UNIVERSIDAD DE EL SALVADOR

FACULTAD DE CIENCIAS Y HUMANIDADES

DEPARTAMENTO DE IDIOMAS EXTRANJEROS

TÍTULO:

"THE ONLINE TEACHING OF THE ENGLISH LANGUAGE THROUGH DIDACTIC MATERIALS FOR VIRTUAL ENVIRONMENTS."

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ABSTRACT

Like many other side effects COVID-19 pandemic brought to the world, education was one of the most noticeable impacts that people could perceive. Schools and teachers were forced to apply new methods that were not as common before as they are now, such as distance learning, which also meant that educators had to get more familiar to the application of ‘‘e-learning’’ in their classes. After covid hit, and students from the Foreign Languages Department of the University of El Salvador, who were in the verge to graduate were pushed to make a pause on their graduation process. As a result, a decision was made, and a plan was created. This is how the idea of doing online courses was born. These courses were split up in three different modules, and they included audio and video files of weekly lectures by professors, as well as writing assignments for group discussions and individual projects. Module 1 ‘‘Online English Language Teaching’’ started with a short introduction to the history on online education, as well as a glimpse of different topics, such as the theories of learning, synchronous and asynchronous learning, the evolution of e-learning, etc. The second module "Educational Applications for Learning a Foreign Language" was a little broader in terms of its purpose, since it dealt with how educators use technological tools to teach online. Finally, in the third course, 'Design of Didactic Materials for Virtual Environments,' students learned how to create technological tools that they can implement in their online lessons. Since distance education seems to be here to stay, these courses were a big step up to getting teachers ready for the future.

Keywords: COVID-19 pandemic; Online Courses; virtual learning environments; technological tools; learning theories.

I. INTRODUCTION

When Covid-19 reached the country, it meant that schools would close permanently for the remaining part of 2020. It was on March 12 of the same year when El Salvador's government first declared that, for 15 days, schools and universities would close their doors. However, as the virus began to spread all around the country, those 15 days became months. There were numerous fields that were affected by this situation and education was one of them. For instance, educators were forced to adapt their course's materials to an online environment with not enough experience to manage a virtual classroom, incorporating online tools and innovative resources.

The specialization course, that was split into three separate modules, has provided several graduate students with opportunities to learn and gain experience. The course contained a module on 'Online English Language Teaching', a module on 'Applications for Learning a Foreign Language', a module on 'Design of Didactic Materials for Virtual Environments' and a module on 'Applications for Teaching a Foreign Language'.

To start off, each of the modules contained contextualization of theoretical concepts of the numerous activities throughout the different stages along the course, as well as setting up expectations and goals to be accomplished by the end of the specialization. Therefore, a set of different objectives were provided to determine the main realization. The objectives will explain the main theoretical concepts seen along the course, as well as the experiences that were gotten.

Finally, different recommendations and suggestions to the Foreign Languages Department Authorities will be provided. The following information will be based on the students' needs that started to be more noticeable after the pandemic hit and the specialization course started. The implementation of the course as part of the graduation process represented a huge advance that offered the students the opportunity to complete their targets, that is why it is always necessary to develop ideas to improve any flaws that the course may present.

II. OBJECTIVES

GENERAL OBJECTIVE

To demonstrate how technology can be effectively applied in online education, using the different didactic materials obtained from the three modules of the online specialization course.

SPECIFIC OBJECTIVES

1. To provide a concise explanation of how the information gained from the first module, Online English Language, helps improve the educators' development in a virtual class.

2. To determine the effectiveness of learning about the technological tools provided in the second module, Education Applications for Learning a Foreign Language, on the efficacy of online teaching as it pertains to the students.

3. To illustrate the different activities that were made in the third course, Design of Didactic Materials for Virtual Environments, and how they provide the teachers with innovative ideas to build real interface between them and the students through technological devices.

III. Theoretical Framework

The Effects of COVID-19 in Education

The article **''Impact Of Covid-19 Pandemic on Education System'' by Preeti Tarkar (2020)** explains the different consequences of covid-19 education in six parts. It starts by talking about the impact of covid on the education system. Then, it moves on to the impact of the pandemic on schools, followed by the impact on higher education, later, it discusses the impact of the pandemic on parents, and it finishes by explaining the assessments and presenting a conclusion.

1. Impact of COVID-19 on education system

In order to control the spread of the novel coronavirus, state governments started the closure of schools and colleges across the country. It was somewhere announced in the second week of March as a temporary measure to avoid the crowd. Initially, for a month closure of schools was announced by the government but gradually the time of closure was extended, and it is uncertain when they will reopen. During this period, there are various activities take place which are very crucial such as competitive exams and entrance tests of various universities, board examination and semester examinations in universities, nursery school admissions as well as the admission process in universities.

2. Impact of COVID-19 on Schools

In order to raise the skills, best public policy tool available is going to school. A school is a place where children can have fun and raise social awareness and social skills. The main motive of going to school or being in school is that it enhances the ability of the child. Spending a relatively short period of time in school increases skills and ability. On the other side missing the school or not attending the school will have negative effect on the skill growth The closure of the schools has affected the structure of learning and schooling. Firstly, it affected the teaching and assessment methodologies. Online teaching methods are adopted by the few private schools that are handful in taking online classes. In those schools children are taking classes online. On the other side low-income private and government schools have complete closure and not having the access to eLearning solution. It is disrupting the learning of students. Parents are facing various issues because of the change in teaching methodology.

