UNIVERSITY OF EL SALVADOR
SCHOOL OF ARTS AND SCIENCES
DEPARTMENT OF FOREIGN LANGUAGES

TITLE:

CREATION OF TEACHING MATERIALS THAT INCORPORATE AI TO FACILITATE LEARNING

PRESENTED BY:

IN ORDER TO OBTAIN THE DEGREE OF:

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INFORME FINAL DE CURSO DE ESPECIALIZACIÓN ADMINISTRACIÓN DE AMBIENTES VIRTUALES PARA LA ENSEÑANZA Y APRENDIZAJE DE IDIOMAS EXTRANJEROS

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I. ABSTRACT

Artificial Intelligence is changing the education system since it is using algorithms to complete duties that humans usually perform, such as analytical problems and administrative tasks. AI in education boosts teaching and learning because it provides smart tutoring technologies, adaptive learning environments, and online learning tools. The inclusion of AI in educational environments enables educators to elaborate customized learning materials, follow up learner performance and adapt the content of the course in real time in order to support students' learning needs. AI Based tools like chatbots, automated scoring systems, and learning games raise learners' engagement and lower teachers' time and effort. The advancement of AI technologies from rule-based systems to advanced learning technologies has enhanced AI's ability to offer customized educational experiences, giving important advantages for learners and educators. Additionally, AI provides easy access for students with special needs and assists to cross geographical barriers by facilitating global access to online learning resources. This report examines the role of AI in education, considering its ability to transform the creation and delivery of learning materials while increasing educational efficiency and effectiveness. The results of the specialization course on managing virtual environments for teaching and learning foreign languages are also included in this report. The main goal of this course was to give educators the abilities and information they would need to efficiently plan, develop, and oversee online learning environments, improving the way language lessons are delivered.

Participants developed their skills in the use of digital tools, encouraging student participation, and building inclusive and dynamic virtual classrooms through hands-on applications. It outlines the most important lessons learned, the difficulties encountered, and suggestions for future teachers looking to improve their online instruction of foreign languages. *Key words: Artificial Intelligence (AI), student progress, educational technology, teaching materials, virtual environments.*

RESUMEN

La Inteligencia Artificial está cambiando el sistema educativo, ya que utiliza algoritmos para realizar tareas que habitualmente desempeñan los humanos, como problemas analíticos y tareas administrativas. La IA en la educación impulsa la enseñanza y el aprendizaje porque proporciona tecnologías de tutoría inteligente, entornos de aprendizaje adaptables y herramientas de aprendizaje en línea. La inclusión de la IA en los entornos educativos permite a los educadores elaborar materiales de aprendizaje personalizados, hacer un seguimiento del rendimiento de los alumnos y adaptar el contenido del curso en tiempo real para apoyar las necesidades de aprendizaje de los estudiantes. Las herramientas basadas en la IA, como los chatbots, los sistemas automatizados de puntuación y los juegos de aprendizaje, aumentan el compromiso de los alumnos y reducen el tiempo y el esfuerzo de los profesores. El avance de las tecnologías de la IA desde los sistemas basados en reglas hasta las tecnologías de aprendizaje avanzadas ha mejorado la capacidad de la IA para ofrecer experiencias educativas personalizadas, lo que supone importantes ventajas para alumnos y educadores. Además, la IA facilita el acceso a los alumnos con necesidades especiales y ayuda a superar las barreras geográficas facilitando el acceso global a los recursos de aprendizaje en línea. Este informe examina el papel de la IA en la educación, considerando su capacidad para transformar la creación y la entrega de materiales de aprendizaje, al tiempo que aumenta la eficiencia y la eficacia educativas. En este informe también se incluyen los

resultados del curso de especialización sobre gestión de entornos virtuales para la enseñanza y el aprendizaje de lenguas extranjeras. El objetivo principal de este curso era brindar a los educadores las habilidades y la información necesarias para planificar, desarrollar y supervisar eficazmente los entornos de aprendizaje en línea, mejorando la forma en que se imparten la enseñanza de los idiomas. Los participantes desarrollaron sus habilidades en el uso de herramientas digitales, fomentando la participación de los estudiantes, y construyendo aulas virtuales inclusivas y dinámicas a través de aplicaciones prácticas. En este informe se resumen las lecciones más importantes aprendidas, las dificultades encontradas y las sugerencias para futuros profesores que deseen mejorar su enseñanza de lenguas extranjeras en línea. *Palabras clave: Inteligencia Artificial (IA), progreso del alumno, tecnología educativa, materiales didácticos, entornos virtuales.*

II. INTRODUCTION

The creation of teaching materials that include Artificial Intelligence (AI) has generated significant progress in the educational field. AI offers different innovative tools that allow the learning process to be personalized and made more productive, adapting to the teaching needs of each student and facilitating a more dynamic and interactive educational environment. This report seeks to know which tools and applications are being most used or approved by teachers for the creation of materials and how those benefit both teachers and students.

Therefore, in this report we will learn how teachers can create different resources that, in addition to presenting content, also allow them to interact with students in real time. AI tools allow teachers to identify areas of difficulty and thus personalize activities. In addition, through AI, student progress can be analyzed and difficulty levels adjusted to maintain challenge and motivation. We can use different tools, which we can identify the categories to give each tool the most productive use. Incorporating AI into teaching materials offers an opportunity to make education more personalized, interactive, and efficient, in order to provide students with quality instruction and help them reach their full potential.

The Design of Teaching Materials for Virtual and Face-to-Face Environments requires a large part of the teacher's time; however, the use of AI and different interactive tools reduces the time to prepare the material and helps update

the way in which educators and students interact. This report will give a brief explanation of the tools and applications that have been studied in the specialization course, which was divided into three modules, each of these consisting of 8 weeks of study, in which different activities and exercises to be carried out were presented. The information of each module is divided into weeks and in these we can see the learning obtained. In addition, we have added the achievements that were obtained with this specialization course, as well as some recommendations addressed to the authorities of the Foreign Languages Department for improvements in the specialization course for future students.

III. OBJECTIVES

3.1 GENERAL OBJECTIVE:

To explain the importance of innovative teaching materials that leverage artificial intelligence (AI) in the efficacy of language acquisition and teaching in virtual environments, thereby improving learning outcomes for students in foreign language courses.

3.2 SPECIFIC OBJECTIVES:

· To examine the impact of AI integration on the effectiveness of teaching materials and student learning results in virtual foreign language courses, to refine and optimize instructional strategies.

· To describe the different academic activities carried out in 3 modules of the specialization course Administration of Virtual Environments for Foreign Languages Teaching and Learning.

IV. THEORETICAL FRAMEWORK

Before diving into AI's function in the education space, let's define this technology in general terms. Artificial intelligence allows machines to execute tasks that have traditionally required human cognition. AI-powered programs and devices can make decisions, solve problems, understand and mimic natural language and learn from unstructured data (Hamilton, 2024).

The inclusion of artificial intelligence (AI) in education has been a gradual but transformative evolution, transforming the way teaching and learning dynamics are structured. The main objective of integrating AI into educational environments is to improve the efficiency and effectiveness of educational procedures, focusing on individual learning requirements. Artificial intelligence in the field of education covers a wide range of topics, a variety of uses such as intelligent tutoring systems, adaptive learning platforms, and computer-generated experiences in a simulated environment.

These technologies use machine learning algorithms to assess student progress, offer individualized feedback, and establish interactive learning settings. The summary of AI's role in education sets the stage for examining advancements in these technologies, focusing on the integration of teaching methods and technological progress.

Artificial Intelligence (AI) offers improvements in the learning process of students through the creation of teaching materials. The teacher can adapt the materials taking into account the needs of the students and their progress. An automatic learning sequence can analyze student performance and adjust content, difficulty, and pace of learning in real time. AI-based tools can generate and adapt interactive content, such as exercises, games, and simulations, which fit each student's responses and learning style. Chatbots and virtual assistants can offer personalized help and answer questions in real time, guiding students through problems and providing instant feedback. In addition, AI facilitates continuous assessment by analyzing data on student performance with tracking of learning progression, including knowledge and understanding and uses the findings to enhance the capabilities of the system to customize content to the students' needs and capabilities, which motivates students and leverages personal capabilities to enhance uptake and retention (Chen et al., 2020).

