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IMPACTO DE LA IMPLEMENTACIÓN DE SPEECH ACE MEDIANTE EL ENFOQUE CALL COMO HERRAMIENTA PARA MEJORAR LA PRONUNCIACIÓN DE LAS VOCALES COMO PARTE DE LA HABILIDAD ORAL EN ESTUDIANTES DE QUINTO GRADO QUE APRENDEN INGLÉS COMO SEGUNDO IDIOMA EN LA ESCUELA JOSÉ JOAQUÍN MORA DURANTE EL PRIMER SEMESTRE DEL 2025

THE IMPACT OF IMPLEMENTING SPEECH ACE THROUGH THE CALL APPROACH AS A TOOL FOR IMPROVING THE PRONUNCIATION OF VOWELS AS PART OF THE SPEAKING SKILL IN FIFTH-GRADE STUDENTS LEARNING ENGLISH AS A SECOND LANGUAGE AT JOSÉ JOAQUÍN MORA DURING THE FIRST SEMESTER OF 2025

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Impacto de la implementación de Speech Ace mediante el enfoque CALL como herramienta para mejorar la pronunciación de las vocales como parte de la habilidad oral en estudiantes de quinto grado que aprenden inglés como segundo idioma en la escuela José Joaquín Mora durante el primer semestre del 2025

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RESUMEN

Este estudio investiga cómo la integración de la plataforma Speech Ace y el enfoque de Aprendizaje de Idiomas Asistido por Computadora (CALL) puede mejorar la pronunciación de las vocales en inglés y las habilidades de comunicación oral de estudiantes de quinto grado de la Escuela José Joaquín Mora Porras, quienes han enfrentado desafíos de aprendizaje tras las interrupciones provocadas por la pandemia de COVID-19. Mediante la implementación de herramientas digitales, se busca incrementar la participación y la confianza de los estudiantes al hablar inglés como segunda lengua, apoyando su progreso en la pronunciación y fluidez mediante una práctica oral más frecuente y el desarrollo de habilidades comunicativas efectivas. En línea con los objetivos bilingües del Ministerio de Educación Pública de Costa Rica, la investigación resalta el valor de los recursos tecnológicos para fomentar un entorno de aprendizaje dinámico y centrado en el estudiante. Los resultados indican una mejora notable en la pronunciación de vocales y un aumento en la confianza de los estudiantes al interactuar en inglés, contribuyendo a la formación de hablantes seguros y competentes en un contexto globalizado.

Palabras clave: speech ace, competencia oral, tecnología, aprendizaje segunda lengua, call

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The impact of implementing Speech Ace through the CALL approach as a tool for improving the pronunciation of vowels as part of the speaking skill in fifth-grade students learning English as a second language at José Joaquín Mora during the first semester of 2025

ABSTRACT

This study investigates how the integration of the Speech Ace platform and the Computer-Assisted Language Learning (CALL) approach can improve the pronunciation of vowels in English and the oral communication skills of fifth-grade students at José Joaquín Mora Porras School, who have faced learning challenges due to interruptions caused by the COVID-19 pandemic. Through the implementation of digital tools, the study aims to increase student participation and confidence when speaking English as a second language, supporting their progress in pronunciation and fluency through more frequent oral practice and the development of effective communication skills. In line with the bilingual objectives of the Costa Rican Ministry of Public Education, the research emphasizes the value of technological resources in promoting a dynamic, student-centered learning environment. The results indicate a notable improvement in vowel pronunciation and an increase in students' confidence when interacting in English, contributing to the formation of confident and competent speakers in a globalized context.

***Keywords*:** speech ace, oral proficiency, technology, second language learning, call

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INTRODUCTION

The development of oral production in foreign language learning, particularly in English, has become consolidated as an essential skill in the processes of language acquisition. Mastery of speech not only involves the ability to produce sounds but also extends to fluency, accuracy, and the ability to convey coherent meanings within a communicative context. As Nguyen (2023) points out, "By adopting the principles of Communicative Language Teaching (CLT), educators can create an environment that fosters authentic and meaningful communication, allowing students to actively engage in oral interactions, express their ideas, and develop fluency and accuracy in their language use" (p. 16). This highlights the need for educational strategies that promote both fluency and accuracy in oral interactions, preparing students to participate effectively in communicative settings.

The importance of speech in the language acquisition process is widely recognized, as it constitutes the foundation for personal interaction and social communication. Nunan (2003, as cited in Nguyen, 2023) describes speech as "the productive aural/oral skill. It consists of producing systematic verbal utterances to convey meaning" (p. 48), which emphasizes the crucial role of speaking for effective communication, requiring coherent and meaningful discourse to express ideas and participate in interactions. Furthermore, proficiency in oral production facilitates the development of other language skills, such as writing, listening, and reading comprehension, making oral competence a cornerstone for comprehensive language acquisition.

In the educational context of Costa Rica, particularly in rural areas, education has historically faced challenges related to a lack of resources, inadequate infrastructure, and insufficient teacher training. These issues have limited the development of educational systems that respond to the specific needs of local communities. Bonilla (2008) suggests that, for significant progress to be made, development must be rooted in local contexts, ensuring that schools provide relevant education aimed at improving economic and social conditions. In this regard, José Joaquín Mora Porras School works to address the specific needs of its students, promoting an education that enhances their well-being and future opportunities. However, the COVID-19 pandemic revealed a significant digital divide, especially in rural areas, where students struggled to access the necessary tools to develop key skills such as English pronunciation (Cambronero, 2022).

