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

TOPIC:

HOW TO USE ARTIFICIAL INTELLIGENCE TO GENERATE TEACHING MATERIALS, SUCH AS STUDY GUIDELINES AND MULTIMEDIA RESOURCES

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BACHELOR OF ARTS IN ENGLISH WITH A MAJOR IN LANGUAGE TEACHING

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ABSTRACT

The integration of artificial intelligence (AI) in education has the potential to revolutionize the creation of teaching materials, such as study guidelines and multimedia resources. This paper explores the theoretical framework and practical applications of AI technologies in educational content generation. Key AI technologies, including Natural Language Processing, Machine Learning, and Computer Vision, are examined for their roles in automating content creation, personalizing learning experiences, and developing interactive multimedia resources. The framework is grounded in General System Theory and the Technological Pedagogical Content Knowledge model, highlighting the synergy between AI tools and pedagogical practices. Implementation strategies focus on designing AI driven content, personalizing learning paths, and addressing ethical considerations. The specialization course called "Curso de Especialización: Administración de Ambientes Virtuales Para la Enseñanza y Aprendizaje de Idiomas Extranjeros" took place in the virtual classroom in the University of El Salvador, the specialization course has three modules that were delivered in two months respectively, in were learners works different kind of activities, where students learnt different tools in each module, with the purpose of facing pupils with the labor market. The name of the three modules were: Online Teaching of Foreign Languages, Educational Applications to Learn a Foreign Language and Design of Didactics Materials for Virtual Environments.

Key words: artificial intelligence (AI)**,** education, teaching materials, study guidelines, multimedia resources.

I. INTRODUCTION

In the following research, learners mentioned how to use artificial intelligence to generate teaching materials, such as study guidelines and multimedia resources; nowadays artificial intelligence (AI) is revolutionizing the way educators create and deliver teaching materials. By leveraging AI, trainers can generate study handbooks, multimedia resources, and personalized learning experiences more efficiently and effectively. Generating Study leaders, AI tools can analyze large volumes of text and extract key concepts to create comprehensive study guides. For example, platforms like Hyper Write AI allow educators to input quiz questions and text sections, and the AI generates a study guide based on these inputs. This helps in saving time and ensuring that the study materials are thorough and aligned with the curriculum.

Creating Multimedia Resources AI can assist in creating engaging multimedia content, such as videos, interactive simulations, and visual aids. Tools like Chat GPT can generate scripts for educational videos, while AI powered design tools can create infographics and interactive presentations. This makes learning more dynamic and accessible for students with different learning styles.

Personalizing Learning Experiences AI driven analytics can provide insights into learners performance and learning trends. This data allows educators to tailor learning materials to meet individual student needs. For instance, AI can adapt the difficulty level of assignments based on a student's progress, ensuring that each learner is challenged appropriately.

Enhancing Productivity, AI tools can automate routine tasks such as grading, providing feedback, and managing administrative duties. This allows educators to focus more on teaching

and interacting with students. By streamlining these tasks, AI helps in improving overall productivity and efficiency in the classroom.

While AI offers numerous benefits, it's important to consider ethical implications, such as data privacy and the potential for bias in AI generated content. Educators should be aware of these issues and ensure that AI tools are used responsibly and ethically. By integrating AI into the creation of teaching materials, educators can enhance the learning experience, making it more personalized, engaging, and efficient. This not only benefits students but also allows teachers to focus on what they do best teaching and inspiring their students.

Also, learners describe a brief description of the course and the activities that were carried out in the three different modules that were delivered in two months respectively. The first one was called "Online Teaching of Foreign Languages"; where students learnt about some asynchronous and synchronous activities that as professors can improve the classes educational applications to learn a foreign language and design of didactics materials for virtual environments. The second module was called "Educational Applications for Learning a Foreign Language" pupils learnt some tools like: Liveworksheet, Nearpod, Padlet, Classroomscreen, and others, in the third module was called "Design of Didactic Materials for Virtual Environments" in this module learners design the materials for the learning environment.

II. OBJECTIVES

A. GENERAL OBJECTIVES

1. To explore the use of artificial intelligence (AI) in generating effective and engaging teaching materials, including study guidelines and multimedia resources, to enhance the educational experience for both teachers and students.

2. To describe the three modules carried out in the specialization course.

B. SPECIFIC OBJECTIVES

1. To identify AI tools and platforms that can assist educators in creating comprehensive study handbooks and interactive multimedia content, thereby improving the quality and accessibility of educational materials.
2. To evaluate the impact of AI generated teaching materials on student engagement and learning outcomes, ensuring that the integration of AI in education is both effective and beneficial for diverse learning needs.

3. To describe the activities carried out in each of the three modules.

III. THEORETICAL FRAMEWORK

The role of educators has continued to change over the years. With technology making considerable changes, especially with something as powerful as AI. According to Richard Frost, in schools, teachers have to provide opportunities for students to learn about changing technology because of the impact it may have on their future. Not only can AI tools improve creativity and productivity, but also, they can provide trainers with valuable perspectives into pupils' learning and assist with some of the time consuming tasks that educators have.

Even with all of the promises or perspectives of AI, it is important to take time to talk about artificial intelligence in the classrooms. Educators not only teach the content, but serve as mentors, facilitators of learning and co-learners with students, especially as they assume these emerging powerful technologies. It’s important that teachers help students learn about the benefits of them and also show how to use these tools properly, responsibly, and ethically.

This is how AI can instantly adapt student learning materials. In this case teachers can then use this information to provide personalized learning experiences, adapting to each student’s strengths, weaknesses, and learning pace.

On the other hand, through AI powered platforms, facilitators can choose a range of educational resources. With generative AI in particular, mentors are able to create lessons, activities, assessments, prompts for discussion, and presentations simply by providing a short prompt with keywords.

Therefore, pupils should be aware that AI tools cannot replace human critical thinking or the development of learning skills and knowledge that forms the basis of their education.

