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

TITLE:

"*Application of Technological Tools in a Virtual Classroom Environment"*

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INFORME FINAL DE CURSO DE ESPECIALIZACIÓN "ADMINISTRACIÓN DE AMBIENTES VIRTUALES PARA LA ENSEÑANZA Y APRENDIZAJE DE IDIOMAS EXTRANJEROS" IN ORDER TO OBTAIN THE DEGREE OF: BACHELOR OF ARTS IN MODERN LANGUAGES WITH A MAJOR IN FRENCH AND ENGLISH

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Abstract

Distance learning is increasingly becoming an option for learners that were previously denied continuing education opportunities due to pandemic situations, academic preparation, or personal circumstances. For this reason it is really important educators can get specialization

in virtual classrooms and how important the usage of technological tools is. It is also a means to help nations meet goals to increase the percentage of individuals with the education in order to address workforce needs. However, learners and instructors often have concerns with their ability to be successful in a distance learning environment. Considerable research has been conducted over the last few days, which has identified certain principles of effective learning. These principles are important to consider in the development of multimedia resources. This final report presents a theoretical model for eLearning and eTeaching aimed at helping learners and instructors successfully navigate distance learning courses for a second language. Examples of course activities corresponding to the model components, some important technological tools seen are shared in the specialization course. A qualitative analysis of learner self-reflections demonstrates the efficacy of the model in terms of increased autonomy, self-regulation, and targeted skills.

Key words: distance language learning, self-regulation, eTeaching and eLearning, online instructor training, distance education.

I. Introduction

Technology can be a powerful tool for transforming learning. It can help affirm and advance relationships between educators and students, reinvent our approaches to learning and collaboration, shrink long-standing equity and accessibility gaps, and adapt learning experiences to meet the needs of all learners. Our schools, community colleges, and universities should be incubators of exploration and invention. Educators should be collaborators in learning, seeking new knowledge and constantly acquiring new skills alongside their students. Education leaders should set a vision for creating learning experiences that provide the right tools and support for all learners to thrive.

However, to fully realize the benefits of technology in our education system and provide authentic learning experiences, educators need to use technology effectively in their practice. Furthermore, education stakeholders should commit to working together to use technology to improve education. These stakeholders include leaders; teachers, faculty, and other educators; researchers; policymakers; funders; technology developers; community members and organizations; and learners and their families.

For learners, online classes have become an imminent trend in the education sector around the globe. Digital learning provides easy access to the files and folders that can now be organized and saved without any physical damage. With one click, learners can access their notes and assignments without the fear of misplacing or spoiling them. With advanced technology, this mode of learning has not only been simpler but fun and engaging as well.

Technology-enabled learning is beneficial and proved to be more engaging as it helps in making those subjects interactive and fun which are traditionally considered dull by learners. It has become very convenient for the learners to attend classes from anywhere in the world as both classes and learning content is easily accessible at home.

Integration of the learning platforms with new-age interactive applications make online classes more convenient for both learners and educators as more learners are able to express their views at the same time using certain online applications. Learners have been

more particular with their online submission as they notify on a regular basis and it is an effortless task for the educators to track down the learners who fail to submit their assignments on time.

Online learning helps learners to become independent before they make their way into the real world. Learners can get opportunities to explore new learning applications and platforms during the class, which helps them to develop new skills and capabilities, accelerating their growth trajectory. Some of the learners are responding well to the active learning environment created online by the educators whereas others need a push in fits and starts.

After receiving the "*Application of Technological Tools in a Virtual Classroom Environment*" course about all the technologies we, as educators, can apply during the learning process and these new methodologies to use virtual classrooms, the most important theories applied to these new views and all the material seen during this course of specialization in virtual environments can be found in this report.

II. Objectives

General Objective:

- To know new teaching methodologies for teaching English online using Technological Tools.

Specific Objectives:

- To identify multimedia resources according to the teaching-learning process that contribute and are suitable in virtual education.

- To identify technological tools to plan and develop synchronous class activities, as well as the design of didactic materials.

- To design a virtual classroom using a Learning Management System available on the internet.

- To elaborate digital materials for the teaching-learning of foreign languages.

III. Theoretical Framework
3. 1 Learning Theory.

Learning theory is meant to explain and help us understand how people learn; however, the literature is complex and extensive enough to fill entire sections of a library. It involves multiple disciplines, including psychology, sociology, neuroscience, and of course, education. Three of the more popular learning theories – behaviorism, cognitivism, and social constructivism – will be highlighted to form the foundation for further discussion. Rewrite this, mention will also be made of several other learning theories that are relevant to online education. Before reviewing these theories, it will be worthwhile to have a brief discussion of the term theory itself.

Theory is defined as a set of statements, principles, or ideas that relate to a particular subject. A theory usually describes, explains, and/or predicts phenomena. The definition of theory also varies depending upon disciplines, especially when related to the term *model.* As noted by Graham, Henrie, and Gibbons (2013), the two terms are used interchangeably and generally refer to the same concept. However, a model is more frequently a visual representation of reality or a concept. In this discussion, the terms theory and model will be used interchangeably. The purpose of a theory or model is to propose the answers to basic questions associated with a phenomenon. Graham, Henrie and Gibbons (2013) reviewed this issue as related to instructional technology and recommended a three-part taxonomy first proposed by Gibbons and Bunderson (2005) that includes theories that:

1. *Explore:* "What exists?" and attempts to define [describe] and categorize;
2. *Explain:* "Why does this happen?" and look for causality and correlation, and work with variables and relationships.
3. *Design*: "How do I achieve this outcome?" and describes interventions for *reaching targeted outcomes and operational principles (Graham, Henrie, & Gibbons, 2013, p. 13).*

This taxonomy will serve as an overall guiding principle for the discussion of learning theories and models in this article.

3.1.1 Behaviorism

As its name implies, behaviorism focuses on how people behave. It evolved from a positivist worldview related to cause and effect. In simple terms, action produces reaction. In education, behaviorism examines how students behave while learning. More specifically, behaviorism focuses on observing how students respond to certain stimuli that, when repeated, can be evaluated, quantified, and eventually controlled for each individual. The emphasis in behaviorism is on that which is observable and not on the mind or cognitive processes. In short, if you cannot observe it, it cannot be studied.

The development of behaviorism is frequently associated with Ivan Pavlov, famous for his experiments with dogs, food, and audible stimuli, such as a bell. In his experiments, dogs learned to associate food or feeding time with the sound of the bell and began to salivate. Pavlov conducted his experiments in the early 1900s and they were replicated by many other researchers throughout the 20th century. John B. Watson, among the first Americans to follow Pavlov's work, saw it as a branch of natural science. Watson became a major proponent of Pavlov and is generally credited with coining the term behaviorism. He argued that mind and consciousness are unimportant in the learning process and that everything can be studied in terms of stimulus and response.