4.1 Progress of Artificial Intelligence Technologies:

The progress of AI in education reflects the overall developments in the field of artificial intelligence. Initially, early uses of AI in education focused on rule-based systems and basic decision systems. However, the introduction of AI in education, specifically deep learning, marked a new era for AI in education characterized by greater complexity. Natural Language Processing and

computer vision advancements improved AI educational tools, allowing for more personalized learning experiences through tailored interactions. The progression of AI technologies in education involves moving away from rule-based systems to advanced, adaptive algorithms that can analyze large volumes of data to customize educational content and experiences for each learner's profile.

4.2 Benefits of AI in Teaching Materials

Artificial intelligence offers a variety of advantages for designing and delivering online courses, including opportunities for improvement.

Content creation efficiency:

AI can easily generate and refresh educational material, relieving educators from complex texts. This saves time and also makes sure that content stays current and relevant.

Engagement:

Increased Student engagement. Artificial intelligence can serve as a strong partner in maintaining student engagement and motivation. Analyzing specific learning behaviors allows adaptive AI tools to customize how content is delivered, meeting the needs of each student learning type. However, generative AI tools have the ability to learn and apply instructional design principles in course activities.

Assistance in preparing lessons:

AI offers essential assistance to teachers by suggesting multimedia resources, interactive activities, and identifying curriculum gaps, helping to create engaging learning experiences for students. By utilizing AI for lesson preparation, teachers can improve their planning efficiency, boost the quality of instruction, and help students succeed academically.

4.3 Types of AI Tools for Teaching

AI-Powered Educational Games. Game based learning is recognized by teachers and schools, as they have been used since the early days of computer games. Nowadays, the design and incorporation of interactive activities for teaching students is becoming essential. Today's AI-powered games can deliver targeted learning thanks to user-responsive programming (EssayGrader, 2024).

Adaptive Learning Platforms. Educational technology leaders such as Carnegie Learning and Knewton offer adaptive platforms that customize learning activities and content in real time. Continuous assessment allows for immediate feedback and helps the system adjust its approach. Adaptive learning methodologies vary from simple rules-based systems to multifaceted machine learning algorithms (EssayGrader, 2024).

Automated Grading and Feedback Systems. Artificial intelligence systems can free up educators' time and energy for increased student contact by

automating grading, planning, and administrative work. This is a common argument in support of using AI in the classroom (EssayGrader, 2024).

Chatbots for Student Support. At many higher education institutions, university chatbots support learners by responding to admissions queries, connecting students to course information and student services and delivering reminders. Other chatbots can help students: Brainstorm ideas, improve their writing skills, and optimize their study time (EssayGrader, 2024).

Intelligent Tutoring Systems. Often dedicated to a single subject such as math or language, intelligent tutoring systems simulate the one-on-one experience of working with a human tutor. Examples include the Duolingo app and Khan Academy 's Khanmigo tutoring system (EssayGrader, 2024).

In terms of accessibility for students, AI tools can help adapt materials for students with special needs, with the intention that more and more students have access to education. For example, text-to-speech conversion or text simplification for students with learning disabilities can be performed. Creating these teaching materials requires careful planning to ensure effective use of the technology.

4.4 The Role of AI in Education

AI is incredibly potent and has the capacity to deeply influence various sectors of society, with the education field being a prime candidate for significant impact from AI. Truly, based on the various articles examined, it is clear that

AI has been taken up and utilized in the field of education, leading to enhancements in various aspects of the sector. Further examination of various sources revealed additional significant discoveries, such as the potential for AI in education to overcome geographical obstacles by housing learning resources online. Engaging in online learning or utilizing web-based platforms allows access to materials globally, and utilizing various AI tools like language translation helps students learn effectively based on their personal capabilities. One of the sectors most influenced by society by AI is education. We have seen from the pandemic and COVID 19 emergency that most of the schools and teachers had to adapt their learning methodology and materials to virtual environments. One important aspect is the capacity of AI to break barriers; it means students from all over the world can with a simple click access multiple virtual material resources.

As mentioned in (Artificial Intelligence In Education: A Review, 2020). The findings showed a time manner appropriate for grading and giving feedback as a result of implementing AI in administration tasks. Furthermore, the creation of customized material for learners; detection and prevention of student´s deficiencies on their learning path. Eventually, the role of AI in education emphasizes on enhancing the learner´s experience as well as creating a crucial impact on educational process features.

	The work AI can do in education
Administration	● Perform the administrative tasks faster that consume much of instructors' time, such as grading exams and providing feedback. ● Identify the learning styles and preferences of each of their students, helping them build personalized learning plan. ● Assist instructors in decision support and data-driven work. ● Give feedback and work with student timely and directly.
Instruction	● Anticipate how well a student exceed expectations in projects and exercises and the odds of dropping out of school. ● Analyze the syllabus and course material to propose customized content. ● Allow instruction beyond the classroom and into the higher-level education, supporting collaboration. ● Tailor teaching method for each student based on their personal data. ● Help instructors create personalized learning plans for each student.
Learning	● Uncover learning shortcomings of student and address them early in education. ● Customize the university course selection for students. ● Predict the career path for each student by gathering studying data ● Detect learning state and apply intelligent adaptive intervention to students.

4.5 Tools to help educators

There is a wide variety of AI tools that can help educators in the creation of teaching materials. The following analysis gathered the most valuable tools based on a group of teacher perception.

As stated in the quantitative survey of 100 Best AI apps for teachers in the classroom, 121 apps were evaluated in 16 categories for 94 participants with 1 vote per category. These are what we consider the most important findings:

The Apps were divided into 16 categories based on their scope of application. Teachers could vote for a single tool per category and even add their own suggestions. Some of the tools proposed could fall into more than one category

due to the multiple functions they offer. So, in order to keep the research within a reasonable range, we assigned each tool to a single category based on its main characteristic (Karageorgakis, 2023).

The following tools are considered to be the most important for the creation of teaching materials for the researchers.

Category: *Image generation*

Tool: *Canva AI*

According to the survey, this tool was the preferred one by educators with 38% of the votes.

What is Canva AI?

Canva's AI image generator lets you choose image variations based on a preferred look and composition. Generate up to 50 images on a Free subscription, or upgrade to Canva Pro for 500 uses per user per month (Canva, 2012).

Create images just writing prompts

Text to Image, which is powered by *Stable Diffusion*, is Canva's answer to generative AI tools like *DALL·E* and *Midjourney*, which generate images based

on natural text prompts. Simply describe the image you want to see, and Canva will attempt to create it.

Of course, the quality of your results will vary based on the prompts you use. Typically, the more details you provide, the better—especially when it comes to describing your image's style (Kane, 2024).

Category: *Language learning*

Tool: *Duolingo MAX*

Learning a foreign language can be challenging, but with the help of AI, things can become much easier. Duolingo's Max takes the crown for the Best Language Learning app with 36% (Karageorgakis, 2023).

What is Duolingo MAX?

Duolingo Max is a new subscription tier above Super Duolingo that gives learners access to two brand-new features and exercises: "**Explain My Answer"** and **"Roleplay"**. Both are powered by the newest, most powerful generative AI technology. We've been working closely with Open AI for months to refine the technology and get it ready for learners! (Salvador, 2023).

What is the "Explain my answer" Duolingo feature?

It offers students the opportunity to go deeper into their reactions during a lesson (regardless of if their answer was correct or incorrect!) After completing specific exercises, users can click a button to initiate a conversation with Duo

and receive a basic explanation as to why their answer was correct or incorrect, and request additional examples or clarification.

What is the "Roleplay" Duolingo feature?

Roleplay in the app enables learners to simulate real-life conversations with fictional characters, helping them improve their communication skills. Students can talk about upcoming vacation arrangements, place an order at a coffee shop, go shopping, or invite a friend on a field trip.

Category: *Content writing*

Tool: Chat GPT

As mentioned in the research, Chat GPT was the leader of this category with a 71% of acceptance between educators.

What is chat GPT?

ChatGPT is an artificial intelligence (AI) chatbot that uses natural language processing to create human-like conversational dialogue. The language model can respond to questions and compose various written content, including articles, social media posts, essays, code and emails. The GPT stands for "Generative Pre-trained Transformer," which refers to how ChatGPT processes requests and formulates responses (Hetler, 2024).

Chat GPT as we can see is an important tool that assist facilitators to create content on those busy days, one important thing to highlight is that this might be a relief or a relax time for educators when they need to plan or design a

considerable amount of content for different classes, but this never has to substitute a real planification or content creation.

Category: *Research*

Tool: Chat PDF

With an advantage of 39% the selected champion of this category was Chat PDF for top research tool.

What is Chat PDF?

It uses sophisticated natural language processing to analyze, understand, and retrieve data from PDFs, giving users prompt and precise answers to their inquiries. Using ChatPDF, you can upload or bring in a PDF file and start asking questions, similar to having a regular conversation.