Technology has modernized the way in which professors teach; methods, techniques and approaches work at hand with the different theories that exist in education; theories like

Constructivism, Cognitivism, Behaviorism, Connectivism and Humanism are the most common ones that impact the learning teaching process.

Constructivism learning theory emphasizes that learners actively construct their own understanding and knowledge of the word, through experiencing things and reflecting on those experiences. Learners are not passive recipients of information. Instead, they actively engage with the material, reflecting on their experiences and integrate new knowledge with what they already know (2024a, February 1).

New learning is built upon the foundation of previous knowledge. This means that the learner's existing knowledge base significantly influences how they understand and integrate new information. Learning is often a social activity. Interacting with others, discussing ideas, and collaborating on projects can help learners construct new understanding, knowledge is constructed within a context. Real-world problems and scenarios are often used to help learners apply what they have learned in meaningful ways; reflective Thinking: Learners are encouraged to reflect on their learning experiences, which helps them to develop deeper understanding and critical thinking skills. Prominent figures in Constructivist Theory include Jean Piaget, who focused on cognitive development, and Lev Vygotsky, who emphasized the social aspects of learning (2021, February 21).

Cognitivism focuses on the inner mental activities of the learner. It views the mind as an information processor, similar to a computer, and emphasizes the importance of understanding how people acquire, process, store, and retrieve information. Learners are active participants in their learning process, engaging in activities that require them to think, understand, and apply

knowledge; also emphasis is placed on internal processes such as thinking, memory, knowing, and problem solving.

Knowledge is organized into units or schemas, which help individuals understand and interpret information. Learners build on their prior knowledge and experiences to construct new understanding. Cognitivism likens the mind to a computer, where information is input, processed, and output. This involves stages such as encoding, storage, and retrieval. Refers to the amount of mental effort being used in the working memory. Effective instructional design aims to manage cognitive load to enhance learning. Awareness and understanding of one's own thought processes. It involves self-regulation and reflection on learning strategies and outcomes.

Providing temporary support to learners to help them achieve a task they cannot complete independently. This support is gradually removed as learners become more proficient. Breaking down information into smaller, manageable units to make it easier to process and remember. Tools used before learning to help structure and organize new information, making it easier to integrate with existing knowledge. Visual representation of relationships between concepts, helping learners organize and structure their knowledge.

Cognitivism provides a comprehensive framework for understanding how learning occurs and offers practical strategies for enhancing educational outcomes. By focusing on the mental processes involved in learning, educators can create more effective and engaging learning experiences (Julia.kuzmina. 2024).

Behaviorism provided by B.F. Skinner was a prominent psychologist who significantly advanced the field of Behaviorism. His theory, known as radical behaviorism, posits that all

behavior is learned through interactions with the environment, primarily via conditioning processes.

Skinner's most notable contribution, this concept involves learning through rewards and punishments. Behaviors followed by positive outcomes are likely to be repeated, while those followed by negative outcomes are less likely to recur, Skinner identified two types of reinforcement; adding a rewarding stimulus to increase the likelihood of a behavior. Removing an aversive stimulus to increase the likelihood of a behavior. This involves introducing an aversive stimulus or removing a rewarding stimulus to decrease the likelihood of a behavior (History, C. *et al.* 2024).

Connectivism is a learning theory developed by George Siemens and Stephen Downes that addresses the impact of technology on how we learn and share information. It emphasizes the role of social and technological networks in the learning process. Knowledge is distributed across a network of connections, and learning consists of the ability to construct and traverse those networks. Learning is enhanced by the diversity of opinions and perspectives within a network. Modern technologies, such as the internet and social media, play a crucial role in facilitating learning by connecting individuals and information sources.

Learners self-organize their learning paths by connecting with various nodes (people, resources, and information) that provide relevant knowledge. The ability to stay current and up-to-date with information is a key skill, as knowledge is constantly evolving. Connectivism is particularly relevant in today's digital age, where information is abundant and learning is increasingly collaborative and networked. *(Siemens, Downes,* 2017).

Humanism is a psychological and educational theory that emphasizes the inherent dignity, potential, and value of individuals. It emerged in the 1960s as a response to the limitations of behaviorism and psychoanalysis. Humanism considers the entire individual, including their emotions, thoughts, and experiences. It emphasizes personal growth and self-actualization, and believes that people have the freedom to choose their actions and are responsible for their own development. Humanistic theory posits that people are inherently good and have an innate drive to make themselves and the world better.

This is the process of realizing one's full potential and becoming the best version of oneself. It is a central goal in humanistic psychology. Humanistic approaches emphasize the importance of empathy and genuine interactions in fostering personal growth. Has influenced various educational practices, promoting a more personalized and empathetic approach to teaching and learning.

AI in educational content creation

Artificial intelligence (AI) is transforming educational content creation in several impactful ways; Automated Content Generation, AI tools like ChatGPT, Claude, and Bard can generate lesson plans, quizzes, and even entire courses based on simple prompts. This helps educators save time and focus on more interactive aspects of teaching. Also, Personalized Learning Materials in which AI can analyze student data to create customized learning experiences. For example, adaptive learning platforms adjust the difficulty of content based on a student's performance, ensuring they are always challenged but not overwhelmed.

Multimedia Content Creation tools like DALL·E 2 and Midjourney can create images and visual aids that enhance learning materials. These visuals can make complex concepts more accessible and engaging. Interactive Simulations and Virtual Labs AI-powered simulations allow

students to experiment with virtual labs and scenarios that would be difficult or impossible to replicate in a traditional classroom. Assessment and Feedback: AI can automate grading and provide instant feedback, helping students understand their mistakes and learn more effectively. This also allows teachers to track progress and identify areas where students need more support Ai content generation tools in teaching, learning, and research (2023).