3. Impact of COVID-19 on Higher Education:

The shutdown of universities has also affected the student's learning in universities. In order to ensure the continuity in institutes and universities, one immediate measure is essential. To conduct the class smoothly, online teaching methodology is adopted. Learning management software and open-source digital learning solutions are adopted by the universities to run online classes.

Higher education is a critical determinant of the economic future of the country and higher education sector has significantly affected by the pandemic as well. Many students from India enroll in universities abroad. Due to the global closure of the institutes and universities, it is expected that it will reduce the demand for the international higher education.

The main concern which is coming in the mind of everyone is the effect of the pandemic on the rate of employment. Because of the current situation, graduates who have recently completed their graduation are fearing from the withdrawal of job offers from corporate. Teaching methodology in institutes and universities has also transformed due to the lockdown in India. It has been replaced the old chalk-talk model with the new technology. E-learning solutions are making teaching and learning possible in this situation, but engagement is a big problem attached with the eLearning. The policy makers are trying to solve the problem of engagement of students and tackling the digital divide. In order to manage the crisis in education section, a multi-pronged strategy is necessary in the long term.

4. Impacts COVID-19 on online classes on Parents

In order to maintain the attendance or not missing out too much, children are forced to continue their education at home and generally have not been sent out from the home to play. Bjorklund and Salvanes (2011) described that major inputs into a child's learning is provided by the families as these are treated as a central to education. Parents are facing issues in understanding the new methodology of teaching. Some parents are not very techno friendly. Thus, they are not able to guide their ward to take classes online. Connectivity of internet is also a big challenge in front of all teachers, students and parents. Many disturbances have to face due to the poor connectivity.

5. Assessments

The teaching for students is not only interrupted by the closure of schools, colleges and universities. Lockdown also affected the assessment of the students all around the world. Many exams and assessments have been cancelled or postponed because of the closure of educational institutions. For both students and teachers, this is a new era of the education. Many colleges and universities have shifted their traditional classes system to the online classes as well as the examination system also has been shifted from offline to online. They are using online assessment tools for evaluation. Online assessment tools are not free from the limitations. There are various errors related to the measurement are reported in online assessment tools in comparison to the usual measurement. Piopiunik et al. (2020) showed in their research that educational credentials are used by the employers to assess the applicants such as grade point averages and degree classifications to sort applicants. Thus, the lockdown is also affecting the placement of the new graduates on labour market. Matching efficiency of the new graduates is reducing due to the increment in the disruptions in the signals of the applicants which is leading higher job separation rates and slower earning growth. According to Fredriksson and Ihlen (2018), this is costly both to the individual and also to society as a whole.

6. Conclusion

The closure of schools, colleges and universities is interrupting the learning of students and also disrupting the internal assessment and public assessments for qualifications. The traditional method of teaching has been replaced by the online teaching. One side online teaching is providing opportunity to the students for learning another side there are various issues are attached with the new methodology of teaching. Education institutions are searching the ways to solve the issues which arose due to the lockdown and putting their efforts to fill the loss of learning. In order to rebuild the loss in learning at the time when they will be reopened, schools need resources. There are many

questions in front of the schools such as how to target the children and how to utilize these resources etc. need to be solved. The internal assessment of the students related to the learning should not be skipped. It should be postponed. In order to avoid the longer unemployment period for new graduates, new policies should be formed to support them in their entry to the labor market.

TPACk Model - Technological Pedagogical Content Knowledge Framework

Another important aspect that needs to be explained is the concept of ‘‘TPACK’’, but what is it? How did schools and teachers start to apply it in their classes?

Dr. Serhat Kurt tries to give an explanation about this model in his article **Technological Pedagogical Content Knowledge Framework (May 12, 2018 – Updated on September 16th, 2019).** He starts by describing what the model is and how it can represent an advantage to the educators. Then, in the same article, he splits the most essential parts of the model in order for the reader to get an extensive view of the main concepts that need to be known to fully understand the TPACK methodology:

What is TPACK?

Technology has become an increasingly important part of students’ lives beyond school, and even within the classroom it can also help increase their understanding of complex concepts or encourage collaboration among peers. Because of these benefits, current educational practice suggests that teachers implement some form of technology in their classrooms – but many teachers face difficulties in doing so. Cost, access, and time often form considerable barriers to classroom implementation, but another obstacle is a lack of knowledge regarding how technology can best be used to benefit students across diverse subject matter.

Punya Mishra and Matthew J. Koehler’s 2006 TPACK framework, which focuses on technological knowledge (TK), pedagogical knowledge (PK), and content knowledge (CK), offers a productive approach to many of the dilemmas that teachers face in implementing educational technology (edtech) in their classrooms. By differentiating among these three types of knowledge, the TPACK framework outlines how content (what is being taught) and pedagogy (how the teacher imparts that content) must form the foundation for any effective edtech integration. This order is important because the technology being implemented must communicate the content and support the pedagogy in order to enhance students’ learning experience.

According to the TPACK framework, specific technological tools (hardware, software, applications, associated information literacy practices, etc.) are best used to instruct and guide students toward a better, more robust understanding of the subject matter. The three types of knowledge – TK, PK, and CK – are thus combined and recombined in various ways within the TPACK framework. Technological pedagogical knowledge (TPK) describes relationships and interactions between technological tools and specific pedagogical practices, while pedagogical content knowledge (PCK) describes the same between pedagogical practices and specific learning objectives; finally, technological content knowledge (TCK) describes relationships and intersections among technologies and learning objectives. These triangulated areas then constitute TPACK, which considers the relationships among all three areas and acknowledges that educators are acting within this complex space.

