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Scientific articles

Tecnología H5P para desarrollar el aprendizaje autónomo del idioma inglés

H5P technology to develop autonomous learning of the English language

Tecnologia H5P para desenvolver aprendizagem autônoma da língua inglesa

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Resumen

Este documento presenta los avances de una investigación centrada en la incorporación de la tecnología H5P para desarrollar el aprendizaje autónomo del idioma inglés en los Centros de Auto-Acceso (CAA) de la Universidad Autónoma de Yucatán (UADY). La investigación se llevó a cabo con alumnos inscritos en el Programa Institucional de Inglés en modalidad mixta durante el curso escolar enero-mayo 2023, y su objetivo inicial es identificar las problemáticas que afectan la autonomía de los estudiantes que asisten a realizar actividades en los CAA de esta universidad y medir la necesidad de implementar una herramienta digital como complemento de los CAA.

Los datos se recolectaron mediante encuestas digitales utilizando formularios de Google, se diseñaron dos instrumentos, uno dirigido a los docentes del programa y uno a los estudiantes.



Los resultados indican que la autonomía del estudiantado se está viendo afectada por la metodología de enseñanza dentro de estos espacios de aprendizaje autónomo. Se concluye que los CAA de la UADY presentan áreas de oportunidad, especialmente en lo que respecta al uso de la tecnología, la limitación del estudio independiente, la disparidad entre el desarrollo de las cuatro habilidades del idioma y la poca flexibilidad de horarios que implica la presencialidad.

Palabras clave: Autoaprendizaje, enseñanza de idiomas, educación a distancia, tecnología educacional.

Abstract

This document presents the progress of a research focused on incorporating H5P technology to develop autonomous learning of the English language at the Self-Access Centers (CAAs) of the Autonomous University of Yucatan (UADY). The research was conducted with students enrolled in the Institutional English Program in a mixed modality during the period January-May 2023, aiming to initially identify the issues affecting the autonomy of students attending activities at these CAAs and to measure the need to implement a digital tool as a complement to the CAAs.

Data was collected through digital surveys using Google Forms. Two instruments were designed, one aimed at the program's teachers and one at the students. The findings indicate that student autonomy is being affected by the teaching methodology within these autonomous learning spaces. It is concluded that the CAAs at UADY present areas of opportunity, particularly concerning the use of technology, limitations on independent study, disparities in the development of the four language skills, and the limited flexibility of schedules associated with in-person attendance.

Keywords: Self-study, language teaching, distance education, educational technology.

Resumo

Este documento apresenta o andamento de uma pesquisa focada na incorporação da tecnologia H5P para desenvolver a aprendizagem autônoma da língua inglesa nos Centros de Autoacesso (CAA) da Universidade Autônoma de Yucatán (UADY). A pesquisa foi realizada com alunos matriculados no Programa Institucional de Inglês na modalidade mista durante o ano letivo de janeiro a maio de 2023, e tem como objetivo inicial identificar os problemas que afetam a autonomia dos alunos que frequentam para realizar atividades nos CAAs. desta universidade e medir a necessidade de implementação de uma ferramenta digital como complemento ao CAA.

Os dados foram coletados por meio de pesquisas digitais por meio de formulários do Google. Foram elaborados dois instrumentos, um direcionado aos professores do programa e outro aos alunos. Os resultados indicam que a autonomia do corpo discente está sendo afetada pela metodologia de ensino dentro desses espaços autônomos de aprendizagem. Conclui-se que os CAA da UADY apresentam áreas de oportunidades, principalmente no que diz respeito ao uso da tecnologia, à limitação do estudo independente, à disparidade entre o desenvolvimento das quatro competências linguísticas e à pouca flexibilidade de horários que a presença.

Palavras-chave: Autoaprendizagem, ensino de línguas, educação a distância, tecnologia educacional.