This tool aids facilitators to comprehend PDF documents, facilitate the research process and also provide space for feedback and colleague discussion on each document.

Category: *Presentations*

Tool: Gamma

Among the apps for creating exceptional presentations, Gamma is a favorite among teachers with 27% of the survey. So, let's learn more about this app.

What is Gamma?

Gamma App is a tool that can create presentations, documents, and websites with AI. However, its functionality is mainly focused on creating presentations. It’s very easy to use and generates quick results.

Advantages

1. Allows you to generate presentations from just one prompt
2. Offers several attractive color themes
3. Allows real time collaboration so teams can work in sync
4. Easy to export and share your gammas
5. Analytics let you see how many times a gamma was viewed
6. Web based platform so you can access your presentations on different devices
7. Comes with a free plan

(Fritz, 2024).

Category: *Productivity*

Tool: Perplexity

With 27% of the survey, teachers consider that the tool that helps them increase productivity is Perplexity. Let's find out more about this tool.

What is Perplexity?

Perplexity AI is an advanced AI-powered search engine that combines natural language processing with web search capabilities to provide users with accurate and concise answers to their queries. Launched in 2022, it utilizes a variety of large language models (LLMs), including GPT-4 and Claude 3, to enhance its functionality and user experience.

Key Features

Conversational Search: Perplexity AI operates like a chatbot, allowing users to ask questions in natural language and receive summarized responses instead of traditional search results. It also cites the sources used to generate these answers, ensuring transparency and reliability.

Freemium Model: The platform offers a free version that utilizes its standalone LLM, while a paid version, Perplexity Pro, provides access to more advanced models and features, such as the ability to upload documents and images for analysis.

Real-Time Information: Perplexity indexes the web daily, enabling it to provide answers to current events and recent news, making it a versatile tool for information discovery.

Organizational Features: Users can create "Threads" to organize their questions and research, allowing for a more structured approach to information gathering.

Perplexity AI serves as a powerful tool for users seeking quick, reliable answers while facilitating deeper exploration of topics through its innovative search and organizational features (Perplexity Team, 2023).

V. DESCRIPTION OF ACTIVITIES

5.1 Module 1: Online Foreign Language Teaching

In this module the students were able to learn about the basics of online education and its application to English language teaching. The module covered the use of the Learning Management System (LMS) to create a virtual classroom and develop asynchronous activities like Moodle and using platforms such as TEAMS or Meet for synchronous activities.

5.1.1 Week 1 and 2:

Students learned about the theories that focus on the use of technology in education. Participants have also discussed the definition of learning and the main theories used to create instructional environments in this context: Behaviorism, cognitivism, constructivism, and connectivism.

A presentation about online education has been presented to learners who also watched a video about synchronous and asynchronous learning, then the class was divided into groups to discuss pros and cons of synchronous and asynchronous learning.

During week 2 undergraduates had their first evaluated activity, which consisted in writing a paragraph answering the question: "*Which learning*

theory do you think influences the way foreign languages are taught online and why do you think so?" Then students had to add it in the discussion forum and needed to reply to a classmate's entry.

5.1.2 Week 3 and 4:

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During session 3, the professor shared a presentation of LMS Feature categories and examples. The participants worked in groups to practice in Moodle, they had to choose a topic for a class, downloaded an image from Pixabay, got a URL from a YouTube video they had to recommend to their students to check in "Milaulas" site.

In the fourth session students reviewed the roles in Moodle (admins, students, course creators and teachers) The facilitator also showed a video about Edmodo to the class and how to use it. During the group activity, participants were divided in groups and had to create an infographic about the features of different online platforms (Edmodo, Schoology and Sakai)

5.1.3 Week 5 and 6:

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The instructor shared a video of how to set up and manage Google classroom, then the undergraduates practiced in the group activity. Each group had to think of a topic for the class and also added a name to the group. In Google Classroom, each of the groups needed to post a forum, uploaded a video related to the topic and assigned homework to the students within the Google Classroom group. After completing the activity, participants explained the way and reasons why they added every element in Classroom.

Students participated in an evaluated assignment in which they were required to create a course about an English subject in Google Classroom. During the assignment, each participant added resources like YouTube videos, links, etc. They also included activities such as assignments, forums, materials and quizzes within the classroom group. Afterwards, the undergraduates presented their work during the class.

5.1.4 Week 7 and 8:

The professor showed how to create the breakout rooms in Google meets and also how to select the participants in each group and to set the time per room. After this explanation, learners created their own meeting from the calendar, added guests, created a survey, tried breakout rooms and applied visual effects.

On week 8, there was an evaluated task in which students planned and conducted a short class through Google Meet and used resources like short videos, Google Slides, images, Google Classroom poll, etc. Also included some activities in order to make a more dynamic class.

5.2 Module 2: Educational Applications for Learning a Foreign Language

In this module, students learned about the theoretical foundations and the use of technological tools for teaching and learning a foreign language in virtual mode. Students learned to use around 20 technological tools for online teaching. In addition, individual and group practices were carried out for the use and knowledge of these tools.

5.2.1 Week 1 and 2

In week 1, an activity was practiced in the Google Drawings tool where you can create graphs, drawings and diagrams. This tool is included as part of the free Google Docs Editors suite. In addition, they learned about Educational Technology. Educational technology is the use of computer technology to learn about other disciplines, but about changing the way we teach and learn, transforming teaching practices. In addition, about the importance of being objective-based when selecting a tool or designing an activity.

Students watched a video about the Introduction to TPACK Model. Which is made up of PCK (Pedagogical Content Knowledge) + TCK (Technological Content Knowledge) + TPK (Technological Pedagogical Knowledge). Learners worked in three different groups and in different tools such as Google Doc, Jamboard and Google Slide. Finally, Students formed pairs and chose a tool to work on in the first assessed activity of the module.

In week 2 we studied Gamification and game-based learning, which refers to the use of games to support the teaching and learning process. Some examples of tools that can be used to achieve the stated objective.

Activate prior knowledge: Kahoot is a quiz platform to create new quizzes. It helps them practice what they have learned.

To introduce the content: Padlet, is a digital notice board capable of featuring images, links, videos and documents. Specially to get the attention of students.

Provide feedback: Genially used to create visually appealing, engaging, interactive content for classroom lessons.

Evaluate: Liveworksheet transforms your traditional worksheets into interactive online exercises. Excellent for designing interactive assessments.

Put knowledge learned into practice: Flip can record videos.

In addition, students learned how to use the WordArt tool and shared their work with their classmates. Finally, each couple chose their topic for the presentation of the first evaluated activity.

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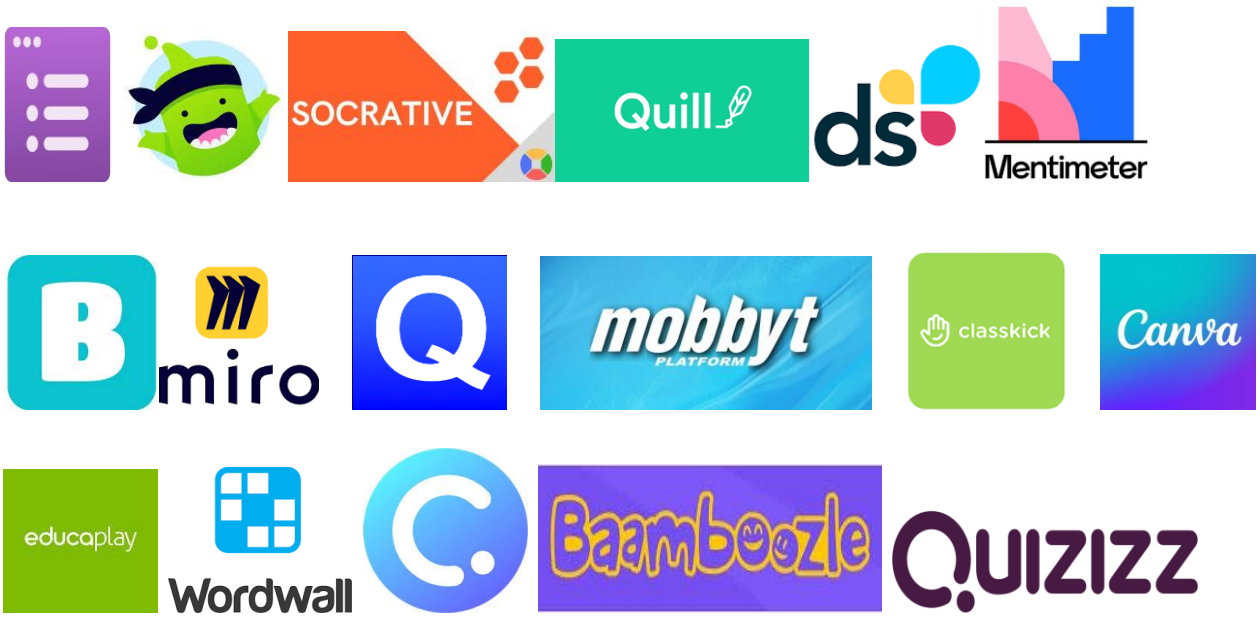
5.2.2 Week 3 and 4

In week 3, learners presented T Tool based on the fundamentals of technological tools when teaching a foreign language in an online educational context. Each pair had 10 minutes to present their topic using the tool they had selected. The tools presented were: Google Forms, ClassDojo, Socrative, Quill, Dotstorming, Mentimeter, Blooket, Miro, Quizlet, Mobbyt, Claskick, Canva, Educaplay, Wordwall, Classpoint, Baamboozle and Quizizz.

