



STUDENTS' EXPERIENCES AND AFFECTIVE ASSESSMENT OF THE MULTIMEDIA LANGUAGE LABORATORY AT UNIVERSIDAD NACIONAL, CHOROTEGA CAMPUS: AN ANALYSIS THROUGH KRASHEN'S LENS

EXPERIENCIAS DE LOS ESTUDIANTES Y EVALUACIÓN AFECTIVA DEL LABORATORIO DE LENGUAJE MULTIMEDIA DE LA UNIVERSIDAD NACIONAL, CAMPUS CHOROTEGA: UN ANÁLISIS DESDE LA PERSPECTIVA DE KRASHEN

Jorge Antonio Brenes Zúñiga^{1*}

¹ Magister en Educación con Énfasis en el Aprendizaje del Inglés, Académico-Investigador de la carrera Enseñanza del Inglés, Universidad Nacional de Costa Rica, Sede Regional Chorotega, Campus Liberia. Costa Rica. ORCID: <https://orcid.org/0009-0005-1579-9892>. Correo: jorge.brenes.zuniga@una.cr

María Fernanda Moya Bello²

² Magister en Traducción, Académica-Investigadora de la carrera Enseñanza del Inglés, Universidad Nacional de Costa Rica, Sede Regional Chorotega, Campus Liberia. Costa Rica. ORCID: <https://orcid.org/0009-0004-0333-7546>. Correo:

Tobías Montero Cortés³

³ Magister en Educación, Académico-Investigador de la carrera Enseñanza del Inglés, Universidad Nacional de Costa Rica, Sede Regional Chorotega, Campus Liberia. Costa Rica. ORCID: <https://orcid.org/0009-0004-8348-879X>. Correo: tobias.montero.cortes@una.cr

* Autor para correspondencia: jorge.brenes.zuniga@una.cr

Abstract

This study focuses on the experiences of university students and their affective perceptions related to the use of the Multimedia Language Laboratory (MLL) at Universidad Nacional, Chorotega Branch. This research used the theory of the Affective Filter hypothesis by Krashen (1983) and a mixed-method design to collect qualitative and quantitative information from 96 undergraduate students from three different majors, English Teaching, Systems Engineering, and Tourism. The findings revealed that the MLL fosters confidence in



Esta obra está bajo una licencia *Creative Commons* de tipo (CC-BY-NC-SA).

Sociedad Ecuatoriana de Investigación Científica. E-mail: revistaalcon@gmail.com

students, it reduces their anxiety, and it improves their motivation thanks to the privacy it provides, the high-quality audio, and the opportunities for interaction. Students also reported improvements in the areas of listening comprehension, pronunciation, and communicative competence. On the other hand, some challenges like technical maintenance and the need for teacher training were identified. The study concludes making emphasis on the importance of taking into account the affective considerations in environments like that of the MLL, also there is also a need for a better infrastructure and pedagogical innovation to maximize the laboratory's potential as a space for meaningful interaction and language acquisition.

Keywords: Language laboratory, students' perceptions, Krashen's theory, Foreign Language

Resumen

Este estudio se centra en las experiencias de estudiantes universitarios y sus percepciones afectivas relacionadas con el uso del Laboratorio Multimedia de Lenguas (MLL) en la Universidad Nacional, Sede Chorotega. Esta investigación utilizó la teoría de la hipótesis del Filtro Afectivo de Krashen (1983) y un diseño de métodos mixtos para recopilar información cualitativa y cuantitativa de 96 estudiantes de pregrado de tres carreras diferentes: Enseñanza del Inglés, Ingeniería de Sistemas y Turismo. Los hallazgos revelaron que el MLL fomenta la confianza en los estudiantes, reduce su ansiedad y mejora su motivación gracias a la privacidad que proporciona, el audio de alta calidad y las oportunidades de interacción. Los estudiantes también reportaron mejoras en las áreas de comprensión auditiva, pronunciación y competencia comunicativa. Por otro lado, se identificaron algunos desafíos como el mantenimiento técnico y la necesidad de capacitación docente. El estudio concluye enfatizando la importancia de tomar en cuenta las consideraciones afectivas en entornos como el del MLL, así como la necesidad de una mejor infraestructura e innovación pedagógica para maximizar el potencial del laboratorio como un espacio para la interacción significativa y la adquisición de idiomas.

Palabras clave: Laboratorio de idiomas, percepciones de estudiantes, teoría de Krashen, idioma extranjero

Fecha de recibido: 22/01/2025

Fecha de aceptado: 23/04/2026

Fecha de publicado: 25/04/2026

Introduction

Communicating in English is an essential skill in today's world. Educational institutions are incorporating technological tools to improve language learning, and one example of this is the language laboratory, which has played an important role to support the practice of listening and speaking skills, as an integral part of the foreign language instruction for many years.



Esta obra está bajo una licencia *Creative Commons* de tipo (CC-BY-NC-SA).

Sociedad Ecuatoriana de Investigación Científica. E-mail: revistaalcon@gmail.com

Language laboratories are constantly changing to comply with the demands of education and technology. These laboratories have experienced an important transformation; they have progressed from systems with simple audio to more sophisticated environments with multimedia. These places evolved from devices from the mid-twentieth century, to digital systems that are now capable of integrating video, voice, and online communication (Larson, 2024). Also, this development occurred at the same time of major pedagogical changes, which evolved from the audiolingual method (that was based on repetition) to a more communicative and approach that emphasizes interaction, collaboration, and the use of authentic language (Garett & James, 2013).

Although there was a rapid grow of learning tools and mobile language applications, the MLL is still an important component of many language programs because it provides environments that promote linguistic immersion with the use of authentic audio and video materials, even in contexts where exposure to native speakers is difficult. Another point to mention is that they promote learner autonomy, students can take control of their progress and practice, the lab creates opportunities for collaboration and meaningful interaction (Osaka, 2024).