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Introduction

English Program (PII) of the Autonomous University of Yucatan (UADY) has incorporated the use of Self-Access Centers (CAA) into its study programs since the beginning of its management in 2006 and its main objective is to encourage students to learn the English language independently; however, some actions have been detected that compromise this goal. The first problem observed is the decrease and even exclusion of the autonomy of the students. Currently, these spaces are mainly used to practice one of the four language skills, oral production (*speaking*). Students attend workshops and sessions focused on developing this skill and the use of worksheets that were intended to reinforce the other three skills (listening, reading and writing) has been eliminated. The participation of the teacher has become indispensable since a teacher is required to be present to guide the session. In other words, the autonomy part that makes up the main objective of the Self-

Access Centers of the UADY has been completely eliminated. “In this practice center, students develop the skills of independent learning” (Autonomous University of Yucatan, 2022). In the words of the authors Huerta and Alcubilla in 2021:

There are all kinds of reasons to promote independent learning, but they all emerge from a general belief among teachers, not only in the language area, and that is that learning is more effective when learners play a more active role in their learning process, assuming responsibility for their learning and participating in decisions that have to do with it (p. 54).

Currently, student work is supervised by teachers in the CAAs and student autonomy is not being promoted.

The second problem identified is related to the relevance of the resources and materials available in the AACs. The use of ICT is minimal in these centers. The worksheets are not designed to include the use of educational technologies. The only technological resources are the use of recorders to play audio and sometimes a projector and computer to present a presentation designed by the teachers to give a workshop. Regarding this situation, Gallardo et al. (2021) maintain that:

Information and Communication Technologies (ICT) were and are the main causes of the digital revolution. This revolution remains in an evolutionary and active state, generating new forms, uses and codes of communication and information management in our societies. Faced with this reality, schools are immersed in a profound change that demands new approaches in their methodologies and educational materials (p.40).

Taking into account the above, there is a perceived need to update and incorporate the use of new emerging technologies into the UADY CAA.

The concept of these AACs was very innovative at the beginning of their operation, more than 29 years ago, when it was not so easy to access materials in English, such as: magazines, books, music or videos in this language; today, students have access to the Internet where they can find an unlimited amount of documents, music, movies, magazines, games, etc., in English and even in other languages. In the words of Chaves et al. (2015): “It is not an option to remain stagnant in the methods and technologies that we used in the past. We will be much more effective when we learn the languages of the new generations” (p. 165). In addition, it is worth mentioning that not all AACs have the same infrastructure and equipment; in some faculties at

UADY, only a space in the library with some tables is assigned where students carry out their activities.

Taking into account all of the above, it was determined that the process within the AACs needed to be analyzed. Although one of the most important aspects of mastering a language is having the ability to express oneself orally, we must not lose sight of the fact that comprehensive learning of the English language also requires being able to communicate through written expression, reading comprehension, and listening. This project seeks to identify the problems that affect the autonomy of students who attend activities in the AACs of this university and to understand the need for a digital tool that incorporates H5P technology as a complement to the AACs.

Theoretical foundation

Learning English has been a challenge for educational institutions in Mexico. There are various internal and external factors that influence the process of acquiring a second language. Due to this, various authors have conducted research related to the topic of interest of this article and that serves as the basis for this study.

What is a Self-Access Center?

It is important to define the concept of Self-Access Center (CAA), this refers to a space where students carry out activities to reinforce their knowledge, generally of a language. In the case of the Autonomous University of Yucatan (UADY), the CAA are used as an extension of the classroom to complement the contents of the Institutional English Program (PII), they are designed so that students can learn English in a more efficient way. students come to carry out work activities focused on developing the four skills of the English language (speaking, reading, writing, listening) independently. We can also find Others definitions for the CAA: Herrera, in his article “Exploring the students' perceptions and language learning experiences of a self-access center ” from 2016, mentions that “ In general, the term self-access refers to the organization of learning materials and equipment to make them available and accessible to students without necessarily having a teacher there” (p.44).

In this definition, the author mentions that an AAC is about organizing learning materials and equipment, so that they are available and accessible to students without the need for a teacher to be present. A slightly different perspective emerges at the International Meeting of Self-Access Centers in 2016, Curiel states that:

The CAA has distinguished itself for almost two decades by providing a space for academic and technological support to all students who, in an autonomous or semi-directed manner, wish to learn or practice the language or languages of their choice, with English students being the ones who find the greatest number of educational resources and support staff to assist them in the process of acquiring a second language (2016, p.3).

Unlike the previous one, this second definition mentions that the AAC is a space for autonomous learning, but also semi-directed by support staff. Although both definitions differ in this aspect, they both agree that the material and resources must be available to students. Technology is also mentioned as part of the resources that are ideally included in the AAC.