In week 4, the same tools were used to present activities with different themes and different partners used them. In order to practice these tools more, the students then watched a video on the use of Liveworksheets in which it was shown how to make a task that was in pdf or image format into an interactive activity. They also watched a tutorial on how to create a video using Liveworksheets. At the end, the students received instructions for task number 2 to Create a Video.



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5.2.3 Week 5 and 6

In week 5 Presented videos about the use of Narakeet. Narakeet is a tool to create videos using presentations that you created. Is important to write notes in the presentation for the audio in the presentation or you can record your own voice.

Students learnt about what is AI (artificial intelligence) the concept and that is not a new term. Moreover, the three types of AI. First, Artificial Narrow Intelligence (Machines that do a specific job like Netflix, Chatbox and Siri). Second, Artificial General Intelligence (Attempts to create software with human-like intelligence and the ability to self-learn). Third, Artificial Super Intelligence (Software with an intellect superior to human intelligence). AI has made progress in different areas such as health care, education, robotics and banking.

Students worked in three groups with different topics to practice in Narakeet and upload in YouTube to present to all the class.

The participants watched a video about the use of Gamma to create a complete presentation quickly and only to write the topic and select specifications. Then students 'groups had time to create a presentation using Gamma with different topics to practice and finally present their work to all classmates.

Into week 6. To start the class the teacher explained to them about the use of Classroomscreen and showed all the options that the tool offers them, in addition, a video about Classroomscreen was shown. Undergraduate saw a video about PowToon. The video explains the ways to use it, the options it offers to make videos interactively using audio, background music and adding the animations you consider necessary to make your video more attractive to students. A group practice video was later created. The educator then showed a video tutorial on the use of Nearpod, Edpuzzle and Padlet, explaining the features and the steps to take full advantage of their benefits. Later the tutor

explained how the task of a video made in PowToon was going to be developed. As a final point, instructions were given for the final evaluation of the module, which consisted of using three tools learned in the module and a topic chosen by each student from a previously prepared list to create the activities requested in the work guide. This presentation was made during the last two weeks of the module.

5.2.4 Week 7 and 8

In weeks 7 and 8 of module 2, each student had 10 minutes to present their topic using three different tools. The class was previously divided into two groups, group 1 presented in week 7 and group 2 presented in week 8. In addition, the class was divided into 7 sets to determine which tools they should work with. Therefore, in these weeks, students put into practice everything they learned in module 2 of the specialization.

Set A used: Narakeet, Nearpod and Classroomscreen

Set B used: Nearpod, Padlet and Dotstorming

Set C used: Narakeet, Miro and Edpuzzle

Set D used: Edpuzzle, Dotstorming and Socrative

Set E used: Kahoot, Mentimeter and Classroomscreen

Set F used: Nearpod, Padlet and Socrative

Set G used: Narakeet, Nearpod and Classkick.

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5.3 Module 3:

The third module was developed from August to October and it had a duration of eight weeks. This part of the course was focused on the design of didactic materials for virtual environments, aimed at learners who successfully completed the previous modules to put into practice the previous learning acquired.

5.3.1 Week 1 and 2:

The educator shared several materials; the first material shared was about the types of educational multimedia resources like: text, audio, animation, images, videos and interactivity. Also, another important aspect was the advantages of these multimedia resources. The audience which these media were directed to was an outstanding element.

Learners had to make groups of 3 and find a topic and subtopic suitable for the creation of a website addressed to a certain audience: undergraduate students.

Also, as first evaluation beginners created a podcast related to the subtopic

selected, in which it had to be creative and innovative. Before the development of this activity, the facilitator shared the essential aspects of a podcast, the different audio formats, steps on how to create a podcast and the different advantages of using podcasts in education. Furthermore, learners practiced and discovered the audacity audio editor; the usage of this software facilitated the development of this task. Also, the creation of the script boosted student's creativity. Another important platform learned this week was Soundcloud, this site allowed learners to upload their podcasts in a free, suitable and friendly user website.

Audacity **SoundCloud**

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5.3.2 Week 3 and 4:

Learners gain an understanding of the fundamentals of image selection, common file format images like: JPG, GIF, NPG and the anatomy of a digital image: Pixels. Also, other interesting sites for photo editing where images can be reduced and adjusted were introduced: Reduceimages.com and Fotor.com, images without copyright and free use sites like: Pixabay, Unsplash, and sites where creativity and photo editor can be combined: Pizap.

Moreover, beginners were introduced to color classifications: warm/cold, complementary and monochromatic. In addition to this week, students could learn the different purposes of typography, and it´s rules. Another important assessment was the creation of an interactive image using Genially, with this platform the task was to design an interactive image using the subtopics already chosen and to make it creatively and attractive to the selected audience mentioned. The students were introduced to the features of this program: Select an image and convert it into a learning experience for beginners adding text, audios, videos and other tools available at this site.

Genially **Pizap**

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5.3.3 Week 5 and 6:

Educator provided some steps on how to prepare a presentation: Analyze your audience, the importance of defining the objectives of the presentation etc. Besides this topic, students navigated through Google slides and its different features, then learners created a presentation using the subtopic selected in the first week of this module. Furthermore, during this period the class had to develop a first draft of a written report of a topic selected by students and also of the entire course evolution, this was an evaluated task. Also in the sixth week, students were introduced to Google Sites. The development of this session was devoted to practicing this tool, features and what advantages could offer for creating a website in a friendly user interface. Next, the beginners learned how to modify a photo using Photofunia, with this editor, a photo could be easily edited and be useful for creating the main cover of a website. Then the educator provided the guidelines for the last evaluative activity of the specialization: create a Google Site and embedded previous evaluated tasks (podcast, creative image, google presentation slide) all of this linked to a Google Classroom group.

Google Slides **Google Sites** **Photofunia**

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5.3.4 Week 7 and 8:

In the seventh session, the educator developed the fundamentals of video productions along with some examples of very useful editors like Open Shot. Next, in addition, students had to create a video for the final activity previously mentioned, this short clip had to be attached to the Google Site created. Moreover, the final version of the written report of each module of this specialization and the topic selected on week one was presented with all the necessary feedback and corrections applied. Additionally, as the last integrative task, learners had to present their work developed on the eight weeks of this module: Podcast, interactive image, Google Presentation and Short video, all of this embedded in the website previously created and link to a Google Classroom with different activities, applying all the knowledge acquired from module 1 and 2.

OpenShot

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VI. ACHIEVEMENTS

- Using Moodle and Edmodo, students showed proficiency in navigating various LMS systems, which in turn improved their adaptability in online learning environments.
- Successfully developed an infographic comparing and analyzing the features of different online platforms (Edmodo, Schoology, Sakai), showing their ability to evaluate and visually present information about different LMS tools.
- Participants demonstrated their ability to develop a complete educational experience by designing a complete English course in Google Classroom. This included embedding YouTube videos, links, and interactive components such as assignments, forums, materials, and quizzes.
- Scholars presented their Google Classroom courses to the class, improving their communication and their ability to give and receive useful feedback on teaching designs.
- By organizing and leading a class, individuals developed practical teaching skills using Google Meet, using both technical and pedagogical knowledge to provide impactful and interactive teaching in an online environment.
- Learners made different images with the tools learned to ask for opinions and participation from students.