Implementing AI in education requires a thoughtful and strategic approach to maximize its benefits while addressing potential challenges. AI-Focused Task Forces, establish dedicated teams to oversee AI integration in educational institutions. These task forces can develop guidelines, monitor progress, and address challenges.

AI tools can create interactive and immersive learning environments, such as virtual labs and simulations, that encourage students to actively construct their knowledge rather than passively receiving information. Can tailor educational content to individual learning styles and paces, aligning with the constructivist emphasis on personalized learning experiences. Often use reinforcement learning principles, providing immediate feedback and rewards to reinforce desired behaviors and learning outcomes.

AI can automate quizzes and tests, offering instant feedback that helps reinforce learning through repetition and practice. Also, adjust task complexity based on student performance, helping to manage cognitive load and prevent overload. Provide scaffolding by breaking down complex tasks into manageable steps, supporting students as they build their understanding. AI-powered platforms can facilitate collaboration between students, enabling peer learning and social interaction, which are central to social learning theory. Virtual Tutors artificial intelligence can act

as virtual tutors, providing guidance and support, similar to a human mentor in a social learning context.

AI can help students connect with a wide range of online resources and experts, supporting the connectivism idea that learning happens through a network of connections. Knowledge Management can assist in the organization and retrieval of information, helping students navigate and make sense of the vast amount of data available (2023).

According to Magna Publication Inc. AI can generate diagrams. There are tools like Whimsical that now allow professors to use a simple prompt, describe a particular diagram to have in mind, and get a diagram that can be used to illustrate a concept, a process, a framework. It can obviously edit those. Once it is generated, teachers can then edit them. And yet, facilitators don't have to do all of the initial menial work of putting the information into the diagram initially. These images that are AI-generated can add visual flair and engagement to slides, to the material, even if there isn't a designer who could design or draw those images. And can create these custom materials as often as would like, and they're generated very quickly. So, put in a prompt, and less than 30 seconds later, have a variety of images to choose from. And can start to incorporate these images to the extent they're useful and fit into something that is teaching. Another valuable way to use AI in your teaching is to generate slides with AI. There are a number of different tools that allow the use of AI in a few different ways, and I want to highlight three specific approaches to using AI in generating slides. First, can use AI simply to suggest alternative layouts for slides that you've created. So, if using Google Slides, for example, can use its suggested mode to select from multiple different versions of that slide. It's not creating the slide in this case. It's just suggesting a cleaner or a more engaging way to lay out that particular slide. And can do this with really any slide created on Google Slides now. © 2023 Magna Publications.

AI can also be used as a slide design recommendation tool on a tool like Canva, for example, which has a similar capability, suggesting alternative ways to organize the visuals or words on a particular slide that have. And can choose from one that looks good, or that seems cleaner, or better conveys the message that is trying to convey.

A second way to use AI for slide generation is to generate individual slides with a prompt. Can tell a tool like Beautiful.ai that would like a slide that illustrates this concept that has these three parts, and the parts of the concept are A, B, and C, and it will generate a draft of that slide. Teachers can move things around if they want to. But get a very quick slide that conveys an idea or a framework that is explaining. It can even draw on its knowledge from the internet, essentially, of a particular framework. So, if someone asks for a Business Model Canvas slide, for example—that framework is well known and well documented online—it can give a draft version of that slide that can then adjust, annotate, remake in its own style.

A third way to use generative AI in generating slides is to ask it in a detailed prompt to generate some initial slides for a presentation. So, in this case, the AI is doing even more of this initial drafting, outlining something. And with Beautiful AI, and Time, Mid journey and Gamma, these are four different tools you can use to generate a whole batch of initial slides. And in the case of some of these tools, like Tome, you can give it a document and Canva can use this way too. Can give it a document that lays out the key aspects of a presentation it is creating, like a Google Doc, a Word, Microsoft Word document type material, and it will take that material and turn that into visual slides. Of course, someone can then edit the slides. Someone is going to reorder them. You’re going to take some out. You’re going to change them.

But the value of this is that it saves you that many hours, in some cases, of initial work of drafting those initial slides. In this case, you can focus more on polishing, improving and strengthening that initial outline to make it really yours and to put it in your own style. So, the generative AI can really help make slide development, slide creation, © 2023 Magna Publications developing presentations a little bit easier, a little bit faster, and even more effective for you as an educator.

In addition to creating slides and generating images with AI, someone can also use AI to generate audio and video. And in some cases, may be an educator who doesn't want to appear on screen, or not want to have their own voice recording an audio message. If that's the case, can now use AI to essentially take a script and voice it, or can even generate an avatar that will essentially read a set of instructions or give students a little update on something. And the video avatar can essentially convey a message in a visual way, in an engaging way, in a live way, that avoids having to continually be in front of a camera recording if that's not your comfortable place, or if not feel eager to continually record audio or video messages. Now, this isn't for everyone.

Some people like recording their own audio and video messages, that's great. But for those who can't for whatever reason, or prefer not to be in front of the camera, or recording own voice messages, can now use AI avatars and AI voice recorders to essentially turn words that write out—so these are still own words—but those words now can become visual or can be voiced by an avatar that sounds quite human-like. It's not like the robotic voices of the past. So this is another way to use AI. And these can be for messages to be included in the learning management system, summarizing the week's class sessions, or giving students a preview of what's ahead, or answering common questions that students have asked about a particular assessment or upcoming assignment. So, there are multiple ways to use this audio and video. It could be part of the syllabus, giving

students a preview of the course that is developing, for example, or reflecting back on key points in the course.

These are all different ways to use the AI to generate audio and video material for students. Another important way that can be used by AI is to edit audio and video that you develop for a course. So, if you are not familiar with professional video or audio editing, and don't want to use tools like Final Cut Pro or Adobe Premiere, which are relatively complicated, professional editing tools can simply edit the text of material (2023).