Challenges of CAA in Mexico

Currently, AACs in Mexico present some challenges in their implementation. Domínguez, in the keynote speech presented at the VII National and International Meeting of Self-Access Centers (CAA): “Educational innovation and self-learning”, in 2008, mentions that:

The CAAs have appeared in Mexico for several years now, and have gone through processes of acceptance and adaptation. However, in some places they have gained strength, examples of this are the UANL, the BUAP, Veracruzana, the UDG, where there are not only one or two centers but several. However, in others their importance has been diminished, they are beginning to be seen as systems that have not met expectations and are beginning to be neglected. Should they disappear or do they simply require a new conception? (p. 10)

The question that the author poses implies a study that evaluates the effectiveness of these spaces and invites us to reflect on the challenges that arise. Rodríguez et al. (2013), referring to Gaona (2008), mentions six factors that could influence the functioning of a CAA:

The management of innovation, adequate facilities, training and development of staff and students, consideration of the cultural strengths of students, and the existence of adequate materials, to which is added the great challenge of promoting learning autonomy and connection with the classroom (p. 24).

Following the COVID-19 pandemic, many educational institutions are facing the challenge of resuming in-person classes in classrooms and, along with this, reopening the

CAAs. All of the above must be taken into account to update and prevent these CAAs from becoming obsolete spaces.

H5P Technology in English Language Teaching

In the article “H5P Technology in English Language Teaching,” Díaz (2021) explores H5P technology and its potential for creating interactive content in educational contexts. Some features of H5P are described, including its versatility to create different types of interactive content and how to integrate with online learning platforms. Likewise, the intuitiveness of the platform for teachers and the usefulness that they see in creating engaging interactive content for students are highlighted. From the results of the study, Díaz (2020) establishes the following:

Choosing the way to implement the activities to be used with H5P will depend on the objective that each teacher pursues. What is very clear is the wide range of content that H5P presents with more than 45 activities to use and 42% of teachers willing to use the tool to present the content of their classes in a different, attractive and original way (p. 6).

This research highlights the benefits of H5P technology in terms of the versatility and effectiveness it offers for creating interactive content in online learning environments. Despite this, the percentage of teachers willing to use this tool is less than 50%, and it is necessary to consider the factors that could be generating resistance on the part of teachers to the use of this instrument.

In another study conducted by Wicaksono et al. (2021), on the use of H5P technology, the impact of this resource on English language teaching was investigated. The research was conducted in a university context and different means were used to collect data, where they were able to conclude that the use of H5P technology improved students' motivation and skill development, particularly reading comprehension. It is also highlighted that the use of H5P in online learning can generate opportunities for students to learn in an interactive and engaging way, as well as increase their interest, which can reinforce different skills.

Considering the above work, it can be expected that the use of H5P will prove beneficial in teaching the English language and allow students to experience a positive impact on their motivation and learning, as long as the user accessibility features to these resources are considered.

Methodology

The project is approached from a mixed research perspective, seeking to combine the benefits of both types of research to obtain better results. Ayala (2021) mentions that mixed research, also called multiple or integrative research, is a type of research where a methodology is used that seeks to integrate qualitative and quantitative methods in the same study and points out that it is a way to enhance the benefits and functionalities that each method separately entails.

The research was carried out at the Autonomous University of Yucatan, on the Campus of Exact Sciences and Engineering. The participants were students of the Institutional English Program (PII) who were enrolled in one of the courses offered by the program in the mixed modality (this modality refers to face-to-face classes plus a complement of non-face-to-face hours on the institutional platform). During the January-May 2023 semester, 61 students were registered, from which a sample of 54 participants was obtained. A sample of the total population of 16 PII teachers was also selected, which consisted of 12 participants. The data was collected through digital surveys using Google forms that were designed to identify the problems that affect the autonomy of students who attend activities at the CAAs of this university and measure the need to develop a digital tool as a complement to the Self-Access Centers they currently attend. Graphs were generated that allow easy visualization of the behavior of the data.

Two instruments were designed for this research, one for PII teachers and one for students in the program. Both instruments were subject to validation by expert judgment and were composed as follows:

Table 1. Instrument for PII teachers.