Other major figures associated with behaviorism are B.F. Skinner and Edward Thorndike. Skinner is particularly well known, primarily because he introduced what he referred to as operant conditioning which emphasized the use of both positive and negative reinforcement to help individuals learn new behaviors. This was quite different from Pavlov, who relied on simple reflexive responses to specific stimuli although both Pavlov and Skinner promoted repetitive behavior that leads to habit formation. Skinner had a significant influence on early computer-assisted instructional (CAI) models as developed by Pat Suppes and others. A common aspect of early CAI programs was the reliance on encouragement and repetition

to   promote   positive   learning   activities.

3.1.2 Cognitivism

Cognitivism has been considered a reaction to the "rigid" emphasis by behaviorists on predictive stimulus and response (Harasim, 2012, p. 58). Cognitive theorists promoted the concept that the mind has an important role in learning and sought to focus on what happens in between the occurrence of environmental stimulus and student response.

They saw the cognitive processes of the mind, such as motivation and imagination, as critical elements of learning that bridge environmental stimuli and student responses. For example, Noam Chomsky (1959) wrote a critical review of Skinner's behaviorist work in which he raised the importance of creative mental processes that are not observable in the physical world. Although written mainly from the perspective of a linguist, Chomsky's view gained popularity in other fields, including psychology.

Interdisciplinary in nature, cognitive science draws from psychology, biology, neuroscience, computer science, and philosophy to explain the workings of the brain as well as levels of cognitive development that form the foundation of learning and knowledge acquisition. As a result, cognitivism has evolved into one of the dominant learning theories. The future of cognitivism is particularly interesting as more advanced online software evolves into adaptive and personalized learning applications that seek to integrate artificial intelligence   and   learning   analytics   into   instruction.

Behaviorism led to the development of taxonomies of learning because it emphasized the study and evaluation of multiple steps in the learning process. Behaviorists repeatedly studied learning activities to deconstruct and define the elements of learning. Benjamin Bloom (1956) was among the early psychologists to establish a taxonomy of learning that related to the development of intellectual skills and to stress the importance of problem solving as a higher order skill. Bloom's (1956) *Taxonomy of educational objectives handbook: Cognitive domains* remains a foundational text and essential reading within the

educational community. Bloom's taxonomy is based on six key elements (see Figure 1) as follows:

1. Creating: Putting elements together to form a coherent or functional whole, and reorganizing elements into a new pattern or structure through generating, planning, or producing.

2. Evaluating: Making judgments based on criteria and standards through checking and critiquing.

3. Analyzing: Breaking material into constituent parts, and determining how the parts relate to one another and to an overall structure or purpose through differentiating, organizing, and attributing.

4. Applying: Carrying out or using a procedure through executing or implementing.

5. Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.

6. Remembering: Retrieving, recognizing, and recalling relevant knowledge from long-term memory.

Figure 1
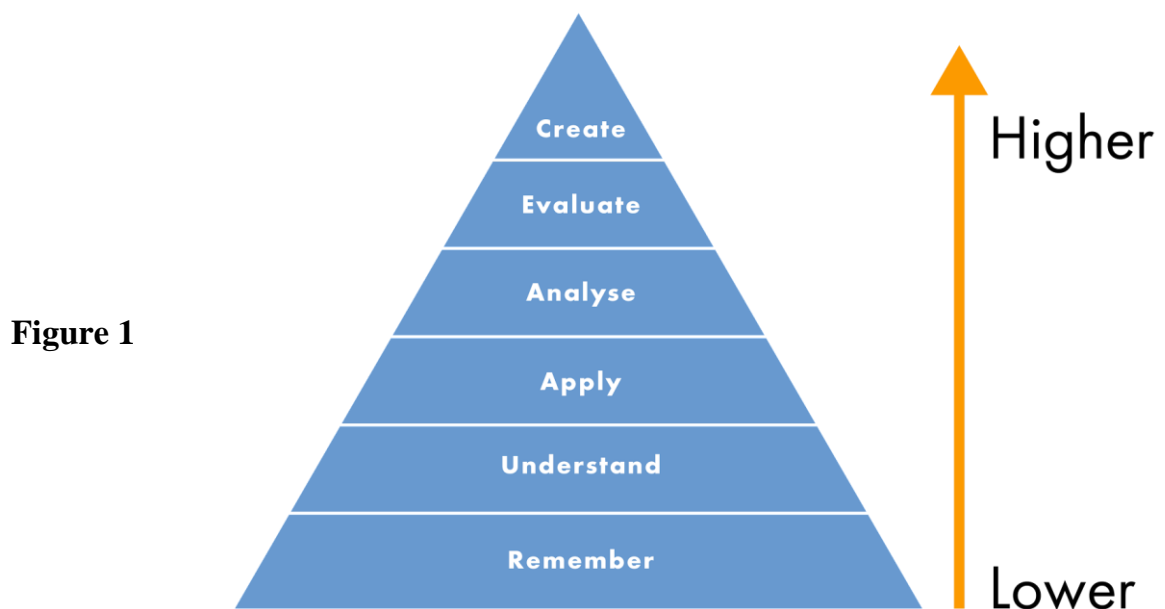
3.1.2.1 Bloom's taxonomy

Bloom, in developing his taxonomy, essentially helped to move learning theory toward issues of cognition and developmental psychology. Twenty years later, Robert Gagne, an educational psychologist, developed another taxonomy (events of instruction) that built on Bloom's and became the basis for cognitivist instructional design (Harasim, 2012). Gagne emphasized nine events in instruction that drive the definitions of objectives and strategies for the design of instructional material (see Figure 2).

Figure 2
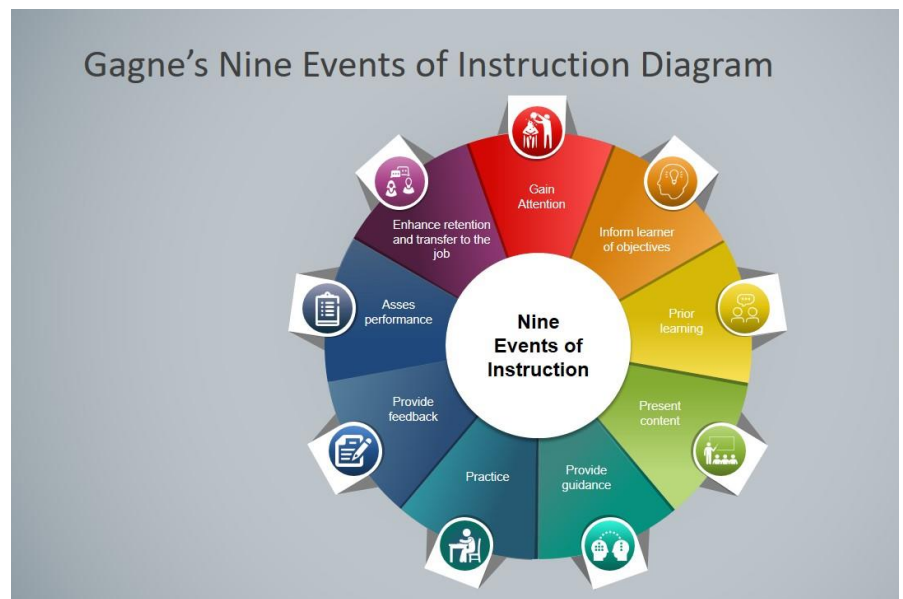
Gagné's nine events of instruction