Although many studies have already explored the technological and methodological dimensions of MLLs, the research is still limited, especially when it comes to subjective experiences, student perceptions, and their assessments of the effectiveness (Calderona et al., 2016). This study aims to analyze students' perceptions in regards to the use of the MLL in their English courses at Universidad Nacional, Chorotega Branch. It tries to identify the way students perceive the effectiveness of the MLL, its role in developing different language skills, and its general contribution to their learning process. Another aim was to collect valuable information related to suggestions on how the lab could be better equipped. This study is meant to fill a gap in the literature by providing evidence that can serve in decision-making and pedagogical innovation taking into account the perspectives of learners. It is essential to understand students' experiences for improving the pedagogical use of MLLs and ensuring that these technological resources align with the learners' needs, preferences, and contexts.

Theoretical Framework

The concept of Affective Filter Hypothesis derived from the affective filter proposed by Dulay & Burt (1977), it explains the way emotional and attitudinal variables influence second language acquisition (Krashen, 1982). According to Krashen, learners with high motivation, self-confidence, and a low anxiety have a "low affective filter", this allows comprehensible input to reach the brain's language acquisition device in a more efficient way. On the other hand, learners who experience fear, stress, or negative attitudes have a "high affective filter," and this can block input from being processed even if they comprehend it. This hypothesis explains that emotional barriers often limit the learning of a language, and it highlights the importance of classrooms with environments that are supportive and that have low stress where the learners can feel confident and encouraged to use the target language.

The existing research contains strong support to Krashen's proposal. For example, Zen and Apriana (2015), demonstrated that children learn languages more effectively when they feel relaxed, confident, and supported through natural interactions with family and peers. Also, Wang and Wu (2020) investigated some affective factors (motivation, anxiety, empathy, and personality) in different age groups, they confirmed that positive



and emotional states improve the absorption of input and the language retention. The researchers emphasized that methods that are empathetic, engaging, appropriate can lower affective barriers and foster more effective results when learning a language. Chen (2022) further applied the hypothesis to the teaching of spoken Chinese, they identified motivation as the most influential factor, it was followed by self-confidence and finally anxiety.

Recent investigations also validate and expand the hypothesis in varied educational and cultural contexts. Sanesi (2023) found that negative emotions like anxiety, low motivation, and poor self-esteem hinder the ability of high school students to acquire a second language, in contrast to supportive and flexible environments that can lower the affective filter. D'Souza and Padmanabha (2024) concluded that motivation and low anxiety are necessary elements to facilitate the processing of language input.

To finish, Al-Mutairi (2025) explored the way gender and cultural transitions influence the affective filter among Kuwaiti college students, in that experience they concluded that anxiety and motivation differ by gender and context, and that pedagogical strategies that are emotionally supportive are essential to overcome affective barriers. All of these findings support the idea that emotional and environmental conditions are essential for second language acquisition, and making affective considerations is necessary in language pedagogy.

The Affective Filter Hypothesis works as the theoretical foundation for this study, and it is necessary to understand students' emotional and attitudinal responses toward the use of the MLL. This hypothesis emphasizes that motivation, self-confidence, and anxiety are factors that influence directly the language acquisition process (Krashen, 1982), it provides a useful framework to analyze how learners experience and evaluate technological environments. This study supports the affective dimension of second language learning and tries to determine if the MLL promotes a low-stress atmosphere that leads to effective language learning by examining the perceptions of students regarding motivation, and confidence when using the laboratory.

Literature Review

Language laboratories history can be divided into different periods that were marked by technological advances and pedagogical changes (Calderona *et al.*, 2016; Shane & Lacey, 1961). The first contributions appeared at the end of the 19th century. Back in the 1880s the phonograph became a revolutionary tool, and it started to allow students to listen to the pronunciation of native speakers without the mediation of a tutor, this meant a good level of access and control of the learning process (Larson, 2024). In the 1920s, universities such as Ohio State University introduced laboratories with "listening tubes," and this made it possible for several students to practice simultaneously in individual booths, this reinforced the learner autonomy (Larson, 2024). During the 1940s, the incorporation of headsets with microphones and tape recorders represented a significant advance, since students could record their voices, compare them to those of native speakers, and carry out self-assessment (Larson, 2024; Shane & Lacey, 1961).



In the 1950s and 1960s, language laboratories reached their peak with the expansion of the audiolingual method, which was based on the repetition of controlled patterns and dialogues (Garett & James, 2013). Laboratories offered an ideal environment for intensive practice of these patterns, they allowed constant exposure to correct pronunciation models and the simultaneous practice of large groups (Shane & Lacey, 1961).

From the 1970s onward, the decline of the audiolingual method and the proposal of communicative approaches transformed the role of laboratories (Garett & James, 2013; Larson, 2024). They started to focus on listening comprehension as an autonomous skill, and their appearance evolved toward more open designs that promoted pair or group work, for example the Jigsaw Listening activities (Garett & James, 2013).

With the digital revolution, computer-assisted language laboratories became what is now known as the Multimedia Language Laboratory (MLL), which is a platform that combines audio, video, text, automatic speech recognition software, and online resources (Calderona et al., 2016; Popova, 2024). According to Osaka (2024), an MLL is defined as a space that integrates technological tools to share auditory, audiovisual, and written materials; they provide multiple forms of feedback. However, since the late 1970s, the expansion of personal computers and computer-assisted language learning (CALL) led to the obsolescence of many traditional laboratories (Larson, 2024).

Multimedia language laboratories offer substantial advantages that go beyond mere pronunciation practice. First, they enable the creation of artificial linguistic-cultural environments (LCE) in which students can experience auditory and visual immersion through authentic materials (Osaka, 2024). Second, the multimedia component promotes student motivation and engagement by making learning a more interactive and dynamic experience (Osaka, 2024).

Another significant advantage is the promotion of autonomous learning. Students can progress at their own pace, repeat activities, record their voices, and self-assess, thus strengthening self-regulation and responsibility in their learning process (Larson, 2024). Also, MLLs foster the integral development of language skills, they improve listening comprehension through controlled exposure to correct models (Agrawal & Sethi, 2020), strengthen oral expression thanks to the privacy provided by headsets (Agrawal & Sethi, 2020), and facilitate the self-correction of pronunciation through comparison with native speakers (Shane & Lacey, 1961). Recent studies show that collaborative laboratory environments enhance pronunciation more effectively than individual or non-technological models (Calderona et al., 2016).

