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Integrating the TPACK framework in the English Productive Skills with English Teachers at “Ana Páez Educative Unit”

Research dissertation before obtaining the master's degree in Applied Linguistics to Teaching English as a Foreign Language.

Author:

Vilcacundo Pérez Erika Magaly Lcda.

Tutor:

Tovar Viera Rodrigo Vicente Msc.

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TUTOR'S ENDORSEMENT

In my capacity as a Supervisor of the Research dissertation titled Integrating the TPACK Framework in The English Productive Skills with English Teachers at “Ana Paez Educative Unit” investigated by Lcda. Erika Magaly Vilcacundo Perez, for obtaining the master's degree in Applied Linguistics to Teaching English as a Foreign Language.

I CERTIFY THAT:

This research dissertation has been fully revised, and has the requirements, and merits to be submitted for evaluation by the assigned Revision Committee, and its presentation, and public defense.

Latacunga, April 24th, 2021



.....
Rodrigo Vicente Tovar Viera Msc.
ID: 0502414089

COMMITTEE APPROVAL

This research dissertation: Integrating the TPACK Framework in the English Productive Skills with English Teachers at “Ana Páez Educative Unit”, has been revised, approved, and authorized for printing and binding, before obtaining a Master's degree in Applied Linguistics to Teaching English as a Foreign Language; This meets the substantive and formal requirements to hand in for the presentation and defense.

Latacunga, June 25th, 2021



.....
Castro Bungacho Sonia Jimena Msc.
ID: 0501974729
Committee president



.....
Mena Vargas Nelly Patricia Msc.
ID: 0501574297
Committee Member 1



.....
Rosero Menéndez Jorge Luis Msc.
ID: 0500862727
Committee Member 2

DEDICATION

I dedicate this research work to my parents because they have always been such great support, demonstrating care, love, and motivation in each stage of this great traverse. To my siblings, for being my example of success. Finally, this is for my nieces, and nephews who I love so much.

Magaly

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Thanks, God, for giving me the strength to end up this process, and also aided me to overcome problems. Special thanks to my tutors whose comments, and advice were clues in this research dissertation since they all shape this work into a reliable one. Finally, Thanks mom, dad, brothers, for being with me in all moments.

Magaly Vilcacundo Perez

AUTHORSHIP

I, Vilcacundo Perez Erika Magaly declare to be the author of the concepts, procedures, and findings in this research dissertation.

Latacunga, April 25th, 2021

A handwritten signature in blue ink, appearing to read 'Magaly', is written over a horizontal dotted line. The signature is stylized and includes a small flourish at the end.

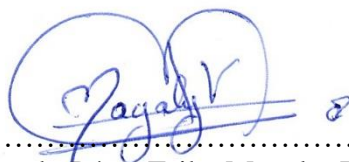
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ID: 0503612426

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Latacunga, April 25th, 2021



.....
Vilcacundo Pérez Erika Magaly. Lcda.

ID: 0503612426

COMMITTEE PRESIDENT'S APPROVAL

I, Castro Bungacho Sonia Jimena Msc, declare that this research dissertation: Integrating the TPACK Framework in the English Productive Skills with English Teachers at “Ana Páez Educative Unit”, has the corrections and comments suggested by the members of the committee in the scientific session.

Latacunga, July 06th, 2021



.....

Castro Bungacho Sonia Jimena Msc.
ID: 0501974729
Committee President

TECHNICAL UNIVERSITY OF COTOPAXI
GRADUATE DEPARTMENT
MASTER'S DEGREE IN APPLIED LINGUISTICS TO
TEACHING ENGLISH AS A FOREIGN LANGUAGE

THEME: Integrating the Technological Pedagogical, and Content Knowledge (TPACK) framework in the English Productive Skills with English Teachers at “Ana Páez Educative Unit”

Author: Vilcacundo Pérez Erika Magaly. Lcda
Tutor: Tovar Viera Rodrigo Vicente Msc.

ABSTRACT

Through the times, technology has been winning a lot of space into the educational system. Teachers need to be updated with Information and Communication Technologies (ICT) so that students can adapt to their environment and learn the topic around the current events. This is how the Technological Pedagogical and Content Knowledge (TPACK) framework appeared as a help for teachers to introduce technology in class correctly. The purpose of this research was to analyze the TPACK framework and the English productive skills in the teaching-learning process combining the technological, pedagogical, and content knowledge. That is why, this report is descriptive, explanatory, and non-experimental. Additionally, It used the mixed method to obtain results that evidenced its importance. The beneficiaries were the English teachers' staff who work at Ana Páez Educative Unit located in San Felipe, Latacunga. The proposal was a Virtual Course using a Learning Management System called milaulas.com, giving the opportunity of applying this framework through the use of applications such as Padlet, Jamboard, Edpuzzle, and Plickers that can enhance productive skills. A pre-test and a post-test were the instruments that helped to conclude that English teachers do not have enough knowledge about technological tools that they can work with students. However, after using the TPACK framework and the applications mentioned, they have the essence about how to introduce the three most important aspects such as 1. what to teach (Content Knowledge), 2. How to teach (Pedagogical Knowledge), and 3. what ICT tool to use (Technological Knowledge). It means that the teaching-learning process needs a correct relationship to obtain a better understanding, and consequently, it enhances the teaching competencies. Finally, this research has a linguistic, and pedagogical implication because the TPACK framework contributed to productive skills development.

KEYWORD: TPACK framework, Productive skills, Virtual Learning, EFL, LMS.

UNIVERSIDAD TÉCNICA DE COTOPAXI
DIRECCIÓN DE POSGRADO

**MAESTRÍA EN LINGÜÍSTICA APLICADA A LA ENSEÑANZA DEL
IDIOMA INGLÉS COMO LENGUA EXTRANJERA**

Título: Integración del Modelo del conocimiento Tecnológico, Pedagógico y de Contenido (TPACK) en las habilidades productivas del Idioma Ingles con Docentes del área de Ingles en la Unidad Educativa “Ana Páez”

Autor: Vilcacundo Pérez Erika Magaly. Lcda.

Tutor: Tovar Viera Rodrigo Vicente. Msc.

RESUMEN

Al pasar los años, la tecnología ha ido ganando espacio en el sistema educativo. Los docentes necesitan estar actualizados con las Tecnologías de la Información y la Comunicación para que los estudiantes puedan adaptar su entorno y aprender en torno a su actualidad. Así surgió el marco de Conocimiento Tecnológico Pedagógico y de Contenidos (TPACK) como una ayuda para que los docentes introduzcan correctamente la tecnología en clase. El objetivo fue analizar el marco TPACK y las habilidades productivas del inglés para conocer su significado y cómo utilizarlo combinando los conocimientos tecnológicos, pedagógicos y de contenido. El informe tuvo una metodología descriptiva, explicativa, no experimental y mixto para obtener resultados que evidenciaron su importancia. Los beneficiarios fueron el personal docente de inglés que labora en la Unidad Educativa Ana Páez ubicada en San Felipe, Latacunga. La propuesta fue un Curso Virtual utilizando un Sistema de Gestión de Aprendizaje llamado milaulas.com dando la oportunidad de aplicar este marco mediante el uso de aplicaciones como Padlet, Jamboard, Edpuzzle y Plickers que pueden mejorar las habilidades productivas (speaking y writing). Un pre-test y un post-test fueron los instrumentos utilizados concluyendo que los profesores de inglés no tienen conocimientos suficientes sobre herramientas tecnológicas para trabajar con los estudiantes. Sin embargo, después de usar el marco TPACK y las aplicaciones, tienen la esencia sobre cómo introducir los tres aspectos más importantes como 1. qué enseñar (conocimiento del contenido), 2. cómo enseñar (conocimiento pedagógico) y 3. qué herramienta TIC a utilizar (Conocimiento Tecnológico). Esto significa que el proceso de enseñanza-aprendizaje necesita una correcta relación para obtener una mejor comprensión y potenciar las competencias docentes. Finalmente, esta investigación tiene una implicación lingüística y pedagógica porque el marco TPACK contribuyó al desarrollo de habilidades productivas.

PALABRAS CLAVE: modelo TPACK, habilidades productivas, aprendizaje virtual, EFL, LMS

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INTRODUCTION

In recent years, people have witnessed technological advancement, the greater possibility of access to the Internet, the increasing use of technology, and communication, and the computer development applications in the design of virtual educational spaces which provoke the evolution of traditional education into a new educational modality aided by the technological tools. It helps access several information sources, keeps in touch with other people, close or distant. Thus, becoming one of the ways for learning management, online training, and reinforcement of face-to-face training.

That is why in this project the principal investigation line is Information, and Communication Technology (ICT) because the use of various technological tools is very important since it allows to achieve better learning results in the various knowledge areas, and in the system education it plays an important role because it can reinforce knowledge not only in class nor in the house as well with virtual assessments. In addition to this, it is important to focus on the sub-line which is related to English as a Foreign Language Learning. It is that the English language is considered the most spoken language in the world because business, academic education, and communication from one continent to another are made using this language. Thus, it means that it is important to join the use of technology in the English teaching-learning process. So, in this case, the project is going to study the TPACK framework as an important tool in the development of English classes, and how it can improve them.

“With the emergence of virtual learning environments (VLE), and virtual education (e-learning), new needs are created for the teacher, such as continuous, and permanent training in the use of ICT, and also how to incorporate them critically in the processes of teaching, and learning”
(Cabero, J. Et al, 2015)

The **Problem statement** in this research was that technological integration emphasizes the educational cycle, which has as a prerequisite the professional development of teachers. That lied in their training in technological integration models applied to the educational process.

The methodology has been proposed by the Ministry of Education. It has promoted some initiatives; the most current is developed through the Digital Educational Agenda which follows some guidelines to reduce the digital gap that was analyzed in the Presentation of the Ecuador digital strategy. (Ministry of Education, 2017-2021)

At Ana Páez Educative Unit, scarce technological integration is evident, and excessive use of traditional methodologies in the educational processes of English as a foreign language subject, too.

Furthermore, the lack of technological infrastructure also has a significant role in this institution because although this institution has the infrastructure (hardware, software, connectivity), which is limited because not all staff have access to it. Those aspects make it difficult to plan activities that integrate technology.

On the other hand, a weak knowledge about the TPACK model can be evidenced in English teachers, due to the little use of the digital tools they have. In this way, the TPACK model is undoubtedly a theme to promote in the Institution.

It can be implemented to the methodologies, and teaching strategies according to the Curricular guidelines established in the English curriculum of the Ministry of Education. Consequently, the TPACK model as a practice in the classroom takes on important aspects that need to be investigated to establish the relationship between the TPACK model, and English teaching as a subject.

In this way, the researcher **formulates the problem** using the following question: How does the integration of the TPACK framework enhance the teaching productive skills in English teachers in Ana Páez Educative Unit? This is due to teachers who don't use technology according to pedagogical purposes.

The aim to improve learning through the appropriate use of technology is the most important part of this research. So, the researcher proposes as a **general objective** to analyze the TPACK framework and the English productive skills in the teaching-learning process

Furthermore, as an answer to the questions about the problem faced, the research wants to analyze epistemologically the TPACK framework in the English language

so that those terminologies can be understood clearly. Apart from that, it is important to identify the problems that teachers face when they use technology in their classes. Finally, this project proposes to create a Moodle platform applying the TPACK framework to motivate the educational community to use technology. Those things mentioned are part of the **specific objectives** of this report.