3.1.3 Social Constructivism.

Parallel to behaviorism and cognitivism was the work of several education theorists, including Lev Vygotsky, John Dewey, and Jean Piaget. Their focus on social constructionism was to describe and explain teaching and learning as complex interactive social phenomena between teachers and students. Vygotsky posited that learning is problem solving and that the social construction of solutions to problems is the basis of the learning process.

Vygotsky described the learning process as the establishment of a "zone of proximal development" in which the teacher, the learner, and a problem to be solved exist. The teacher provides a social environment in which the learner can assemble or construct with others the

knowledge necessary to solve the problem. Likewise, John Dewey saw learning as a series of practical social experiences in which learners learn by doing, collaborating, and reflecting with others.

While developed in the early part of the 20th century, Dewey's work is very much in evidence in a good deal of present-day social constructivist instructional design. The use of reflective practice by both learner and teacher is a pedagogical cornerstone for interactive discussions that replaces straight lecturing, whether in a face-to-face or online class. Jean Piaget, whose background was in psychology and biology, based his learning theory on four stages of cognitive development that begin at birth and continue through one's teen years and beyond.

Seymour Papert, in designing the Logo programming language, drew from Jean Piaget the concept of creating social, interactive microworlds or communities where children, under the guidance of a teacher, solve problems while examining social issues, mathematical and science equations, or case studies. Papert's approach of integrating computer technology into problem solving is easily applied to many facets of instructional design.

3.2 Learning Theories for Online Education.

Just as no single learning theory has emerged for instruction in general, the same is true for online education. A number of theories have evolved, most of which derive from the major learning theories discussed previously. In this section, several theories will be examined in terms of their appropriateness for the online environment.

3.2.1 Community of Inquiry (CoI).

The "community of inquiry" model for online learning environments developed by Garrison, Anderson, and Archer (2000) is based on the concept of three distinct "presences": cognitive, social, and teaching (see Figure 3). While recognizing the overlap and relationship among the three components, Anderson, Rourke, Garrison, and Archer (2001) advise further research on each component.

Their model supports the design of online and blended courses as active learning environments or communities dependent on instructors and students sharing ideas, information, and opinions. Of particular note is that "presence" is a social phenomenon and manifests itself through interactions among students and instructors. The community of inquiry has become one of the more popular models for online and blended courses that are designed to be highly interactive among students and faculty using discussion boards, blogs, wikis, and videoconferencing.

Figure 3
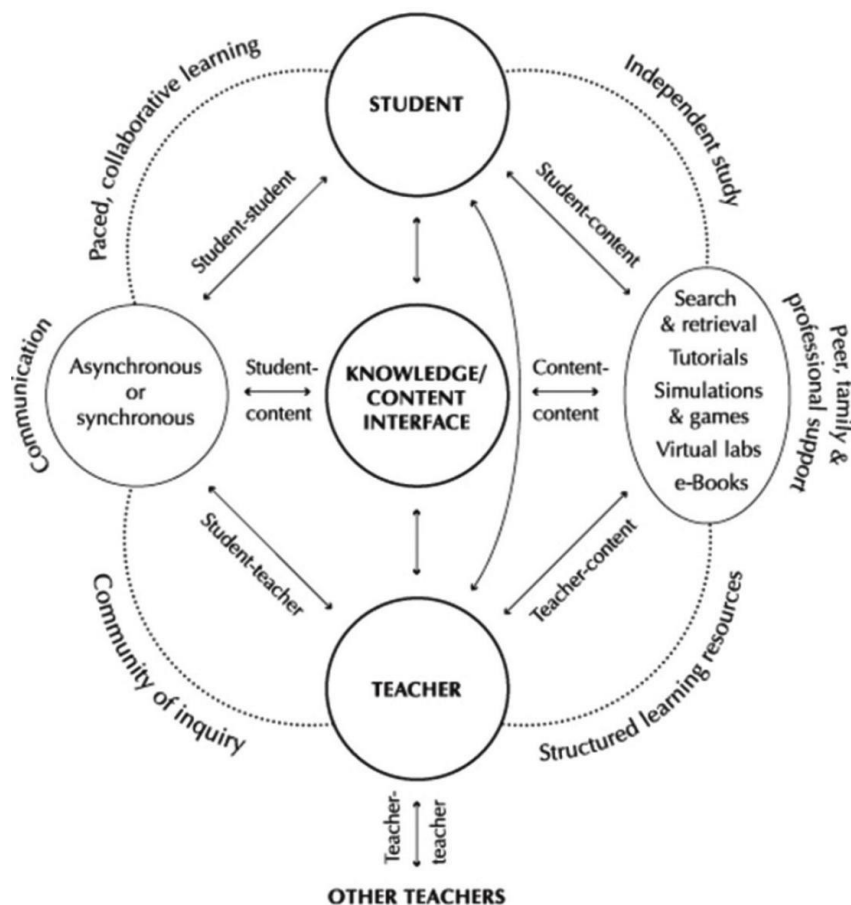
Community of inquiry (from Garrison, Anderson, Garrison, & Archer, 2000).

3.2.2 Connectivism

George Siemens (2004), one of the early MOOC pioneers, has been the main proponent of connectivism, a learning model that acknowledges major shifts in the way knowledge and information flows, grows, and changes because of vast data communications networks. Internet technology has moved learning from internal, individualistic activities to group, community, and even crowd activities.

In developing the theory, Siemens acknowledged the work of Alberto Barabasi and the power of networks. He also referenced an article written by Karen Stephensen (1998) entitled "What Knowledge Tears Apart, Networks Make Whole," which accurately identified how large-scale networks become indispensable in helping people and organizations manage data and information.