Mishra and Koehler, researchers from Michigan State University, developed TPACK in the absence of other sufficient theories to explain or guide effective edtech integration. Since its publication in

2006, TPACK has become one of the leading theories regarding edtech and edtech integration: research and professional development activities both draw heavily from it.

However, TPACK has remained such a powerful principle for almost 12 years because the complex constituents described above allow room for a range of specific educational circumstances. Any effective implementation of technology in the classroom requires acknowledgment of the dynamic, transactional relationship among content, pedagogy, and the incoming technology – all within the unique contexts of different schools, classrooms, and cultures. Factors such as the individual educator, the specific grade level, the class demographics, and more will mean that every situation will demand a slightly different approach to edtech integration. No one monolithic combination of content, pedagogy, and edtech will be applicable for every setting, and TPACK leaves room for researchers and practitioners to adapt its framework to different circumstances.

This adaptability can be seen in the various intersections and relationships already embodied in the TPACK acronym.

Content Knowledge (CK) – This describes teachers' own knowledge of the subject matter. CK may include knowledge of concepts, theories, evidence, and organizational frameworks within a particular subject matter; it may also include the field's best practices and established approaches to communicating this information to students. CK will also differ according to discipline and grade level – for example, middle-school science and history classes require less detail and scope than undergraduate or graduate courses, so their various instructors' CK may differ, or the CK that each class imparts to its students will differ.

Pedagogical Knowledge (PK) – This describes teachers' knowledge of the practices, processes, and methods regarding teaching and learning. As a generic form of knowledge, PK encompasses the purposes, values, and aims of education, and may apply to more specific areas including the understanding of student learning styles, classroom management skills, lesson planning, and assessments.

Technological Knowledge (TK) – This describes teachers' knowledge of, and ability to use, various technologies, technological tools, and associated resources. TK concerns understanding edtech, considering its possibilities for a specific subject area or classroom, learning to recognize when it will assist or impede learning, and continually learning and adapting to new technology offerings.

Pedagogical Content Knowledge (PCK) – This describes teachers' knowledge regarding foundational areas of teaching and learning, including curricula development, student assessment, and reporting results. PCK focuses on promoting learning and on tracing the links among pedagogy and its supportive practices (curriculum, assessment, etc.), and much like CK, will also differ according to grade level and subject matter. In all cases, though, PCK seeks to improve teaching practices by creating stronger connections between the content and the pedagogy used to communicate it.

Technological Content Knowledge (TCK) – This describes teachers' understanding of how technology and content can both influence and push against each other. TCK involves understanding how the subject matter can be communicated via different edtech offerings and considering which specific edtech tools might be best suited for specific subject matters or classrooms.

Technological Pedagogical Knowledge (TPK) – This describes teachers' understanding of how particular technologies can change both the teaching and learning experiences by introducing new pedagogical affordances and constraints. Another aspect of TPK concerns understanding how such

tools can be deployed alongside pedagogy in ways that are appropriate to the discipline and the development of the lesson at hand.

TPACK is the end result of these various combinations and interests, drawing from them – and from the three larger underlying areas of content, pedagogy, and technology – in order to create an effective basis for teaching using educational technology. In order for teachers to make effective use of the TPACK framework, they should be open to certain key ideas, including:

1. Concepts from the content being taught can be represented using technology,

2. Pedagogical techniques can communicate content in different ways using technology,

3. Different content concepts require different skill levels from students, and edtech can help address some of these requirements,

4. Students come into the classroom with different backgrounds – including prior educational experience and exposure to technology – and lessons utilizing edtech should account for this possibility,

5. Educational technology can be used in tandem with students' existing knowledge, helping them either strengthen prior epistemologies or develop new ones.

Because it considers the different types of knowledge needed and how teachers themselves could cultivate this knowledge, the TPACK framework thus becomes a productive way to consider how teachers could integrate educational technology into the classroom. Then too, TPACK can also serve as a measurement of instructor knowledge, potentially impacting both training and professional development offerings for teachers at all levels of experience. Finally, the TPACK framework is useful for the ways in which it explicates the types of knowledge most needed in order to make technology integration successful in the classroom. Teachers need not even be familiar with the entire TPACK framework as such in order to benefit from it: they simply need to understand that instructional practices are best shaped by content-driven, pedagogically-sound, and technologically forward-thinking knowledge.

Virtual Learning Environments

In the article **''Virtual Learning Environments'' by Pierre Dillenbourg, Daniel Schneider and Paraskevi Synteta**, they try to give an answer to the different questions associated to what VLE are, how they work, and the way educators make use of them in a class; as well as their features.

WHAT IS A VIRTUAL LEARNING ENVIRONMENT?

Does a « virtual learning environment » refer to any educational website? No. However, like many fashionable words, some authors use it in a very broad way, including for instance Web sites that simply include static Web pages. Is a «virtual learning environment» restricted to systems including some 3D / virtual reality technology? No. Some environments include less sophisticated interfaces, namely text-based ones. Between these over-general and over-specific definitions, there is a range of environments, which vary along the criteria listed below. Our goal is not to decide which environments deserve the «virtual learning environment» label, but to provide an understanding of their specificity.

Is a “virtual learning environment” synonymous to a «virtual campus»? No. A “virtual campus” provides University courses, while the name «virtual learning environment» does not restrict the scope to any age or level. The former is hence a subcategory of the latter. A “virtual campus” covers a set of courses, often a whole diploma program, while «virtual learning environment» can be used for smaller parts of a curriculum.