Having said that, the system task that is made is the following:

Table 1. System of tasks concerning the specific objectives

OBJECTIVE	ACTIVITIES (TASKS)
Specific Objective 1: To analyze epistemologically the TPACK framework in the English language.	To research papers published in digital journals or on the web about the TPACK framework to collect the information needed. Moreover, to check, and cite university repositories in which the researchers had applied the TPACK Framework.
Specific Objective 2: To identify the problems that teachers face when they use technology in their classes.	<ul style="list-style-type: none"> - To apply a Pre-Test to establish prior knowledge such as technologically as pedagogically. Furthermore, with this pre-test, it is possible to identify the before, and after study situation. - To employ a Post-Test to compare the result, and to prove or not the hypothesis. It determines significant changes in the group.
Specific Objective 3: To create a Moodle platform applying the TPACK framework to motivate the educational community the use of technology.	To create a Moodle Platform with different applications, and activities that can be applied following the TPACK framework. So, English teachers could use it. This is focused on English productive skills (Writing, and Speaking).

Elaborated by: Vilcacundo M,(2020)

In this context the problem has passed for the following **stages**:

Table 2. Problem Investigation Stages

STAGE	DESCRIPTION
Stage 1. Tradicional	The manner of learning has changed, becoming more dynamic, and interactive, this research aimed to analyze different criteria about the use of technological tools in the process of teaching English language learning, and how basics components can be taken into account to complement, and strengthen different topics which are implemented in the English books provided by the Ministry of Education. The competencies that the teacher possesses to make effective the integration of Information, and Communication Technologies (ICT) in education must be a subject to necessarily address at any educational level since it is an aspect that we cannot give back” (Baishakhi Bhattacharjee and Kamal Deb, 2016)
Stage 2. Active	This stage is the first time where the PCK is used as a term to name the use of a combination of Content and Pedagogical Knowledge in a class by Shulman (1986) It is the teachers' knowledge of the subject to be learned or taught. The content that is addressed about English productive skills in High School is different from the content that is addressed in the university. He pointed out, this knowledge could include knowledge of concepts, evidence, and tests, as well as established practices, and approaches towards the development of such knowledge.
Stage 3. Critic	The acronym TPACK is used to describe the transformation of teachers' knowledge into one which can introduce technology, pedagogy, and content knowledge in the same lesson. This TPACK framework is based on identifying the requirements needed by teachers for the integration of technology in their teaching. (Harris, Judi & Koehler, Matthew & Mishra, Punya., 2016)

Elaborated by: Vilcacundo M,(2020)

Through the analysis of this problem, the principal **justification** of this research is due to the difficulties in knowing what should be implemented within an educational modality mediated by technology means those innovative concepts. This research found that in 2006, the TPACK model focused on the Pedagogical Technological Knowledge of Content emerged, particularly dominated by the

teacher who will be in charge of integrating ICT in the training processes (Rodgers, 2018)

The beneficiaries of this TPACK framework model are the teachers as part of this educational cycle because this platform trains them to use, and develop other applications using the TPACK framework. So, they were able to use it as a support, and as an example of how to apply technology to get better teaching results.

This research was feasible because the interest is reflected in the institutional opening given by the high school principal, and also due that the institution is the researcher's workplace. It also is important to mention that due to the current reality which is COVID -19, they face a problem to introduce technology, and they have the opportunity to train from their house about this topic.

On the other hand, referring to the **methodology** that is used in this research as the first one is the **explanatory research** because it is intended to provide details about the all-prior information. The finality of this research was to obtain a general idea and to use the research as a tool to guide other topics that could be addressed in the future. Apart from that, the research determined how the introduction of technology following this TPACK framework influences English productive skills.

Furthermore, the research was **descriptive** because the objective was to establish a description as complete as possible of the problems that teachers can identify when they use technology in class. It means a specific population is going to be identified. The problem and the research question were stated indicating the assumptions in which these are supported. Appropriate sources are chosen, and techniques for collecting information, and data are selected, too.

This research also was **non-experimental** because this type of research was fundamentally based on observation. It means that the variables, categories, concepts, or contexts that are part of the situation are not controlled. It means that the TPACK framework use was observed as it occurs in his natural context, and then analyzed.

In addition to this, the research was **deductive** because, through this method, teachers at Ana Páez Educative Unit were observed to get a general conclusion about the use of the TPACK framework.

Finally, this had a **mixed study**, because the combination of quantitative, and qualitative methods reinforced the understanding, and explanation of the problem stated. It means that the results obtained helped to understand the phenomenon much better.

CHAPTER I.

THEORETICAL FRAMEWORK

1.1 Background

The immersion of Information and Communication Technology (ICT) in the educational environment is not new at all, but it has taken an impulse in this last decade. These have forced the traditional educational paradigm to develop new competencies in teachers, and students that can answer the social exigencies. ICTs are currently not known as a means to transmit information but as a valuable tool to generate learning environments. According to Salinas et al (2018), the relation teacher-student must be understood from a pedagogical view, which means that must be considered as a true innovation process following the sophistication, and technical potentiality into the learning model. (p.162-174)

As Rodriguez (2009) points out that ICT is changing education measurably, it has changed such the learning way as the teaching way, and for sure teachers', and students' role at the same time that formative objectives change because students have to learn to use, and produce new means. Moreover, teachers have to change their communicative strategies and assume their function as students learning facilitators in cooperative environments to help them to achieve their educational objectives. (p.6). The multiples progress that has been presented during the last twenty years referring to Information, and Communication Technology (ICT) has allowed the use of tools to facilitate the teaching and learning process.

However, this scope even leaves some dudes. Those have motivated the researchers' interests who look at ICT as a tool to help the educational community. Having said that, the first investigation that is taken into account is elaborated by Martha Salazar Cando, who makes a contrast comparison with two institutions of different

situations referring to technology. She points out that didactic resources are useful to students, and their manipulation allows the intellectual capabilities development. The materials are made for the student, not for teachers (Salazar, 2017. p39). This investigation was socio-educative and documental with a qualitative, and quantitative design supported by field research.

This research was made at Milenio Mejia High School with students of seven years of school parallel A, and B, each one with 32, and 34 students respectively, and at Isabel Ruilova school in the same years with 36, and 38 students per parallel.

According to Salazar the conclusions of this research are that the Milenio Mejia high school has an infrastructure with high technology such as virtual classes, digital boards, Wi-Fi, computers lab, good library, audiovisuals, but those are not used by teachers nor students. On the other hand, Isabel Ruilova high school doesn't have a technological infrastructure however teachers, and students have curiosity about ICT in the teaching and learning process.

Referring to the TPACK framework is important to mention the most important studies, So, in the international researches that is possible to mention was made by Wei Wang (2016) in his dissertation to obtain a doctor of philosophy called Development of Technological Pedagogical Content Knowledge (TPACK) in PreK-6 teacher preparation programs, the methodology used was quantitative and qualitative, the main objective was to measure the teachers' knowledge about TPACK framework, and it involved pre-service teachers, and he concludes that the introduction of this framework should be adequate to the different levels of education. Furthermore, he mentioned that the TPACK played the most important role in the lesson planning, and its implementation, and the lack of knowledge about this topic represented a negative impact on the practice implementation. (p. 132)

In the same international line, Hamzah Hassan Alhababi (2017) in his dissertation Technological Pedagogical Content Knowledge (TPACK) Effectiveness on English Teachers, and Students in Saudi Arabia used a mixed-method because they use surveys, interviews, and artifacts to understand the experience and perception of the participants. So, the main conclusions of his dissertation are that some collaborative activities engage students to remember vocabulary and understanding,

and students felt motivated to speak and participate in class. Moreover, through the workshops applied in this research, the author concluded also that using this TPACK framework, students increased their scores and knowledge. Finally, he recommended for further research the support of teacher's staff to update their knowledge for educational system development, and If teachers and students are familiarized with technological tools, this can improve confidence in class.

Finally, regarding national, and local studies, the most important was made by Rodrigo Tovar, and Diego Velasco (2020) called Research on Technology Competencies in EFL Language Instructors: Technology -Pedagogy-Content in Language Teaching. It was applied in the Language Center of Cotopaxi Technical University. Their principal objective was contextualizing the beliefs about the use of TPACK in teaching English as a foreign language. The instrument used were surveys-based questionnaire, interviews, and class observations where the finding was that the major percentage of English instructors is not familiar with the term TPACK, and how it can be applied in class deducing that Teachers know how to use technological tools but they are not able to combine teaching resources and adequate pedagogical methods for the teaching-learning process. So, they concluded that through the use of the TPACK framework, teachers can improve their teacher competencies by integrating technology in class. (p.16)

1.2 Epistemological Foundation

1.2.1 English as a Foreign Language

The English language has changed the world through the years because it helped to communicate around it. The most principal language used, without the country's location, is English. Even in primary, and secondary school, this language is part of the curriculum, that is why many bookstores sell their books in English translation. Those aspects have made the English language the most important language in the world. English is a fundamental request in many universities to be admitted or graduated so, to achieve this, the teaching-learning process has to start at an early age, and the language must be included in the primary school curriculum.

That is why the governments have taken as part of their proposals, and Ecuador follows the same work line. The linguists Richard, and Rodgers (2014) quoted by

Mohammed Rhalmi (2018) mentions English as the most studied language in the world as a foreign language, and the percentage of people who speak English as a second language could be from 3 to 1 comparing with the native speakers, for this reason, as they mentioned this language could represent a way to open many opportunities in relevant aspect in the person's life. Thus, through the years the English language has become the most powerful language around the world.

1.2.1.1 English language in Ecuador

The Ecuadorian government has been outstanding to improve the education quality in all areas. So, the government is engaged to implement the plan "Educación para Todos", the aspects to establish the improvement are in the project called Plan decenal (updated 2018) which has eight educational policies to be achieved with one objective in this plan, the curriculum was changed to power the citizen abilities. One of the most important changes was the modification of the curriculum of all subjects, and in the English area, it became "it's time to teach English" in which the teaching-learning process tried to improve the teaching methodologies and competencies. (p.10)

In addition to this, in the English as a Foreign Language Curriculum (Ministerio de educación, 2016), English was introduced with 5 hours per week from eight levels, trying to improve the linguistic skills competencies through teachers training so, the first step was to evaluate teachers through the TOEFL exam which evaluates the skills, and competencies in the English language. However, As Alicia Ortega Caicedo (2019) the results were not good because, from all evaluated teachers, almost the majority were placed as basic users even though the Ministry of Education establishes a B2 level as a request to be an English teacher. It means that the majority of teachers have a low level in the language, and it affects the teaching-learning process. (49)

Through the ministry of Education, the National Curriculum of English as a foreign language was developed in 2016. This plan is designed for students of basic general education until high school which the principal language is not English. It means that referring to Ecuador, this curriculum takes into account that there are several grades of bilingualism in the communities, and a diversity of culture which is true,

that is why, in this case, it pretends to relate the English teaching with the educational inclusion independently of their mother tongue. The basic principles of this plan are the communicative language approach, the language is learned better as a tool to interact, and communicate than just memorizing. (Ministerio de educacion, 2016).