Siemens describes connectivism as: *the integration of principles explored by chaos, network, and complexity and self-organization theories [where] learning is a process that occurs within nebulous environments of shifting core elements – not entirely under the control of the individual. Learning (defined as actionable knowledge) can reside outside of ourselves (within an organization or a database), is focused on connecting specialized information sets, and the connections that enable us to learn more and are more important than our current state of knowing. (Siemens, 2004).*

Siemens noted that connectivism as a theory is driven by the dynamic of information flow. Students need to understand, and be provided with, experiences in
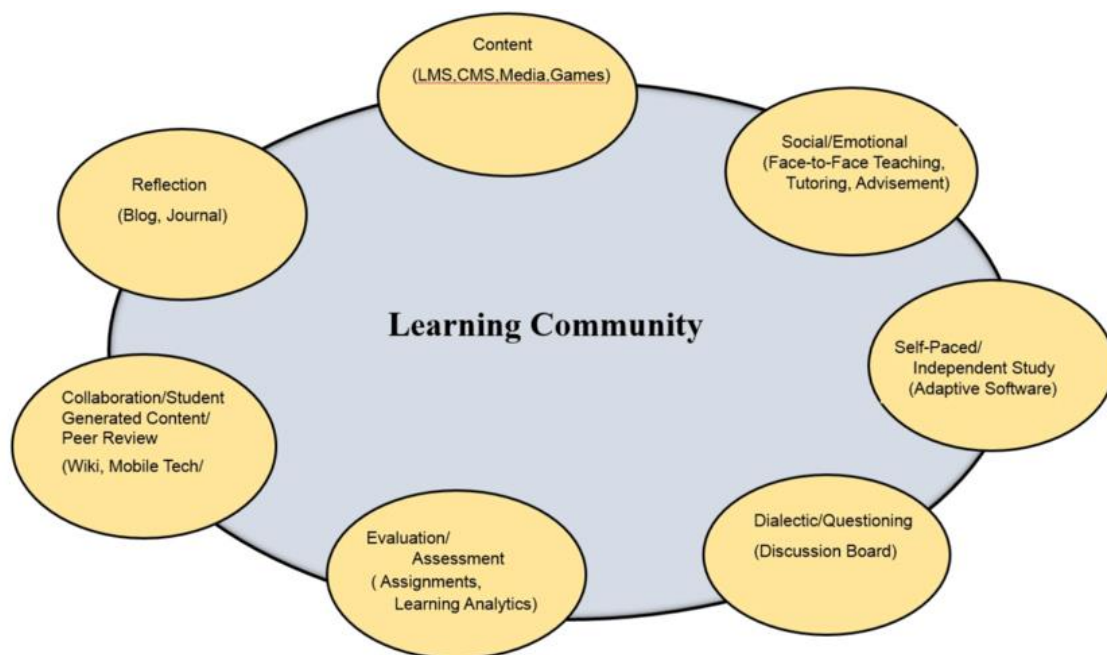
Figure 4   Siemens' eight principles of connectivism.

navigating and recognizing oceans of constantly shifting and evolving information. Siemens proposed eight principles of connectivism (see Figure 4). Connectivism is particularly appropriate for courses with very high enrollments and where the learning goal or objective is to develop and create knowledge rather than to disseminate it.

3.2.3 Online Collaborative Learning (OCL).

Online collaborative learning (OCL) is a theory proposed by Linda Harasim that focuses on the facilities of the Internet to provide learning environments that foster collaboration and knowledge building. Harasim (2012) describes OCL as:

a new theory of learning that focuses on collaborative learning, knowledge building, and Internet use as a means to reshape formal, non-formal, and informal education for the Knowledge Age. (p. 81)

Like Siemens, Harasim sees the benefits of moving teaching and learning to the Internet and large-scale networked education. In some respects, Harasim utilizes Alberto Barabasi's position on the power of networks. In OCL, there exist three phases of knowledge construction through discourse in a group:

1. **Idea generating:** the brainstorming phase, where divergent thoughts are gathered.
2. **Idea organizing:** the phase where ideas are compared, analyzed, and categorized through discussion and argument.
3. **Intellectual convergence:** the phase where intellectual synthesis and consensus occurs, including agreeing to disagree, usually through an assignment, essay, or other joint piece of work (Harasim, 2012, p. 82).

OCL also derives from social constructivism, since students are encouraged to collaboratively solve problems through discourse and where the teacher plays the role of facilitator as well as learning community member. This is a major aspect of OCL but also of

other constructivist theories where the teacher is not necessarily separate and apart but rather, an active facilitator of knowledge building. Because of the importance of the role of the teacher, OCL is not easy to scale up.

Unlike connectivism, which is suited for large-scale instruction, OCL is best situated in smaller instructional environments. This last issue becomes increasingly important when seeking commonality among online education theories. Many other theories can be associated with online education but, rather than present more theories and in keeping with one of the major purposes of this article, it is appropriate to ask whether an integrated or unified theory of online education is possible.

IV. Description of Activities
4.1 Module 1: Online English Language Teaching

This module was about the fundamentals of online education and its application in the English Language Teaching field; specifically, the virtual or online teaching approach. New and different terms and techniques were introduced during the first two months of the specialization. For instance, the Learning Management System (LMS from now on), Moodle, Teams, among others that have the same level of importance at the moment of being included in an online teaching environment and they are explained here.

For starters, we need to have a better understanding about certain new terms before we dive into the vast ocean that is Online Language Teaching. Therefore, we need to know that an LMS, according to Moodle, *is a software that helps you create, manage, organize, and deliver online learning materials to learners.* A great example of this is Moodle itself where we can house all different sections for a specific subject, like activities, quizzes, homework and in the same place we can upload grades and have direct communications with the students. Making the teacher-student relationship and the learning even funnier and interactive.