In the same way MLLs promote the integration of the four language skills, which are listening, speaking, reading, and writing (Guru, 2019), and they provide a positive environment for collaborative learning. Teachers also benefit from these tools since it is possible to monitor individual progress, and also provide personalized feedback, and dynamically organize group activities (Agrawal & Sethi, 2020).

Although there are many benefits, multimedia laboratories face several challenges. One of the main ones is the technical complexity of their operation, which requires specialized teacher training. In many cases for example teachers feel overwhelmed by the number of functions laboratories have and prefer not to use them, leading to underutilization (Larson, 2024). Another important obstacle is the high cost of installation, maintenance, and technological updates (Shane & Lacey, 1961). The rapid obsolescence of hardware and software represents a constant challenge, worsened by the constant changes in digital formats (Larson, 2024).





From a pedagogical point of view, there is often a limited use of the laboratory, it is used mainly in the assessment of listening comprehension rather than in active teaching (Guru, 2019). Also, many institutions continue to apply mechanical repetition models that do not take advantage of the communicative or collaborative possibilities that are offered by MLLs (Calderona et al., 2016). Finally, physical limitations like fixed furniture or the distance between stations can hinder face-to-face interaction, and create a sense of disconnection between the teachers and the students (Huang & Liu, 2000).

MLL came to revolutionize the foreign language teaching. The success depends in the ability to combine auditory, visual, and technological resources that improve motivation, autonomy, and a balanced development of the four language skills (speaking, writing, listening and reading). However this must incorporate pedagogical design, teacher support, and sustainable infrastructure. The challenges that are related to the training of teachers, technological updates, and investment are still important barriers that need to be overcome.

Methodology

This study used a mixed-method approach that focused on qualitative analysis. The methodological framework also used triangulation as a key strategy to provide validity and reliability to the results. According to Creswell and Creswell (2018), triangulation aims to find consistency among different types of data to provide a more comprehensive understanding of the phenomenon under study. In this research the analysis was mainly directed by qualitative data, which was examined to identify themes related to students' experiences in the language laboratory. The quantitative information was used to support and verify these qualitative findings, also it was used to provide consistency and reinforce the credibility of the findings' interpretations. This design links the richness of the narratives of the students with the tendencies.

Participants

The participants in this study were 96 undergraduate students who were enrolled in the English Teaching, Systems Engineering, and Tourism Management programs at the Universidad Nacional, Costa Rica, Chorotega Branch. At the time of the study, all participants were either currently enrolled in an English course that required the use of the multimedia language laboratory, or they had completed such a course during the year 2024.

In terms of English proficiency, and according to the Common European Framework of Reference for Languages (CEFR), most participants were estimated to be between levels A1 and B1. Although no standardized placement test was administered to determine their exact proficiency levels, the course syllabi were designed to help students achieve competence within this range.

All participants had attended at least ten sessions in the multimedia language laboratory. Each English course that involved the laboratory required students to attend lab sessions at least once per week throughout the semester.



Participation in the study was voluntary. Students were invited to complete an online survey, and the consent was obtained through an introductory statement in the Google Forms instrument, which explained in Spanish that participation was voluntary, responses would remain anonymous and confidential, and the information would be used only for academic and research purposes. Only students who had used the multimedia language laboratory for at least ten in a course that required its use were included in the study, those who had never used the lab or taken such a course were excluded. The participants' ages ranged from approximately 17 to 30 years old. The inclusion of students from the English Teaching, Systems Engineering, and Tourism Management programs was based on the accessibility of these populations, as they were the ones whose English courses required the use of the multimedia language laboratory.

Instrument

This study used a questionnaire that was designed specifically for this investigation to collect both quantitative and qualitative data. It was divided in two main sections: the first one with closed-ended questions and the second one with open-ended questions. It was written in Spanish to make sure that participants could fully understand it (as all respondents were native Spanish-speaking university students).

The first section contained 15 closed-ended questions that were divided in four categories: (1) Confidence, Motivation, and Emotions in the Laboratory; (2) Development of Language Skills; (3) Technological Resources and Technical Conditions; and finally (4) Pedagogical Use and Utility of the Laboratory. These items were based on a Likert scale with options from "Totally Agree" to "Totally Disagree," and its objective was to measure students' level of agreement with statements related to their experiences in the MLL. This section also included demographic questions related to the academic level, major, the number of courses in which the laboratory was used, and an estimated number of sessions held in that place.

Then the second section had 11 open-ended questions that asked for more details about students' feedback on the language laboratory. These questions were aligned with the same categories and explored aspects like motivation, overall confidence, accessibility to technology, and the lab's effectiveness to develop language skills.

The instrument was created by the research team, and it was checked by two external experts in language education and research methodology. A pilot test was carried out before the final application, this to ensure the comprehensibility and relevance of all questions. The data was collected online using the Google Forms platform, with the assistance of the course instructor and one member of the research team, whose task was to guide the participant during the process in case of doubts.

Data Analysis Procedure

The information was collected using Google Forms, the instrument had open-ended and closed-ended questions. The first type of questions provided qualitative information about the student's perceptions and experiences, while the second type of questions collected information about the level of agreement with some specific statements. To analyze this information a mixed method approach was used, first, the qualitative elements were examined, this identify key patterns and meanings; and then the quantitative results were analyzed to confirm the emerging patterns.



The survey questions were organized according to four predefined categories, the first was *confidence, motivation, and emotions demonstrated during the laboratory*. The second category was *The development of language skills*; the third category was *Technological resources and technical conditions*; and finally, the fourth category was *Suggestions for improvement and overall assessment*. The qualitative analysis was carried out following this structure, three researchers participated in the interpretation process, and the findings were discussed in group to validate and reduce any subjective bias. At the end, triangulation between data sources was employed to improve reliability and to connect the perspectives of the participants with previous research findings.