We argue that virtual learning environments can be identified by the following features and we will discuss them one by one through this contribution:

• A virtual learning environment is a designed information space.

• A virtual learning environment is a social space: educational interactions occur in the environment, turning spaces into places.

• The virtual space is explicitly represented: the representation of this information/social space can vary from text to 3D immersive worlds.

• Students are not only active, but also actors: they co-construct the virtual space.

• Virtual learning environments are not restricted to distance education: they also enrich classroom activities.

• Virtual learning environments integrate heterogeneous technologies and multiple pedagogical approaches.

• Most virtual environments overlap with physical environments.

Feature 1: A virtual learning environment is a designed information space.

Any Website is a built information space. In many cases though, this information space is just spaghetti of HTML files. We refer to the ‘architecture’ of information instead of ‘structure’ or ‘organization’ of information in order to emphasize the fact that the structure results from analyzing the functional requirements of the environment. For learning environments, the functional requirements are numerous and have not been yet systematically studied. Here are a few examples:

- Using information in educational interactions. For answering simple questions such as “Give me an example of...” or “Give me an argument against...”, information must be stored in databases or other information structures that can be used to produce dynamic responses.

- Multi-authoring. The information stored in a virtual learning environment is produced by many authors: several teachers, students, domain experts, ... There must be mechanisms for sharing objects (e.g. «locking» an object when somebody is editing it) and workflow techniques (e.g. the document produced by X must be sent for approval to Y and Z before to be displayed).

- Indicating information source. Web information without explicit information regarding to (the authority of) its author will soon have no more value.

- Maintaining information. When Websites grow, if information has not been carefully structured, maintenance becomes very heavy: maintaining links, removing obsolete information, ... The cost of maintaining a Web site may become higher than the costs of creating the site! And despite this, it is rarely included in the budget.

- Following technical evolution. The effort devoted to developing Internet sites has to survive the current technology. Structuring information and adding meta-information increases the potential of reusability of information.

- Sharing information with the world. Education would benefit from richer possibilities to share information outside the environment. There are currently efforts to establish worldwide accepted 'resource description formats' and to specialize them for educational purposes.

Today's use of 'virtual learning environment' is not restricted to well-structured information spaces, but we expect that this criterion will become more salient, as content management becomes a main issue for all teachers involved in virtual learning environments. Researchers have to develop a better understanding of the functional relationship between how information is structured and represented and how it can be used in learning activities and interactions. The same challenge is addressed by researchers in the applications of artificial intelligence to education, that is to find out the relationship between knowledge representation schemes and system performance.

Feature 2: A virtual learning environment is a social space

A book can hardly be described as a learning environment. But, reading a book in a seminar, discussing with other students, writing a summary for the tutor, ... do constitute a learning environment. Similarly, a set of Web pages does not constitute a virtual learning environment unless there is social interaction about or around the information. Interaction can take many forms, including synchronous (e.g. chat, MUDs...) or asynchronous (e.g. electronic mail, forums,) communication, one-to-one or one-to-many or many-to-many, text-based or audio and video, or even indirect communication such as sharing objects.

What is specific to virtual environments compared to any information space is that it is populated (Dieberger, 1999). The users are inside the information space and see a representation of themselves and/or others in the space. As soon as students see who else is interested by which information, the space becomes inherently social. Researchers have introduced the notion of "place" (Dourish & Chalmers, 1994) to emphasize that space has a social impact. Places are "settings in which people interact. (Munro, Höök & Benyon, 1999) "While spaces take their sense from configuration of brick, mortar, wood and glass, places take their sense from configurations of social actions. Places provide what we call appropriate behavioral framing" (Dourish, 1999).

The notion of social space opens interesting possibilities that only have been explored for the last few years. Here are a few examples:

- If a student looks for a book, he/she may go to the library and use standard search techniques. A library is a well-structured information space. Besides the library, the set of university offices, in which each professor has its own books, does also constitute an information space, but socially structured. This type of information architecture may be more useful in some cases, for instance if the student does not know very well what he/she is looking for.

- Social space can be represented explicitly. For instance, students may leave trace of their presence in a room or on a page. Viewing which area has been visited by other students is an indirect mode of interaction referred to as 'social navigation' (Munro, Höök & Benyon, 1999).

- The social space can be represented per se, for instance by drawing a graph in which students are the nodes and the thickness of the link between two nodes represents the number of e-mail messages between two students. The merge between social network analysis techniques (Nurmela & al, 1999) and virtual learning environments is a promising avenue for research in our domain.

Feature 3: The virtual space is explicitly represented

We do not restrict the definition of virtual learning environments to Web sites that look like computer games. The representation of the learning environment ranges from text-based interfaces to the most complex 3D graphical output. The key issue is not the representation per se, but what the students actually do with this representation. For instance, we observed that virtual space imparts on users' behavior even when space is only described by text. (Dillenbourg & al., 1999).

Nevertheless, representations are not neutral; they do influence the student work. Most often, the rationale for using 3D-graphical representations is motivational. It is taken for granted that nice representations trigger positive attitudes towards the environment. Actually, as all extrinsic motivational tricks, its impact on students may not last very long. However, it would be hard to justify that the interface of learning environments ought to remain less appealing that those of other software!

Nevertheless, representations of the space may have an impact on the learning process beyond motivational aspects. Here are some examples:

- Virtual space may support navigation. This is of course not the case for any spatial organization (e.g. not for a labyrinth). «City of News» is an example of information space organized as a city, designed for exploiting people's ability to remember the surrounding three-dimensional spatial layout.