ITEMS
English Program .
2. At the SAC, activities are carried out that allow students to improve their English <i>conversation skills</i> .
3. In the SAC, activities are carried out that allow students to improve their <i>listening skills</i> in English.
4. In the SAC, activities are carried out that allow students to improve their English <i>writing skills</i> .
5. In the SAC, activities are carried out that allow students to improve their English <i>reading skills</i> .
6. Activities in the SAC allow students to learn independently.
7. Technological tools are used in the SAC to promote independent learning.
8. The material in the SAC is up-to-date and attractive.
9. The schedule offered by the SAC is flexible and allows students to attend at the time that best suits them.
10. I consider it appropriate to implement a digital tool to complement the activities of the SAC.

Source: Own elaboration

Table 1 presents the indicators that were included in the survey for PII teachers. To obtain the responses, a Likert scale was used where 1 equals “Totally disagree” and 5 equals “Totally agree.”

Table 2. Instrument for PII students.

ITEMS
1. I know the services offered by the SAC on my campus.
2. SAC allows me to improve my English <i>conversation skills</i> .
3. SAC allows me to improve my English <i>listening skills</i> .
4. SAC allows me to improve my English <i>writing skills</i> .
5. SAC allows me to improve my English <i>reading skills</i> .
6. What materials do you use in the SAC during a visit?
7. The activities in the SAC allow me to learn independently.
8. Technological tools are used in the SAC to promote autonomous learning.
9. The material in the SAC is up-to-date and attractive.
10. The schedule offered by the SAC is flexible, I can go at the time that is most convenient for me.
11. I would like to be able to do some SAC activities from home virtually.
12. I consider it appropriate to implement a digital tool to complement the activities of the SAC.
13. Write a comment about your experience at the SAC or a suggestion for improvement:

Source: Own elaboration

Table 2 shows the indicators that were included in the survey for PII students. This instrument also used a Likert scale where 1 equals “Totally disagree” and 5 equals “Totally agree,” with the exception of question 13 where a space was left open for comments.

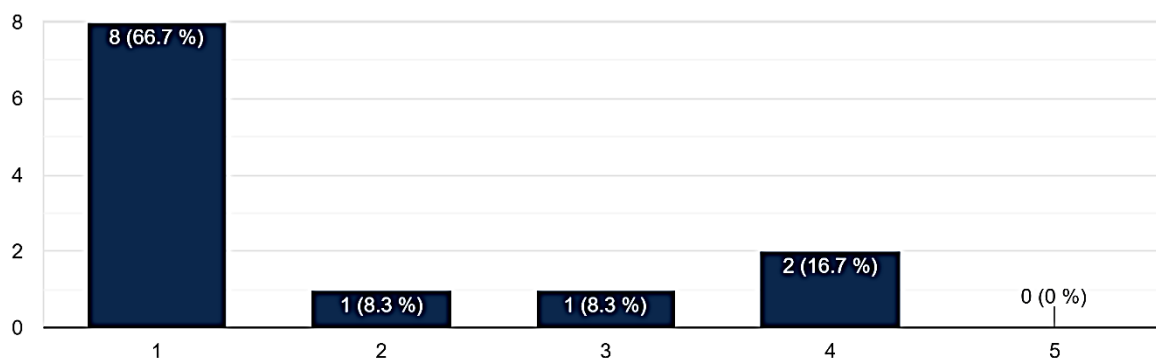
Results

In this section, the results obtained from the application of two instruments are presented; the first one addressed to the PII teachers and which consisted of a section of general data followed by 10 questions related to the current operation of the CAA or as this space is known by its acronym in English: SAC (*Self Access Center*) and the second instrument designed for PII students, which included a section of general data and 13 questions related to their opinion about the SAC during their visits in the January-May 2023 semester.

PII teachers

The most relevant questions for the implementation of this project were those that questioned the autonomy of the students and the convenience of implementing a digital tool to complement the SAC activities. In the graphs, a Likert scale was used where 1 equals “Totally disagree” and 5 equals “Totally agree”.