Analysis and Discussion

Category 1. Confidence, Motivation, and Emotions in the Laboratory

In this survey section we examine the way students evaluate the multimedia language laboratory in terms of emotions and the way it influences their confidence and motivation when they use the English language. It focused more on affective factors like anxiety reduction, comfort, and engagement, it also made emphasis on how the design of the lab and technological tools (headsets and intercom systems) helped to create a safe and supportive space for communication.

Through the analysis, it was observed that 28 of the total students saw the laboratory as a place where they could feel more confident, comfortable, and less nervous at the moment of using English. Students expressed that the lab with gave them privacy and reduced their anxiety (since they did not have to speak in front of others). For example, one student said “Me sentí cómodo porque no había gente viéndome cuando estaba presentando o diciendo algo” (I felt comfortable because there were no people watching me when I was presenting or saying something). Another participant said, “cuando hablo por los auriculares me siento más seguro porque no veo directamente a la persona con la que estoy hablando” (When I speak through the headphones, I feel more confident because I don’t see the person I am talking to directly). These comments agree with findings from Agrawal and Sethi (2020), who found that the privacy provided by headsets strengthens a student’s oral expression and reduces affective barriers such as fear and nervousness that would be present when speaking with a peer or other person.

Regarding the feeling of motivation, 17 students reported an improved in interest due to the frequent interaction. When they work in pairs or groups through the audio system, students feel that this helps them to practice English naturally and without fear of judgment. Several students said they felt proud when they could understand or express themselves better than before, which is something that shows that the lab promotes autonomy and awareness of progress, this is also related with the findings of Larson (2024), who found that multimedia laboratories foster autonomous learning by allowing learners to repeat activities, self-assess, and take responsibility for their progress. Activities like singing, oral presentations, and listening tasks were also mentioned as enjoyable and rewarding experiences that increased their motivation, this is, at the same time,



consistent with Osaka's (2024) who wrote that multimedia equipment made learning more interactive and engaging.

But there is a less positive view of the lab, in this case 9 students had neutral or absent emotional experiences. They indicated that the lab environment did not affect their confidence very much. Despite this, the general tendency shows that the multimedia lab supports emotional well-being and motivation especially because it lowers anxiety and it provides a safer space for oral practice.

The rest of the comments (37) focused on general satisfaction and practical benefits of the lab, for example having better sound quality, easier group formation, and more opportunities for listening and pronunciation practice. Although these responses were not explicitly emotional, they still reflect a positive connection between technology use and learning comfort, which suggests that even when emotions were not directly mentioned, the lab environment contributed to a sense of support and engagement. These results are consistent the literature that views MLLs as spaces that promote both communicative and affective development when well-integrated into the teaching process (Calderona et al., 2016; Osaka, 2024). Table 1 shows a summary of the answers provided to the question.

Table 1. Factors increasing students' levels of motivation and confidence to speak English in the MLL.

Theme / Pattern	Number of Mentions	Percentage
Feeling confident or comfortable due to privacy/headsets	28	31%
Motivation and pride during oral presentations or singing	17	19%
Better understanding or performance in listening/exams	14	15%
Positive interaction with peers or teacher (via audio)	13	14%
General comfort/enjoyment in the lab environment	10	11%
No special or negative emotional experience	9	10%

Note: Levels of motivation and confidence.

To explore students' emotional and motivational experiences in the multimedia language laboratory, participants were asked "Which features of the MLL make you feel more comfortable or motivated to speak English?" This question tried to identify the specific environmental and technological factors that fostered or hindered their confidence and willingness to speak. The responses here provided useful information about the way in which features like privacy, sound quality, and interaction affect the affective dimension of students during oral activities.



Some students (38 in total) expressed that the multimedia language laboratory provides them with a sense of privacy and comfort, which increases their confidence when they speak English. The majority clearly expressed that the headphones and cubicles help them feel less observed, and this reduces their anxiety and fear of making mistakes. For example, one participant mentioned, “Porque nadie me ve, solo escuchan” “Because nobody sees me, they only listen” with this it is possible to notice that visual anonymity is necessary to create a more relaxed atmosphere. Another student said, “la manera en que está distribuido me hace sentir más tranquila porque el profesor puede escuchar y dar retroalimentación” “The way it’s distributed makes me feel more confident because the teacher can listen and give personal feedback”

Previous studies confirm the findings that describe how multimedia laboratories improve oral expression by providing privacy and safety with headsets and individualized spaces. As Agrawal and Sethi (2020) explain, these features help students “improve pronunciation and express themselves more freely” because they reduce the social pressure that often accompanies oral practice. In a similar manner, the results of this study revealed that students perceive the MLL as a supportive environment that reduces emotional barriers, promotes self-confidence, and encourages active participation. Also, some students really liked the possibility to interact in pairs or small groups, which supports the observation of Calderona *et al.* (2016), the author stated that collaborative laboratory environments improve motivation and pronunciation.

In summary, the data show a pattern of emotional safety and confidence that is related to privacy and auditory tools, then it is followed by peer interaction and sound quality as secondary motivators. The above observations may indicate that the laboratory not only supports linguistic practice, but it also responds to affective factors that facilitate oral participation, and this aligns with the pedagogical advantages described in the literature. Table 2 presents the thematic categorization and frequency of students’ responses to the question “What aspects of the laboratory make you feel more motivated or more confident to speak in English?”.

Table 2. Aspects of the laboratory that make students feel more motivated or more confident to speak in English.

Category / Emerging Theme	Description	Frequency (out of 89)	Percentage
Privacy and feeling less observed	Mentions of privacy, cubicles, partitions, or not being seen	38	43%
Headphones and sound quality	Reference to headphones, microphones, or clear audio	27	30%
Interaction and teamwork	Mentions of group work, pair work, or communication with peers	11	12%
Teacher interaction / feedback	Mentions of teacher listening or giving feedback	5	6%



Calmness, concentration, or comfort	Mentions of tranquility, concentration, or comfort in the space	5	6%
Negative / neutral responses	Responses indicating no difference or discomfort	3	3%

Note: Aspects related to the laboratory that increase students' level of motivation and confidence.