Google Classroom is a major LMS used within the online teaching world and the one used to set up our Virtual Classroom for this specialization. Google Classroom is a wonderful tool to integrate into a teacher's life since it is very minimalistic but at the same time has all the tools and sections at a glance and students can be promptly directed to the activity they need to complete. This since all the instructions are easy to find and can be divided in blocks as the teacher sees suitable (See Image 1). This platform, as well as Moodle, also allows us to create Discussion Forums, which is another great tool to use to interact with the students about a topic that is being discussed in class and needs to be reviewed at a deeper level, or to clarify doubts or questions they might have. It is a great conversational tool when we are not online since the discussion remains ongoing while the students are voicing their opinions and/or thoughts. At the same time it is a great asset for writing exercises and can be less intimidating than speaking in front of the class, especially for   the   beginners.
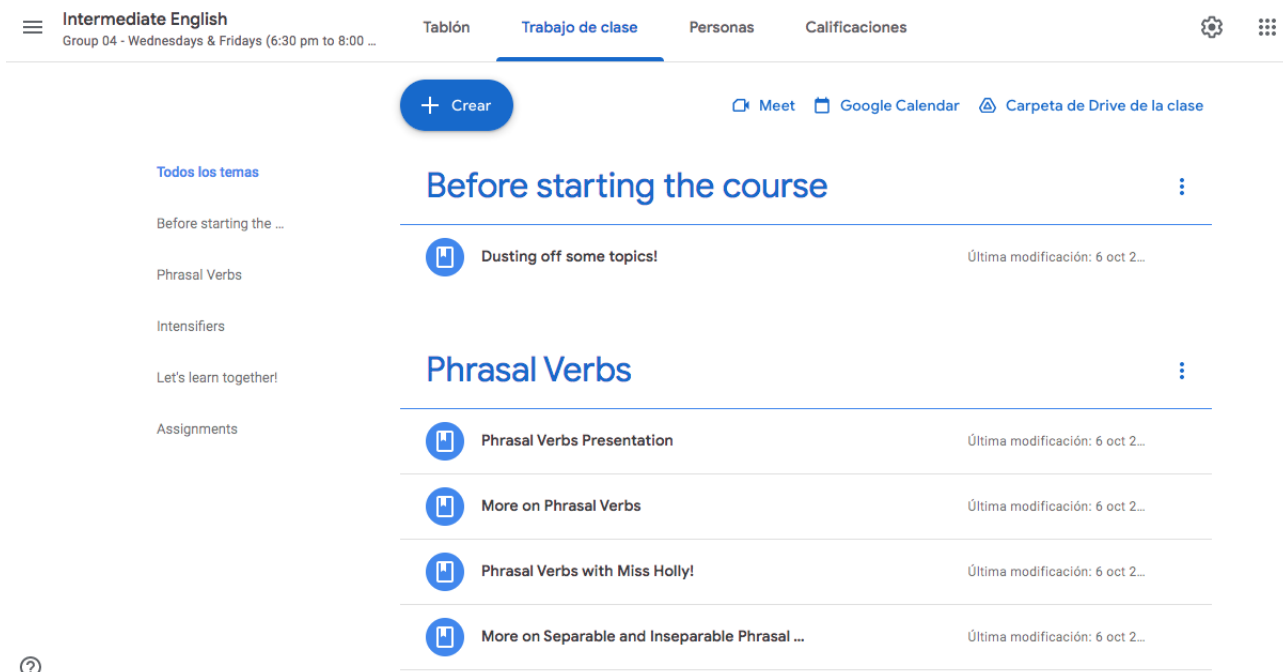
Image 1. Google Classroom interface

Visual representation of information is very important, if not crucial, in a learning environment and when it comes to online learning this has not changed. Infographics come in handy to fulfill this task as they include a variety of elements, such as images, icons, text, charts, and diagrams to convey messages at a glance. It is a way to combine text and images to present a subject in a short, straight to the point but understandable manner. They can be used as a summary after teaching a topic and all the main things can be included for the students to have it as an aid when studying.

Infographics can be a great way to share a data-rich visualization of a story, a tool to educate and inform and even a way to build awareness. An infographic is like a good story: it has the ability to walk us through different phases, offering us facts and intriguing visuals along the way. We can control the flow of our infographic using numbers, headers, color, white space, pictures, and of course charts.

All these tools and techniques come together at the end of the Module 1, where they are presented in a short online class via Google Meet. This helped to understand how well all these platforms work together and how they make the online teaching experience very

smooth once we get to the necessary level of familiarization with the LMS and how to integrate them into the classroom.

4.2 Module 2: Educational Applications for Learning a Foreign Language

This module's main focus was the theoretical fundamentals and the use of technological tools for teaching-learning a foreign language in a virtual modality with the objectives of defining the terms and principles associated with technological tools for educational purposes and using them to plan and develop synchronous class activities.

By definition of the IGI Global website, technological tools *refers to software, primarily, that can be used to develop or support online course content. This could include blogs, wikis and other tools available through the internet*. In short, it is any application that allows us to create content from scratch or use content already created and adapt it to be able to fit our classes and deliver a powerful teaching experience.

These technological tools are not something new to the world, but became more and more noticeable and used in the midst of the pandemic. COVID-19 not only changed our lives and how we live them but also changed, dare we say evolve, the way things are taught. This drastic alteration of the world as we knew it forced us to look deep and search for ways to adapt our old ways into a new reality.

This reality takes form in technological tools. This module provided the knowledge, and alongside, the courage to take advantage of the resources we have available but due to the lack of research or oblivious thinking we have been using them at its lowest capacity. Module two was an eye opener to many resources that we have at hand and can help make the teaching and learning process more interactive and engaging.

Among the tools discovered in this module, we have edpuzzle, Flipgrid, Flippity, liveworksheets, Nearpod, Padlet, Kahoot, Classroomscreen, and Powtoon. These tools provide a big range of possibilities within the virtual classroom and can create a bigger impact in the way teaching and learning is being conducted.

The conventional way of teaching would tell us to play a video and ask questions by the end of it. However, with these tools they can now watch the video and it would ask the questions as the video progresses and even show the answer. Assigning homework would never be the same as the plain and boring printed PDF assignment comes to life and students are able to interact with it and be more engaged during the activities presented.

It is clear that technological tools can make the teaching and learning environment much more dynamic by dedicating some time to understand their functions and how to integrate them into our everyday classes.

4.3 Module 3: Design of Didactic Materials for Virtual Environments

The last and final module of this specialization consisted of the learning and implementation of web tools with the purpose of creating educational material for the teaching-learning of foreign languages.

Web tools are free or paid digital programs that can be used for creating and sharing content, projects and products designed with one or various ends, in our case for educational purposes . These tools are interactive, multi-purpose, easy-to-use digital platforms that encourage teachers and even students to collaborate with each other or create and share individualized response products.

Module 3 introduced us to engaging ways students can interact with, and most importantly, learn from course material. Web tools can be helpful when we align them to teaching and assessment exercises with the final purpose of increasing student engagement, require students to summarize information, or verbalize insight into their conceptual understanding through means other than traditional writing exercises.

Furthermore, web tools also provide the teachers an opportunity to make the classroom and its activities more dynamic and share their knowledge in a completely but effective way. This dynamic and effective approach was presented in the way of educational material such as podcasts, online presentations, interactive images, videos and some others.

Each and every web tool that was taught brings a unique experience for the students in the virtual classroom. They can perfectly work as individual activities and even better when combining them. That is why as a fundamental part of the culmination of this specialization, an integrative task was completed through which the competences acquired during the three modules were applied.

The integrative task consisted in gathering every single material created throughout the three modules and unite them in the Google Classroom that was put together in Module 1. Nonetheless, another tool needed to be integrated as part of the web tools seen in this course. Google Sites brought the Virtual Learning Environment concept to a different level by providing a more enticing, colorful and all-at-a-glance facade, making it the best candidate to be the students first point of contact.

All didactic materials created using the web tools were perfectly integrated within Google Sites, allowing the teacher to have everything in one place and the students to have a more and faster access to everything. Module 3 consolidated the idea of Virtual Learning Environment as a whole and showed how different but breathtaking the teaching process has become.