IV. DESCRIPTION OF ACTIVITIES

MODULE I "ONLINE FOREIGN LANGUAGE TEACHING"

In this module students were able to analyze and identify the importance of learning theories for the development of the English language teaching methodology in virtual learning environments and encouraged to play an active role in the discussion and analysis forums to develop the academic activities during this course, thus students were able to use web tools to do their tasks with a change of roles: as learners and as facilitators in their virtual classrooms.

So, activities were carried out asynchronously and synchronously, and cooperative work was essential during the synchronous classes, so interaction and feedback occurred between the professor and the participants, as well as between participant to participant.

Furthermore, learners were able to identify the importance of the Learning Theories and their direct impact on the methodology of teaching the English language in virtual learning environments with an exhaustive reading and content analysis. Learners worked on the creation of a virtual classroom using a LMS for those available on the Internet; so scheduled and carried out synchronous work sessions in TEAMS or MEET.

WEEKS 1 AND 2

Learners were able to learn about evaluation of resources of learning theories: Connectivism, Constructivism, and Behaviorism in virtual classes; the facilitator uploaded videos on synchronous and asynchronous concepts, and divided the class into three groups so that each group explained the theories given in class, and thus they presented them in online class.

In addition, to engage in meaningful and extended discussion with peers, taking in to account the learning theories studied in class and their application to the online foreign language

learning was opened a discussion forum in asynchronous manner for the first evaluation, using the guidelines given by the professor, then students responded with sixty to eighty word according to the guidelines, to follow the next question: “which theory learning do you think influences the way foreign languages are taught online and why do you think so?”; once posted, then were commented partners entries.

WEEKS 3 AND 4

During these weeks students were able to learned about the definition and application of E-learning as virtual teaching and its application in language teaching, so the teacher uploaded LMS (Learning Management System) videos, which are the most common tools to create, feed and use online courses, and explained them with multimedia materials, tutorials and readings.

After students analyzed the features of a learning management system (LMS) there was a space for a second evaluation. So learners were able to create an infographic activity using the guidelines given by the professor, and could identify the features and resources of the activities that could be carried out with the assigned LMS.

First, pupils researched information about Moodle, then selected the platform features, uses, and resources that could be used on the platform; and included the link in canva to create their infographic and placed the information obtained on two pages in Canva; they also added the references from where they obtained the information at the bottom of their infographics. Finally, they uploaded the infographic to campus in PDF or JPG format and shared the link.

WEEKS 5 AND 6

In these weeks the learners were able to use and organize Google Classroom, and how to create some Quizzes, and then carried out the third evaluation on how to create a virtual classroom. In this way, the students created their classes in Google Classroom.

Therefore, learners created a virtual Classroom with groups work made of four students with an English subject and topic chosen by the participants, who added 4 resources in total for the class, one for each participant, YouTube videos, links to web pages, and four basic activities using the resources available in the classroom: forum, assignment, quiz, and material. So the students presented their class to their classmates in a live class for 3 or 4 minutes for each member of the group with the camera activated. Moreover, the file included 3 screenshots of the work done in the classroom and was delivered in a PDF on campus.

WEEKS 7 AND 8

Learners were able to plan a short class that would be held through Google Meet, and used some web tools and resources to have a dynamic synchronous class, so pupils planned a class according to the topic selected in class with 16 minutes per group using four resources such as short videos, images, short readings, PPT or Google slides, the pupils included four activities for this class, 4 minutes for each member of each team, who delivered the same planning on campus in PDF format file. Then students were introduced to many platforms for video conferencing, so they learned the features of two of them: Meet and Teams, in which a demonstration class on MEET was held in group work, and thus the students demonstrated how to use video conferencing platforms using Google Meet and other web tools for classes.

MODULE II "EDUCATIONAL APPLICATIONS FOR LEARNING A FOREIGN LANGUAGE"

Pupils were able to learn the theoretical foundations and use of technological tools for teaching a foreign language in the virtual mode such as Edpuzzle, Flip, Narakeet, Liveworksheets, Nearpod, Padlet, Kahoot, Classroomscreen and Powtoon. Moreover, learners became familiar with theoretical information about technological tools for teaching and learning a language and their functions. Participants were able to define the terms and principles associated with technological tools for educational purposes and used technological tools to plan and develop synchronous class activities.

Likewise, they were able to analyze at least eight technological tools and learn about their use in the teaching-learning process in virtual environments. Therefore, they developed specific activities based on instructional practices, which were discussed among their classmates in the module to give and receive feedback and thus be able to permanently improve during the process.

WEEKS 1 AND 2

This week, the professor introduced various technological tools for educational purposes and their foundations and principles in teaching a foreign language. The class was divided into three groups to create a picture using Google Workspace, which represented how students imagine future teachers using that workspace. Then, the professor introduced a general topic of technology, the importance of computers, the Internet, and their applications in educational technology, giving a brief summary of their history in recent years, and the most important criteria on how to select the best tool and activities for online teaching based on learning objectives. Later, the professor also introduced the TPACK model by Mishra and Koehler (2006), which integrates technological

knowledge, pedagogical content, and pedagogical knowledge to enrich learning. Students used Google Slides, Google Docs, and other web-based tools to explain video segments and present their findings to the class.

In the second week, the professor started the class with a true-false game as a warm-up to the previous technology class. The teacher then taught the concepts of Gamification, a technological tool for educational purposes for group work that draws students' attention and can be used for assessment. According to the website, it is a “practice of using game design elements in non-game contexts, such as software, websites or mobile applications, to increase engagement, motivation and interaction” (2023). Future professionals were also introduced to the Word Art tool, which “allows the creation of word clouds with various graphic designs” (1995), and is considered useful for warming up. Subsequently, there was a guideline for the development of the “My T” tool at the end of the week.