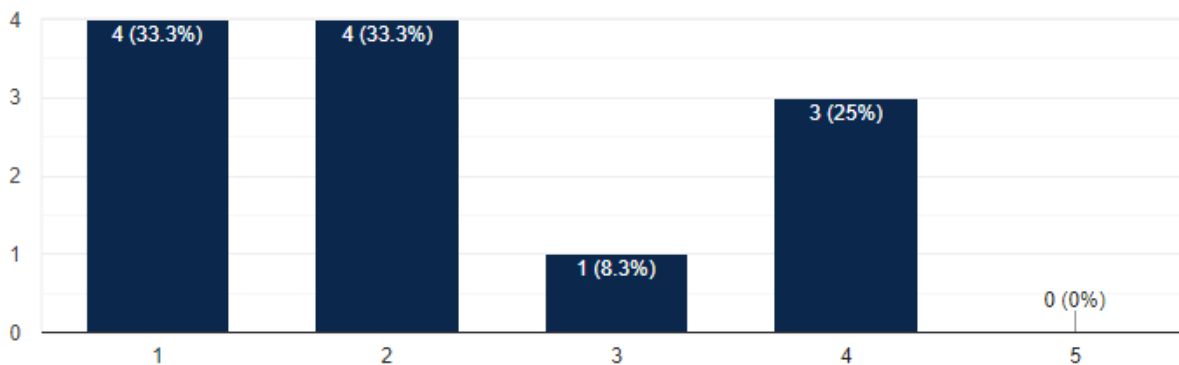
Figure 1: Learning independently



Source: Own elaboration

Figure 1 shows the graph corresponding to the responses of the PII teachers to the question: “The activities in the SAC allow students to learn independently” in which it can be observed that 66.7% of the teachers did not agree that the activities in the SAC allow students to learn independently, that is, that the current activities compromise the autonomy of the students.

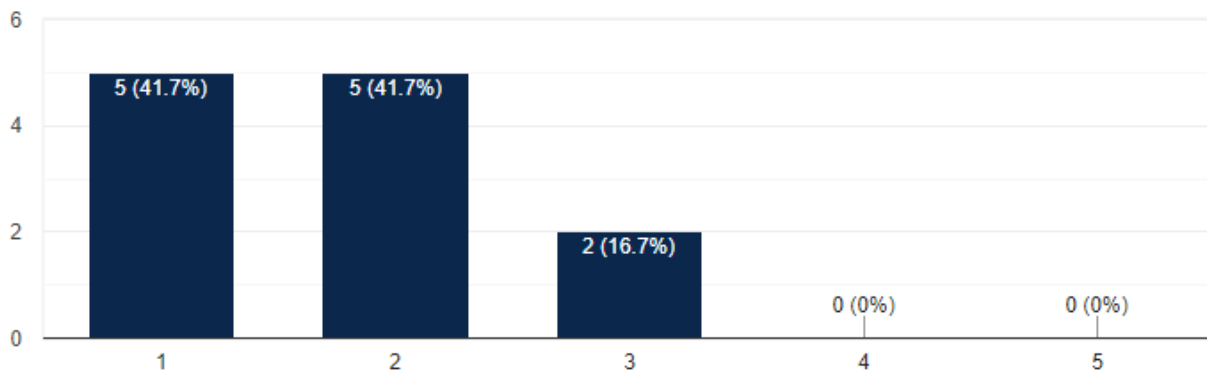
Figure 2: Use of technology



On the other hand, in Figure 2, the teachers' responses to the statement: "Technological tools are used in the SAC to promote independent learning" can be

observed. Here it can be seen that 33.3% totally disagreed 33.3% disagreed, that is, a total of 66.6% of teachers perceive a lack of use of technology in the AAC.

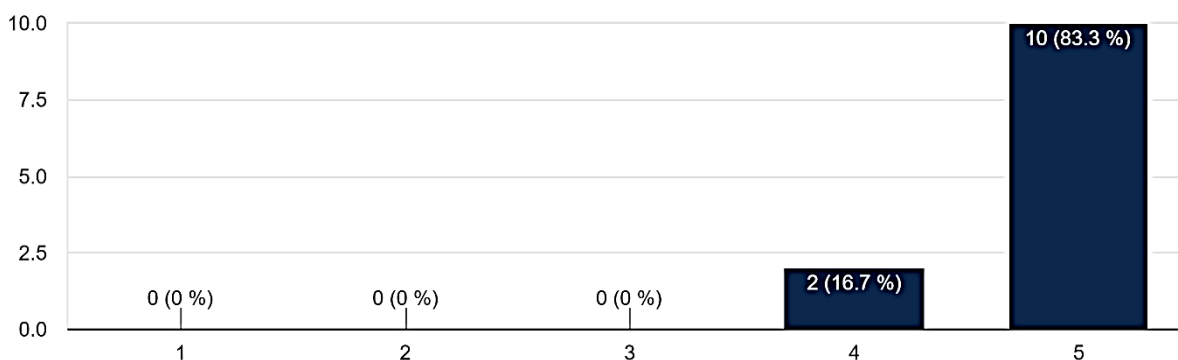
Figure 3: Materials and resources



Source: Own elaboration

Figure 3 shows the teachers' responses to the statement: "The material in the SAC is up-to-date and attractive." In total, 83.4% strongly disagreed and disagreed. This suggests that the material and resources in these spaces are outdated or obsolete.