On the other hand, the results from the closed-ended questions show a very positive general trend toward the laboratory environment and its influence on students' confidence, motivation, and emotions when speaking English. More than half of the participants (55.2%) agreed that the lab environment helps them feel less nervous, while only 8.4% disagreed. Also, 69.8% preferred doing activities such as recordings or oral exercises in the lab because it allows them to work without feeling judged. These quantitative findings support the qualitative observations that described how students see the MLL as a space that is safe and free of pressure, this supports their self-confidence and reduces anxiety when they practice the English language.

It was also possible to gather other interesting and confirming information. For example, 70% of the respondents reported that they feel more confident speaking English in the language lab, and 52.1% expressed that using the lab had increased their confidence to speak in class. 68.8% expressed a desire for more opportunities to practice in pairs or small groups within this space, all this shows a high level of motivation and the perception that the lab encourages active and collaborative learning. These results reinforce the idea that the laboratory provides a technologically suitable environment and also represents an emotionally supportive space that fosters oral practice and confidence when using English.

To complement the qualitative analysis, descriptive measures of central tendency and dispersion were calculated (see Table 3). The mean values were between 4.10 and 4.53, this showed a clear tendency toward agreement with the statements related to confidence, motivation, and positive emotions in the lab. Also, the relatively low standard deviations (0.84 to 1.17) indicated that participants' perceptions were consistent across the group.

Table 3. Mean scores and standard deviations related to the students' given statements regarding their perception of the laboratory.

Item	Mean (M)	Standard Deviation (SD)
The laboratory environment helps me feel less nervous when practicing English.	4.15	1.17
I prefer to practice certain activities (recordings, oral exercises) in the lab because I can work without being judged by others.	4.53	0.84



Using the laboratory has increased my confidence to speak in class.	4.1	1.13
I feel more confident when speaking English in the language laboratory.	4.27	0.97
I would like to have more activities in the lab that allow me to practice in pairs or small groups.	4.4	1.05

Category 2. Development of Language Skills

This category focuses on how students perceive the multimedia language laboratory as a space that supports the growth of their listening, speaking, and pronunciation abilities in English. It explores the ways in which different activities, like for example pair conversations, listening exercises, and oral practice using technological tools, contribute to improve communication skills. As of the first open-ended question from this section, “¿Cuáles de las actividades realizadas en el laboratorio fueron las más efectivas para desarrollar la habilidad oral?”(which of the activities carried out in the lab were the most effective to develop the speaking skill? why?) the following was observed.

The findings from this question show that students perceive *listening* and *speaking* activities, (especially those mediated by *headphones*, *microphones*, and *intercom systems*) as the most effective for developing their oral skills in English. The participants emphasized how these tools made communication feel more private and less intimidating, it helped them to gain confidence and fluency. For example one student explained “las llamadas con otros estudiantes por los headsets me dan confianza para decir lo que pienso sin que me de vergüenza”(The calls with other students through the headphones give me the confidence to say what I think without feeling ashamed). Another mentioned, “hablar por el intercomunicador me hace sentir menos nervioso al hablar” (Speaking through the intercom makes me feel less nervous to talk). The answers in this part show that the MLL facilitates linguistic practice and it also reduces anxiety, it creates the relaxed environment Krashen (1982) saw as essential for language acquisition in his Affective Filter Hypothesis.

The previous observations agree with other previous studies that showed that supportive and low-anxiety contexts promote greater confidence and motivation. For example, Sanesi (2023) found that classrooms that are emotionally supportive lower the affective filter, learners can process input in a more effective way, the studies on multimedia language laboratories stress the importance of these spaces to foster comfort and autonomy.

To better understand a student's preferences for practicing their listening and speaking skills, we included two open-ended questions this study. These questions were used to compare students' experiences in the traditional classroom versus the multimedia language lab. The questions were: (1) Between practicing speaking in a classroom and in the lab, which place would you choose and why? and (2) Between practicing listening in a classroom and in the lab, which place would you choose and why? The responses to both questions were analyzed to identify patterns and preferences.

Regarding the first question, the majority of students expressed a clear preference for practicing *speaking* in the laboratory instead of working in a traditional classroom. From the 88 responses, 71 participants (81%) chose the lab, and only 8 preferred the classroom, and 9 mentioned both or were indifferent. The reasons for



their main choice in most students were *privacy, comfort, concentration*, they said that using *headphones and microphones* helps them speak more freely, without fear of judgment or distraction.

To illustrate the above information, one participant said, “Prefiero el laboratorio porque me siento más seguro y cómodo al usar el equipo...me puedo concentrar y sentir más seguro ya que solo una persona me escucha” (I prefer the laboratory because I feel more secure and comfortable using the devices... I can concentrate and feel more confident since only one person listens to me). Another student mentioned, “en el laboratorio no tengo que ver a la gente directamente a la cara entonces me siento menos nerviosa” (*In the lab, I don't have to face people directly, so I feel less nervous*). As can be inferred from the students' comments, the technological and spatial design of the laboratory creates an atmosphere with low-stress that facilitates oral communication.

When it was asked if they preferred practicing *listening* in the classroom or in the multimedia language laboratory, almost all the students chose the laboratory. Out of the 86 responses, 78 participants, equal to 91%, expressed this preference, while only 7% preferred the classroom and 2% were indifferent. In promoter feedback the most common positives were better sound quality, clarity, and concentration due to the use of headphones and the quiet environment.

It was described by students that the lab was a place where they could listen better, understand more, and concentrate easily in the absence of noise. One student shared the following: “En el laboratorio me puedo concentrar completamente en el audio porque los headphones reducen los ruidos de fondo”, translates to “In the laboratory, I can concentrate completely on the audio because the headphones block outside sounds”. Another one said, “en el lab es más fácil entender y escuchar porque el audio es mejor” (*In the lab, it's easier to understand and listen since the audio quality is better*). Based on the previous comments, it appears that the reduction of external noises in the MLL helps students perform better, (or at least perceive it that way) in highly demanding cognitive tasks that require a lot of concentration.