- Students learned the importance of knowing what TPACK is and the importance of having clear objectives to be met when selecting the tools to develop the class.
- Undergraduates developed interactive games to motivate students in their learning.
- Participants changed conventional paper activities for interactive ones.
- Academic learners created a class using the tools studied during the module.
- The class learned how to edit audios on the Audacity program, also how to upload these audios in a podcast format to Soundcloud.
- The participants of this specialization learned how to resize images in resize.com and also how to edit them using Pizap.
- Beginners learned to search for images free of copyright on Pixabay and Unsplash to use it for different educational purposes.
- Students acquire knowledge on how to combine colors or palette colors for a presentation using the website: Coolors.
- Attendees designed a website using the features of Google site.
- Scholars elaborated a video using the Software OpenShot.
- Learners created different presentations through Google Slides.

VII. CONCLUSIONS

Overall, the implementation of Artificial Intelligence (AI) into educational resources is a great progress in learning that enables personalized, interactive, and efficient learning experiences. This report focuses on AI tools and applications frequently used by educators, highlighting their potential to improve teaching and learner results. AI allows immediate engagement, tailored learning exercises, and progress tracking, helping to meet the individual learner's needs. Additionally, AI tools can make the process of creating learning materials more efficient, allowing educators to save time and update their methods for engaging learners. This report outlined a specialized course divided into three modules that provided in-depth knowledge of the tools, resulting in significant achievements and suggestions for improving performance in the future. The continued progress and adoption of AI-based tools offers a hopeful path to improve educational standards and boost learner achievement.

VIII. RECOMMENDATIONS

According to the methods, tools, and tasks created during this specialization suggestions for University of El Salvador and Department of Languages authorities, based on the specialization course modules are expressed:

- We suggest authorities organize forums, conferences on subjects related to this specialization so students can be more engaged and also contribute to their professional development.
- We recommend that the authorities take into account the effort of the learners and provide a certificate that validates the knowledge acquired during this course.
- The last suggestion will be to continue with the development of this program to benefit future learners and also to provide the necessary tools to the facilitators in order to boost each module and the student experience.

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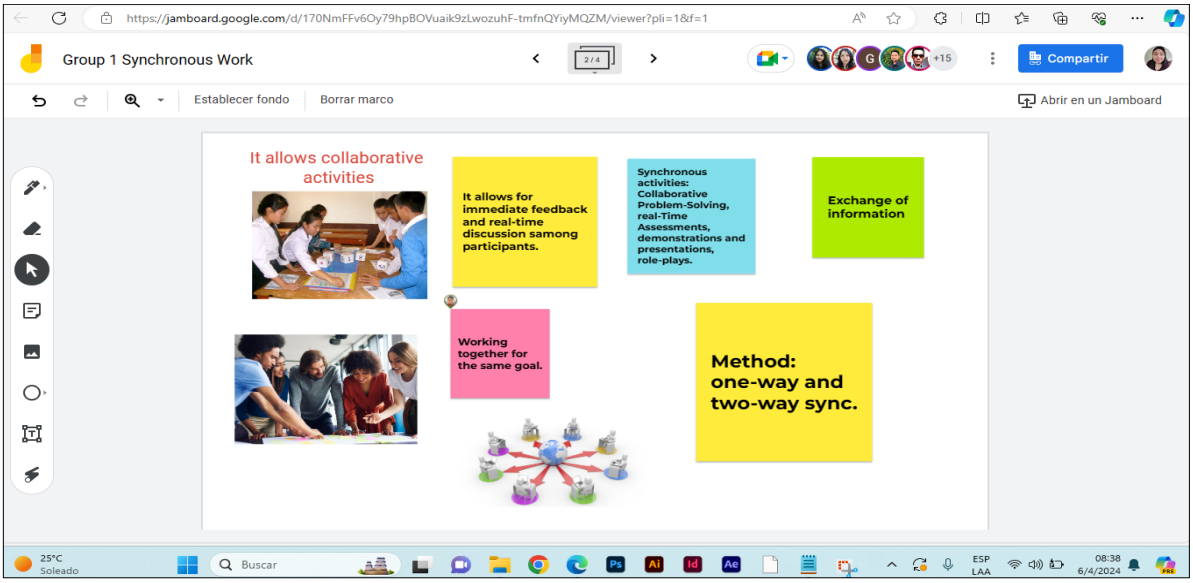
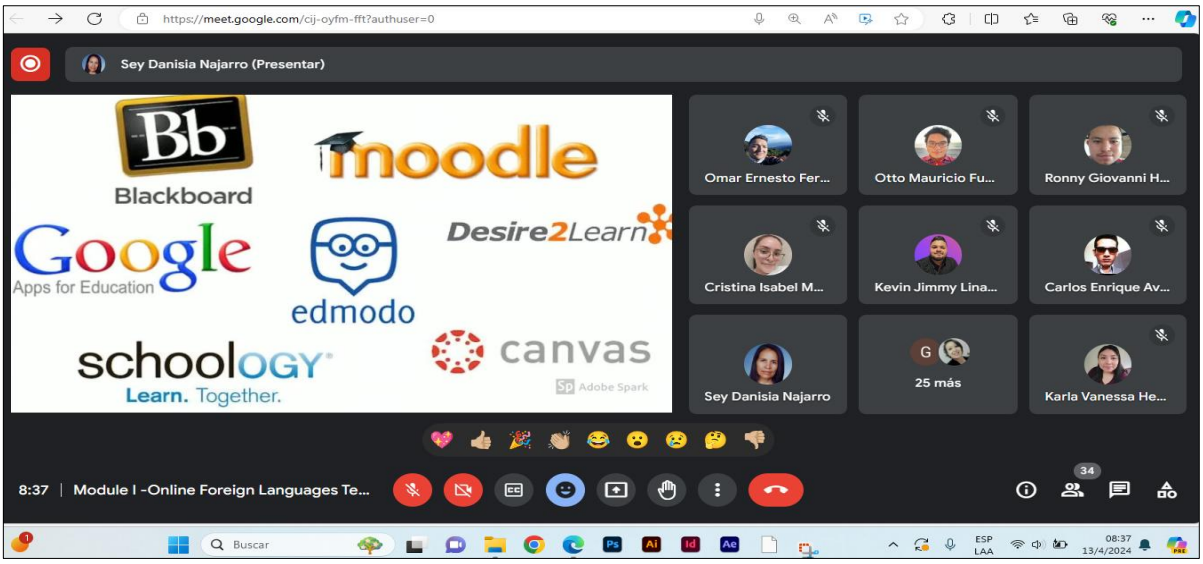
X. APPENDIXES.