In response to these challenges, Computer-Assisted Language Learning (CALL) platforms have emerged as a possible solution. These platforms allow students to practice at their own pace and receive real-time feedback, which is essential for the autonomous learning of oral skills such as pronunciation (Gómez, 2014). Although CALL platforms show great potential, their implementation in rural schools remains limited, and research on their effectiveness in primary education contexts is scarce (Cordero, 2021). This situation underscores the urgent need to explore how these technological tools can improve access to education and the quality of learning in resource-limited communities.

The use of Artificial Intelligence (AI) in education, particularly through platforms like Speech Ace, has been highlighted as a way to enhance the teaching of oral production. Fitria (2021) emphasizes how technology has made English learning more accessible and efficient, while Zhai et al. (2021) explain that AI, by utilizing technologies such as deep learning, can tailor learning to each student's needs, providing a more personalized and effective educational experience. However, the integration of these tools must be aligned with sound pedagogical methods to maximize their impact.

This study aims to evaluate the impact of the Speech Ace platform on improving vowel pronunciation among fifth-grade students at José Joaquín Mora Porras School, located in Puntarenas, Costa Rica. Through the CALL approach, this research seeks to identify how the integration of technological tools can optimize the learning of oral production in English as a second language. Specifically, it aims to analyze the role of Speech Ace in enhancing students' fluency and accuracy in pronunciation, which could significantly impact their academic performance in English, especially as they transition into secondary education, where oral skills are even more demanded.

Previous research in this field suggests that the use of technological platforms for pronunciation teaching, such as Speech Ace, has proven effective in improving key aspects of speech, such as fluency and accuracy (Alemi, 2020; Zainuddin, 2024). However, research on the use of these tools in rural contexts and primary education remains limited, highlighting the need for additional studies that can provide evidence of their effectiveness in resource-constrained environments.

The general objective of this study is to determine the impact of the implementation of Speech Ace through the CALL approach on improving vowel pronunciation as part of the oral production skill in English among fifth-grade students at José Joaquín Mora Porras School during the first semester of

2025. The specific objectives include analyzing the role of the CALL approach in the process of improving oral production skills, describing the features of the Speech Ace application and its functionality as a technological tool for enhancing oral production, and evaluating the impact of implementing Speech Ace on vowel pronunciation in terms of fluency and accuracy.

In summary, this study is framed within the growing need to innovate in English teaching methodologies in rural contexts and primary education. By integrating platforms like Speech Ace, this research seeks to provide effective tools to improve students' oral competence, preparing them for future academic challenges and promoting more inclusive and accessible teaching practices.

METHODOLOGY

The present research follows a qualitative approach, as it seeks to understand the perceptions, experiences, and difficulties of students and teachers in using the Speech Ace tool during the English language acquisition process. Although the study is primarily qualitative, it also includes quantitative elements, such as data obtained through surveys, to support the understanding of the tool's effects on students' oral production.

The type of research is exploratory, descriptive, and explanatory. First, it seeks to explore the potential effects of Computer-Assisted Language Learning (CALL) tools on the development of students' oral production. The study is descriptive because it provides detailed information regarding the evaluation of students' pronunciation before and after using Speech Ace. Finally, it adopts an explanatory approach, as it aims to verify how CALL-based teaching methods influence improvements in pronunciation.

The design used is cross-sectional, as data are collected at a single point in time. This approach allows for the analysis of the immediate effects of implementing CALL tools on students' oral production, without the need for longitudinal follow-up.

The study population consists of fifth-grade students from José Joaquín Mora Porras School in Costa Rica, who participate in CALL-based learning activities. Additionally, English teachers from eight educational institutions in the region are included, as they will complete surveys to assess their knowledge of CALL tools and the strategies used to enhance oral production. The sample will consist of all students from two fifth-grade groups (approximately 36 students) at José Joaquín Mora Porras School. Furthermore, English teachers from the eight participating schools will also be included. A non-

probabilistic, intentional or convenience sampling method will be used, as the study focuses on a specific group of students and teachers with experience in the use of CALL tools or within a context where their implementation is relevant.

Various data collection techniques will be employed, including:

1. **Surveys**: Surveys will be administered to both teachers and students to gather information on the implementation of CALL tools and their impact on pronunciation.
2. **Observation**: Classroom observations will be conducted to evaluate how students interact with CALL tools and their progress in pronunciation.
3. **Interviews**: Interviews will be conducted with selected students to learn about their academic experiences and opinions regarding the use of Speech Ace. These interviews will allow for a deeper understanding of how CALL tools can enhance students' oral production.

The instruments used for data collection include interview guides, checklists for evaluating students' pronunciation, and observation logs to record students' interactions with the CALL tools.

Regarding ethical considerations, all participants will be required to provide informed consent to participate in the study, ensuring that their participation is entirely voluntary. Additionally, the confidentiality of participants' personal data will be maintained, and the data will be used solely for academic purposes. The inclusion criteria for students are that they must belong to the fifth grade at José Joaquín Mora Porras School and be willing to participate in CALL-based learning activities. For teachers, the inclusion criterion is that they must be teaching English at one of the participating schools and have experience using CALL tools. The exclusion criteria will include students or teachers who are unwilling to participate in the study, and students with severe cognitive difficulties that prevent participation in CALL-based learning activities.

The present research follows a qualitative approach, as it seeks to understand the perceptions, experiences, and difficulties of students and teachers in using the Speech Ace tool during the English language acquisition process. Although the study is primarily qualitative, it also includes quantitative elements, such as data obtained through surveys, to support the understanding of the tool's effects on students' oral production.

RESULTS AND DISCUSSION

This section presents the most significant findings of this study, detailing how the results support the conclusions reached. The data presented are objective, clear, and demonstrate that the outcomes are the logical consequence of the methodology employed.