In spite of the clear preference to practice listening in the MLL, one participant gave a more reflective perspective, indicating that “practicar listening en el laboratorio es una espada de doble filo porque en la vida real tenemos que acostumbrarnos a ruidos de fondo y diferentes acentos en inglés” (practicing listening in the laboratory is a double-edged sword, because in real-life situations or jobs we have to get used to background noise and different ways of speaking in English). This comment was remarkable because it aligns with what Brenes and Viales (2019), based on the results of their study, the authors claim that listening exercises should simulate authentic communication conditions, including background and competing noises, to better prepare learners for real-world comprehension challenges. This student's remark supports the notion that there should be some pedagogical balance, although the laboratory provides an ideal, low-stress environment for listening practice, it should also incorporate authentic, noisy, and variable input to simulate real life experience.

Regarding the closed-ended questions, the statistics confirm the positive perception that students have toward the multimedia language laboratory in relation to the present category. All the three items yielded high mean scores (between 4.38 and 4.49) with relatively low standard deviations, this means a general agreement and consistency among participants, these results one more time align with the qualitative findings explained above, where students emphasized that the lab's technological tools (like headsets, microphones, and the intercom) facilitate listening and speaking practice by improving clarity, focus, and confidence. The





quantitative and qualitative evidence demonstrates that the laboratory provides very good conditions for language learning, it supports the comprehension and completion of listening and oral activities using a low-anxiety environment. Table 4 shows two statistical scores that support the positive perception of the MLL.

Table 4. Mean scores and standard deviations related to the statements given by the students regarding development of language skills.

Item	Mean	Standard Deviation (SD)
The language laboratory helps me develop my speaking skill.	4.38	0.93
It is easier for me to understand an audio or video when it is played through the laboratory's audio system.	4.49	0.88
It is easier for me to understand when the teacher speaks to us in English through the intercom.	4.47	0.89

Note: Development of language skills.

Category 3. Technological resources and technical conditions

This category focuses on students' perceptions of the technological aspects and physical conditions of the multimedia language laboratory. It explores how the availability, quality, and functionality of technological tools (like computers, headsets, and audio systems) influence their learning experience. The category also examines students' views on maintenance, equipment performance, and the overall technical support that enables or limits their interaction and participation during the sessions in the laboratory. In total, two questions were asked, the first one was ¿Qué cambiaría en la forma en que se utiliza actualmente el laboratorio de idiomas? (What would you change about the way the language lab is currently used?) while the second one was "En general, ¿cuál es su opinión sobre el laboratorio de idiomas? ¿Qué le gusta más o qué no le gusta?" (In general, what is your opinion about the language lab? What do you like the most and what do you dislike?)

Through the analysis of students' responses for the first question, it was observed that 22 out of 67 participants were satisfied with the current use of the multimedia language laboratory. Many said they would not change anything, which shows a general sense of comfort and approval, however 12 students mentioned that technical problems like broken headphones or poor audio sometimes limited their interaction. Others (8 participants) said they would like to use the lab more often, and a smaller group (6 students) suggested that classes should include more speaking and group activities to make the experience more communicative. One student explained "Tal vez deberíamos practicar más speaking en lugar de solo recibir clases" (Maybe we should practice speaking more when we go to the lab instead of just receiving lessons), while another one added, "Cambiaría dos cosas muy importantes, los headphones porque varios no funcionan, y capacitar a los



profesores que usan el lab” (I would change two very important things, the headphones because several do not work, and train the teachers who use the lab).

These observations are also consistent with Larson (2024) and Calderona *et al.* (2016), who wrote that the success of multimedia language laboratories depends not only on the technology itself but also on how it is used to promote interaction and communication. In this study, students valued the laboratory’s potential for learning but wished it were used more dynamically and collaboratively. In general, the pattern shows that improving technical conditions, teacher training, and opportunities for pair or group work could make the lab a more supportive and motivating environment for language practice which is consistent with the principles of the Affective Filter Hypothesis and current literature on MLLs. Table 4 summarizes the answers to the question “what would you change about the way the lab is used?”

Table 5. Changes students manifested would like to make in the MLL at the UNA, campus Liberia.

Type of Response	Number of Mentions	Example or Summary
No changes / satisfied	22	"Nothing," "Everything is fine."
Improve or repair equipment (audio, headsets, etc.)	12	"The headphones don't work," "Improve sound quality."
Use the lab more frequently	8	"Use it more often," "Give more opportunities of use."
More speaking / group interaction activities	6	"Practice more speaking," "Do more group work."
Expand or reorganize space	5	"More space," "Smaller dividers."
Teacher training and better management	4	"Professors should know how to use it."
Add or update technological resources	3	"Add more technological resources."
Internet connection issues	1	"There is no good internet."

Note: Changes suggested by the students.

Regarding the second question in this category, the analysis of students’ opinions about the language laboratory revealed that general perceptions were highly positive. Most participants (63 out of 92) expressed satisfaction with the lab, they emphasized that it is “un lugar cómodo y seguro para aprender” (a comfortable and safe place to learn) and “una excelente herramienta para practicar y mejorar el inglés” (a great tool for practicing and improving English). Many students also liked the privacy and confidence of the lab for speaking tasks, this means that the physical and technological setup helps reduce anxiety, in total, 15 students mentioned that they feel motivated and more engaged because the environment makes classes more dynamic and enjoyable.



