbal competence development, maintaining 85.96% overall motivation. Activities 2 and 4 are positively rated, with passing results in all cases.

Table 4
Group Results in Each Activity

Evaluation out of 100				
Activity 1	**Activity 2**	**Activity 3**	**Activity 4**	**Activity 5**
83%	**81%**	**72%**	**82%**	**79%**

Note. Percentage of grades

Conclusions

Challenges regarding motivation and fair, timely feedback necessitate technological tools situating students in real, global, and inclusive contexts. Consequently, Speaker Progress proves effective by providing a safe environment where students receive AI-assisted learning processes resembling reality, developing topic comprehension, decision-making, and oral communication while strengthening transversal skills. Microsoft Teams' application with mixed data collection allowed qualitative and quantitative student progress evaluation.

Kind, specific, and constructive feedback highlighted criteria like voice tone, volume, and inclusive language use, facilitating improvement area identification and autonomous learning. Results demonstrate high motivation and performance: 100% of students completed at least one activity, 76% completed all, with grades ranging from 80 to 100.

These outcomes validate AI’s positive impact on adolescent communication skill development and transversal competencies, showing adaptive tools like Speaker Progress can effectively and ethically integrate into educational and professional environments. Finally, a notable improvement in students’ oral skills was observed, with 80.70% scoring between 90 and 95 and motivation at 83% in activity completion. Immediate feedback helped students identify specific areas for improvement and work on them more efficiently.

In conclusion, AI, used ethically and responsibly, can be a valuable tool for aligning learning with the individual abilities, strengths, and interests of each student.

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