The key findings include the following areas:

1. **Improvement in vowel pronunciation:** A significant improvement was observed in vowel pronunciation errors, particularly in the distinction between long and short vowels. Common errors related to vowel length and differentiation were substantially reduced.
2. **Fluency**: As students gained more confidence using the platform, an improvement in speaking fluency was recorded, with a reduction in unnecessary pauses during speech.
3. **Self-correction**: Students showed an increase in their ability to autonomously correct their own pronunciation errors, a key skill for self-directed learning.
4. **Real-time feedback:** The feedback provided by Speech Ace proved effective in enhancing students' phonetic awareness, enabling more accurate learning of English sounds.

The use of Speech Ace, therefore, demonstrates that CALL-based tools can effectively improve pronunciation and oral fluency among fifth-grade English learners. This aligns with theories supporting autonomous learning and the use of technology in language teaching.

Analysis and Discussion

This study confirmed that the implementation of Speech Ace in the classroom has a positive impact on pronunciation, fluency, and self-correction ability. By allowing students to receive instant feedback, it promoted greater independence in the learning process, which is consistent with previous studies on the use of technology in language education (Golonka et al., 2014). This finding supports the idea that technological platforms not only facilitate repetitive practice but also enable students to recognize and correct their own mistakes without excessive reliance on teacher intervention.

Moreover, the improvements observed in fluency and vowel accuracy align with previous research suggesting that autonomous learning, facilitated by tools such as Speech Ace, can more effectively address pronunciation challenges (Hsu, 2017). However, some studies highlight that technology should not be seen as a complete replacement for traditional teaching methods but rather as a complementary

tool to reinforce learning (Tortorella, 2021).

It is important to note that, although the use of Speech Ace improved pronunciation and fluency, some students continued to experience difficulties with certain vowel sounds. This suggests that refining pronunciation should remain a combined effort between autonomous practice and direct instruction.

Generalization and Relevance

This study contributes to the ongoing discussion on the use of CALL tools in English language teaching by providing empirical evidence of their effectiveness in improving vowel pronunciation and fluency. In terms of scientific novelty, it is important to emphasize that this study specifically focuses on a group of fifth-grade students, an educational level that has been less explored in similar research.

The relevance of this study lies in its practical applicability. CALL-based tools such as Speech Ace can offer an effective solution for improving pronunciation and fluency among primary school students, especially in contexts where teaching resources are limited. Furthermore, the implementation of these tools can facilitate a more interactive and personalized learning environment, which is particularly valuable in foreign language education.

Conclusion and Theoretical Prospects

The main contribution of this study is the demonstration of how the integration of CALL tools can significantly enhance oral production skills in language learners. This research opens the door for future investigations into the impact of other technologies on different aspects of English learning, such as listening comprehension or vocabulary acquisition. Additionally, the study highlights the importance of integrating technological approaches with traditional teaching methods to maximize benefits in language learning. Future research could focus on evaluating the effectiveness of other platforms and comparing results across different educational levels.

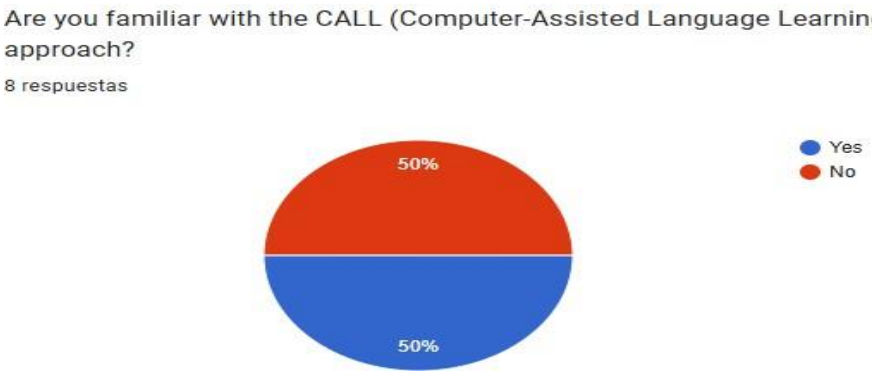
In summary, incorporating technologies such as Speech Ace into English language teaching is a promising practice that can significantly contribute to the development of students' linguistic skills, provided it is properly combined with traditional pedagogical methods.

Illustrations, tables, figures

Instruments

Surveys applied to teachers

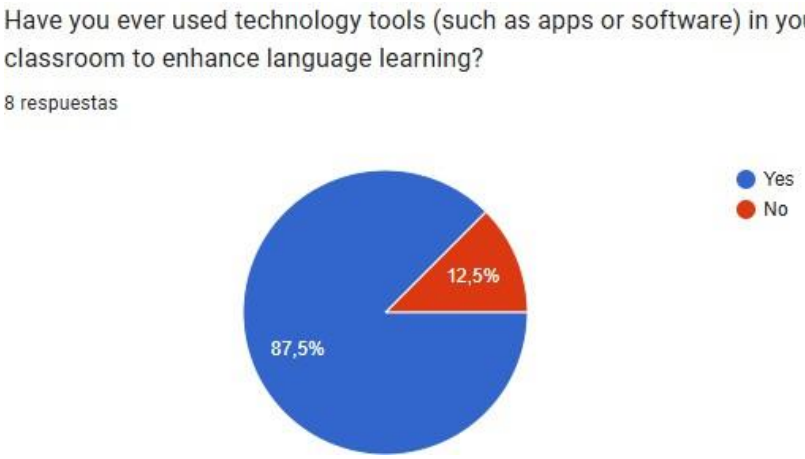
Question 1



The results show that the surveyed teachers have a familiarity with the Computer-Assisted Language Learning (CALL) approach at a balance level. Half of the respondents (50%) of the sample (N=10) stated that they were familiar with CALL, which means they know at least the basics of how technology can be used to augment language instruction and improve possible educational outcomes.