V. Achievements

All the vast knowledge gained by the team during this specialization is countless, priceless and precious. And it can be seen in each and every didactic material created and tool management learned throughout these six months.

The team learned not only how to use Google Classroom, one of the major LMS platforms there is in the teaching-learning environment, but also how to set up a classroom for any subject that would be taught.

The specialization went above and beyond in regards to didactic material creation by showing how to make a good infographic. Which are used to condensed information in a concise and straight to the point manner and at the same time presented in a fun and striking way.

The team learned how to create a podcast and the different ways on how they can be included in the classroom activities. Podcasting is a significant resource which teachers can use to teach and learn a language. It is an alternative method of learning which can help to improve listening skills. Most producers of podcasts are educators who use this technology to communicate with their students outside the traditional class.

Creating content for a classroom from scratch was no stranger to the team during the specialization. One of the ways it was done was through online presentations that showed the team the structure and how not to lose the attention of the listener. Another one is educational videos in which we can rely to teach a short topic or to explain a difficult process since the students can watch and rewatch it as many times as needed.

Technological tools had been in the dark for a long time, but now they can help make the virtual classroom a much more captivating and compelling environment, nor only for the students but also for the teachers.

VI. Conclusions

This report is a recap of everything learned in the specialization and information technology for e-learning education. While many of the tools and technologies used by teachers have changed, many have remained constant, and even the ways teachers use these tools and technologies have remained remarkably consistent.

In addition, teachers' attitudes about these tools and technologies have remained constant. While perhaps not surprising, this becomes an issue when juxtaposed with the student study finding that students are forced to have their instructors use more technology.

This leads to students using more technology in their courses, this is evidence that blended instruction has stronger learning outcomes than fully online or otherwise fully face-to-face instruction. Perhaps the most important finding of this report is that teachers are forced to incorporate new technologies hand in hand with learning theories.

This places the burden on institutions or individuals that offer courses or programs online, or that wish to increase their online offerings, to present this evidence to teachers in an effort to try to engage in more effective teaching technology practices. Many organizations, teaching and learning centers, and other institutional units that support teachers in a variety of ways have the resources to assist in these efforts. Where teachers require more and better opportunities for training and professional development, thus showing the use of technological tools.

This report serves as an important step in bridging that gap by providing teachers or organizations with information about technology tools and discovering technology in education.

Technology influences every aspect of our lives and plays a vital role in education; it is part of the curriculum, a means of delivering instruction, as well as a tool to enhance the learning process. Technology has transformed education, making it interactive, while opening new avenues for children and students with disabilities making it possible to experience positive outcomes and achieve goals.

In general, face-to-face discussions may be preferable and more easily carried out than online synchronous discussions; however, there are a few instances where designing synchronous discussion contexts and incorporating them into courses may be important.

First, they can be an integral part of a completely online course where students do not meet face-to-face at all or meet rarely as in hybrid courses. Especially in order to realize team work for course projects that require group interactions, synchronous online conferencing can be very valuable.

Second, many times in the management discipline, classes require group work outside of regular class meeting times. Students may find it preferable to get together online even if it is for a brief period of time to coordinate and organize their group efforts. Hence, it overcomes limitations of space, time, and distance for collaborative activities.

Third, rather than replacing face-to-face class or group discussions, online synchronous conferencing can be used as a supplement to traditional classroom teaching and learning techniques. To that end, open distance and e-learning platforms can benefit from incorporating our design suggestions into course development targeting online learners.

Obviously, there are significant benefits, challenges, and outcomes of synchronous online discussions. Future research should compare and contrast implementation and design considerations of synchronous online learning with asynchronous online learning environments such as discussion board postings, as very commonly used in supplementing traditional course designs. A fruitful avenue of future research can be to investigate the advantages and disadvantages of using both synchronous and asynchronous learning through experimental design.

VII. Recommendations

1. Institutions and academic units should provide and actively promote training for students in the use of technologies that students will use in their courses. Students will inevitably use many tools and technologies, both commercially available (such as the Microsoft Office and Google Drive suites) and institutionally specific (such as the LMS). Many students feel unprepared to use institutionally specific technology, and some even feel unprepared to use commercial software.

   Regardless of the number or size of online courses or programs at an institution, technology is critical to student success, so this lack of knowledge and confidence is a major point of failure for students. This is comparatively easily remedied, however: Institutions should identify the most critical training needs among the student body and then provide and actively promote training opportunities in these areas. Faculty are critical to improving student technology literacy by encouraging or even requiring students to attend the training.

2. Institutions that offer online courses or programs should make an effort to present to faculty the research about the efficacy of fully online and blended learning for achieving student learning outcomes. Many faculty are either unaware of or unconvinced by the research findings that fully online courses produce learning gains that are indistinguishable from those produced in fully face-to-face environments and that blended instruction has stronger learning outcomes than either mode alone. It should be a critical function of centers for teaching and learning at institutions with online courses or programs to present this evidence to faculty as part of any training in instructional design or use of tools for online teaching.

3. Researchers studying online teaching and learning should prioritize collecting data about the efficacy of tools, technologies, and practices for which the evidence base is

not yet robust. In particular, data on the services provided by student success management systems such as course suggestions and early-alert systems would be valuable.

4. Information security training should be customized to the audience. Most faculty find their institution's information security training to be useful. But criticisms of this training are that it is too simplistic or too technical and that it is outdated. Live training sessions, offered in person, would be well received. And to be seen as relevant by faculty, sessions must include specific information and recommendations for the institution, for the discipline, and for the types of data collected by and activities being performed by the faculty audience members.

5. The effective use of digital learning tools in classrooms from the faculty of foreign languages in the national university can increase student engagement, help teachers improve their lesson plans, and facilitate personalized learning. It also helps students build essential 21st-century skills.

6. The institution needs to develop a comprehensive strategic plan for the integration of online courses into its academic programs as part of its basic teaching and learning function.