Finally, this curriculum is student-centered learning, which means that the students are the most principal factor in the teaching-learning cycle. The government's efforts have been extended for many years and trying to foment a new structure in the English teaching language to be aligned with the globalized world needs. It involves taking into account but, the way to help teachers to train, and improve their competencies is a big step. In recent years, fortunately, the English language as a subject has been introduced not only in high school, it has 3 hours per week in the primary schools. Although it is not enough to achieve the purpose of the ministry of education it is a challenge for teachers who are responsible to teach kids because the process does not depend just on teachers, it needs a perfect articulation from all parts. (English as a Foreign Language Curriculum, 2016)

1.2.2 English Methodologies

To begin with, it is necessary to mention what methodology is and, according to the Oxford University (2020) "methodology" is a set of methods, rules, or procedures that are used in a specific area. In this case, regarding the educational field, it means the strategies, and methods that teachers use in the teaching-learning process related to their prior knowledge, and with the objective to create a piece of new knowledge. Guadalupe Peralta (2016) mentions that the teaching strategies are used from the moment that teachers do their lesson plans. The methodology is the set of decisions that teachers take according to their experience to teach the best possible way. (p.24)

Referring to this, many methodologies have been used since language teaching started until now. To begin with, the strategies were related to traditional teaching methods where technology and interaction among students did not have an important role. So, meaningful learning was not promoted. On the other hand, nowadays, there are several teaching models with meaningful strategies that

promote students' academic achievement. English is a language that has the teaching of four principal skills such as speaking, listening, reading, and writing. When the English teaching-learning process started, many teachers believed that the best method was just the translation from one language to another. (Peralta, 2016)

1.2.2.1 Communicative Method

As Rodgers R. a., (2018), in the book called *Approaches, and Methods in Teaching*, argue that the most used method is communicative, and they said that this method has opened the opportunity to new, and more actual methods that are used to teach English. So, the Communicative method is defined as an approach to teaching through the interaction of students and teachers instead of the rule's memorization. It was born as an antagonist to the Grammar translation method because it wants students to develop effective communicative competencies in the foreign language so that they can create more effective learning. (p.67)

In addition to this, the authors also explain that to achieve this, students must be immersed in communicative situations from the first day, and the lectures, and exercises can complement the speaking activities. It is also explained that teachers must help learners using motivation to work with the language. In this sense, Belchamber (2007) quoted by (Mohd Muhridza et al, 2019) claims that the books used to teach the English language communicatively are an important tool but, sometimes, they lack creativity, that is why teachers must evaluate the material, and if they do not comply with what is required, they must change the content. He also explains that the communicative method must be constantly adapted, and modified according to the objectives of the class.

Furthermore, according to the authors, the curriculum must be based on the activity specifications, ordered according to the areas of knowledge because the precision in language use is judged within a context, and it is observed when students interact with others. Hence, this method is focused on the learners and is based on their experience. For this, it is necessary to design a curriculum that will be articulated with the student's personal experiences, and offer a variety of activities according to their interests, styles, needs, and objectives to get the attention of students. They

complement this, explaining that the student needs to obtain communicative competence. This author defines communicative competence as the one that allows the students to know how to handle language for different purposes. (p.97)

Then, the communicative method allows the student to develop communicative competence, which is based on a curriculum that helps to obtain products through the performance of specific tasks. That is why the communicative situations must be present in all class processes, and recognize how to use it depending on the location, and who is involved, produce, and understand some types of texts, such as narratives, reports, conversations, and finally, use strategies to maintain a conversation despite the limitations that may be in the use of a language, it could be the better option which teachers can manage the communicative approach in class improving the language through the context.

1.2.2.2 Content-Based Learning

Rodgers R. a., (2018) mentions that the content-based communicative method seeks the integration between language, and subject content such as Social Sciences, History, Biology, and others so that the English language is used simultaneously with the teaching of a certain type of content. This method allows the language to be learned as a foreign language with integrated skills, for which the teacher needs to analyze the grammatical topics that must be taught together with the content. Additionally, the authors explain that the objectives of this method include linguistic, strategic, and cultural spaces. (p.64)

Additionally, the author argues that regarding the linguistic, and strategic, an attempt is made to activate and develop the existing skills so that students can apply their knowledge in future situations. It is tried that the students understand the cultural part, to people who come from English-speaking countries. Furthermore, this method seeks that students become self-employed learners, it is necessary for teachers must keep the class with a variety of activities, use workgroup techniques, and use appropriate correction strategies. Finally, the content-based communicative method is useful when teachers try to get students to use previously learned skills in the English language, and articulate them with new content such as art, science, or others. (p.97)

1.2.2.3 Task-Based Instructions

According to Rodgers R. a., (2018), this method is based on performing specific tasks as the core of teacher planning which is based on activities that promote real, and meaningful situations for students. So that students can use the English language while they are interacting, teachers can promote a correct learning process. For this method, the main objective is to take into account the process rather than the product that is obtained. The activities used can be two: the one that prepares them for real-life situations, and the other that encourages tasks with pedagogical purposes. However, in both cases, a plan of sequential studies supplemented with idiomatic expressions, and collocations. (p.67)

In this sense, Richard Frost (2015) argues that this method has advantages that help students stay motivated, and enjoy the English learning process. Moreover, it promotes a natural environment where students do not have a preset pattern to follow, but rather use language that is more relevant to them; so that the language it explores comes from students' needs, rather than leaving the book that is studied. So, the cycle of this method which is pre-task, task, and post-task is a good activity to guide students into knowledge reinforcement because using the students' experiences is more possible to learn and give correct feedback.

1.2.2.4 Content Language Integrated Learning (CLIL)

Sandra Attard Montalto, et al, (2015) in their book named CLIL guide book, explains that this method corresponds to integration of content in the teaching of a language. So that the teacher uses the content as a means of introducing the language. For example, related content can be used to teach a future tense (will) to environmental problems to get to the grammatical point. This method has gained importance in the curricula where English is taught as a foreign language. Likewise, the book explains that within the advantages of using this method is the development of linguistic, cognitive, and social aspects which allows students to obtain competencies satisfactorily not only in the content that is taught but also in the grammatical point. (P.9)

Moreover, the authors argued that the methods currently used for teaching the English language are focused on the communicative method, which has several

auxiliaries. Additionally, this methodology states that the instruction students receive happens best when you think about their needs. This helps keep motivation present so that there is an effective bond with learning English as a foreign language, and the teachers can choose the assessment that they want giving more autonomy to students by helping students to understand the aim of the lesson learning. Finally, this method provides students the opportunity to learn new things, and a new language at the same time, and the challenge of teachers is to assess all those aspects. (p. 41)

1.2.3 English Approaches

Cook (2003) quoted by Karakaş, Ali. (2019) mentioned that the old language teaching is called the **Grammar Translation Method** or Classical Method because this method was typically used to teach the traditional languages in that era (Latin, and Greek). It is the first method in the historical review which students used to learn through grammar rules, and vocabulary repetition is based on grammar and translation. It is a deductive, and mentalistic method, according to whatever language is acquired by rote learning the rules, and grammar paradigms, and long vocabulary lists, and is practiced applying that knowledge of direct, and reverse translation exercises (p.11).

After that, (Karakaş, 2019) mentions the **Direct Method** which is when the most important objective became to communicate with the speakers of that language and not just the reading of literary works, it was found that the method based on grammar, and translation could no longer be used, or at least not exclusively. Thus emerged, in the decades of the twenties, and thirties, a series of methodological initiatives, later grouped under the name of "direct methods", whose common aspect is the idea that the student must put students in direct contact with the language you want to learn, simulating situations concrete as similar to the real thing that could be achieved in the classroom (p. 32-50)

Then, the **Audiolingual method** is also called "linguistic" because it is the first to be based on consciously, and intentionally in a certain language conception, and its acquisition, due to, the growing disappointment of teachers, and experts about the results of the direct method and, on the other, as a consequence of the

communication needs in unusual foreign languages by the military, diplomatic, etc. of the United States during World War II. Its use extended to European language teaching in the United States, and the teaching of English as a language foreign in Europe during the 1950s. Furthermore, this method was invading all educational levels: university faculties, technical schools, colleges of middle school, etc. (Karakas, 2019 p.51)

Finally, it is indispensable to take into account the **communicative approach**. As (Karakas, 2019) argues that the methodological current that seems to predominate among theorists of language teaching, and teachers is communicative orientation, notional functional. More than a new methodology, the communicative approach is a general philosophy that has presided over language teaching for the past few years. The fundamental postulate is that foreign language learning should be aimed at the achievement of communication skills by students, that is, at the same time the series acquisition of skills that allow them to communicate with the native's speakers in the most common situations of everyday life (p. 143)

1.2.4 The English Teaching-learning process

The challenge of mastering English as a second language requires a whole process of teaching and learning. The implications of learning a foreign language are varied. It is from correct grammar, and pronunciation to a large vocabulary. The student must develop certain skills to apply their knowledge, and be able to convey the message in the desired language. Then, the use, and communication are the keywords of the new vision of language, they are the authentic meaning and the real learning objective. This learning should go from hand to use, unfortunately, there are countless cases of people who carry years learning a foreign language, and cannot use it, that is, speak or write it appropriately. (Hossain, 2015 p.7)

All students interested in learning a language are assuming that they will acquire certain skills that will allow them to express themselves correctly. There are many skills, each student prioritizes the ones they think will best serve them according to the context. In this sense, the most common ones that are acquired or should be acquired while studying a new language are productive and receptive skills.

The **receptive skills** are considered according to (Hossain, 2015) as the broader command of the language. Dialect varieties are understood differently from one's language, a much wider repertoire of registers, greater number of words that are used to express themselves. The user has no control over the language that is used in the messages that understand. They are learned and developed earlier. The micro-skills of oral or written comprehension have certain affinities (anticipation, inference of information, formulation of hypotheses of meaning, use of contextual information, etc.) that differ substantially from the productive skills (p. 8)

On the other hand, (Hossain, 2015) mentions the **productive skills** are the limited command of the language. The user expresses himself in his dialect variety and has a more restricted domain of records. Only use some of the words that you master receptively. The user controls the messages he produces: he chooses the linguistic forms. They depend on being receptive when it comes to learning. You can only say or write what has been understood previously. Micro-skills of expression also have affinities: analysis of communication, information search, linguistic selection, adaptation to the audience, etc. (p.9)

According to the British Council BBC (2015) defines the productive skills the speaking, and writing abilities, so, students who use these skills need to produce the language. They are also known as active skills. It is important to mention that productive skills are those that allow the student to produce language either orally or in writing giving way to communication, and thus allowing the student to express their ideas and thoughts. Those are compared with the receptive skills, but although the four skills in the English language are important, the productive ones are more complicated to learn than other ones.

Williams (2005) quoted by (Hossain, 2015) explains that writing is directly related to the production of language through symbols printed on a page. To write you need a message, and a receiver to receive it. It is important to know that the issuer must know, and master the ability to form letters, and words, then to join them, and form clear ideas, and thus be able to communicate. The author also explains that is one of the most important since through this a person can transmit ideas, thoughts, and

feelings which are formulated very quickly to the receiver so that he can analyze the meaning, giving way to effective communication. (p.13)

1.2.5 Information, and Communication Technology (ICT)

ICT is a technological set created the informatic use, and it also gives the facility of communication to long distances. As Perez and Telleria (2012) quoted by (Kaino, 2018) define it as a technological set that allows acquiring, producing, collecting, processing, present, and communicating information. These include computers, traditional advice such as radio or television, and the latest generation such as video or audio players, cellphones, and so on. Nowadays, ICT is important in all aspects but even more on the educational campus because it helps to interact with teachers, and students achieving meaningful learning. This technology allows students to pay attention to an unknown topic. (p.89).