Module I

Synchronous work



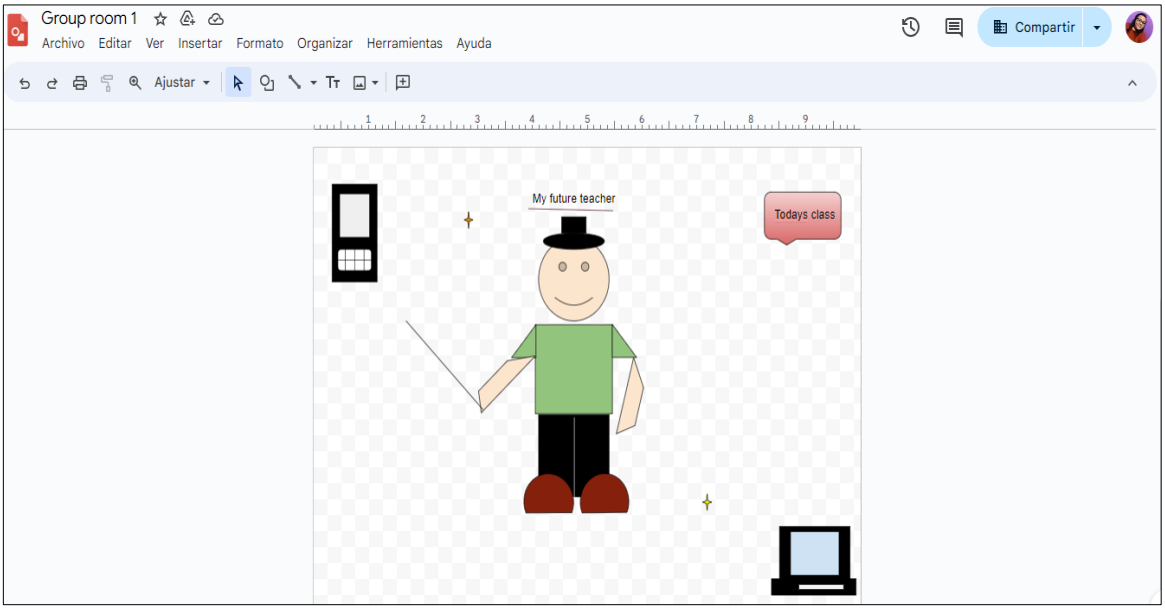
LMS Tools



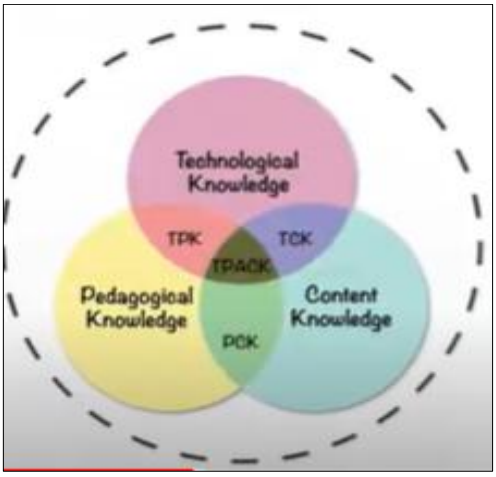
Google classroom

Module II

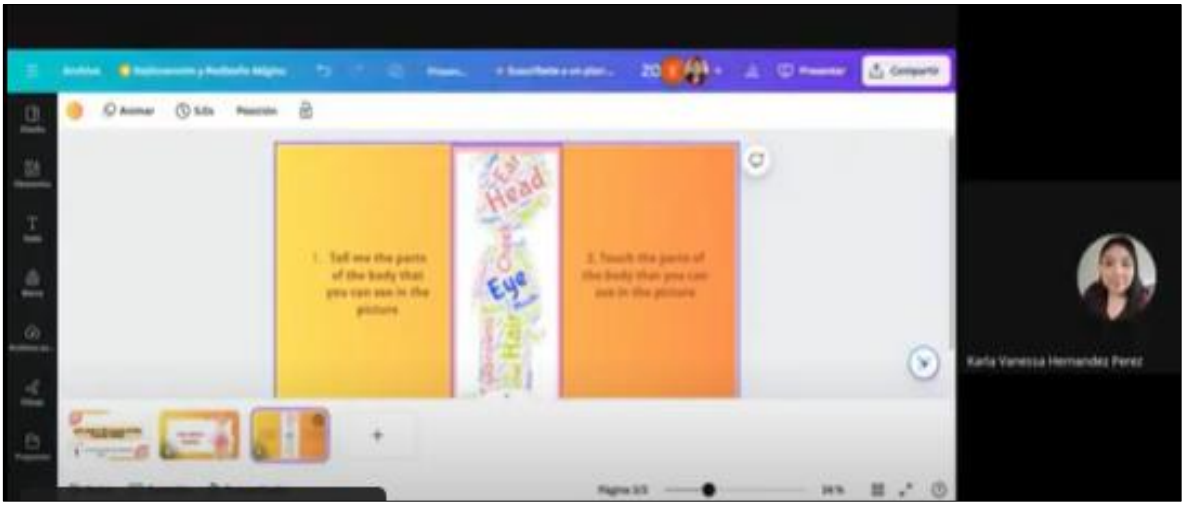
Google drawing



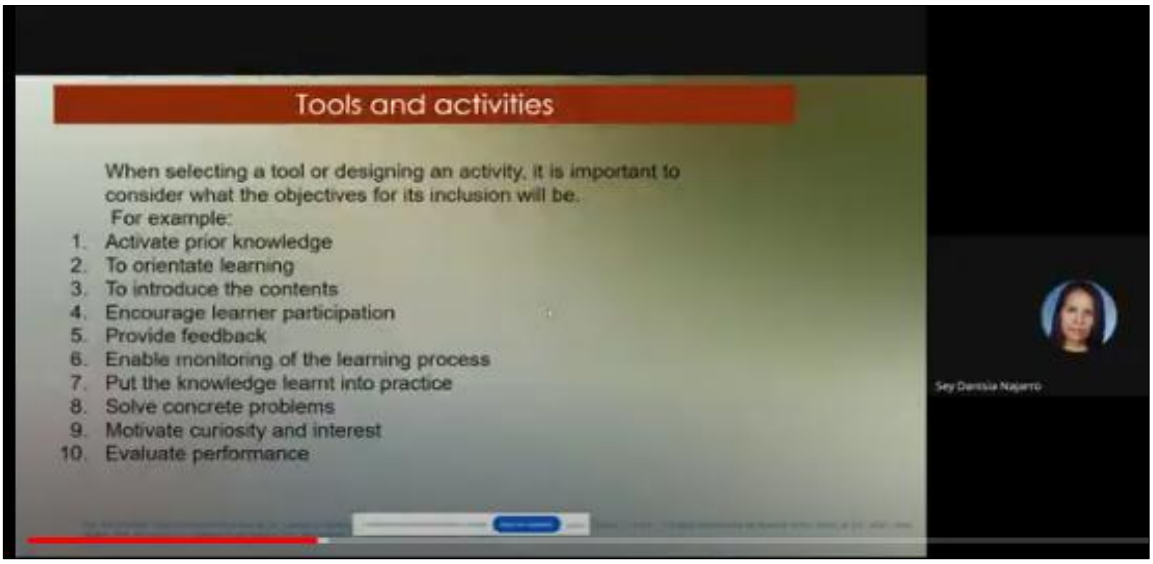
TPACK



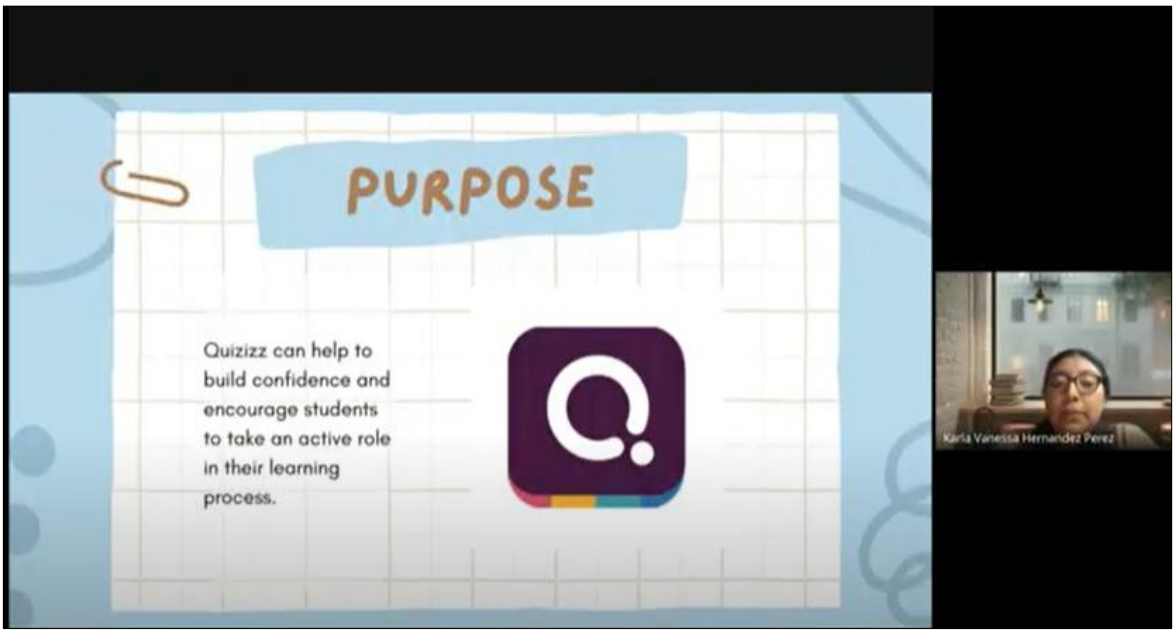