- Let us imagine a virtual museum. If the virtual space aims to imitate physical rooms, the student would explore it, room by room. In a museum, the information space is structured by 'painting schools' (e.g. surrealism), or centuries, or countries... Instead, the information space could be organized differently. Imagine an «Europe 20th century painters map» (2D, 3D or more complex). On this map, distance between two painters would be computed on the basis of a survey in which art experts have been asked to answer question such as «Is Folon closer to Delvaux or to Magritte? » Students would explore this virtual museum in a way that is different from real museums.

- Let us imagine a drill practice environment in which 100 exercises are distributed over 10 virtual rooms. On the graphical representation of this course, students can see who else is in the same room (Gutwin & Greenberg, 1998). Thereby, if Paul is in room 5, facing difficulties with exercise 5-3, and sees Suzanne in the same room, he talks more with her than with Sandra who is in room 3 and does not know anything about exercise 5.3. Reasoning on "who is where in virtual space" tells me about "who is (and has been) doing what". Generally speaking, awareness tools inform users about what others are doing in the workspace and are important for facilitating collaborative tasks.

These are simple examples, but there exist a variety of mechanisms by which virtual space has an impact on learning interactions (Dillenbourg & al., 1999). Like other maps, the esthetics and ease of-use are important concerns, but the main design issue is which information has to be provided for which purposes, or what is the structural relationship between the spatial representation and the information space.

Feature 4: Students are not only active, but also actors

In Web-based environments, learning activities range from multiple choice questionnaires to simulations and problem solving. Simulations can be considered as learning environments on their own. While originally restricted to physical models, they cover now a broad spectrum of domains such as economics, politics, biology… However, what is more specific to virtual learning environments is the set of activities within which students construct and share objects. Most often these objects are Web pages. Writing activities (producing syntheses, study reports, newspapers, ...) are very popular in schools. Students are not restricted to consuming Web information, they become information producers, they enter into the game. There is quite a difference between writing a critique of a novel which will be read only by the teacher, or which can be read by potentially anybody.

Often the writing activity is per se the educational goal, but in many cases, it is just the end point of a variety of earlier activities such as site visits, observations, experiments, interviews, literature review, ... Up to several weeks of work are carried out before moving to the Web. This work can be integrated in the virtual learning environments. For instance, by enabling students to share informal notes, enabling teachers to provide references, by adding scheduling tools, ... Many Web based environments re-instantiate, in more recent technology, the founding principles of Freinet's project-based pedagogy, not only by their use of tools (for instance e-mail and web-page replace

letters and printed newspapers used by Freinet), but also by their concern for multidisciplinary. For instance, a condition for schools to participate into the «Young Reporters for Environment» is that teachers from various disciplines (e.g. biology, physics, geography, …) agree to articulate their course around an environmental issue.

Texts and Web pages are not the only products that student teams build together. It can be computer programs, graphical objects, and even the environment itself. For instance, in the Pangea7 project, kids from various countries (and various languages) co-designed a virtual island, which required them to work out problems related to ecology, democracy, geography, and so forth.

In other words, the notion of a learning activity in virtual learning environments refers to something richer than in individual courseware, closer to the notion of project. The difference between other constructivist environments and what virtual environments potentially offer can be described as making students not only active, but also actors, i.e. members and contributors of the social and information space.

Feature 5: Virtual learning environments are not restricted to distance education.

Web-based education is often associated to distance education, while - in the practice- it is also widely used to support presential learning. Actually, the difference between distance education and presential education is fading for several reasons.

• Many distance education students do not live far away from the physical school but have tight time constraints (often they work). Asynchronous communication provides them with time flexibility, a growing concern in our society.

• Many Web-based courses combine distance and presence, which makes learning environments more robust. Whatever technology is used, all tools have intrinsic limitations. These limitations do, over time, become real obstacles to learning. Even a small amount of co-presence may solve some of the problems that can hardly be solved at distance. Examples are activities that require presence such as: launching a new project, complex technical assistance, repairing deep conceptual misunderstanding, negotiation.

These points are important for vocational training, university courses and lifelong learning. In primary and secondary schools, the opposite balance is found so far, Internet-based activities are generally added to enrich presential learning activities. The enrichment can be just an add-on (for instance the teacher points to extra resources that the students should read) or may have a stronger influence on the teacher's pedagogical approach, e.g. technology can become the enabling factor for complex socio-constructivist learning scenarios (Schneider & al., 2002).

Feature 6: Virtual learning environments integrate heterogeneous technologies and multiple pedagogical approaches.

A physical learning environment generally integrates courses, resources (libraries), formal communication (boards) and informal communication (cafeteria, ...), an administration, ... Similarly, a virtual learning environment integrates a variety of tools supporting multiple functions:

information, communication, collaboration, learning and management (Peraya & al., 1999). The very idea of environment includes this notion of integration. This is clear in virtual campuses. Because of their broad scope, they have to fulfill administrative functions: managing who is registered to which courses, collecting assessment notes to count credits, ... and also functions such as assistance, leisure & fun, ...

The word integrated refers to fairly different realities. There is a technical and a pedagogical integration, and both of them may vary in degree. The WEB technology has increased technical integration. At the lowest degree of integration, different pieces of software can be placed on the same Web page. For instance, there is a small Author ware program running in the upper part of the page and a synchronous communication frame in the bottom of the screen in which the student can ask questions. The integration is here restricted to the fact that the two applications appear in the same window (versus in two different windows). Nevertheless, it is already interesting to design such a structured interface and not simply to ask the user to start multiple applications and configure the screen.