WEEKS 3 AND 4

The master made a presentation about a list of technological tools for educational purposes and their fundamentals and characteristics. The first assessment focused on the tools based on the fundamentals of technological tools in teaching a foreign language in an online educational context 20%. Then the teacher focused her class on the use of different educational tools, such as Edpuzzle, Flip, Narakeet, and Liveworksheets. Then the teacher guided the students through videos and demonstrations on the most relevant features of Live Worksheets, which "allow to transform their traditional printable worksheets (doc, pdf, jpg...) into interactive online exercises with self-correction, called interactive worksheets" (2024).

Thus, the teacher gave the students the guidelines to create the second Live Worksheet assessment activity, and their ability to produce a video on Google Meet using this particular technological tool and send it to the campus. Furthermore, the students synchronously developed the My T tool in pairs; the teacher assigned to each pair different online tools to explain in class, and each pair synchronously, explained the interactive application and its objective with the class.

WEEKS 5 AND 6

During these sessions, the teacher introduced a new technological tool called PowToon through videos, readings, and tutorials. Then, students received in-depth training on PowToon, which according to Web, "is a cloud-based animation software that allows for the creation of animated skits and video presentations" (2012). The teacher then guided the students on how to research the features, advantages, and disadvantages of AI in groups using GPT. During another session, the teacher taught the students how to use different virtual tools. The students used Classroomscreen to draw an image individually and then guess what other classmates had drawn. Then at the end of the week, for the 3rd evaluation, students were tasked with creating a 3-minute video in PowToon about the advantages and disadvantages of artificial intelligence, and the main features of the principal tools currently in use, all using PowerPoint.

WEEKS 7 AND 8

This week, students watched short videos and listened to the in-class instructor's explanations about a new tool called Nearpod, which, according to Web "allows educators to make lessons interactive through quizzes, surveys, videos, and collaborative whiteboards" (2024). Additionally, students were given the final instructions for the 4th evaluated activity, which involved creating an individual lesson plan. Each student had to select a topic and prepare a 10-

minute class using at least three specific tools learned throughout Module II. To add variety, students were allowed to use an additional tool of their choice, but they were required to use three mandatory assignments selected randomly by the teacher. The groups were randomly assigned the technological tools. And present it live at the end of the week.

MODULE III "DESIGN OF DIDACTIC MATERIALS FOR VIRTUAL ENVIRONMENTS"

In this module, students learned to use at least four Web tools for the design of educational materials, and developed materials such as podcasts, online presentations, interactive images and videos, among others. As a fundamental part of the completion of this specialization, students performed an integrative task through which they applied the skills acquired during the three modules. In addition, they were able to design digital materials to be used in the teaching and learning of foreign languages and used technological tools for the design of teaching materials, adding the development of digital materials for the teaching-learning of foreign languages and Integrated tools to present content in a Virtual Learning Environment.

WEEKS 1 AND 2

During these weeks, students were able to acquire knowledge about the Fundamentals of Using Multimedia Resources in a Virtual Learning Environment; with readings, tutorials and creation of Podcasts, using Audacity on Sound Cloud taught by the professor with tutorials and videos. In addition, students developed an individual work on planning and teaching audio with a duration of two or three minutes, planning and writing the audio script in a Word document following the guidelines given by the professor for the first activity of module III. For this topic the teacher held a presentation about current and most common audio formats and then asked the

students to record audio using their smartphones. She defined and provided important criteria on what to consider when recording audio material such as audience type age and social background of listeners on the purpose, duration and format of the content among others. The teacher explained the definition of a podcast and she shared her experience on how to select background music for the audio. The teacher showed some tutorial videos on how to create a podcast using an online audio converter, the software called audacity, and the online streaming platform Sound Cloud. After watching the videos and putting what the teacher had taught into practice, the students made their two-minute podcasts using the tool mentioned above.

WEEKS 3 AND 4

Students were able to learn about the basics of image selection; the teacher used presentation tutorials and uploaded videos about this activity, divided the students into groups, and asked them to download an image and reduce it with the necessary characteristics to fit a good visualization, Pixabay.com and pizap.com. Then, each group uploaded it to the class. Furthermore, the teacher explained the basics of choosing images and creating a Google Site using Genially. The teacher used engaging video presentations and tutorials to show how to upload audio, texts, images, videos, web pages, quizzes, and reference pages. According to the website, "Genially is an all-in-one online tool designed to create stunning and interactive content" (2024). Then as a 2nd evaluated activity the teacher provided guidelines for creating an interactive image activity using Genially, with the audience and objective selected.

WEEKS 5 AND 6

In these weeks the learners were able to learn the basics of creating Google presentations, through readings, and tutorials taught by the teacher who also uploaded videos in Google presentations for students to develop their final creation of Google presentations. Then the students were introduced to the essential skills required for creating effective presentations using Google Presentations. They engaged in comprehensive learning through readings and tutorials. Each group was tasked with carefully selecting material relevant to their chosen subtopic. Additionally, they were required to incorporate a collage and video into their presentation. Following this, the students presented and provided commentary on their creations in front of the entire class. The teacher then provided valuable feedback and made necessary corrections to enhance the quality of the presentations. In addition, the first draft of the Written Report on the specialization was sent to campus. Then the teacher taught the students how to create a Google Site.

WEEKS 7 AND 8

This week students created a Google site linked to a class on the Google Classroom platform. In these two tools, students integrated the content of materials created in module III with 3 technological tools from module II per each group. The activities designed in Google Classroom had to be appropriate with the material provided to the students, which were: podcasts, interactive images, Genially, Google presentation and OpenShot video, also there were included 3 activities from google classroom, there were selected three subtopics per group, and students prepared for a live defense to demonstrate their understanding of the created Website manage. Also students learned about video creation. The instructor provided detailed tutorials covering essential aspects

of video production and also taught several video editing programs. Students were shown how to use their cell phones to record videos and learned practical video capture techniques, such as position, dress appropriate colors, appropriate light, silencing ambient, and not using jewelry to avoid distractions.