Nevertheless, a few other students mentioned specific issues that affect participation and communication. For example, they complained about the presence of dividing panels between cubicles because, according to them, they obstruct the view of the whiteboard and make the interaction more difficult. One student explained: “no me gustan las paredes entre las mesas, bloquean la visibilidad y dificultan ver a mis compañeros” stating “I don’t like the walls between desks, they block the view and make it hard to see my classmates”. This is covered by Huang and Liu (2000) in regards to the problem of physical limitations. Others mentioned technical limitations such as broken headsets, poor audio quality, or limited opportunities to use the lab for communicative activities. Despite these challenges, most reviews reflected appreciation and enjoyment, proving that students perceive the laboratory as a valuable and motivating space for interaction.

In reference to the closed-ended questions, many participants that the lab helps them develop their skills in more effectively. 82.5% saw an improvement on speaking skills and understand audio and video materials more easily. Another 84.5% indicate that they comprehend better when the teacher communicates through the intercom. These numbers and results indicate that technological mediation plays a vital role to facilitate comprehension and oral production in English.

Category 4. Suggestions for improvement and overall assessment

The goal of this section was to gather students' opinions and recommendations about how the multimedia language laboratory could be improved to better support their learning experience. It was based on two open-ended questions: 1) “¿Considera que el laboratorio debería estar equipado con alguna otra facilidad o característica tecnológica? (por ejemplo tablets, computadoras etc?” (Do you think the laboratory should be equipped with any other facility or technological feature (for example, tablets, computers, etc)? and 2) “En general, ¿Cuál es su opinión del laboratorio de idiomas? ¿Qué le gusta menos o más” in English “in general, what is your opinion about the language laboratory? What do you like the most or dislike?” Findings for this section highlight the need for more technological resources like better internet connection and better classroom equipment.

Responses to question one, prove that most students agreed that the laboratory requires more technological resources like computers and tablets. Learners believes these tools are essential to make class activities more interactive and inclusive. From the 79 responses, computers were mentioned 30 times and tablets 23 times, while 10 students asked for better internet or electricity access, and only 9 participants said no improvement was needed, so it is evident that there is a widespread desire for modernization and more support for digital tasks. Students explained that if they had computers or tablets these would allow them to complete online tests and classwork more easily. One participant said, “Sí, deberían haber computadoras que permitan hacer exámenes o prácticas, de acuerdo si es speaking, writing, listening, o reading” (Yes, there should be computers that allow us to take exams or complete exercises for speaking, writing, listening or reading).

Others talked about the way tablets could make learning smoother and reduce the use of paper, for example this student said, “Me gustaría que estuviera equipado con tablets para trabajos más rápidos y eficientes sin uso de papel” (I would like it to be equipped with tablets for short exercises without having to use paper). A few other informants also mentioned elements like power outlets or better Wi-Fi connection to use their cellphones. In other words, the suggestions given reflect the idea that a greater technological access would



increase participation, autonomy, and comfort during activities in the laboratory. Table 5 shows a summary of responses and example quotes related to the question “Do you think the laboratory should be equipped with any other facility or technological feature?”.

Table 6. Students' suggestions for equipment changes in the MLL at the UNA, campus Liberia.

Theme / Suggestion	Number of Mentions	Example Keywords / Quotes
Computers	30	"Computadoras", "serían muy útiles", "optimizarían el aprendizaje" (Computers, they would be very useful, they would optimize learning)
Tablets	23	"Tablets", "tabletas", "más rápidas y eficientes" (Tablets, faster and more efficient)
Better internet / Wi-Fi	7	"Mejor internet", "su propia línea de wifi" (Better internet, its own Wi-Fi line)
More electrical outlets / connectors	3	"Toma corrientes", "pocos enchufes" (Power outlets, few plugs)
Better visibility / projector equipment	3	"Mejor visión para el proyector", "pantalla más alta" (Better visibility for the projector, higher screen)
No improvement needed	9	"No", "así estamos bien", "no es necesario" (No, we are fine like this, not necessary)
Other / unsure	4	"No sé", "tal vez", "podría ser" (I don't know, maybe, it could be)

Note: Suggested equipment changes.

Regarding the second question in this category (“In general, what is your opinion about the language laboratory?”), most students shared a very positive opinion about the multimedia language laboratory, they described it as a comfortable, private, and dynamic space for learning, many participants also said that the lab helps them feel more confident and focused when practicing English, specially during listening and speaking activities. As one student shared, “*Me gusta porque se practica con más confianza*” (“I like it because you can practice with more confidence”), while another one asserted the following: “*En general me gusta cómo es la dinámica, da confianza y privacidad*” (In general, I like how the dynamic works; it gives confidence and privacy).

These ideas and comments are interesting because they are proof that the lab environment contributes to reduce anxiety and encourages participation, which goes hand in hand with the general goal of fostering a more positive affective experience during language learning. Although there was a general satisfaction, several students identified aspects that could be improved. For example, there seems to be a need for better



internet connection and updated or additional equipment, as well as a more open design, this claim is based on the feedback mentioned before, where some students said that the dividers between cubicles make it difficult to see the board or to interact visually with classmates. However, this last suggestion must be taken with caution; it is important to remember that many other students previously expressed their satisfaction with the lab due to the privacy it gives them at the moment of speaking.

Other participants said that the internet connection and the condition of some devices was not the best. Students believe that if more technological resources are provided, the learning experience will be even more effective. The information collected also made evident the need for technological modernization, devices like tablets and computers were often suggested, as well as electrical connections and a better internet access.

Conclusions

It is clear that the multimedia language laboratory plays an important role in improving the way students learn the English language. It was confirmed that it supports their confidence, motivation, and emotional well-being. The equipment such as cubicles, headsets, and the intercom system help reduce anxiety by providing privacy and lowering the fear of being judged, the comfort shown by students when using the MLL can be matched with Krashen's affective filter hypothesis, the majority of learners reported that they felt safer and more willing to participate orally in this environment. This is relevant because it means that technological mediation and equipment increase clarity and focus, which is necessary for students to make progress in their language learning process.