A higher degree of integration is reached when applications share or exchange data structures.

• If the student press 'help' in the Author ware program or if the program itself finds out that the student needs help, it opens up the chat and automatically sends to the teacher a request for help and a summary of what the student has done so far in the environment.

• If the student enters an answer that the Author ware standard pattern matching techniques cannot parse, the message is passed to the mailer, which asks the teacher to provide feedback.

Feature 7: Most virtual environments overlap with physical environments

Virtual learning environments do not only integrate a variety of software tools but also integrate all the physical tools that can be found in a classroom. Of course, there exist some 'pure' virtual environments, designed for curricula that are completely at distance (Students never go to the school, never meet, ...). But most virtual learning environments include:

• A variety of non-computerized learning resources: concrete manipulation tools, instruments, books, ...

• A variety of interactions that are not computer-mediated: face-to-face discussions among students, lectures by the teacher, group discussions, plus traditional media such as letters, TV, phone and fax.

• A variety of activities that are not computer-based: field trips, role playing.

We will not enter here into the debate on what is virtual and what is not, or on where the physical environment stops and where the virtual one starts. It is an interesting philosophical issue, more complex than the simple difference between computerized and non-computerized elements. In the practice however there is no need to draw a boundary between physical and virtual worlds, the key is to integrate them, not to separate them. The continuity between physical and virtual objects becomes clear now that hybrid tools8 appear that connect computers with physical artefacts:

• Boards on which students move blocks whose positions are known by the computers (as in chess games). These are physical objects, but coupled with a representation in the virtual space

that can be used for interactions which are not possible in the physical world: computing all combinations of the elements assembled on the table, recording the previous steps in assembling pieces, detecting where the current state of the artefact has already been reached before.

• Single-display groupware systems: several students interact live in front of the same screen but with a different mouse. While their actions are performed in the virtual space, most of their interactions occur in the physical world: the students not only talk to each other, but touch and even push each other.

WILL VIRTUAL LEARNING ENVIRONMENTS IMPROVE EDUCATION?

Having provided a broad definition of a virtual learning environment, we question the effectiveness of these environments. Do they enhance the effectiveness of education? Potentially yes, but probably not. It would not be honest to claim that virtual learning environments will improve the quality of education or reduce the costs of educational systems. These environments have some potential effects, described in this document. However, the past tells us that it is very difficult to set up the conditions that turn potential into actual effects. Anyway, even if there were no proof of superiority in terms of learning outcomes, the evolution would not stop. The issue is not to prove the effects but to understand them.

Benefits of Utilizing ICTs in Education

Most of the simple basic use of ICTs devices in the educational environment led to the following benefits:

a) Increase in the motivation of pupils, enthusiasm and confidence

b) Positive association with attainment Learning possibilities expanded via collaboration, interaction, and communication in the target language Potential for differentiation according to individual pupil need

c) ICTs tools can perform four essential functions as follow:

d) The speed and automatic functions of ICTs allow a teacher to demonstrate, explore and clarify aspects of the teaching method which enable the students learn more effectively.

e) The capacity and coverage of ICTs to assist the teachers and pupils easily access to for historical event or current formation

f) The temporary nature of information stored, processed and presented using ICTs enable simpler method as documents could be change and corrected by editing software provided in the programs.

g) The interactive way in which information is stored, processed and presented can enable teachers and students to explore the model, to communicate effectively with others and present information effectively to different audiences.

The heart of education reform in the 21st century is the appropriate use of ICTs, which supports education to enhance the success of the ongoing knowledge and skills that will give the students

continuous learning. Using ICTs in an appropriate manner enables new methods of teaching and learning, especially for students in exploring exciting ways of problem solving in the context of education.

IV. Description of Activities.

Module I

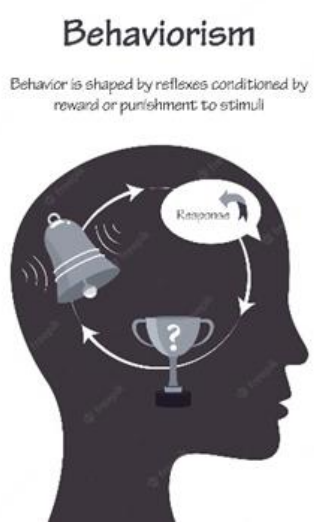
Week 1 – Theories of learning: Behaviorism, Cognitivism, Constructivism, and Connectivism

Behaviorism Learning Theory

Behaviorism learning theory is the idea that how a student behaves is based on their interaction with their environment. It suggests that behaviors are influenced and learned from external forces rather than internal forces.

Psychologists have been developing the idea of behaviorism since the 19th century. Behavioral learning theory is the basis for psychology that can be observed and quantified. Positive reinforcement is a popular element of behaviorism—classical conditioning observed in Pavlov's dog experiments suggests that behaviors are directly motivated by the reward that can be obtained.

Teachers in a classroom can utilize positive reinforcement to help students better learn a concept. Students who receive positive reinforcement are more likely to retain information moving forward, a direct result of the behaviorism theory.



Cognitive Learning Theory

Cognitive learning theory looks at the way people think. Mental processes are an important part in understanding how we learn. The cognitive theory understands that learners can be influenced by both internal and external elements.

Plato and Descartes are two of the first philosophers that focused on cognition and how we as human beings think. Many other researchers looked deeper into the idea of how we think, spurring

more research. Jean Piaget is a highly important figure in the field of cognitive psychology, and his work focuses on environments and internal structures and how they impact learning.