Finally, the remaining 50% of the teachers reported that they were not familiar with CALL, and this points to the gap in awareness or training concerning it being implemented. Although this, 87.5% of teachers accepted having used technological tools in their classrooms, indicating a wider willingness to use these in their teaching practice. It comes to suggest that although not all CALL is known by name, many educators are already using technology as part of their methodology, perhaps without realizing this to be part of the CALL remit.

Question 2



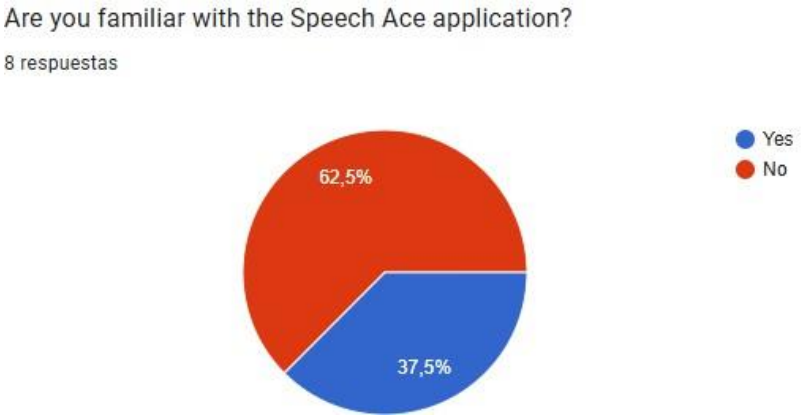
The findings show that although a significant 87.5% already have used technological tools such as apps or software in their CL classroom, the majority of the respondents have not used other digital resources to implement ICT in their CL classroom as they do not see them as applicable to their task. This means that most tutors understand the potential of technology to increase student engagement, interactive learning, and skill development. Nevertheless, 12.5 percent of the teachers surveyed stated that they have never used technological tools in their classroom, possibly as a result of lack of equipment, no or little training, or personal teaching preferences. These findings urge to bolster and foster all teachers to employ digital tools in a style that maximizes their learning potential for their students.

Question 3

When asked what digital tools they've used to make the oral production skills of the students better half of them (50%) replied about using Kahoot, an interactive game based learning platform, where students practice their language skills in an engaging way. Furthermore, 12.5% of teachers declared that they have attended to Google Classroom, a learning management system that can help to develop various instructional activities including oral creation exercises. Yet, while Duolingo and Elsa were certainly well known and very popular first language learning applications, very few (if any) of the surveyed educators reported that they were using these resources in their teaching practices. In addition, one in every 4 teachers has mentioned that he uses other digital tools, indicating that some teachers try to get different technological resources but however, widespread using specific applications dedicated to the development of speaking skills for students is still missing Speech Ace and use and awareness of speech. In this case, regarding the Speech Ace application which aims to aid the students in improving their

pronunciation and oral abilities, 62.5% of the surveyed teachers indicated that they have not heard of this tool, indicating that the application is not yet well known in the field of education. On the other hand, these same 37.5 % teachers have had the opportunity to use Speech Ace in their teaching practice. This finding suggests the need for wider distribution and training on Speech Ace because, while there is potential to benefit oral production for the majority of educators in the region, this potential remains largely untapped. It could expand awareness and provide guidance to teachers about its application, which will serve to expand its application among teachers in their classroom.

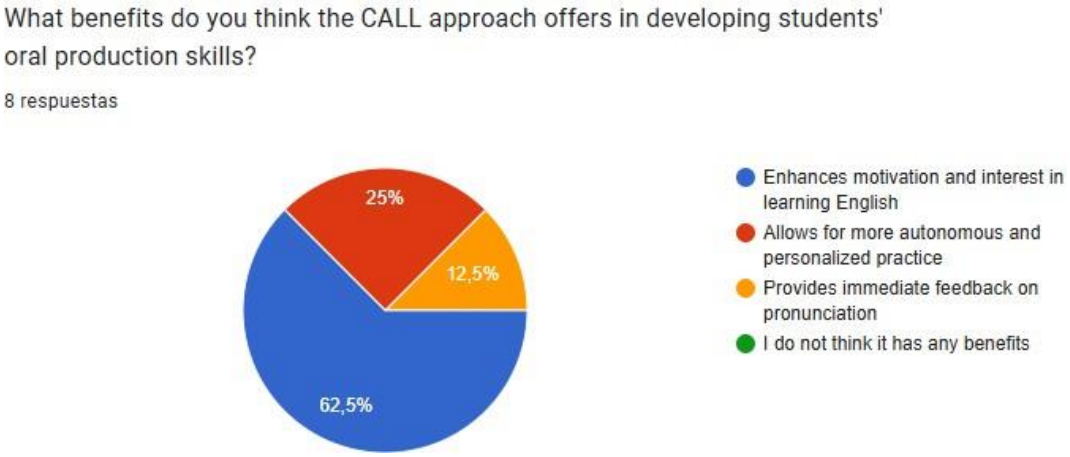
Question 4



With regard to the Speech Ace application that is developed to assist students in improving their pronunciation and oral skills, 62.5% of the surveyed teachers claim

to have no knowledge about this tool — thus implying that this tool is still far from being introduced in the educational sector. While 37.5% of teachers have also testified to having employed Speech Ace in their teaching practice, this means that the teaching practice has already incorporated Speech Ace in a small portion of educators. This finding makes it clear that Speech Ace still has much to disseminate and very little to train with, its potential benefits for oral production remain largely untapped by the majority of educators in the region. It may be expanded awareness, to get more teachers to put it in their classroom.