Figure 4: Implementation of a digital tool



Source: Own elaboration

Finally, in Figure 4, you can see the teachers' responses to the question: "I consider it convenient to implement a digital tool that complements the activities within the SAC", here you can see that 83.3% fully agreed and considered the implementation of a digital tool convenient.

PII students

A total of 54 responses were obtained from the instrument applied to the students. One of the most important questions for the analysis was the one that asked them to write a comment about their experience in the SAC or a suggestion for improvement, which allowed the students to describe in their own words their recommendations for these spaces. Some of the responses that justify the realization of this project were the following:

I like it the way it is, even though I've never used a computer , I don't know what it's used for.

More didactic and use more technology

Use more technology

I suggest a virtual SAC

The above comments are related to the lack of use of ICT in these spaces and that goes against one of the main objectives of the SAC, promoting independent study through technology.

Similarly, comments were obtained regarding the difficulties that students have with regard to the availability of schedules at the SAC when it is offered only in person:

There are only morning and afternoon schedules [sic] very few, in addition to the fact that they only handle 4 different activities for the 6 they ask for in the semester, they should do more or at least change the materials so as not to have to repeat.

More time to accommodate our schedules.

More schedule availability. In my case, my SAC activity schedules coincided with academic activities for my degree. I could only choose the last available time or wait for another day/week. At least 1 or 2 later schedules would be very helpful for those who cannot attend for academic reasons for their respective degrees.

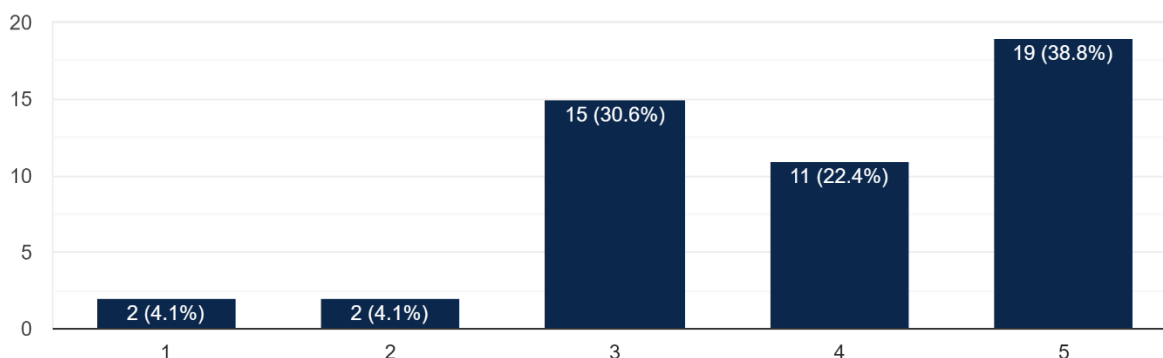
Variety of activities at different times and not the same thing at the same time.

Greater accessibility to the schedule since they only gave out schedules during class time.

Extend opening hours as they are very restricted from being short.

These responses are related to the accessibility to materials and resources within the CAAs. The presence required to attend these spaces is limiting the autonomy of students since they can only access them during the hours established in the CAAs and often during their Bachelor's class hours, which prevents them from attending these centers to improve their language skills.

Figure 5: Implementation of a digital tool



Source: Own elaboration

In Figure 4, you can see the students' responses to the statement: "I consider it convenient to implement a digital tool to complement the activities within the SAC." Here it can be seen that in total 61.2% fully agreed and agreed that it was convenient to implement a digital tool.

In general, it is perceived that both teachers and students who participate in the Institutional English Program of the Autonomous University of Yucatan, consider it convenient to implement a digital tool, as a complement to the activities carried out in the Self-Access Centers, which allows promoting autonomy and the development of English language skills and that the main problems are related to the lack of autonomy, the schedules limited to face-to-face classes and the lack of integration of technology in these spaces.