The instructor also introduced a new video editing tool called Open Shot and guided video tutorials. According to the web “openshot video editor is a free open-source video editor for Linux, Mac, and Windows. Easily cut, slice, and edit any video or film” (2012). Then the students created an educational video using Open Shot to edit in one minute for video from smartphones, adding background music and images as part of their fourth assessment. Lastly, learners presented their final written report on the Specialization course, for their fifth assessment.

V. ACHIEVEMENTS

a) In the specialization course participants acquired the knowledge of more than 20 online tools applications, useful for teaching English learning.

b) Moreover, students got the challenge of using and applying interactive online tools to give online class presentations.

c) Students also developed the creation of cooperative activities in groups, and the interactive participation in online classes with the professor and classmates.

d) Students learned to post forums, share videos, assign tasks, and add new students to a class.

e) Additionally, they mastered the creation of quiz assignments using Google Forms.

f) Students also gained proficiency in adding people and uploading information to Moodle, including images, documents, and URLs of videos or websites.

g) The team also learned to utilize various technological tools for planning and executing synchronous class activities, such as Edpuzzle, live worksheet, Nearpod, Padlet, Kahoot, Classroom screen, and PowToon.

h) Future professionals acquired the knowledge of Basic image and photo editing skills were acquired using free software like Pizap, Pixabay, and Pixels.

i) Furthermore, students learned to leverage tools for designing teaching materials for teaching foreign languages in virtual learning environments, including podcasts, online presentations, interactive images, and videos.

j) Additionally, participants were taught to create a Google Site linked to the Google Classroom platform.

VI. CONCLUSIONS

To sum-up, the integration of artificial intelligence (AI) in generating teaching materials, such as study guidelines and multimedia resources, holds immense potential to transform education. AI can streamline the creation of comprehensive and engaging educational content, making it more accessible and tailored to individual student needs. By using AI tools, educators can enhance productivity, personalize learning experiences, and create dynamic multimedia resources that provide diverse learning styles.

However, it's crucial to approach the use of AI with a mindful consideration of ethical implications, such as data privacy and potential biases. Ensuring responsible and ethical use of AI will maximize its benefits while safeguarding the interests of both educators and students.

Overall, AI offers a promising avenue for innovation in education, empowering teachers to focus more on teaching and inspiring students, while providing learners with enriched and personalized educational experiences.

The team unequivocally asserts that the foundations of the 3 modules have been established through rigorous experimentation with cutting-edge technologies, benefiting both educators and students. Additionally, they have effectively tackled the significant challenges that teachers encounter when utilizing LMS, including the creation of teaching materials, their management, assessment, and timely feedback.

In analyzing the results, it is evident that students have made substantial improvements in various areas, not only in their listening and speaking fluency but also in their overall self-confidence and peer relationships.

Consequently, it is known that currently, there is a growing importance of utilizing LMS in this era of specialization. Furthermore, we strongly advocate for comprehensive training in these technologies for all educators, including those in interdisciplinary fields, as they play a pivotal role in fostering student engagement and reporting on course activities. As such, we urge the faculty authorities to continue their unwavering support for these specialized courses.

VII. RECOMMENDATIONS

For the following research investigators make the supporters recommendations for effectively using AI to the authorities of the University of El Salvador, School of Arts and Sciences, Department of Foreign Languages:

1. Let learners know when and how AI tools will be used in their learning process, and explain mainly the benefits and any potential limitations that AI will have in their process.
2. Must educate students on data privacy practices and ensure that any AI tools that learners use comply with privacy regulations.
3. May use AI to create interactive and engaging learning materials, such as quizzes, simulations, and personalized feedback.
4. Should promote critical thinking by encouraging students to question and analyze AI-generated content.
5. The authorities should invest in training for educators to effectively use AI tools and understand their capabilities and limitations.
6. The team requests to promote the recovery of the old language laboratory located in the facilities of the central library where English teachers took their students for listening comprehension and pronunciation instruction, knowing that online education is a complement to face-to-face education because it was observed that some colleagues reduced their participation because they could not use some of the programs or applications due to poor internet connection in their areas at home or due to low-capacity equipment such as phones and tablets, which affects their learning experience.

7. The team acknowledges the benefits of distance learning for UES students but has observed that low-income students encounter challenges accessing programs and applications due to poor internet connectivity and inadequate equipment. In light of this, we recommend establishing or revitalizing a language laboratory within the central library facilities to provide equitable access to resources.
8. Additionally, we suggest enhancing the statistics course as a continuation of the research seminar.

To the authorities responsible for the specialization course:

1. The team recognizes that while the professor's efforts to engage the class are commendable, they believe that four-hour classes pose challenges for student attention and participation. It is recommended to consider dividing the sessions into two-hour classes per week or scheduling classes for shorter durations on multiple days to optimize student engagement.
2. Furthermore, we advocate for the continuation of the specialization in virtual environment management despite the challenges, as it equips participants with essential skills and experiences for virtual teaching and learning, aligning with the evolving needs of both educators and learners.
3. We also propose that new professionals have the opportunity to participate as online assessment evaluators while working as teaching assistants in an additional role to continue developing the specialization course.

4. The team suggests that it would be beneficial to split the class into parts throughout the week. This is because 4 hours is always challenging for students, as their attention decreases significantly when sitting for long periods compared to a face-to-face class.

Despite the professor's great effort to keep the group engaged in various creative and interactive activities during the class.

5. Due to the increasing number of activities in module III, the team recommends preparing the written report starting from the first module. This will provide enough time to collect the necessary material and complete the required activity on time.
6. Finally, the team recommends to the authorities the continuation of this specialization in virtual environment management, despite the inconveniences. This is because they have gained important experiences with the use of technological tools, which will benefit the students in their future roles as teachers. It will also enable them to acquire skills and opportunities to teach virtually, which will be a fundamental part of meeting the needs of the new generations of learners and educators in the future.