Question 5



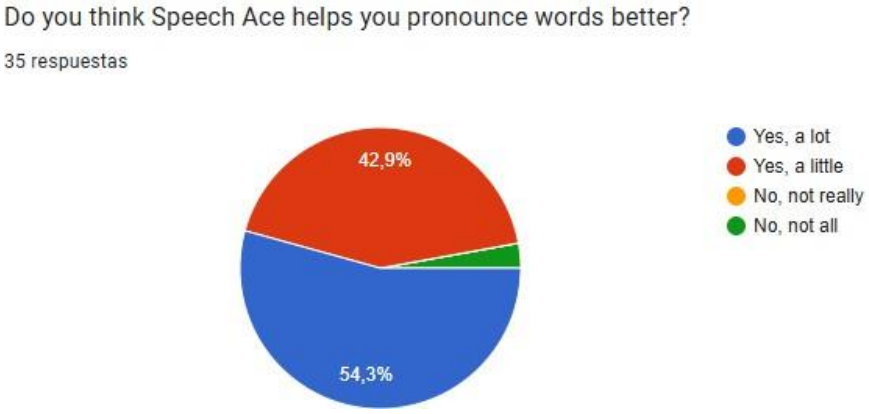
Among the teachers surveyed, most acknowledges that CALL can bring in the advantages of developing students' oral production skills. Almost half (62.5%) stated that use of technology and the CALL environment generally improves learner's motivation and interest for learning English, because such a technology- based subject often creates an interesting and interactive learning experience. Furthermore, 25% of the teachers stated that CALL provides more autonomous and personalized practice, which is the reason why digital tools offer to students work in their own pace and on their own problems. Moreover, 12.5% of the respondents stated that CALL immediately gives an opportunity to hear your pronunciation and to correct your mistakes as they occur in real time. Remarkably, none of the teachers supported that CALL is devoid of benefit, which could be taken as a key that technology can play a necessary role in the delivery of English Language Instructional content, when the best utilization of it is achieved.

Question 6

It is suggested that CALL tools are not fully integrated into the English teaching practices because educators are not consistent in their use of CALL tools. Overall, teachers reported being actively involved in CALL tasks (62.5%), indicating that they do not address CALL techniques actively in their teaching. Lastly, 25 % of respondents reported to be using 25 % of digital learning work to support the learning of language, which implies that there is a smaller part of the teachers that seem to engage more actively with Digital Resources for language classes. However, 12.5% of teachers admitted they never use CALL tools, suggesting that there are some teachers who do not have access to CALL tools or who prefer traditional methods of teaching. These results indicate that CALL tools ought to be promoted more widely and more consistently for English language teachers to maximize their change in students' learning and development.

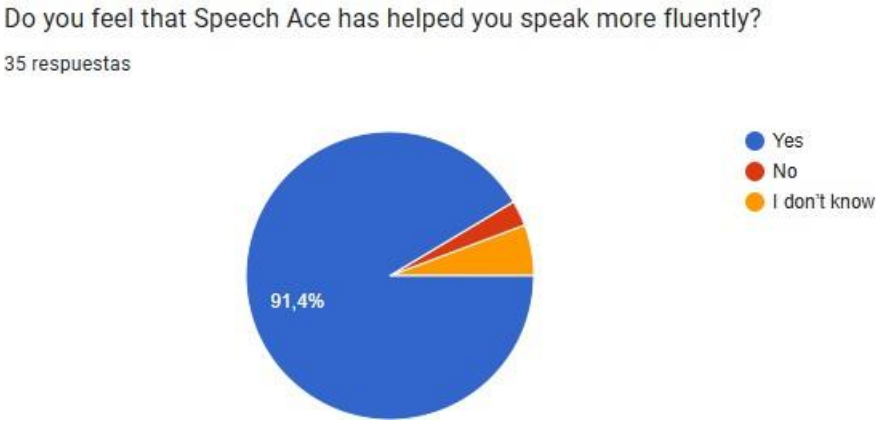
1. Surveys applied to students

Question 1



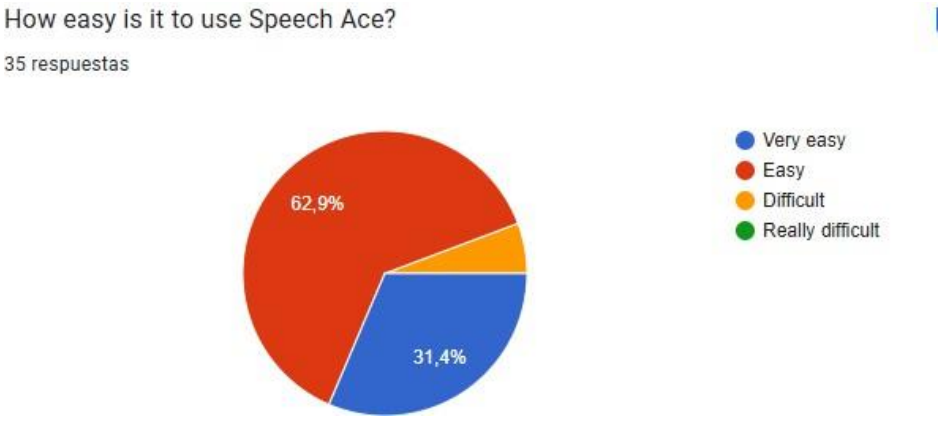
It is mostly assumed that Speech Ace has benefited most students' pronunciation 42.9% of the respondents say that the app has improved their pronunciation very well and 54.3% say that it has improved moderately. Only two students (2.8%) stated that Speech Ace has not helped at all, and none of the students check "No, not really." This implies that the application offers a proper means by which pronunciation skills can be improved.