Cognitive theory has developed over time, breaking off into sub-theories that focus on unique elements of learning and understanding. At the most basic level, the cognitive theory suggests that internal thoughts and external forces are both an important part of the cognitive process. And as students understand how their thinking impacts their learning and behavior, they are able to have more control over it.

Cognitive learning theory impacts students because their understanding of their thought process can help them learn. Teachers can give students opportunities to ask questions, to fail, and think out loud. These strategies can help students understand how their thought process works and utilize this knowledge to construct better learning opportunities.

Constructivism Learning Theory

Constructivism learning theory is based on the idea that students actually create their own learning based on their previous experiences. Students take what they're being taught and add it to their previous knowledge and experiences, creating a reality that's unique to them. This learning theory focuses on learning as an active process, which is personal and individual for each student.

Teachers can utilize constructivism to help understand that each student will bring their own past to the classroom every day. Teachers in constructivist classrooms act as more of a guide to helping students create their own learning and understanding. They help them create their own process and reality based on their own past. This is crucial to helping many kinds of students take their own experiences and include them in their learning.

Connectivism Learning Theory

Connectivism is one of the newest educational learning theories. It focuses on the idea that people learn and grow when they form connections. This can be connections with each other or connections with their roles and obligations in their lives. Hobbies, goals, and people can all be connections that influence learning.

Teachers can utilize connectivism in their classrooms to help students make connections to things that excite them, helping them learn. Teachers can use digital media to make good, positive connections to learning. They can help create connections and relationships with their students and with their peer groups to help students feel motivated about learning.

Discussion Forum

What does a discussion forum mean? A discussion board (also known by various other names, such as discussion group, discussion forum, message board, and online forum) is a general term for any online "bulletin board" where you can go out and expect to see replies to messages you have left...etc.

The first activity the students did in the first module was the participation in a Discussion Forum. This time the participants had to demonstrate understanding of learning theories in virtual environments and traditional classrooms when teaching English.

The research team had to explain in their own words, and write a comparison between theories of learning in a virtual environment and theories of learning in traditional classrooms. To complete this activity, the students had to consider the following learning theories:

- **Behaviorism**
- **Cognitivism**
- **Constructivism**
- **Connectivism**

So, the students had to provide a comparison for each learning theory given above. And all requested comparisons were published in a single entry. The teacher suggested that the entry be published in an essay format. Also, the teacher shared some sample essays. The students consider the correct use of grammatical structures, word spelling, punctuation, and capitalization. The participants published their entry in the Academic Forum I.

And the participants were warned against plagiarism, or copying and pasting any information or idea that did not belong to us. Instead, the research team could paraphrase in their own words. The research team had to answer to posts from two colleagues. The participants gave an opinion on the tickets. Here at this point the students had to say whether the participants agreed or disagreed with the information from their colleagues. In addition, participants provide information that it feels their peers should include in their posts.

The students had to write at least 50 words for each entry. The professor demanded that participants be courteous and professional when sharing their point of view.

Info graphics

EVALUATION 2

The second activity was to make an info graphic. The most common definition of Info graphic describes it simply as a visual representation of information and data. By combining elements of text image, chart, diagram and, more recently, video, an info graphic is an effective tool to present data and explain complex issues in a way that can quickly lead to insight and better understanding. The research team chose four of the main LMS (Learning Management Systems) platforms that are used in the world of education: Moodle, Edmodo ... and the students put the extract of information in the info graphics.

For this task the research team had to select and analyze the characteristics of 4 learning management systems (LMS). The research team also had to create an info graphic to identify the characteristics of the selected Learning Management Systems (LMS). For this activity, an info graphic must be created. To do this, these steps were followed: Find information about the 4 most common LMS. After having analyzed the information, characteristics of each LMS were selected. The participants then include them in their info graphic. Then the students had to upload their info graphic to the Campus in PDF or JPG format and share the link with the teacher. And upload it to

Info Graphic Score. The teacher gave us useful information: the students had to use the following website to create their info graphics: https://www.canva.com/design/play?category=tACFahzNhT4

The students watched the video at the link below and learned how to create their own info graphics: https://www.youtube.com/watch?v=Z1A33gSULyo

Infographics means “a visual representation of information or data” (Oxford Dictionary).

Model II **Educational Applications for Learning a Foreign Language**

This module was about the theoretical fundamentals and how to use technological tools for the teaching- learning process during virtual classes.

Some of the contents studied during this course were:

- Presentation of a list of technological tools for educational purposes and their foundations and principles.
- Use of the following educational tools: Edpuzzle, Flipgrid, Flippity, Liveworksheets.
- Use of the following technological tools: Nearpod, Padlet, Kahoot, Powtoon Classroomscreen.
- Presentation of educational products by students: Students will do a demo class using technological tools in the development of a class.

The technological tools reviewed during the course were: Edpuzzle, Flipgrid, Flippity, liveworksheets, Nearpod, Padlet, Kahoot, Classroomscreen, Powtoon. The purpose of these tools was to provide students with aims to develop their classes.

1. **Edpuzzle**: is an online video editing and formative assessment tool that lets teachers cut, crop, and organize videos. But it does so much more, too.

Unlike a traditional video editor, this is more about getting clips into a format that allows teachers to engage directly with students on a subject. It also has the capacity to offer assessments

based on the content, and offers lots of controls that allow for the use of video even in more strict school scenarios.

The result is a modern platform that's engaging for students but is also very easy to use for teachers. It's even crammed full of curriculum-specific content to further help in teacher progress with students.