Discussion

The analysis of the perspectives of students and teachers of the PII in relation to the process within the CAA provides an enriching view of the educational dynamics in this specific context. The main interest of this study was to identify the problems that compromise the autonomy of the students who come to carry out the activities that are currently in these centers. The results of this research coincide with those of a study carried out in 2016 in the library and information services unit of the Universidad Veracruzana in Coatzacoalcos to learn about the perceptions of students about the factors that affect their performance in the CAA. Guevara et al. (2015) concluded that there are some factors that negatively impact the performance of students, mainly pointing out the time factor and the workload of subjects. Likewise, it is mentioned that the individual context and the previous knowledge of the English language affected the performance of the participants to a lesser extent.

Both groups, teachers and students, demonstrated a general receptivity towards the integration of technology. The participants' responses indicate that most consider technology as a valuable tool to improve the learning experience, especially due to the flexibility offered by virtuality. This aspect is related to the results of a documentary and field research for the reconstruction of a model for AAC carried out at UAEMéx . Romero (2024) states that mandatory face-to-face classes are an obsolete measure and instead the needs of users and technological advances must be taken into account. The conclusions of this study speak of using technology to incorporate new techniques for the development of autonomous language learning skills.

Conclusions

Based on the progress of this research, it can be concluded that the UADY AACs present areas of opportunity, especially in relation to the use of technology, the limitation of independent study, the disparity between the development of the four language skills and the lack of flexibility in schedules that face-to-face classes involve.

Both teachers and students stated that the use of technology in these spaces is minimal and that they would like to see this element included more. Regarding autonomy, it is observed that the activities currently carried out in the CAAs actively involve teachers and there are no others designed for students to carry out independently. On the other hand, there is a significant inclination towards the practice of speaking in English, which develops only oral and auditory production, however, the other two language skills are neglected: writing and reading. Finally, there is a need to increase flexibility and access to resources that allow students to progress at their own pace and that has been limited by the obligation to attend the CAA in person.

The implementation of a digital tool that includes H5P technology aims to meet the needs that were outlined in this study. Firstly, the request to include technology in the teaching-learning process in the AACs would be addressed. Likewise, the need to promote student autonomy would be met, since the activities would be worked on without direct supervision from a teacher. Likewise, the development of the four English language skills would be reinforced, making use of the multiple tools offered by the H5P package and, finally, the flexibility of being able to access practice resources from anywhere and at any

time would be expanded without having to depend on the schedules established by the face-to-face AAC.

The research continues and it is expected that at the end it can be demonstrated that the integration of H5P educational technologies with an autonomous approach to the teaching-learning process is significantly and positively related to the development of English language skills of PII students at UADY.

Future lines of research

Considering the results of the instruments applied in this study, it is crucial to recognize that, despite this positive general attitude, there are some considerations that must be taken into account in the process of incorporating a digital tool:

1. Educational platform . All students and academic staff at UADY use the institutional Moodle platform. Consideration should be given to developing the CAA digital tool complement on this platform so that students and teachers are familiar with the interface and thus avoid complications.
2. H5P Technology . This would be the first time that students and teachers are exposed to this digital tool. The need for training may arise.
3. Autonomy . The purpose of developing a digital tool using H5P technology, as a complement to AAC, is to give students back the opportunity to learn independently, however, the correlation between the variables must be evaluated.
4. Language skills . It is essential to develop activities that encourage the development of the four language skills: speaking, reading, writing and listening, in the new digital tool with H5P technology, without neglecting or excluding any.

These points reflect the complexity and importance of addressing specific aspects when incorporating a digital tool in English language learning. Recognizing these considerations is essential to designing effective strategies that maintain a positive attitude toward technology and mitigate potential challenges in implementation.

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Resources	Sweet Aracelly Sanchez Zapata
Data curation	Sweet Aracelly Sanchez Zapata
Writing - Preparing the original draft	Sweet Aracelly Sanchez Zapata
Writing - Review and editing	Equally: Adelina Morita Alexander; Reyna Moreno Beltran
Display	Sweet Aracelly Sanchez Zapata
Supervision	Adelina Morita Alexander
Project Management	Sweet Aracelly Sanchez Zapata
Acquisition of funds	Sweet Aracelly Sanchez Zapata