Question 2



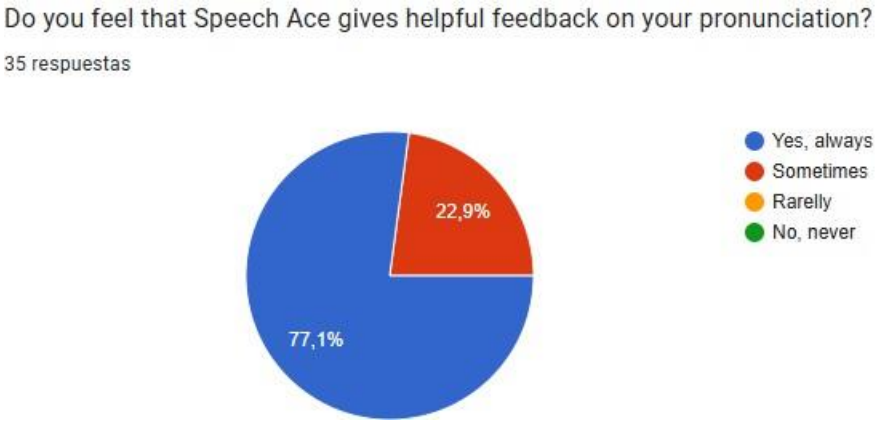
Nearly all students (91.4%) (32 out of 35) of the students who tried the app commented that the app was helpful to help them talk more fluently in English. Two students were unsure and none reported they obtained no improvement. The results of these findings indicate the possibility of Speech Ace as an instrument in fostering fluency skills among young learners.

Question 3



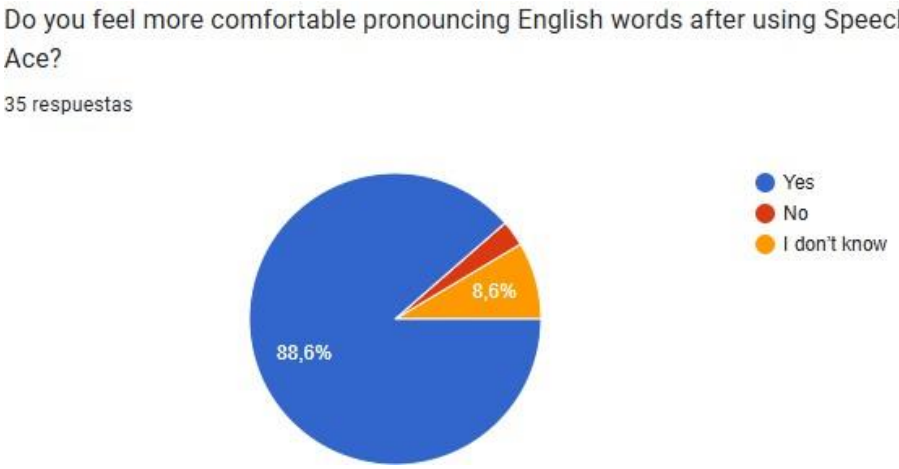
Most students found Speech Ace easy to use and 62.9 percent of students said the app was "very easy" to use, 31.4 percent found it "easy." Only 2 students (5.7% of population) experienced difficulties, none of which found them extremely difficult. Overall, this suggests that Speech Ace is generally accessible to students and imposes few usability issues on most of them.

Question 4



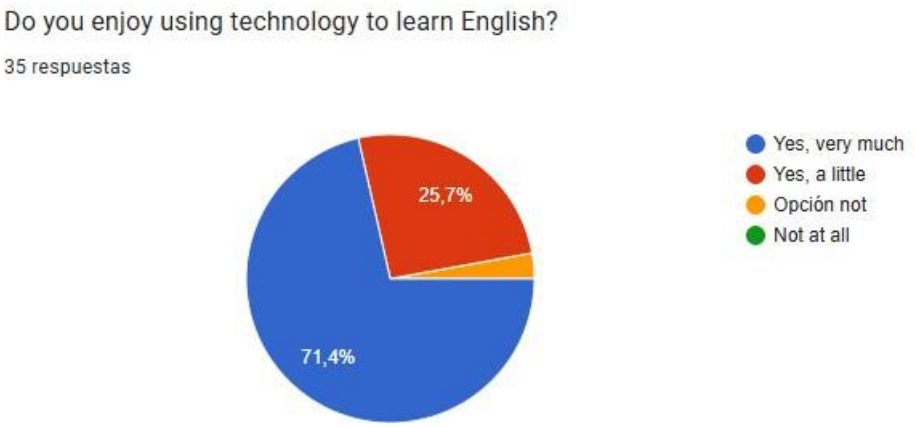
Feedback provided by students for Speech Ace's feedback is generally being perceived as helpful, and consistent, as it is 'always' feedback about useful pronunciation from 77.1 of respondents and sometimes feedback from 22.9 of respondents. It is worth noting that no students answered that the feedback was never or rarely helpful. In other words, the use of speech ace for constructive pronunciation guidance is effective.