It is worth mentioning that there was a strong agreement among the students that the lab improves comprehension, the ability for oral expression and, in general, the learning experience. Nonetheless, some important limitations in the technological infrastructure were identified. For instance, technical failures such as broken headsets, poor audio, unstable internet connection, and limited computer resources generate frustration for a portion of students and hinder the potential of the laboratory. These suggestions provided by the students must encourage educators and administrative staff to reflect on the need for modernization and push for more equipment such as computers and tablets, improved connectivity, and better maintenance. These concerns are similar to the type of challenges that are usually associated with MLLs in the literature, for example, rapid obsolescence, a need for constant maintenance requirements, and updates to stay relevant in terms of pedagogical practices.

In summary, this study revealed that the effectiveness of the laboratory depends not only on technology but also on pedagogical use and teacher mediation. Students valued instructors who used the tools in a confident manner and create dynamic interactive activities. Students expressed a need for better communication tasks, more frequent lab usage, and improved training for teachers in the platform. The results describe the MLL as a highly valued learning environment in which the success depends on reliable technology and pedagogical mediation. In order to maximize the lab's potential, a significant investment from the learning institution is required. With this study we provide compelling data for educators and students to urge their institution to modernize their equipment and teacher preparation if they wish to improve their language courses.





References

- Abdykhalykova, A. Turuşeva, L. Beysembayeva, Z. Dukembay, G. (2020). Multimedia technologies in teaching a foreign language, Rural Environment. Education. Personality.13
- Agrawal, S. Sethi, D. (n.d). Multimedia language lab: technology in English language learning. AISECT University.
- Agrawal, S., & Sethi, D. (2020). Multimedia language lab: technology in English language learning. RNTU Journals.
https://rntujournals.aisect.org/assets/upload_files/articles/c0e00333078025cb2d77e33c4573d94b.pdf
- Al-Mutairi E. (2025) The Impact of the affective filter in the acquisition of English among college students in Kuwait. The Asian Conference on Education 2024: Official Conference Proceedings (pp. 1095-1106)
<https://doi.org/10.22492/issn.2186-5892.2025.95>
- Brenes-Zúñiga, J. Angulo-Viales, J. (2019). Supporting the English listening comprehension skill in a costa Rica's rural high school: the use of teacher-recorded listening exercises modified with background noises. Revista De Lenguas Modernas, (30). Recuperado a partir de
<https://archivo.revistas.ucr.ac.cr/index.php/rlm/article/view/38983>
- Bute, A. (2022). Language laboratory: communication skills. International Journal of English Literature and Social Sciences, 7(2). DOI: 10.22161/ijels
- Calderona, J., Nussbaum, M., Carmach, I., Díaz, J., & Villalta, M. (2016). A single-display groupware collaborative language laboratory. Interactive Learning Environments, 24(4), 758–783.
<https://doi.org/10.1080/10494820.2014.917111>
- Chen, Y. (2022). Analysing the impact of the affective filter hypothesis on teaching spoken chinese as a foreign language. The Educational Review, USA, 6(9), 516-518.
<https://doi.org/10.26855/er.2022.09.012>
- Creswell, J., & Creswell, J. (2018). Research design: qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE.
- D'Souza, F., & Padmanabha, C.(2024). Krashen's second language acquisition, a theory or hypothesis: an analytical study. i-manager's Journal on English Language Teaching, 14(3), 43–48.
<https://doi.org/10.26634/jelt.14.3.20897>
- Garett, P. & James, C. (2013). Language Laboratories. En M. Byram & A. Hu (Eds.), Routledge encyclopedia of language teaching and learning (2.^a ed., pp. 333–335). Routledge.
- Guru, B. (2019). Proceeding 1st national conference on teaching innovation 2019. Empowering Teachers for Industry 4.0 Era.
- Huang, S. & Liu, H. (2000). Communicative language teaching in a multimedia language lab, The Internet TESL Journal 6(2). <http://iteslj.org/Techniques/Huang-CompLab.htm>





- Krashen, S. D. (1982). Principles and practice in second language acquisition. Pergamon Press.
https://www.sdkrashen.com/content/books/principles_and_practice.pdf
- Kvasyuk, E., Putistina, O. & Savateeva, O. (2021). The use of multimedia language laboratory in teaching English phonetics at the university. International Scientific and Practical Conference "Professionalism of a Teacher: Psychological and Pedagogical Support for a Successful Career. 113
- Larson, J. (2024). The rise and fall of the language Lab: a cautionary tale for SALCs. Relay Journal, 6(2).
https://researchmap.jp/larson/published_papers/46039743
- Popova, O., Piskurska, H. Skyrda, A. Vereshchak, O. (2024). Using multimedia language lab to develop linguo-cultural competence. International Journal of Evaluation and Research in Education, 13(6).
- Sanesi, M. (2023). High school students' affective filter in second language acquisition: causes and solutions. Pedagogy. Theory & Practice, 8(3). <https://doi.org/10.30853/ped20230049>
- Scholes, J. (2011). Strategic role-plays in a paired testing format: putting a language lab into a rational pedagogical use. Texas Papers in Foreign Language Education, 15(1).
- Shane, M. & Lacey, H. (1961). Laboratories for foreign language teaching. Educational Leadership. Association for Supervision & Curriculum Development.
- Vanisree, M., Sakila, S., Sharma, R., Nair, H., Sunalini, K., Lalitha, M., & Mary, M. (2024). Enhancing English language acquisition through virtual labs: An exploratory study. Library Progress International, 44(3). <https://doi.org/10.48165/bapas.2024.44.2.1>
- Wang, L., & Wu, X. (2020). Influence of affective factors on learning ability in second language acquisition. Revista Argentina De Clínica Psicológica, 29(2), 1232. <https://doi.org/10.24205/03276716.2020.365>
- Zen, E., & Apriana, A. (2015). Contributing factors toward first and second language acquisition; a manifestation of Krashen's affective filter hypothesis. Paper presented at The 2nd Forum on Linguistics and Literature (FOLITER) UIN Maliki Malang, Indonesia. Retrieved from:
https://www.researchgate.net/publication/320180886_Contributing_Factors_toward_First_and_Second_Language_Acquisition_a_Manifestation_of_Krashen's_Affective_Filter_Hypothesis