WordArt



Aspects to consider



T Tool Presentation



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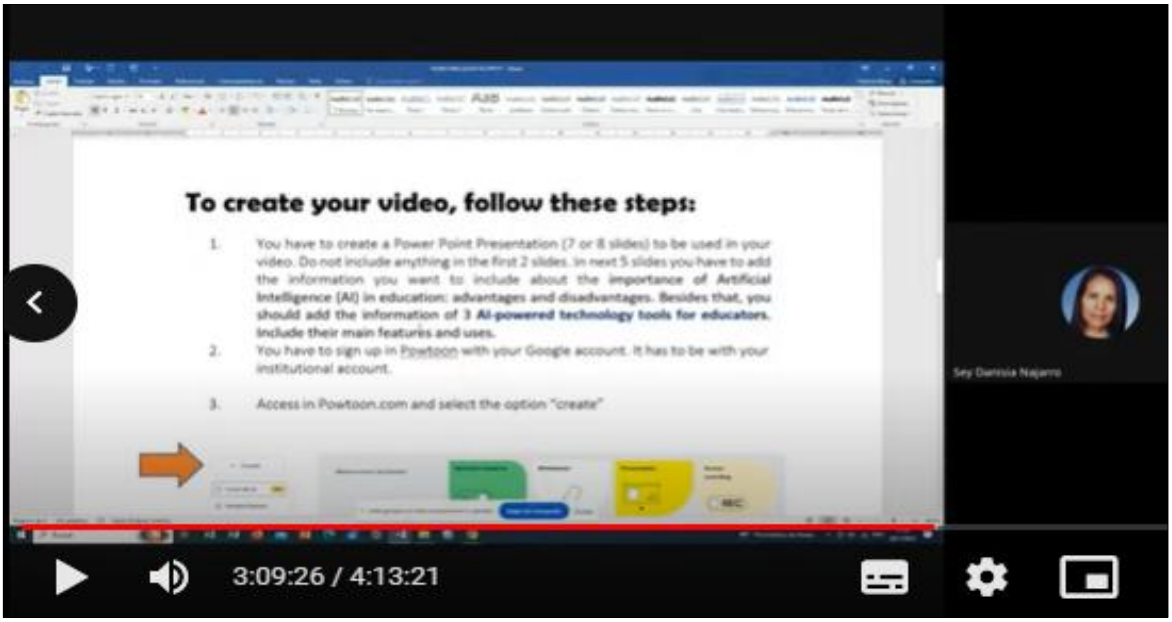
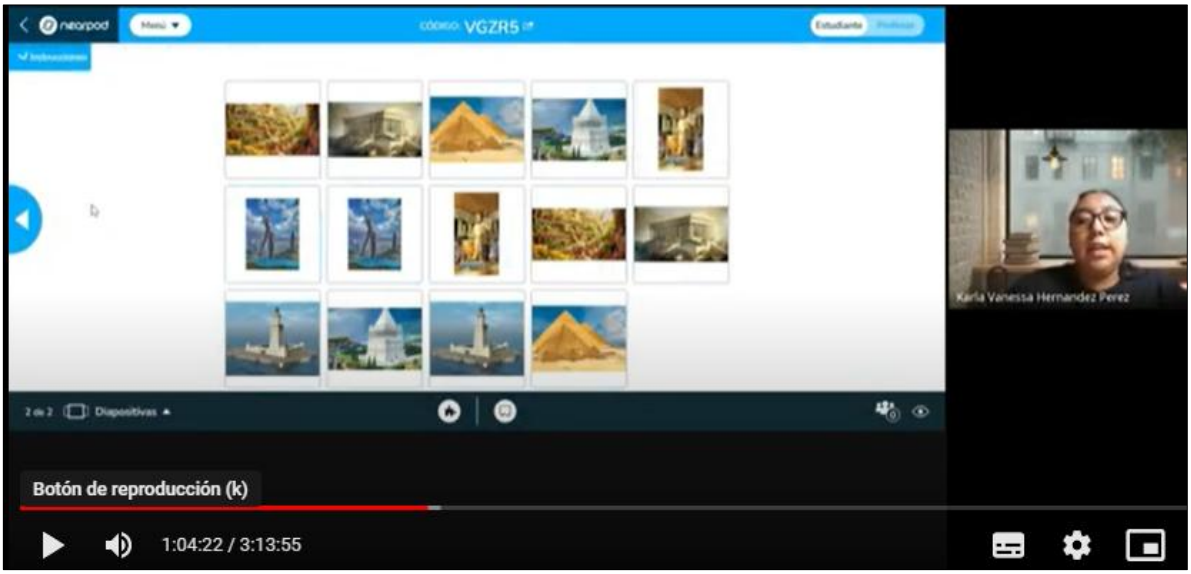
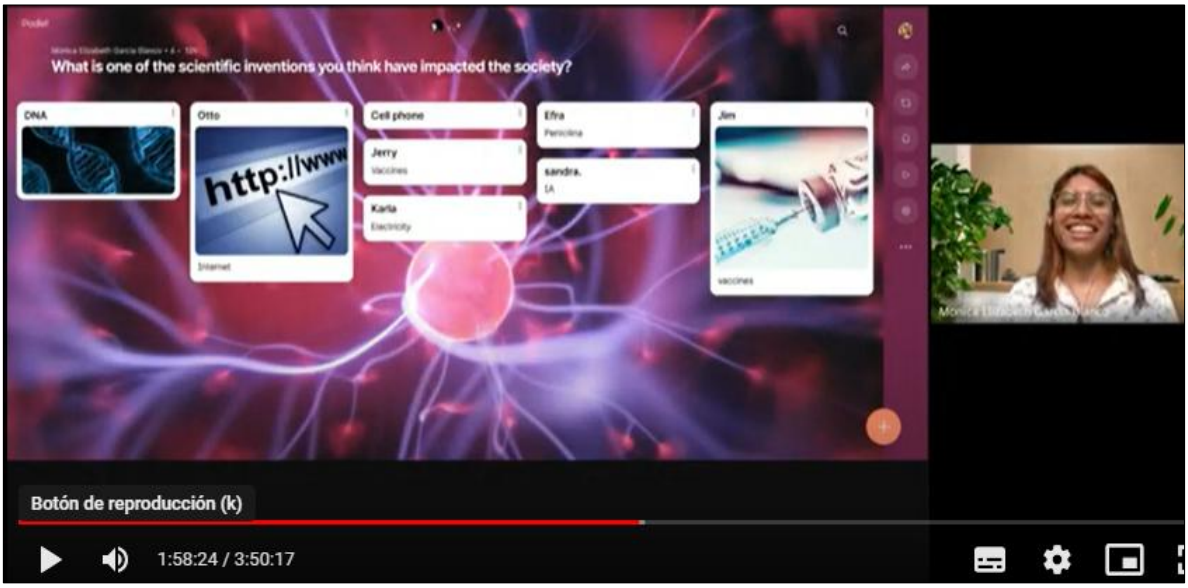
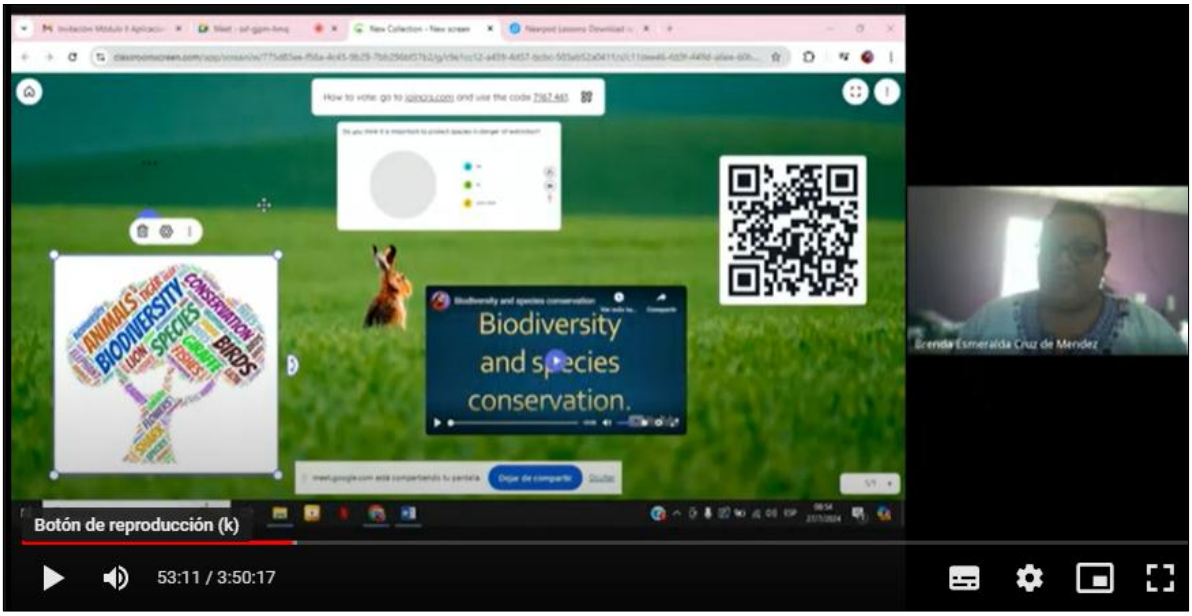