Question 5



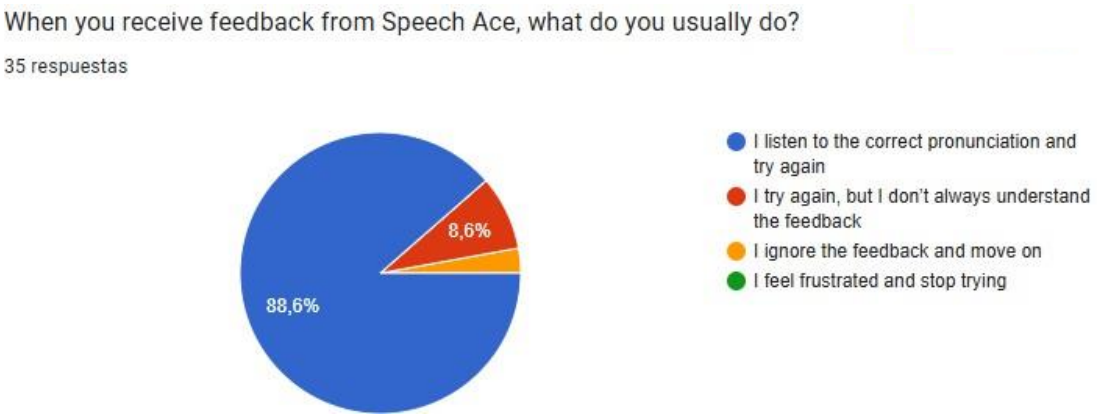
Using Speech Ace, more than 88.6 per cent (31 out of 35) of the students feel more comfortable to pronounce an English word. Three were unsure and of that only one reported no improvement. This implies that students' confidence in spoken English has been positively impacted by Speech Ace.

Question 6



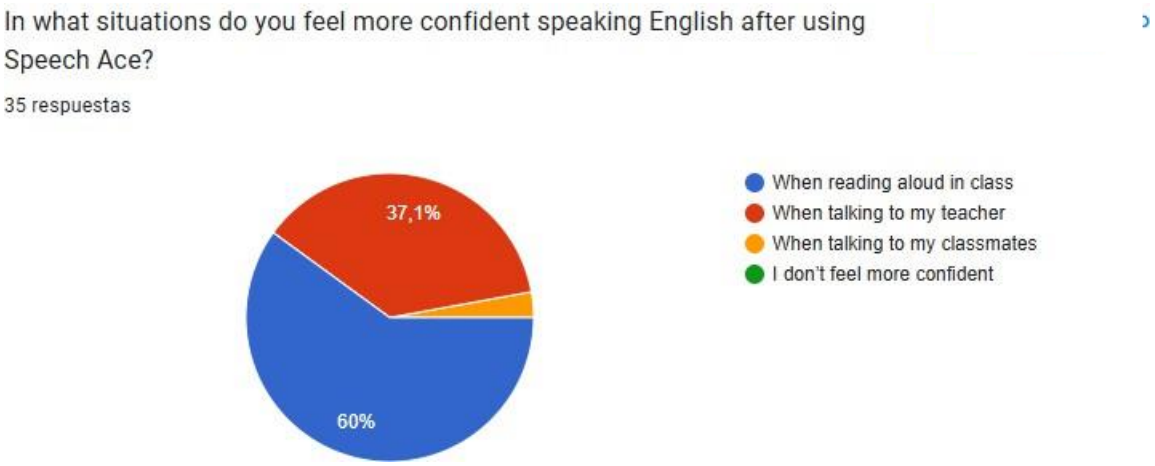
Most of the respondents found English learning Technology as an interesting 'techno tool'; with 71.4% responding they like to learn English with the Technology 'a little' and 25.7% 'very much'. However, none of the students expressed a complete hatred for the use of technology in the learning process and only one student responded negatively. This clearly supports the idea that digital tools are well received by students and should be used as tools to develop language learning.

Question 7



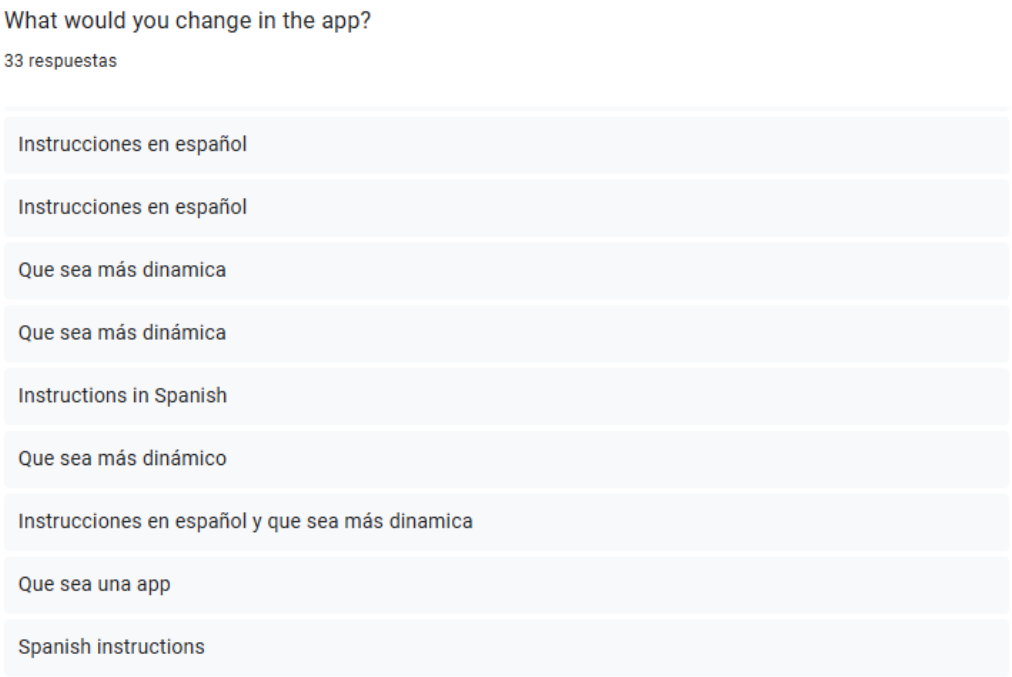
Students are highly active with the feedback they receive from Speech Ace; 88.6% of the students are listening to the correct pronunciation and try again, all willing to learn from their mistakes. On the other hand, 8.6% said they try to retry, but not always understand the feedback. The feedback was ignored by only one student and no one gave up because they were frustrated. This means that the app is successful to motivate students to work on their pronunciation.