Apart from that, the authors set that the educational system all around the world faces the challenges of using ICTs to provide students with the tools, and knowledge necessary for this era. That is why the most important society's role is to introduce technology ICT in the classroom, permitting to exploit all technological resources available to do an educational activity so that students can adapt to the new, and fast changes of actual society. According to the new curriculum that proposes the Ministry of education, and the effort of integrating technology in the teaching, and learning process, the schools must be prepared to develop pedagogical practices with the help of technology. (p.16)

On the other hand, ICT has changed the different environments. In education, for instance, its use has allowed many achievements Linways Team(2017) mentions the following as the most important:

1. To facilitate the requirement of contents in the diversity's forms, entertainment, and rich in information through videos, animations, CD-ROM, DVD, and so on. By the way, books are not the principal study resource now because the material can get life through gifs, sounds, and even films that describe events, actions, or processes.

2. to encourage the learning process improvement contributing to the achievement of personalized educational content to each participant.
3. to integrate indirect participants of the process such as parents through virtual communicative tools.
4. to offer opportunities to the individual, and cooperative activities development.
5. To support the inclusion of people with physical or mental disabilities through tools, and mechanisms that can improve the educational environment.

It must not be forgotten that the same facilities available for teachers are also for students. Assar, (2015) said that new information is generated each second, and is opened through different media such as tv or the internet. students have access to a huge variety of data that could be true or false. is there, where the teacher's intervention is necessary to guide, and clear doubts, interpretations, and correct errors. Teachers need to be prepared for those challenges that are why it is important to be updated with knowledge, to develop competencies, and capacities around information searching, critical analysis, the choice of communication media, cooperative work, etc. So, if teachers follow those recommendations, they could be at the same level of transformation that the teaching-learning process produces. (p.66)

1.2.6 E-learning

Firstly, is important to the concept of e-learning term, the European Training Foundation (2019)determines as a teaching-learning modality that consists of designing, put in practice, and assesses a course through technological networks. It also could be called an education offered to people who are geographically dispersed or maybe they interact at a different time than the tutor. It is defined as a teaching-learning process based on the technology used that allows students to follow the class without any restriction of space or time. Training through the Internet known as virtual training has the basis in classical distance education, where the need to link the teacher, and the student synchronously, and

asynchronously, creating thus communication channels, and information distribution to improve the quality of teaching. (p.123)

Thus, Betty Collis (1996) defines E-Learning or virtual training as the connection between people, and resources through the technologies of communication with a learning purpose. In 1998 the Polytechnic University of Madrid in its report on Tele Education defines e-learning as the integration of information technologies, and communications (ICT) in the educational field to develop courses, and other educational activities without all participants having to be simultaneously in the same place, (quoted in Sánchez, 2015). E-learning then allows you to graphic different scenarios adapted to the teaching models and the particular needs of each entity with the sole purpose of achieving meaningful learning. It means that through e-learning teachers, and students can close the relationship to ask, and clear doubts in real-time.

1.2.7 Learning Management System (LMS)

Parmley (2018) defined LMS as a software application installed on a server for managing, distributing, and controlling non-face-to-face training or e-learning activities of an institution or organization. The author also mentions Learning management systems (LMS) are software that is used mainly to facilitate the management of the web, either the internet or intranet, and that is why they are known as web content managers (WCM). Brenda Juárez et al (2020) argue that LMS has evolved dramatically in three evolutionary stages, which have notably influenced the speed of content creation, cost, flexibility, learning personalization, quality of care, and potential competitive advantages of those who have applied e-learning solutions.

First stage: LMS is within the most basic e-learning platforms, and allows the interaction with websites dynamic generation. The main objective of this program is the creation, and information management through the network (texts, images, videos, sound, etc.). They are also characterized by not having more complex collaboration tools (forums, chats, newspapers, apps. etc.) nor supported in real-time. (Brenda Juárez et al, 2020)

Second stage: According to (Brenda Juárez et al, 2020), the LMS (learning management system) provides an environment that enables the updating, maintenance, and expansion of the web with the presence of multiple users and their collaboration. They are oriented to learning, and education, providing tools for the management of academic content, allowing to improve the skills of the users of the courses, and their intercommunication, in an environment where it is feasible to adapt the training to the requirements of the company, and its professional development.

Third stage: LMCS (learning content, management system) are platforms in which the functionalities of the LMS are integrated to incorporate the management of content to personalize the resources of each student, and where the company becomes its own publishing company, with self-sufficiency in publishing contents in a simple, fast, and efficient way solving the previous problems of the previous stages. (Brenda Juárez et al, 2020)

Taking into consideration the third stage, it is the platforms that provide the tools needed; therefore, from a wide variety of platforms, we intend to emphasize the use of Moodle. because the researcher considers this kind of LMS as the most available tool to create a course about TPACK framework usage for teachers.

1.2.8 Pedagogical Content Knowledge (PCK) by Lee Shulman

In the summer of 1983, Shulman participated in a conference at the Texas University where he called it “the lost paradigm in the teaching investigation”. Here, he examined the lost paradigm and proposed that one must be the case study and the interaction with the pedagogy. This proposal surprised some authors because, until that time, the different teaching studies have been focused just on teachers' behaviors, and not how they think. Shulman also in other studies has mentioned teachers as thinkers. On the other hand, the cognitive psychology focus has been just from learning perspectives, and those teaching studies had ignored the teachers' view. (quoted by Rollnick, Marissa & Mavhunga, Elizabeth, 2017)

Three years later, Shulman (1986) published his first ideas of the research about the interaction between subject content, and pedagogy. In this work he developed a new

phrase “Those who can do. Those who understand, teach” in the contrast of Bernard Shaw “He who can, does. He who cannot, teaches”. In this phrase, he planted that to locate the content in which the teachers’ mind is developed, it is important to distinguish three kinds of knowledge such as a). Knowledge of the subject, thematic, or content. b. Pedagogical Content Knowledge (PCK), and c. the curricular knowledge. (Quoted by Rollnick, Marissa & Mavhunga, Elizabeth, 2017)

Of these three types of knowledge, as (Rollnick, Marissa & Mavhunga, Elizabeth, 2017) mentioned, (PCK) is the one that has received the most attention because it is the knowledge that goes beyond the subject of matter that reaches the dimension of subject knowledge matter for teaching. It is important to differentiate the Pedagogical Content Knowledge from General Pedagogical Knowledge for teaching, which is the generic principles knowledge of the organization, and management in the classroom, theories knowledge, and teaching methods. The PCK is the most useful form of ideas representation; analogies, illustrations, examples, explanations, and demonstrations. In short, the representations ways, and theme formulation that makes others understandable. That is, all the effort that the teacher makes the particular topic understandable. (Retrieved by Shulman, 1987, p. 9)

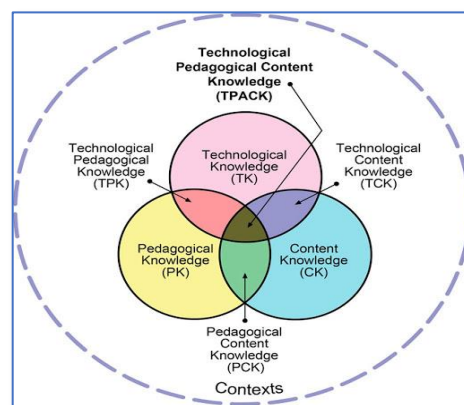
The PCK also includes an understanding of what makes learning topics easy or difficult conceptions, and preconceptions that students of different ages bring to learning the most frequent topics, and lessons. Shulman extends in 1987 the notion of basic knowledge that the teacher must have. Examining Pedagogical Content Knowledge, which has a focus on science education, and represents the first systematic attempt to synthesize the research on PCK, the model from which it was derived, and to map its implications for research, and practice. In the changes that have occurred in the last years in the education programs, De Jong, Korthagen, and Wubbels (1998) rank as an important common trend the growing interest in the thoughts of science teachers, especially in the knowledge of the subject, and in their conceptions of the learning. (Quoted by Stanford University, 2019)

To conclude PCK is a theoretical perspective that arises from the knowledge base for the teaching of Lee Shulman. Unlike other perspectives of didactic research, it favors the teacher's study in light of the knowledge of the specific content that is

taught. Currently, the PCK study has taken a particular interest in recent years. Such is the case in the field of English education. It does not intend to suppress, obviate or devalue other components of knowledge in the task of teaching, but only defends, proposes, and justifies a set of knowledge about the specific content, to cover a necessary complement about the teacher's knowledge of a specific subject. it means that PCK helps teachers to understand, and control what they want to transmit.

1.2.9 The TPACK Framework

The TPACK framework is based on identifying the knowledge nature required by professors to integrate technology into the teaching-learning process. it is important to understand that there isn't just an only, and one way about how to use technology in class but TPACK is a good one. The TPACK could be defined as the interaction of the three elements that are immersed in the acquisition of knowledge, and that is 1. The content of the specific subject to be taught. 2. The pedagogy is necessary for students to achieve these contents and, 3. Technology is involved in the learning process. (Mishra & Koehler, 2009)



*Graphic 1. the TPACK Framework by Koehler, and Mishra
source: © 2012 tpack.org*

Mishra and Koehler (2009) integrate this technological aspect into the content and pedagogical content with the underlying idea that it can't be acquired without its contextualization. Traditionally, teacher training has been limited to the acquisition of knowledge about one or several disciplines, depending on whether they are professionals for Primary, Secondary, or Higher education, with pedagogical training being in the background, especially in teaching professionals Secondary, and higher education. The

TPACK model takes into account the fact that technology has come to stay for many years, this is repeated by different authors who deal with the incursion of ICT in the classroom. (p.102)

Faced with this reality, Mishra and Koehler (2014) proposed to teachers not only learning in the use of technologies but also training in skills to adapt to the changes that occur in the face of new software and hardware which are in constant innovation. For these authors, the maximum expression of deep teaching knowledge is that which integrates the three knowledge, disciplinary or content knowledge (CK), pedagogical knowledge (PK), and technological knowledge (TK). So, It is proposed to consider that it is from this three knowledge that the interrelationships that give rise to the final product or TPACK. (p.101)

1.2.9.1 The Pedagogical Knowledge (PK)

Pedagogy joins the deep knowledge of teachers about the process, the practice, and the teaching-learning process. It is related to educational purposes, values, and objectives. This generic knowledge is focused on understanding how students learn, the class management techniques, planning, and the guide to students. Using this base, the pedagogical content knowledge refers to the idea of Shulman who points out the transformation of the subject to the teaching which occurs when teachers adapt the content to the previous knowledge of students. Pedagogical knowledge refers to the teacher's knowledge about the teaching, and learning process, how students learn, and how this process should be organized so that it is as optimal as possible (Mishra & Koehler, 2006; Koehler et al., 2013; Amhag et al., 2019)

Guerreiro (2016) defines it as the knowledge, beliefs, and skills that teachers possess, and that is related to teaching, learning, students, as well as general principles of teaching, academic learning time, waiting time, class management, etc. It also includes knowledge about didactic techniques, lesson structure, teaching planning, theories of human development, curricular planning processes, evaluation, social culture, the characteristics of learning, and the student, the teaching methodologies, the structure of the syllabus, and topics, the planning processes curricular, evaluation, History, and Philosophy of education, the purposes

of education, among others, and influences of the context in teaching, history, and philosophy of education, legal aspects of education, etc. (p.6).

For James Stronge et al (2018) the constituent elements of pedagogical knowledge would be the management, and organization of the class, the curriculum. In addition to socialization, the PK takes into account the characteristics of the students since the contents cannot be worked without taking into account the cognitive abilities of the students, as well as their experiences, and previous knowledge that they have about said contents. It can therefore be affirmed that PK includes the teaching-learning process, its characteristics, the factors that affect it, the main obstacles, the strategies to facilitate it, and the management of resources in educational processes. (p. 70).