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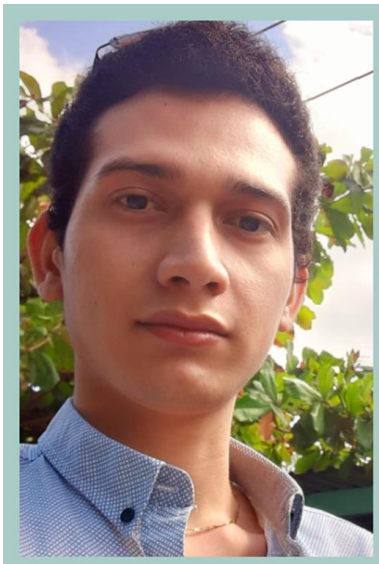
IX. ANNEXES



Lic. Carlos Avilés

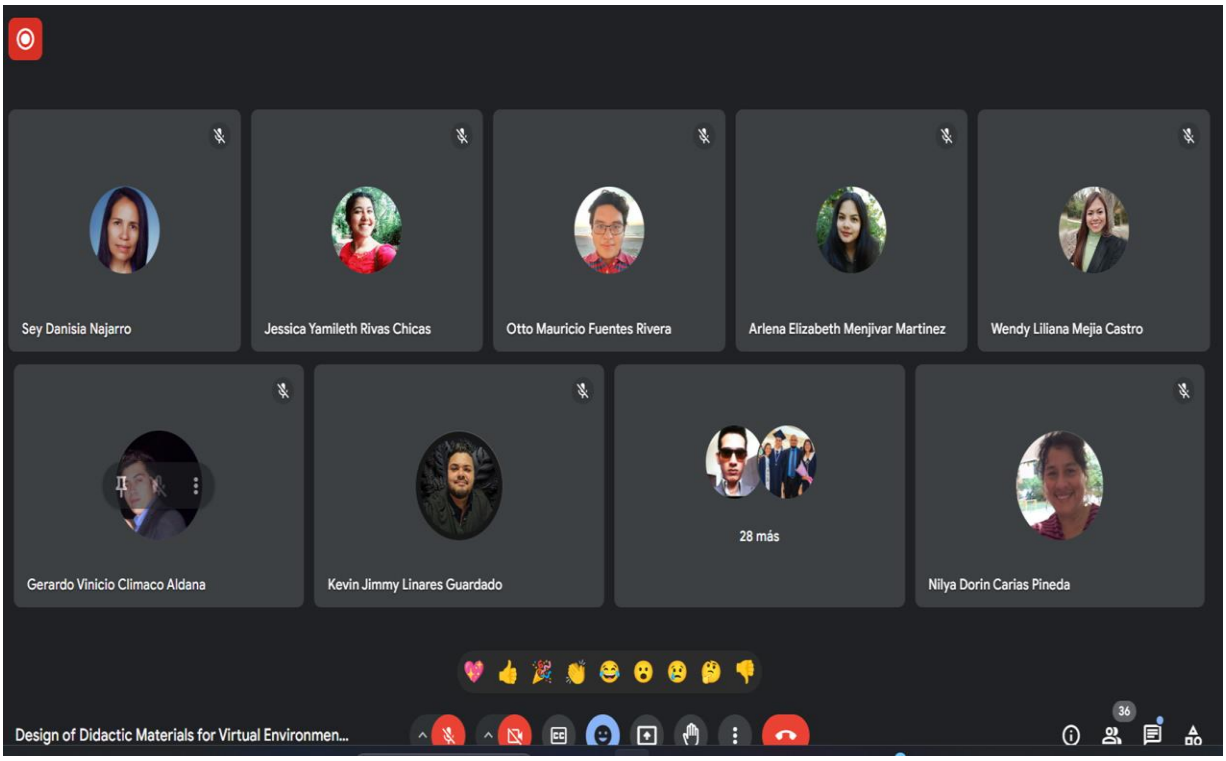
Licda. Nilya Dorin Carias

Lic. Jimmy Stanley Batres

THIS IS NOT A GOOD BYE...IT IS A SEE YOU

SOON!