Last Presentations





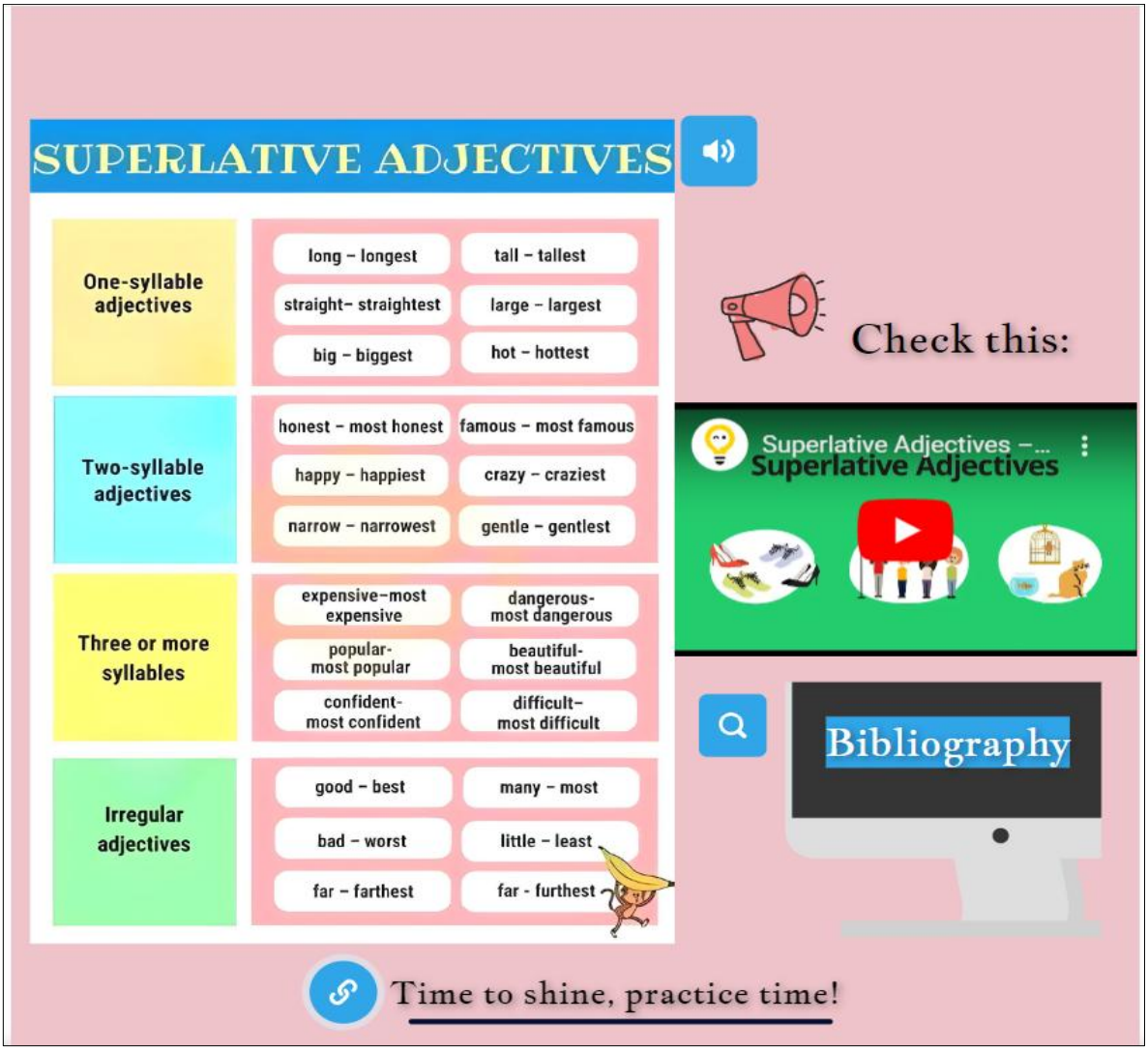


Module III

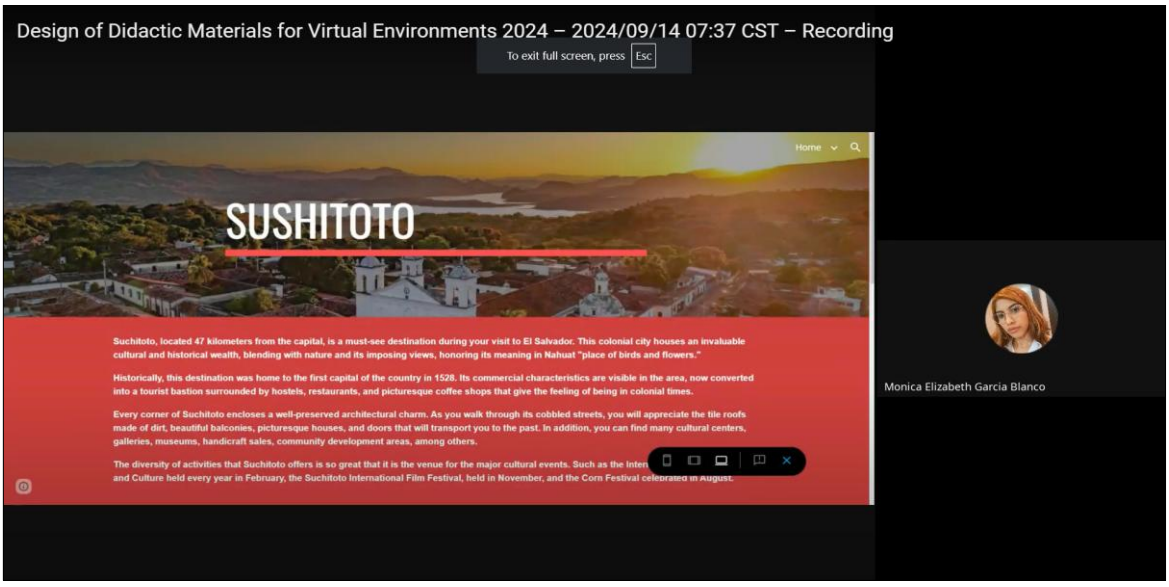
Interactive images

COMPARATIVE ADJECTIVES

One-syllable adjectives	long – longer	tall – taller
	straight – straighter	large – larger
	big – bigger	hot – hotter
Two-syllable adjectives	honest–more honest	famous–more famous
	happy – happier	crazy – crazier
	narrow – narrower	gentle – gentler
Three or more syllables	expensive–more expensive	dangerous-more dangerous
	popular-more popular	beautiful-more beautiful
	confident-more confident	difficult–more difficult
Irregular adjectives	good – better	many – more
	bad – worse	little – less
	far – farther	far - further


SUPERLATIVE ADJECTIVES
One-syllable adjectives
long – longest
tall – tallest
straight– straightest
large – largest
big – biggest
hot – hottest
Two-syllable adjectives
honest – most honest
famous – most famous
happy – happiest
crazy – craziest
narrow – narrowest
gentle – gentlest
Three or more syllables
expensive–most expensive
dangerous- most dangerous
popular- most popular
beautiful- most beautiful
confident- most confident
difficult– most difficult
Irregular adjectives
good – best
many – most
bad – worst
little – least
far – farthest
far - furthest
Check this:
Superlative Adjectives –...
Superlative Adjectives
Bibliography
Time to shine, practice time!

Google site


Design of Didactic Materials for Virtual Environments 2024 – 2024/09/14 07:37 CST – Recording
To exit full screen, press Esc
SUSHITOTO
Suchitoto, located 47 kilometers from the capital, is a must-see destination during your visit to El Salvador. This colonial city houses an invaluable cultural and historical wealth, blending with nature and its imposing views, honoring its meaning in Nahuat "place of birds and flowers."
Historically, this destination was home to the first capital of the country in 1528. Its commercial characteristics are visible in the area, now converted into a tourist bastion surrounded by hostels, restaurants, and picturesque coffee shops that give the feeling of being in colonial times.
Every corner of Suchitoto encloses a well-preserved architectural charm. As you walk through its cobbled streets, you will appreciate the tile roofs made of dirt, beautiful balconies, picturesque houses, and doors that will transport you to the past. In addition, you can find many cultural centers, galleries, museums, handicraft sales, community development areas, among others.
The diversity of activities that Suchitoto offers is so great that it is the venue for the major cultural events. Such as the Inter
and Culture held every year in February, the Suchitoto International Film Festival, held in November, and the Corn Festival celebrated in August.
Monica Elizabeth Garcia Blanco

Pizap and Resize