1.2.9.2 The Content Knowledge (CK)

Mishra and Koehler (2014) said that The CK refers to the knowledge on which teacher training has traditionally been based, and which was limited to the accumulation of knowledge about the specific discipline that was taught. Although this does not mean that the subject knowledge possessed by a teacher is not relevant for the development of their function. This knowledge allows organizing the contents hierarchically, from less to more complex, so that teachers can design which of these contents will take to the classroom, and when they will be worked on. Likewise, it is decisive for the posing of questions since the greater content knowledge of the subject, greater clarity about the key aspects that cannot be ignored in each of the topics that are worked on in the classroom (p.102)

This means that the new knowledge is introduced, and accepted in the community, in the educational system, in the institution, and on the part of the teaching staff, it will allow them to know the scientific changes, and new conceptions about the subject that must be taught, which will help them to develop teaching that is most accurate to the reality of their moment, preventing them from taking obsolete or out-of-print ideas to the classroom. The deep knowledge of a discipline endows the teacher with a greater capacity to know the structure of that specific subject. It is, Content Knowledge refers to the general information about a topic that teachers

have to know and understand to transmit that information to students. (Matthew J. Koehler, Punya Mishra, Kristen Kereluik, 2014)

1.2.9.3 The Technological Knowledge (TK)

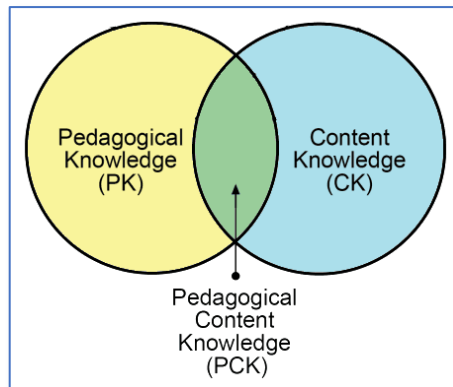
Technological Knowledge or TK is closely related to the technical domain of existing technologies. Mishra and Koehler (2006) defined it as standard technologies such as textbooks, mobile applications, systems, and more advanced technologies, such as the internet, and video media, etc. This knowledge includes management skills of technological tools as well as a much broader knowledge that allows its application in both works, and personal life. It is in continuous change due to the characteristics of obsolescence, and evolution of technology, it must be open to constant change, and evolution, and must allow the teachers adaptation to this constant modification (p. 103).

Mishra et al (2014) argued that through time, the technological training of teachers has been modified. Teachers' training needs to be focused on understanding technological tools from the perspective of technically qualifying the teacher to facilitate the technologies used in the classroom. The teacher training must be planned more interested in technological skills of teachers, and not in their training as an expert in ICT manipulation. The use of ICT is contextualized in this way with the subjects, progressively eliminating the wall that separated them. Technology training is left aside, and it is transferred to technology training. (p.105)

1.2.9.4 The Relationship of CK, PK, and TK components to create TPACK Framework

In the same way that Content Knowledge (CK), Pedagogical Knowledge (PK), and Technological Knowledge (TK) are important, there are the intersections derived from their combination. Thus, the following categories can be distinguished: pedagogical, and content knowledge (PCK), technological, and content knowledge (TCK), technological, and pedagogical knowledge (TPK).

1.2.9.5 The Pedagogical Content Knowledge (PCK).



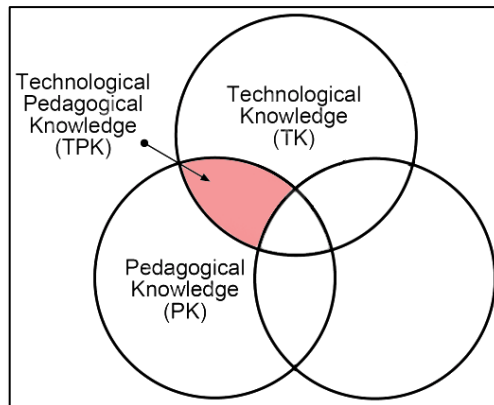
Graphic. 2 Pedagogical Content Knowledge

Source: Mishra & Koehler, 2006.

Harris, Mishra & Koehler (2009) considered that it is the knowledge that implies the pedagogical strategy that best suits a discipline or specific content. It requires the choice of the necessary materials, and the reworking of the knowledge to be transmitted. It also implies other relevant aspects for the achievement of an adequate educational practice such as being aware of the most common misconceptions, and ways to discover them, consider the importance of connections between different ideas of curricular content, starting from the prior knowledge of the students, and having alternative teaching strategies that can propose alternative ways of understanding the same content. (p.109)

It is the intersection of Pedagogical Knowledge, and Content Knowledge that comes from the model proposed by Shulman (1986). It involves going beyond the isolated knowledge of the disciplinary content to be taught, and the teaching-learning process. In this way, the central conception of the PCK is the transformation of the simple subject for teaching, and it occurs when teachers can interpret the discipline, find multiple ways to represent it, and adapt the teaching materials to alternative conceptions, and all of this depends on the prior knowledge of the students to impart new knowledge and reinforce the old ones. (Matthew J. Koehler, Punya Mishra, Kristen Kereluik, 2014)

1.2.9.6 The Technological-Pedagogical Knowledge (TPK).



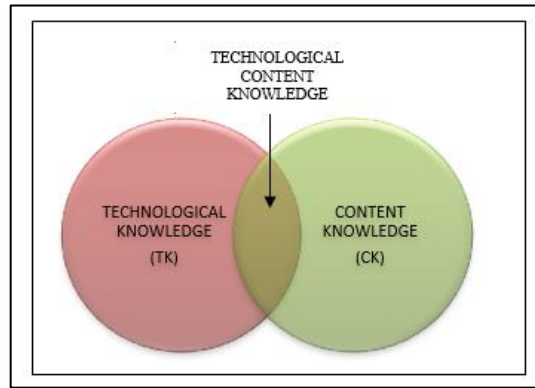
Graphic.3 Technological Pedagogical Knowledge
source: Mishra & Koehler, 2006

It is the confluence of pedagogical, and technological knowledge teaching staff, and includes the pedagogical possibilities, and limitations of technological tools knowledge to be used in the learning contexts of specific subjects. As Harris, Mishra, and Koehler (2014) mentioned that it implies understanding how the English, and learning process is modified with the integration of ICT. Achieving the development of the TPK involves the skills development by teachers, surpassing it, and transforming it in a creative way for use in the classroom. The usual problem for its achievement is the non-educational nature of the existing software. Such difficulty requires the prior analysis of the different programs to evaluate their possibilities in teaching. It means that teachers need to have a conception about what technology could use depending on the teaching approach that they want to use, and according to the class purpose.

For example, consider how whiteboards may be used in classrooms. Because a whiteboard is typically immobile, visible to many, and easily editable, its uses in classrooms are presupposed. Thus, the whiteboard is usually placed at the front of the classroom and is controlled by the teacher. This location imposes a particular physical order in the classroom by determining the placement of tables, and chairs, and framing the nature of student-teacher interaction since students often can use it only when called upon by the teacher. However, it would be incorrect to say that there is only one way in which whiteboards can be used. One has only to compare

the use of a whiteboard in a brainstorming meeting in an advertising agency setting to see a rather different use of this technology. (p110)

1.2.9.7 The Technological Content Knowledge (TCK)



Graphic 4. Technological content knowledge
source: Mishra, and Koehler, 2006

In the words of Mishra, and Koehler, knowledge requires understanding how technology and subjects influence each other. It assumes that the teacher must be aware of the technology usage limitations for teaching specific content. Likewise, certain decisions about the concepts to be transmitted limit the types of technologies that can be used to achieve them. Technology limits the types of possible representations but also enables the construction of new, and varied representations. It is needed to understand what specific technologies are appropriate to be used in the discipline, and how curricular content changes technology, and in contrast, this intersection, indicating that it is the most unknown knowledge as there is not a complete specification of the technology's usage in the different areas, and disciplines. (p.110)

1.2.10 The Technological Pedagogical, and Content Knowledge (TPACK) Advantages, and Disadvantages

Brand (2017)The integrated TPACK model allows future teachers to discover their mastery level of the different elements that make up the correct training (CK, PK, TK), their appropriate interrelation (PCK, TPK, TCK) (Price, 2013 quoted in Tai, 2016). In this way, the TPACK is shown as a complete model that can help solve conflicts in the initial training of teachers as well as in specialization courses or

retraining of active teachers, helping to develop changes in procedures, etc. among teachers in front of technologies. Likewise, this model proposes a reflective action to disciplinary content, pedagogy, and technology from a critical perspective to promoting modifications from a positive, and receptive acceptance. The TPACK model helps to meditate on teacher training as it makes them participate in self-knowledge.

Regarding the teacher's role and the student's body, the TPACK model participates in the current change that implies the abandonment of the traditional teaching-learning process where the passive student receives the explanation from the active protagonist, the teacher. In this way, it is promoted that it is the students who, based on active methodologies can build their knowledge aided by technologies. These ICT tools also help the teacher in his new guiding role in the achievement of learning, since the TPACK does not conceive didactic proposals without the symbiosis between active methodology, disciplinary content, and technology. Each of these element's feedback, and graphics the other, giving rise to a structure of joined pieces (Brand, 2017).

On the other hand, technology is not presented in the TPACK model as the protagonist of the activity but is only one more tool in the natural environment in which learning occurs. In this way, the idea of thinking first about ICT, and what can be done with new technology is abandoned, and the position of reflecting on the learning needs detected is adopted. The interest is focused on the teaching-learning process with technologies, and not on how to introduce ICT in the teaching of specific disciplinary contents. Additionally, this model is based on ICT as a teaching tool when, in reality, most technologies have not been created for educational purposes. In this way, teachers have to carry out extra work that is to redesign them so that they can be used in educational contexts. (Brand, 2017)

1.3 Foundation of the state of the art

The state of the art that is made in this research is divided into two groups, the first one is related to the different investigations made about the TPACK framework in English as a foreign language, and the second part is about investigations related to the variables of the problem.

To begin with, it is important to mention some international, and interesting research about the use of the TPACK framework in EFL. As Drajadi, N et al (2018) mentioned in their research about the use of TPACK framework, and the multimodal literacy in the English Language teachers published in the Indonesian Journal of Applied Linguistics, this model is not new at all as everybody thinks but the real challenge for teachers is how to put it in action. In the same way, the three knowledge could be a problem for teachers. TPACK is not a new model for teachers to integrate technology, pedagogy, and content knowledge, yet it is a challenge for teachers as professionals to do the action. However, the three cores of knowledge for teachers are still problematic for teachers. In the other areas, pre-service teachers should know, and understand about this teaching, and learning model for future classrooms. This study, which mentions that it is one of the first investigations focused on multimodal literacy, pretends to give details to teachers about technology, pedagogy related to the professional career. The principal hypothesis is that what is the relation between teacher knowledge in TPACK, and multimodal learning? What is the base of the relationship between English teachers, TPACK, and 21st-century learning? What kind of tools English teachers know? The research implications give directions and alternatives in the implementation of the TPACK framework to the future of English class. it also gives some advantages to develop the quality of the English professional development. The first method used in this study was the online survey about TPACK and its relation to multimodal learning. The object of this survey was to get information about the English teachers' knowledge, and how much information they have about the technology used in the 21st century. Here, 100 people participated. Then, they made a class observation, and finally an interview for teachers in service, and in training. The most important results of this study are that the TPACK framework and multimodal learning presents to teachers, and students a different way of learning English. teachers had investigated new perspectives about how to improve their teaching and learning process. Moreover, Teachers used the technology in class, and they improved it by 80 percent, however, they even feel unsure about using TPACK, and its impact. it means that teachers needed more time to be familiar with those two terms because those were new. so, the authors of this study concluded that If teachers receive help

from the university or institutions to update technological tools, they will improve their classes successfully.