2. **Flipgrid**: is a website and app that allows teachers to facilitate video discussions. Students are organized into groups and then given access to discussion topics.

3. **Flippity**: is a free website that allows you to turn Google spreadsheets into interactive digital manipulatives, activities, and tools. The site offers a wide range of ready-made templates that you can copy and customize.

4. **Liveworksheets:** allows you to transform your traditional printable worksheets (doc, pdf, jpg...) into interactive online exercises with self-correction, which we call "interactive worksheets". Students can do the worksheets online and send their answers to the teacher.

1. **Nearpod:** helps educators make any lesson interactive whether in the classroom or virtual. The concept is simple. A teacher can create interactive presentations that can contain Quizzes, Polls, Videos, Collaborate Boards, and more.

5. **Padlet:** is a digital tool that can help teachers and students in class and beyond by offering a single place for a notice board. That's at its most basic. This digital notice board is able to feature images, links, videos, and documents, all collated on a "wall" that can be made public or private.

6. **Kahoot:** is an online game-based learning platform. It allows teachers, organizations and parents to set up fun web-based learning for others. This could include your coaches, athletes or parents.

7. **Classroomscreen:** is an online tool that allows you to display the instructions for your lesson in a clear and visual way. Choose from over 13 widgets to support your class activities and help students get to work.

8. **PowToon:** is a tool that creates animated videos for personal, educational, or business/professional use. It is a free, web-based (with options to upgrade), user-friendly software that creates presentations via three simple and easy steps: writing a script, recording a voiceover, and adding visual.

V. Achievements

Module one:

- Students were introduced to Virtual environment for learning teaching foreign languages
- Students learned how to create a virtual classroom.
- Students learned how to use Google Meet to schedule classes or meetings.
- Students learned how to use Canvas to create infographics.
- Students learned how to use discussion forums.

Module two:

Students learned now to aim for education applications to be used for virtual environments in the teaching of foreign languages.

- Students learned how to use Edpuzzle. Students learned how to use Flipgrip.
- Students learned how to use LiveWorksheets
- Students learned how to use Kahoot.
- Students learned how to use Nearpod. Students learned how to use Powtoon.

Module three:

- Students learned how to edit videos using Openshot.
- Students learned how to create a Google site.

- Students learned how to use Google presentations.
- Students learned how to create a podcast.

- Students learned how to edit an image by using GIMP.
- Students practice how to apply the knowledge and use the technological tools learned during the module in a real class.

VI. Conclusions

In conclusion, digital tools will always be in our lives, and we as teachers have the purpose of teaching students the proper use of these tools efficiently so that they acquire comprehensive knowledge.

Today's technologies are a necessity that gives a different approach to education and help us update teaching methods by encouraging students to obtain their knowledge through the appropriate tools.

It is very important to be able to not only use technology today, but also have the ability to learn new technology techniques that strengthen teaching and learning, as well as increase opportunities to access knowledge, develop collaborative skills and inculcate positive values in students.

After ending all three modules, students were able to get inside and involved in the virtual learning- teaching process. Some applications studied during the module were totally new for the students, or probably they knew little about them, but they did not know how to use them to prepare a virtual class.

Students were able to practice and get in deep into the tools studied. All the activities performed during all three modules are very valuable and easy to be applied in real classes. Now that the virtual learning-teaching environment has become more frequent, and probably it changed the way of teaching and learning; educators need to be prepared to face any situation that they are not familiar with and take new risks as it is to teach online. Nowadays, it is very common to use technology for so many uses, but people do not realize the importance technology has when it comes to learning and teaching, and the advantage that can be taken if technology is used properly.

After finishing this specialization, all students are ready to take part in the virtual learning-teaching environment. The aid has been already given, and it depends on the students to be aware they have so many tools they can use to make the process more friendly for their students and for themselves.

- Technology is a versatile and valuable tool for teaching and learning, and everyone must be prepared to use these technologies effectively for the welfare of students, teachers and the society itself.

- We can highlight that the use of these technological tools can both promote interpersonal interaction because it generates a rapprochement between students and teachers, favoring teamwork, as well as increasing the autonomy of the student, that is to say, they help people to be more self-sufficient and decisive.

VII. RECOMMENDATIONS

- **To the Department of Foreign Languages**

It is important that the Department provides the necessary tools and support to all students who want to take advantage of the specialty course as a final task, instead of the traditional thesis required to graduate.

To provide professional development not only to students but also to members of the Foreign Language Department on the use of technological tools for a virtual learning environment. In order for teachers to innovate the learning process of new generations

- **To The Authorities of the School of Humanities:**

To enable the necessary resources for the department to be able to create more specialization courses where students can learn, and even create new educational paths in order for students and teachers to innovate the learning process of new generations.

To create more opportunities for teachers to specialize in different virtual environments to be part of the staff of the Foreign Language Department in order to cover the demands of the students inside of the department such as Translators experts, tourism and why not even Language and communications teachers.

To students:

It is recommended for students to use online content in order to find different learning techniques, such as translators, grammar content online, or even podcasts with educational content related to the topic discussed during the class in order to have a more meaningful language learning. Also, the students should proactively look for online tools that help them to work on the different areas of opportunities that they may have; such as pronunciation techniques, or even fluency tests.

Finally, the students need to organize their time with more purposeful online activities where they can practice a foreign language in a better way such as; reading formal books where they can gather a more formal vocabulary to express themselves, or learning phonetic rules that help them pronounce the words in a better way.

VIII. WEBLIOGRAPHY

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