VIII.   Bibliography/   Webliography

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IX. Appendixes

Module 1

Appendix 1. Google Classroom

Appendix 2. Discussion Forum about Theories of Learning

Appendix 3. Infographic about LMS

Best LMS features for online teaching
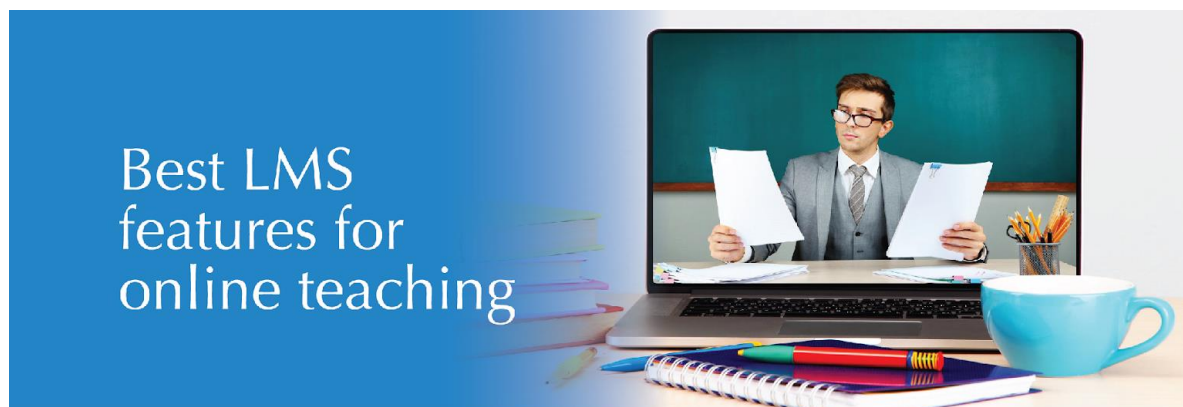
What's an LMS?

A Learning Management System is a software-based platform that helps the teacher ans studets in creating, managing, delivering, and completing all the activities associated with online education.

Let's dive into it!

Parents Dashboard

Parents can play a more active role and can better support their children. The parent dashboard has been designed to help them stay engaged by providing a snapshot view into how their children are doing. (Brightspace Core, Classroom, Edmodo)

Connectivity

The possibility of the platform to be used in a computer, a tablet or a phone can provide many advantages. Specially, if sometimes you'd like to perform an activity in which the students need to go outside. (Google Classroom, Brightspace, Schoology)

Ability to interact in real time

Being able to reach out to teachers, students and even parents within these LMS is important. Sometimes the students have questions or the teacher needs to provide extra clarification about a subject and this is very useful. (Classroom, Schoology)
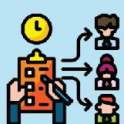
Course Management

Create courses, post announcements, grading tasks, among some other important things is necessary when teaching an online class. This brings more creativity to the course and add a pinch of interactivity to it. (Google Classroom, Moodle, Schoology).

One place for everything!

Having all in one LMS is practical and makes teaching (and learning) more smooth. You can assign homework and grade it, manage students, share material to support topics, see the calendar with the upcoming activites and not miss anything. (Edmodo, Off2Class)

32
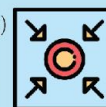
Module 2

Appendix 4. Infographic about Technological Tools

Appendix 5. Flipgrid | Video responses

Appendix 6. Liveworksheets | Interactive PDFs

PHRASAL VERBS

Complete the sentences with the phrasal verbs from the box (drag and drop):

get off	take off	get in	look for	get on
switch on	throw away	look after	look up	pick up

1) I cannot find my car keys. Can you help me .. look for …………………….. them?

2) You should . throw away ……………… … this old sweatshirt. It's completely threadbare.

3) I don't understand this sentence. Can you … lool up …………………….…. the word "threadbare" in the dictionary for me?

4) You should …………………….……. the train now. It leaves in a minute.

5) It's starting to rain. You should …………………….. the car before you get wet.

Appendix 7. Powtoon | Video creation
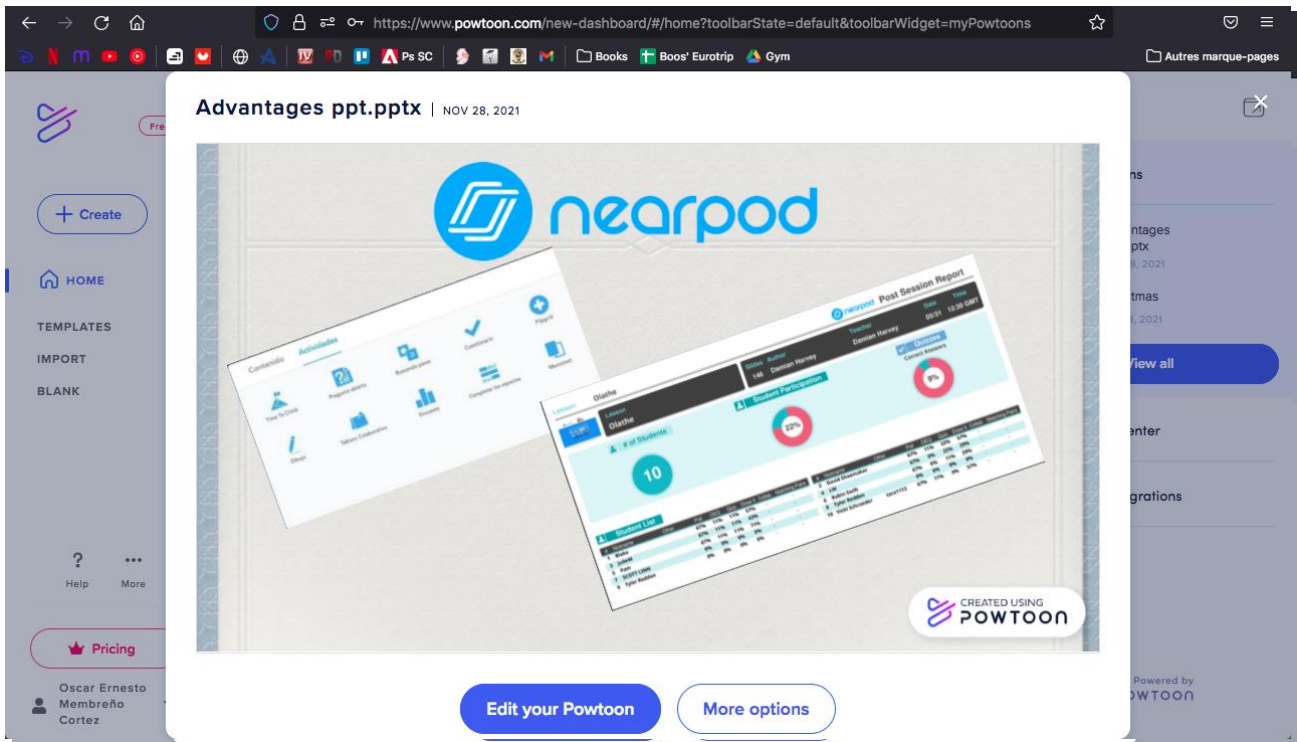
Appendix 8. edpuzzle