Next, Alghamdi, Sami & Parkes, Mitchell & Reyes, Vicente (2018) developed another study analyzing the effects of knowing about the TPACK framework in the English language teaching as a second language in a Saudi Arabian School. The principal problem statement was the lack of knowledge about the TPACK framework. So, it made it difficult to determine actions in the future so that teachers can apply them in class. Those hypotheses allowed the author to investigate the knowledge and the teachers' attitude to the ICT implementation in an EFL class. Apart from that, the purpose was to identify the obstacles to use TPACK in secondary school. The benefits of this research were English teachers of 30 Albaha secondary schools. This was focused on male participants due to the beliefs of this country because men and women are divided into the educational system, and as the research genre is male it was implied to ask permission to work with women in this investigation. 200 English teachers took part between English teachers from urban, and rural places. the researcher applied a sample by convenience due to the easy access to the sample. The research methodology was a mix, and explanatory because the researcher mentions that this method allows to get results from different perspectives, and to analyze the results much better avoiding the weaknesses of qualitative, and qualitative research. Furthermore, the collecting data tools were web-based surveys and interviews. The result of this research is that the author can evidence that English teachers maintain basic knowledge, and competencies in ICT English use context, and TPACK knowledge, too. However, EFL teachers have less knowledge in specific ICT use as virtual, and video tools. Also, the researcher mentioned that many factors influenced this result. The first one is the school location, teachers from the urban places used the better way ICT tools, and as a result, they get more knowledge, and the manipulation of this was easier. so, those teachers could apply the TPACK framework, and be more related to it. On the contrary, teachers which work in a rural school indicated a limited use of ICT together with a low level of competence. The second factor was the English teacher's level of education. it means that the answer of teachers with a bachelor's degree had lower grades than teachers with a master's degree. It is due to master's

teachers being more exposed to technology, and TPACK use than a teacher who studied many years ago. It means that the different kinds of knowledge that the TPACK framework implies are needed for teachers to implement ICT correctly to improve their classes.

In addition to this, it is important to mention that there are lots of projects in which TPACK is used but to close the analysis of international studies Fathi & Yousefifard (2019) is mentioned, they worked on an assessment of the TPACK framework but in this case, it was taken from students' perspectives. They consider the TPACK framework as a valuable model which can help to describe, and understand the technology in different environments including English as a foreign language class. There were many books about the TPACK used by teachers in different areas but there are a few ones about the TPACK framework from English students' perspectives. That is why the main purpose of this research was to assess the TPACK use of teachers by students. The participants of this study were 148 Iranian students between men, and women from a private school of an intermediate level, and their teachers were in the range of 25 to 35 years old. The data collection tool used was a questionnaire about the seven knowledge of the TPACK framework. The most relevant result of this study was that the majority of students indicated that their English teachers over-hanged the technological, pedagogical, and content knowledge but they managed in less way the technological, and pedagogical content, and technological content knowledge. The results advise that English teachers need more training in those last elements of the TPACK to get the competence to implement technology in a better way into English classes.

At this point, some important Ecuadorian studies were taken into account, too. The researcher made a huge search in different university repositories about the TPACK framework used in the English area but some investigations in other areas were found. That is why some of those are quoted. To begin with, Cobos & Mejía (2020) proposed the implementation of the TPACK framework in the mathematics micro plan, thus, the question planted was How the implementation of the TPACK framework in the micro curricular planning will help mathematics learning? It answered the necessity that learning will be active, participatory, and innovative in

students. (p.4) In the theoretical framework topics about the TPACK model, and the math micro curriculum were detailed. The methodology employed was quantitative, non-experimental with documental level, field bibliographic, exploratory, and descriptive. The sample was composed of 87 people between students, and teachers. With the results obtained, it was possible to evidence that the TPACK methodology was acceptable. However, it is necessary to improve the planning with didactic resources to get meaningful learning. For this reason, the TPACK framework represents an alternative to enrich the educative process through technological, disciplinaries, and pedagogical knowledge.

Referring to English learning, Pablo Danilo Guerra (2020) made a case study about the use of virtual environments in the teaching-learning process of a second language. This research was based on the development of ICT in the educational field. it has helped to create resources or tolls into the bimodal modality (p.5). For this reason, this research pretended to answer the following question: How do virtual environments influence the learning didactic of a second language? First, this was a case study about different theories, and pedagogical models in linked environments, and their relationship with a face-to-face modality. Secondly, it was an analysis of the virtual environment used as a methodological strategy to support vulnerable situations. Finally, the proposal about the implementation of virtual environments which help the teaching-learning process, and the second language learning. The author used the inductive method, bibliographic, and field research to an exploratory, and descriptive level. The objective was to determine the positive aspects of bimodal learning in which the interactivity, availability, and accessibility allow to give input to the teaching-learning process of a second language attending to the vulnerable situations. Additionally, the survey of both students and teachers was used as a tool of data collection, and the sample was 113 students, and 3 English teachers with the final intention of confirming or negating the information obtained. As the main result in this proposal, the author concluded that there is a positive incidence in the virtual environment usage in English didactic teaching. Considering that skills and subskills require constant practicing it was difficult to implement them in class. That is why, cooperative work both face to face, and virtual process support among them. Furthermore, according to the student's

perspective, they considered that English teaching improved through the use of media applications or virtual resources. It means that the correct use of different techniques can support the meaningful learning process and the collaborative work not only in English but in other areas as well.

Finally, according to the use of the TPACK framework in local studies, Rodrigo Tovar (2019) analyzed the Technological Pedagogical Content Knowledge competencies in In-service English teachers who belong to the Language Center at the Technical University of Cotopaxi. The study was classified as qualitative, descriptive, exploratory, and diagnostic, and as the author says the methodology used were surveys, interviews, and class observations. In this research, 16 English teachers participated intending to measure their knowledge about the use of the TPACK framework in class. The results obtained were that a high percentage of teachers are not familiarized with this model, and as a consequence, he suggested that the development of these competencies in TPACK reinforce the teachers' domain knowledge, abilities, and beliefs about the use of technology in class.

1.4 Conclusions. Chapter I

1. Technology has had a huge impact on education, in a better way, because it has helped to improve the methodology that teachers use in class, and evaluation. In the beginning, teachers just used a big radio, and CDs, or maybe a big computer, however, nowadays with a cellphone and a speaker, teachers can develop an excellent class. Apart from that, technology needs to be well used and, in this way, English will be diligently such it can.
2. Mishra and Koehler used Shulman's studies about Pedagogical Content Knowledge (PCK) to create the Technological Pedagogical Content Knowledge Framework (TPACK) in which technology, content, and pedagogy have a close relationship, and together, the technological use gave a big step being introduced according to the topic, purpose, and method that teachers want to achieve.
3. The analysis of different topics or study cases about TPACK framework, and the understanding of its aspects such as technology, pedagogy, content, and their relationship among them were useful to clarify ideas about how

this framework has been introduced in different disciplinaries, and eventually, it will help to have a better conception about the proposal.

CHAPTER II.

PROPOSAL

2.1 Proposal Title

- A virtual course developed in milaulas.com about the TPACK framework to improve productive skills

2.2 General Objective:

- To enhance the English productive skills by applying the TPACK framework through a virtual course in order to improve the teachers' competencies.

2.3 Justification

The results of the diagnostic survey applied to English teachers who belong to Ana Páez Educative Unit demonstrate that principally they have not heard about the TPACK framework before. That is why, the preamble of this virtual course was the development of the definition, and importance of the different aspects that it refers to. Consequently, referring to the different aspects of this model, firstly, in the Technological field, they mentioned that they don't feel able to fix the technical problem but they are interested in being updated in technology news.

Referring to Pedagogical Content, the majority of English teachers know how to evaluate the students' performance, adapt the teaching according to the level of understanding, and use different teaching approaches in class. Apart from that, more teachers can manage the student's comprehension creating a suitable environment in class. It reflects that, English teachers from this institution have enough pedagogical knowledge

Regarding Technological Pedagogical Knowledge, a minority of teachers can introduce technology that can improve the teaching approaches, but the majority of teachers are neutral. It showed the knowledge difficulties about technology that face them, and they don't know how to combine them with the pedagogical knowledge, and the English language.

Using those results, it is important to conclude that the present proposal helped to English teachers because through this, they learned about this model, and using some applications they were able to use in class introducing technology with the content, and pedagogical objectives, too. It means that the proposal improved the innovation in class, and give more leadership to teachers to manage students in a better way.

Finally, this proposal doesn't represent spending for teachers because this Moodle course is developed in a free platform called milaulas.com with easy applications that can be applied in class or maybe through virtual classes. Those applications are focused on productive skills (speaking, and writing skills) because it is indispensable to mention that are the most difficult ones to develop.

2.4 Proposal Development

The following proposal has different elements about how teachers can implement applications in class to introduce the technological tools into the teaching-learning process correctly. It is, how to use the TPACK framework effectively. Additionally, applications for improvement writing like Padlet and Google Jamboard were taken into account because these applications allow teachers to give instructions and students can write on those online boards while teachers can control and evaluate the written text. Additionally, Edpuzzle and Plickers used as applications to encourage speaking skills because as is known, speaking is the ability that is more complicated to evaluate using just a technological application, that is why those applications help to motivate students to speak. Finally, through each topic in the proposal, we have the corresponding explanation, and activities to reinforce the learning so that teachers can understand and apply them later.

2.4.1 Proposal Components

Theoretical Foundation: In this stage, the proposal contains an explanation of the TPACK framework. The theory of Mishra and Koehler was developed in 2006. Moreover, the applications also are explained to comprehend what they are, and how we can use them too.

Firstly, the TPACK framework as (Mishra & Koehler, 2006; Koehler et al., 2013; Amhag et al., 2019) mentions that this model is the opportunity to involve technology using the content, and pedagogical knowledge in one so it helps teachers to combine those 3 components making more innovative, and creative the class.

In this context, e-learning applications play a big role in the TPACK framework. As Vicki Davis (2020) says, essentials apps can improve collaboration, communication, critical thinking in students. It also helps teachers to choose the correct application according to students' needs, and level of education. There are many applications into the world web but in this case, the researcher considers as the main important as:

Padlet is an e-board that can be used by teachers and students. Teachers can create a board and share it with students to promote the writing giving assessments related to that. It is easy to use because to open an account, the users just need to have a google account. For students, it is also easy to use because with the link shared by teachers, they have to open, and they don't need to enter any google account. Finally, it is free, and it is available for use on mobile devices, tablets, or laptops. (Renard, 2017)

Google Jam board is another application that can be used to promote writing skills. Teachers just need to open their google account, and plan or paste an image depending on the activity that they want to do in class, and share the link with the students. So, students when they open the Jamboard can be edited, and complete the activity. That is why it is considered a collaborative Jamboard. (Staff, 2020)

Edpuzzle is considered as an application for evaluating understanding because through the collaboration of YouTube, and other video webpages can be edited to

add questions. So, teachers can search a YouTube video according to the topic taught, and add questions to students' understanding. (Edpuzzle Help Center, 2020)

Plickers is an application that can help teachers to maintain the attention of the class while evaluating the topic. This application is considered more for face-to-face assessment than e-learning. This is a good option to combine technology with the content, and pedagogical knowledge. (students in EDUC 390D, 592A, & 692D , 2016)

Finally, it is important to mention the methodology used to elaborate the virtual course. This methodology is PACIE which was developed by the engineer Pedro Camacho. This term is used to incorporate web 2.0 technology in the educational process to potentialize self-learning and the experience of creating collaborative learning. The acronym for PACIE is integrated by Presence (the visual impact of the virtual class), Outreach (define the objectives), Training(content), Interaction (interactive socialization), and E-learning (interactive communication).