Question 8



According to the students who participated, with speech ace help it gave them this feeling of how they or it would feel more confident in some spoken situations. Sixty percent of the students feel more confident when talking with their teacher, this was 37.1 percent that felt more comfortable reading aloud in class. However, no one student said they felt no increase in confidence, and only one student mentioned increased confidence when talking to classmates. Based on this finding, it is suggested that Speech Ace will be more useful for learners in structured learning environments where students interact with teachers.

Question 9



Students were asked what they would change in Speech Ace, and the suggestions which came about

most frequently were for more Spanish language instructions to make Speech Ace more accessible. Other students asked for more guidance in Spanish so that they could understand better how to effectively use the app. Other people suggested it make the app more forward thinking and engaging in order to motiviate and interest the individual.

Furthermore, a few students would not change anything and show that the app was mostly satisfactory. The insights presented here may contribute to further improvements of the usability and engagement of Speech Ace.

2. Observations to classes: Speech Ace implementation

1. Pronounces short vowels correctly (/æ/ in “family”)

a) **Without Speech Ace:** The students had difficulties mastering the pronunciation of the /æ/ sound, which meant replacing it with /ɛ/ or /ɑ/, creating problems for speech clarity.

b) **Improvement in production of /æ/ with Speech Ace:** Students were found to perform more accurately with regard to the sound articulated by utilizing technology enhanced learning, which accentuated their auditory perception and pronunciation.

2. Pronounces long vowels correctly (/i:/ in "teacher")

Without Speech Ace: One common error made by the students was a shortening of the long vowel /i:/ to /ɪ/, so that the student would say tɪtʃər instead of teacher.

a) **Speech Ace:** The software feedback corrected students accurately from distinguishing /i:/ and /ɪ/ and produced improved long vowel pronunciation.

3. Pronounces long vowels correctly (/ɪ/ in "people")

a) **Without Speech Ace:** Students usually pronounce an intermediate vowel sound between /ɪ/ and /i:/ was the most common source of intelligibility problems for many students without Speech Ace.

b) **With Speech Ace:** The tool improved students in their ability to differentiate similar vowel sounds as reflected in their pronunciation of /ɪ/.

4. Pronounces long vowels correctly (/ə/ in "computer")

a) **Without Speech Ace:** Schwa (/ə/) was often replaced with a full vowel in "computer" or the right syllable was stressed at the expense of fluency while students struggled on the schwa in the activity.

b) **With Speech Ace:** It was noticed, in its case, that the correct production of /ə/ had improved and resulted in more natural speech. In so doing, this confirms the effectiveness of auditory reinforcement in teaching reduced vowels in English.

5. Speaks fluently without excessive pauses

a) **Without Speech Ace:** Students frequently pause between words due to insecurity and the need to process information before speaking.

b) **With Speech Ace:** Repetition and guided practice helped students gain confidence, reducing unnecessary pauses and improving speech flow.

Pronounces words clearly and understandably

a) **Without Speech Ace:** Students exhibited speech difficulties because they omitted noises while also incorrectly pronouncing phonemic sounds which created speech confusion.

b) **With speech Ace:** Enhanced pronunciation clarity because students developed better vowel and consonant sounds articulation skills. Speech Ace increased student pronunciation sensitivity so they could identify errors which they then corrected.

7. Self-corrects pronunciation errors

a) Most students missed their speech mistakes and made corrections only when the teacher intervened during instruction without Speech Ace.

b) Students improved their capacity for self-correction because Speech Ace provided them real-time feedback which led to increased autonomous learning.

8. Confidence while speaking (volume, tone, hesitation)

a) **Without Speech Ace:** Students became insecure or showed insecurity when it comes to speaking by speaking in a low tone of voice, pausing frequently, or hesitating.

b) **With Speech Ace:** students felt more confident and fluent in their pronunciation. Speech Ace was composed of structured practice and consistent feedback, and it allowed them to speak naturally.

9. Understands and applies pronunciation feedback

a) **With Speech Ace:** Since Speech Ace was being used to assist the students in correcting their pronunciation mistakes, students needed the external help provided by Speech Ace to recognize the pronunciation mistakes and correct them.

b) The students also showed improvements in using pronunciation corrections to the benefit of their pronunciation, indicating that technology assisted feedback positively influenced their learning

CONCLUSIONS

This study consistently demonstrated that the integration of the Speech Ace tool, within the framework of the CALL approach, had a positive impact on the development of oral production skills among fifth-grade students. The improvements observed in vowel pronunciation, speech fluency, and students' ability to self-correct support the pedagogical value of incorporating technology into English language teaching. The findings show that the immediate feedback provided by Speech Ace fosters phonetic awareness, a crucial element in mastering accurate pronunciation. Moreover, the results confirm that autonomous learning, promoted through the use of the tool, enhances students' independence and self-regulation in their language acquisition process. These outcomes align with previous research highlighting the importance of technology as a complement — not a replacement — for traditional teaching methods.

It is important to note that although most students demonstrated significant improvement in vowel sound production, challenges remain in distinguishing certain minimal pairs. This suggests that pronunciation refinement should continue through a balanced combination of autonomous practice and direct teacher support.

As a pending task for future research, it is recommended to explore the implementation of Speech Ace or other CALL-based tools at different educational levels and to examine their impact on other aspects of oral competence, such as intonation, rhythm, and listening comprehension. Additionally, further studies could focus on developing strategies to optimize the autonomous use of such tools, particularly in educational contexts with limited technological resources.

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