Module 3

Appendix 9. SoundCloud | Podcast
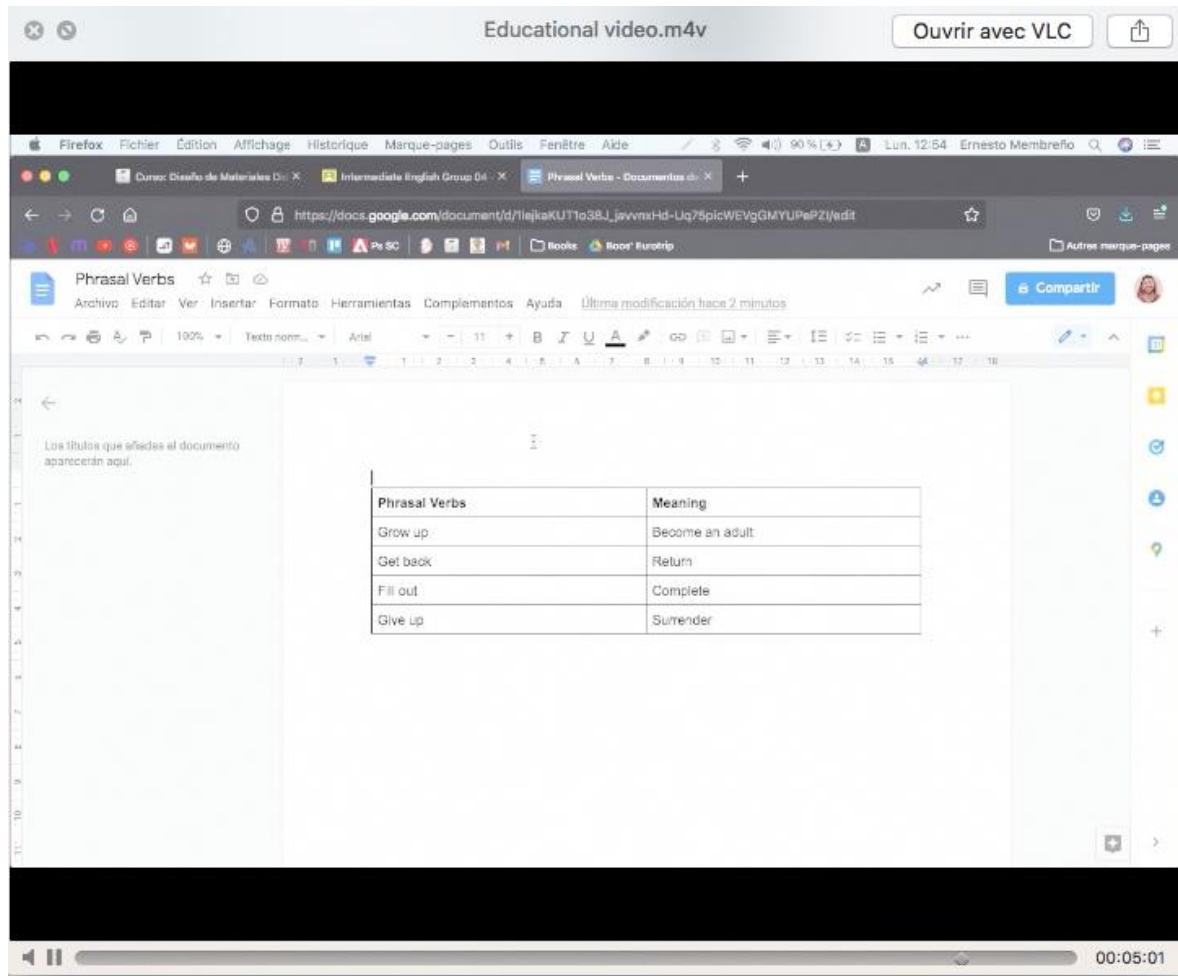
Appendix 10. Genially | Interactive Image

INTENSIFIERS

Appendix 11. Educational Video.
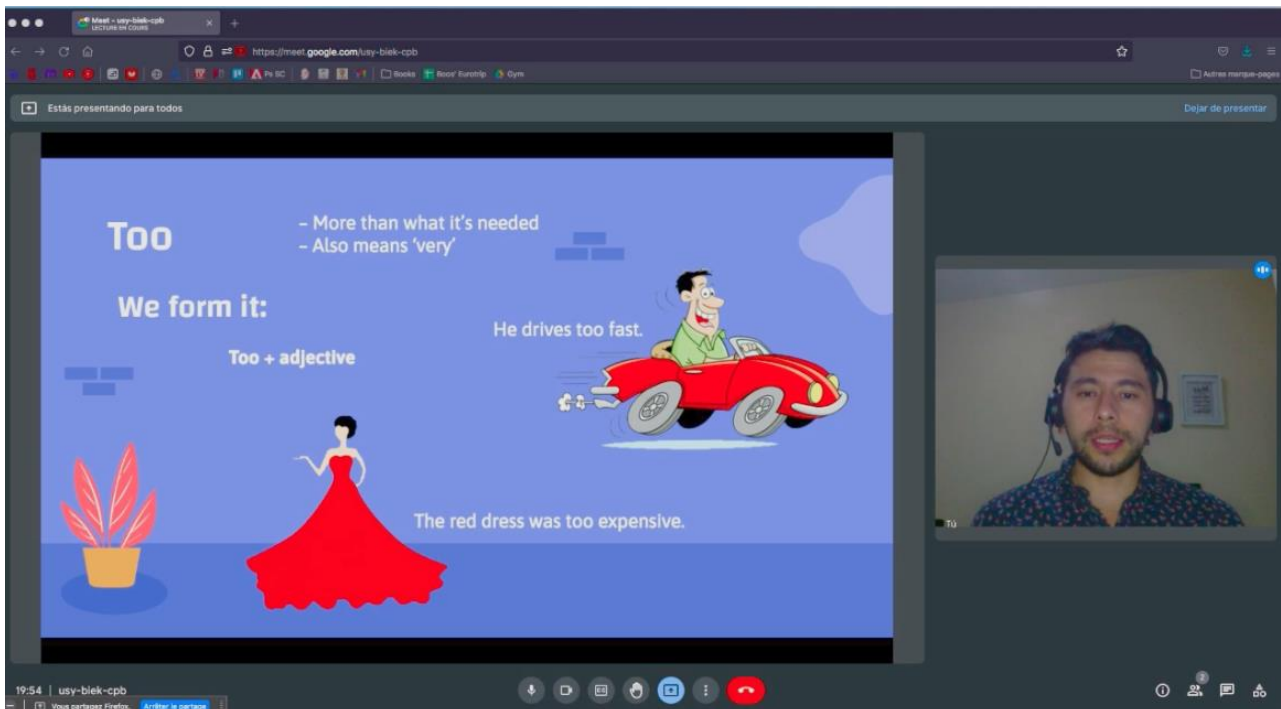
Appendix 12. Google Slides | Presentation and Class Demonstration

Appendix 13. Integrative Assignment | Google Sites

Classroom where you will find the guidelines.

1   **2**

First Quiz   Second Quiz   Final Evaluation

Due date: March 9, 23:59   Due date: March 16, 23:59   Yet to be determined

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TUTORIALS

Create Interactive PDFs with LiveWorksheets

Tables in Google Sheets and Create PDF documents