This methodology is composed of 3 blocks:

Zero Block: information, communication, and interaction section about the course, and it is as learning support.

Academic Block: Explanation section with information, link, and documents. Verification section with evaluations.

Closing block: Feedback sections (Quintero, 2016)

Diagnostic test. It is focused on knowing if the users had any kind of idea or if they have heard about the topic before.

Modules: It consists of the didactic material that contains all the elements, and resources for the concepts, and skills learning.

Videos. They are the media resources that help to reinforce the knowledge and allow understanding the topic in a better way.

Activities, and evaluations. They are instruments that the course needs to confirm that the topic is understood. Furthermore, they encourage users to use and manipulate the applications.

Additional Resources. They are documents that can help to read more about the topic such as manuals, instructions, and information from authors who wrote about the topic.

Final Project. It is an activity to perform a topic developed in the course using technology. It means that users have to apply a lesson plan introducing any of the applications studied.

Final evaluation. It is focused on the diagnostic test to evaluate if the knowledge has changed after the users have developed the course.

Course evaluation survey. This survey is used to collect information about the opinion that people have regarding a training received, and knowing if the course meets the established objectives, if the study program is adequate, and or if the teaching techniques are adequate. Through this data collection tool, the necessary adjustments can make, and adapt to the needs of the users.

2.4.2 Proposal Explanation.

The proposal is mainly focused on the management of ICT tools within the English subjects, the same ones that allow improving the learning, and awakening students' interest in the subject.

The proposed activities and the time to develop the course are available to the discretion, and disposition of teachers. The applications planned in the virtual course are available to work with students of low or high levels but it will depend on the purpose of the class, skills, and evaluation criteria of the level at which it is developed, taking into account the specific needs of the student to whom it is destined.

The methodology used to elaborate the virtual course was PACIE.

Firstly, a google form for enrollment was shared with English teachers from Ana Páez Educative Unit, in this, emails, full names, and IDs were asked. Then, A link was sent with the user, and password for logging into the course.

The LMS used was Moodle, this is called milaulas.com, in this platform, the course was elaborated according to the methodology mentioned before, and was divided into:

- **Zero Block**

Meeting your tutor

- **Interaction section**
 - Announcements
 - Introducing Myself Forum
-

- **Academic Block**

Diagnostic test

TPACK Framework Diagnostic Test

Module 1 TPACK framework, an introduction to the theory

- What Is TPACK Framework?
 - Evaluation Module 1quiz
-

Module 2 Applications to Create Collaborative Boards (Writing)

- Topic 1. Padlet
 - Additional Material
 - My First Padlet Activity
 - Topic 2. Google jamboard
 - Additional Material
 - Creating My Jamboard
-

Module 3 Applications to Evaluate Understanding (Speaking)

- Topic 1. Edpuzzle

- Let's Practice
- Creating My Resource
- Topic 2. Plickers
- Creating My Plickers Account

Module 4 Practicing in Class

Tips for planning, and teaching with TPACK model

- Lesson Plan Template
 - Final Project
 - **Closing Block**
 - Final test
 - Course Evaluation Survey
-

ZERO BLOCK



Into the **Zero block**, there is the **presentation of the course**



Graphic 5. The Virtual Course Logo

Source. https://emavil92.milaulas.com/pluginfile.php/28/mod_label/intro/K.gif

In this part, the introduction to the course is presented, and the manager's course gives welcome to the users.

 **INTRODUCTION TO THE COURSE** 

Teaching with Technology

THE TPACK FRAMEWORK

Welcome!

The digital era opens many opportunities to a challenge world. When you teach using technology, you give more complexity to the class. It means that you will have more effective teaching. That is why, A teacher must be familiar with the technological tools, content and pedagogy as well.

For that reason, this course will help you to understand some applications that you can use in order to improve the productive skills.

Graphic 6. introduction to the course.

Source: <https://emavil92.milaulas.com/course/view.php?id=2i>

Then, the learning outcomes are given:

INTEGRATING TPACK FRAMEWORK COURSE 1 is the first informative course addressed to English Teachers.

LEARNING OUTCOMES:

By the end of the course, the users will be able to do the following:

1. Understand the TPACK framework
2. Compose a lesson plan using TPACK framework
3. Use the applications given in class
4. Manage their courses in a better way
5. Combine the technology, teaching approaches and pedagogy in the same lesson.

Graphic.7 learning outcomes

Source: <https://emavil92.milaulas.com/course/view.php?id=2>

Here, there is an interactive section where announcements appeared, and a section about the introduction forum in which users had to publish a text giving their important information about themselves, and their expectations

INTRODUCING MYSELF FORUM

In this field, You can introduce yourself.

What is your name?

What are your dreams or wishes as teacher and in your personal life?

Add a new discussion topic

Graphic.8 forum

Source: <https://emavil92.milaulas.com/mod/forum/view.php?id=51>

ACADEMIC BLOCK

Next, Into the Academic Block, there are four modules. But at the beginning, there is a diagnostic test used as a pre-test for this research to measure the knowledge about the topic. This form was retrieved by the TPACK framework web page.

INTEGRATING TPACK FRAMEWORK IN THE ENGLISH PRODUCTIVE SKILLS

Dashboard / Courses / TPACK / ACADEMIC BLOCK / TPACK FRAMEWORK DIAGNOSTIC TEST

TPACK FRAMEWORK DIAGNOSTIC TEST

<https://forms.gle/6axG4sVz8pUENJpc6>

Follow the instructions:

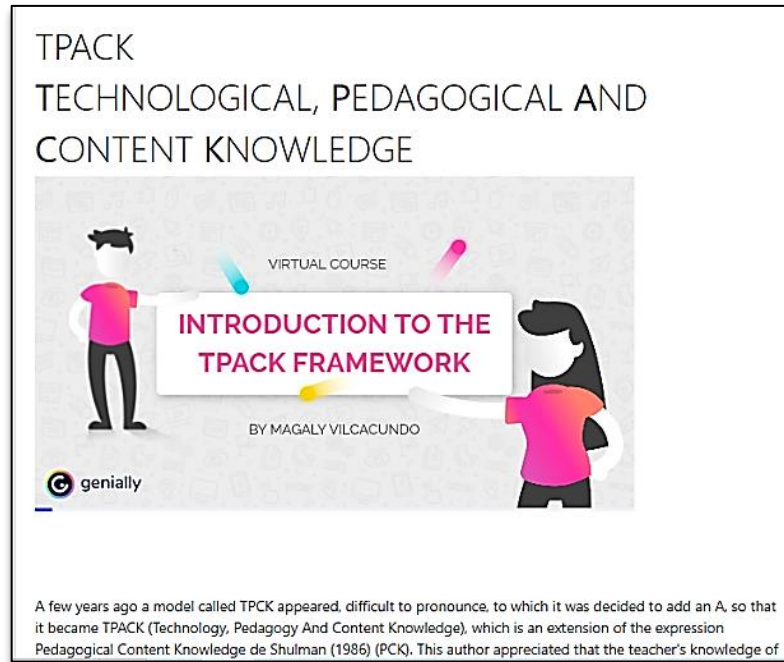
- Read carefully each question and answer selecting one option.
- Take your time to do this evaluation
- Finally, click in the link above.

Graphic. 9. Diagnostic test instructions

Source. <https://emavil92.milaulas.com/mod/quiz/view.php?id=31>

Module 1 TPACK framework, an introduction to the theory

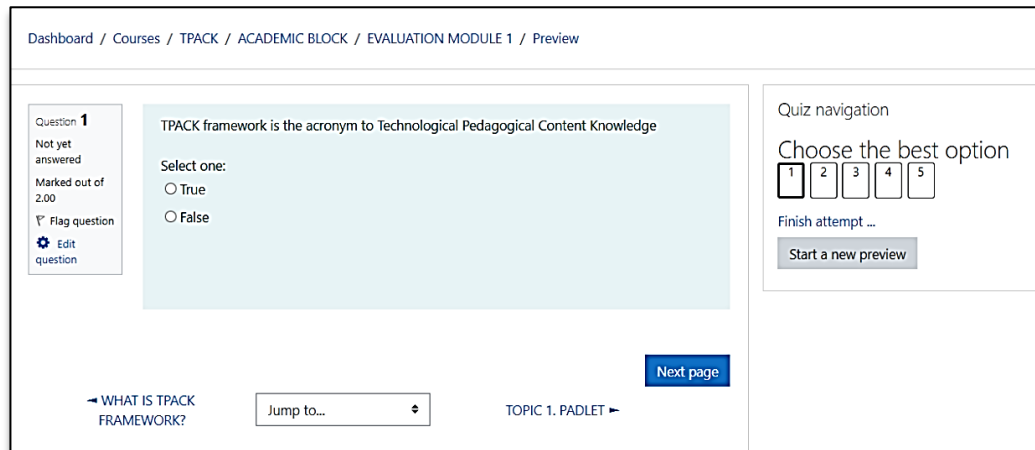
In the first module, the researcher gave a lesson in which there are two topics: what is the TPACK framework, and how to use it in class. Some videos made in Genially.com and Canva.com were elaborated by the course's manager to give more didactic information and explanation.



Graphic 10. TPACK lesson. Module 1

Source. <https://emavil92.milaulas.com/mod/lesson/view.php?id=72&pageid=3&startlastseen=no>

At the end of this module number 1, the users had a quiz in which 5 questions to evaluate their understanding of the topic.



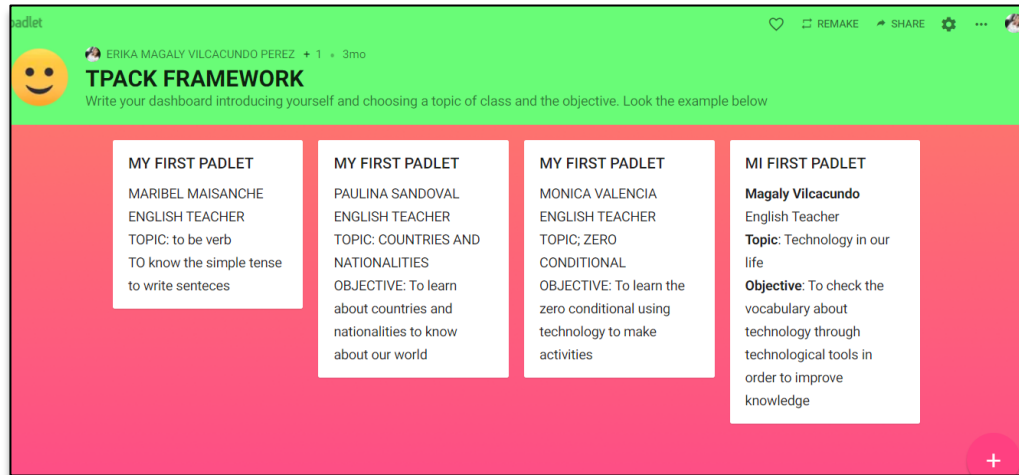
Graphic 11. quiz module 1.

source. <https://emavil92.milaulas.com/mod/lesson/view.php?id=72>

Module 2 Applications to Create Collaborative Boards (Writing)

In **Module 2**. The applications used are presented. In this case, there are two applications to create collaborative boards. The module's objective is to know about applications to enhance writing skills using collaborative learning that can be used in virtual classes.