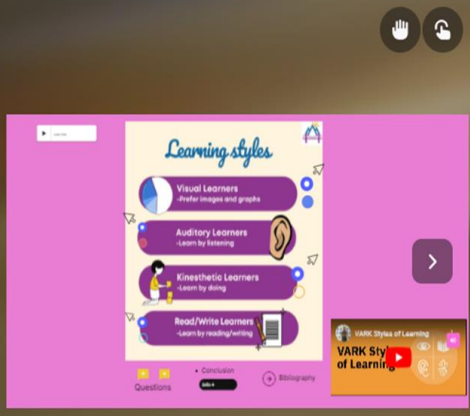
It´s time to say good by



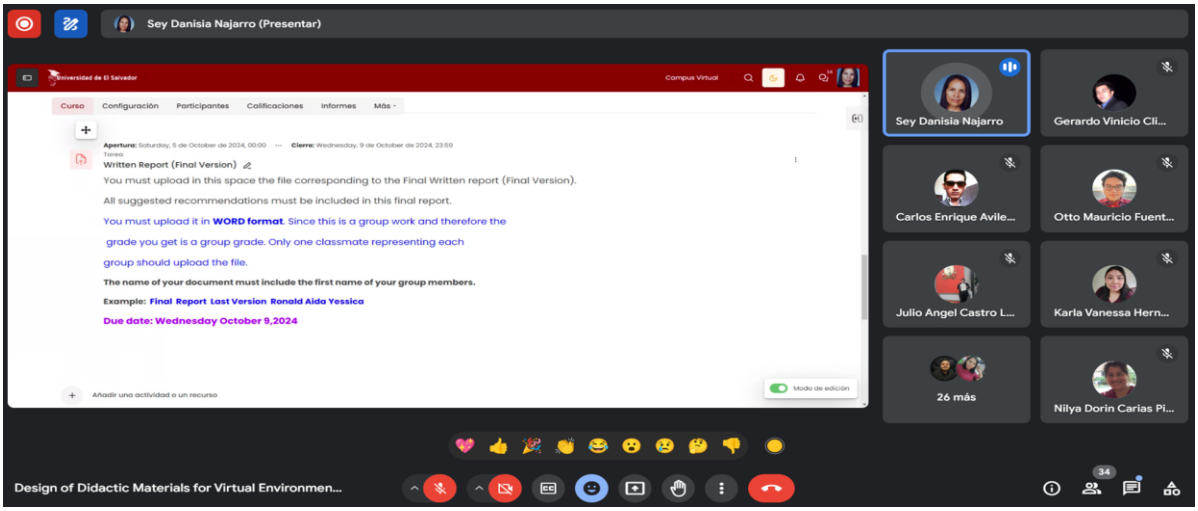
Haz clic para editar el texto

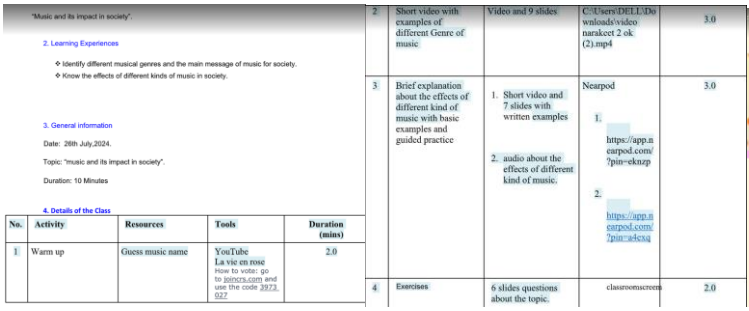
This podcast is about general aspects of learning styles, the objective is to introduce the content of the subtopic. Then, listen to it and continue.

This video is about saying goodbye to the students after studying this subtopic.



This interactive image concerns the four main learning styles that help students learn and retain information. The objective is to give feedback and to motivate curiosity and interest.





"Music and its impact in society".

2. Learning Experiences

- Identify different musical genres and the main message of music for society.
- Know the effects of different kinds of music in society.

3. General information

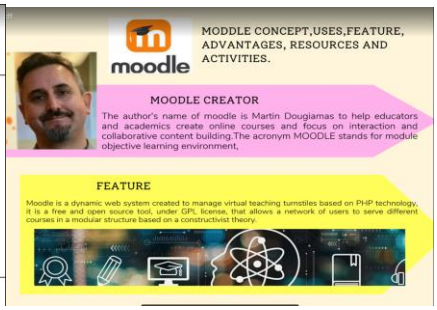
Date: 26th July,2024.

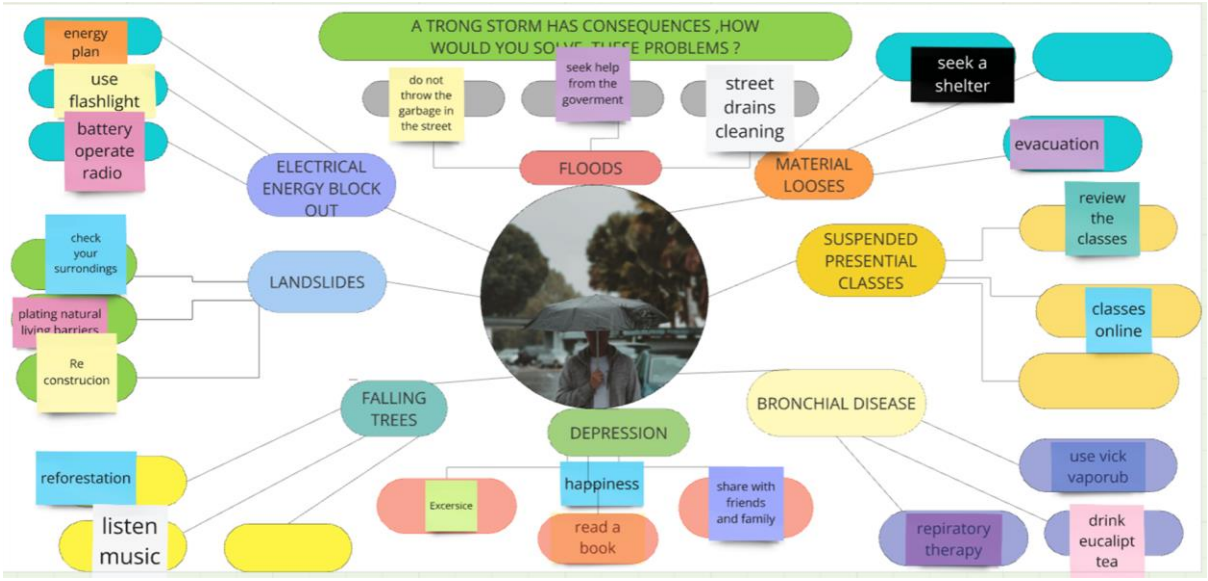
Topic: "music and its impact in society".

Duration: 10 Minutes

4. Details of the Class

No.	Activity	Resources	Tools	Duration (mins)
1	Warm up	Guess music name	YouTube La vie en rose How to vote: go to joincrs.com and use the code 3973 027	2.0
2	Short video with examples of different Genre of music	Video and 9 slides	C:\Users\DELL\Downloads\video narakeet 2 ok (2).mp4	3.0
3	Brief explanation about the effects of different kind of music with basic examples and guided practice	1. Short video and 7 slides with written examples 2. audio about the effects of different kind of music.	Nearpod 1. https://app.nearpod.com/?pin=eknzp 2. https://app.nearpod.com/?pin=a4cxq	3.0
4	Exercises	6 slides questions about the topic.	classroomscreens	2.0





Powtoon Dorin.

By CP88023 | Updated: Aug. 1, 2024, 5:25 a.m.

Slideshow Video