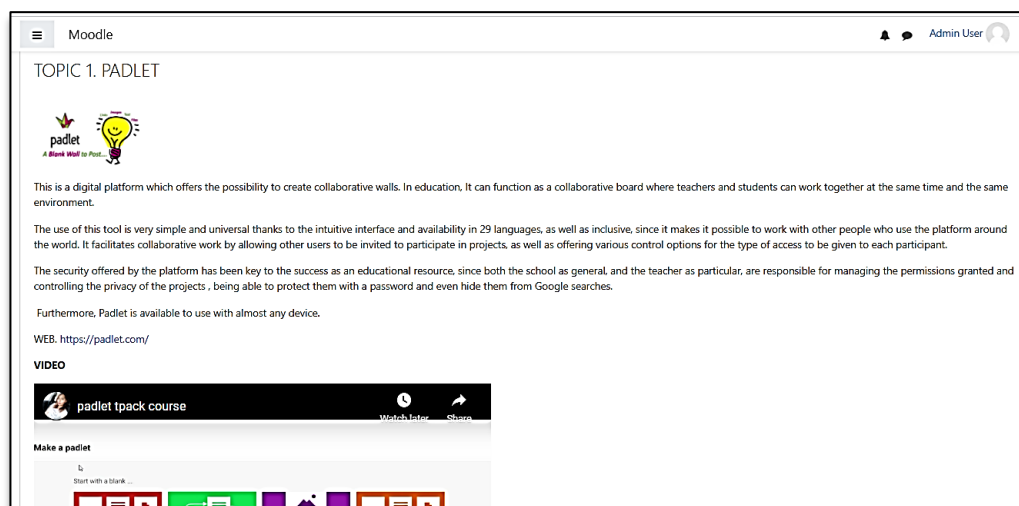
So, the first application was **PADLET**, and a lesson had to be completed. Padlet is considered an online board where you can interact in real life because while students are writing, the teacher can make suggestions and evaluate the task.



Graphic 12. Padlet screen.

Source. <https://padlet.com/erikavilcacundo6/fvqqosum9d8l91n>

The topics of this lesson were what is Padlet, how to create an account, how to use it, and the class advantages. Here, there are audiovisual media, like videos and images elaborated by the author where there are instructions about how to log in and how to start writing and a task.

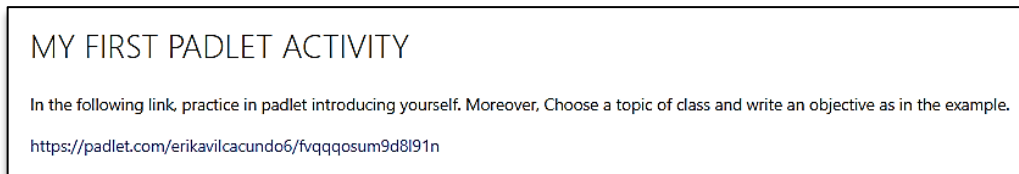


Graphic 13. topic 1 module 2.

Source. <https://emavil92.milaulas.com/mod/lesson/view.php?id=73&pageid=9&startlastseen=no>

Next, there is extra material, this is a written tutorial about how to create a padlet account.

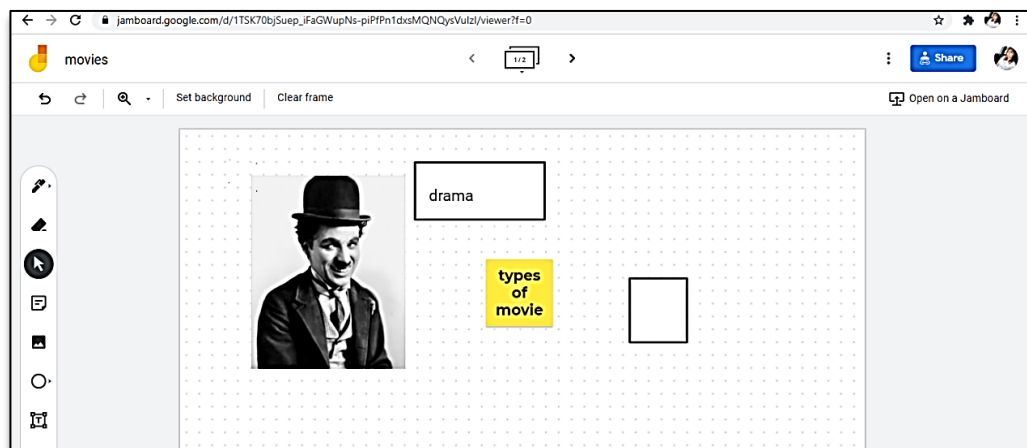
In the end, there is an activity called my first padlet, users have to follow the steps in the lesson before and they must create a padlet wall in the link given. With this activity, teachers knew about how to evaluate the writing skills using different topics.



Graphic 14. activity lesson 1 module 2

Source. <https://emavil92.milaulas.com/mod/assign/view.php?id=65&forceview=1>

Following lesson 2 of module 1, **Google Jamboard** is presented to give information about what is it, and what are the advantages to use it in class. This application was taken into account because it is an e-board that can be used in virtual classes to motivate writing skills. After all, using this application teachers can apply a task using images or instructions, then, students can write in the same slide and teachers can evaluate how they are writing.

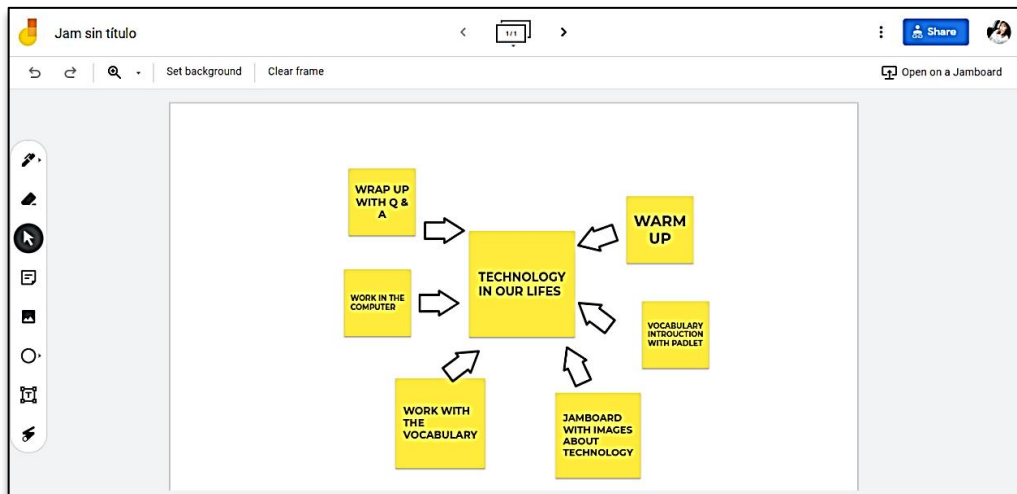


Graphic 15. Google Jamboard screen

Source. <https://emavil92.milaulas.com/mod/assign/view.php?id=65&forceview=1>

In this lesson, there is multimedia support to understand the topic much better. And, as the lesson before, there is an activity where users have to create a Google Jamboard choosing a topic to teach in class with their students, and in this, they

have to make a brainstorming about what they want to do in class, and they have to upload the link in the Moodle platform. There is an example that they can use to create their own.



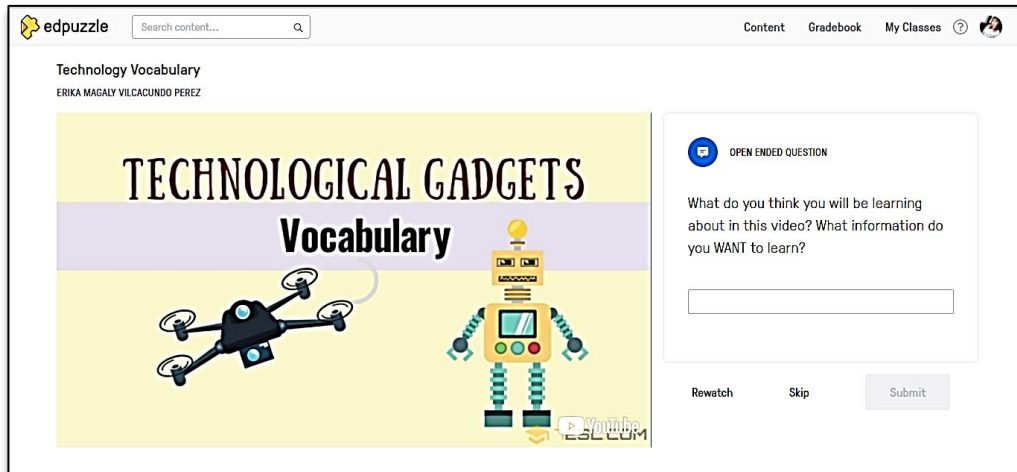
Graphic.16. activity lesson 2 module 1.

Source. <https://jamboard.google.com/d/1TTuqcWlebbSeCAWtbzSAjwqpPd3J3t95-1gS3kRDlsU/viewer?f=0>

Module 3 Applications to Evaluate Understanding (Speaking)

Next, **Module number 3** is denominated, applications to evaluate understanding(speaking). The objective is to create technological tools to encourage students speaking skills. Here, two applications are introduced, Edpuzzle, and Plickers, which contribute to combine the evaluation of understanding, and motivate students to speak indirectly. In the last module, some videos support the written information.

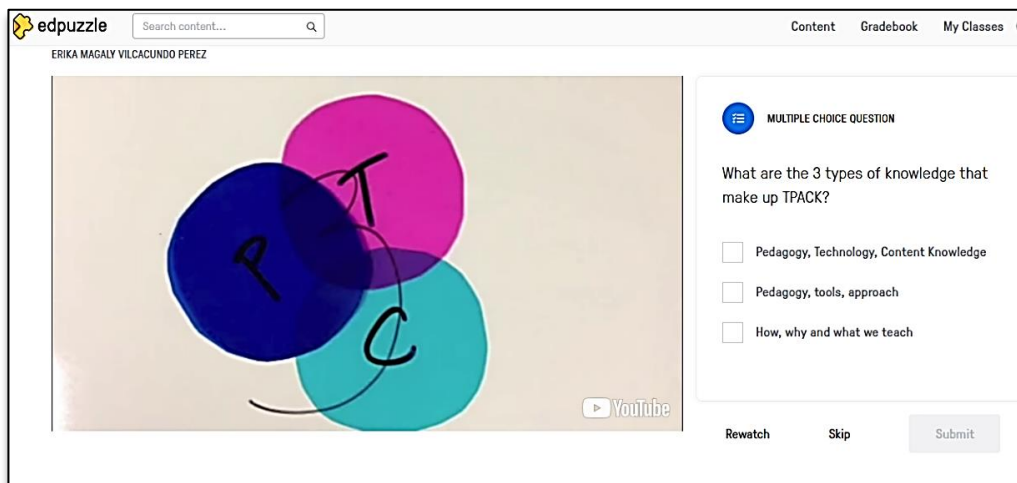
That is why, in Topic 1 of this module, the lesson to complete is **Edpuzzle**, this application showed how teachers can use oral evaluations using videos that can be found on YouTube or may be created by teachers, then, teachers create questions referring to the video then, students have to answer orally. To have the result wanted, the teacher has to apply the activity in class. So, teachers can encourage students to speak, and apart they can evaluate the class understanding.



Graphic 17. Edpuzzle screen

Source. <https://edpuzzle.com/media/6056363e06316342852818c4>

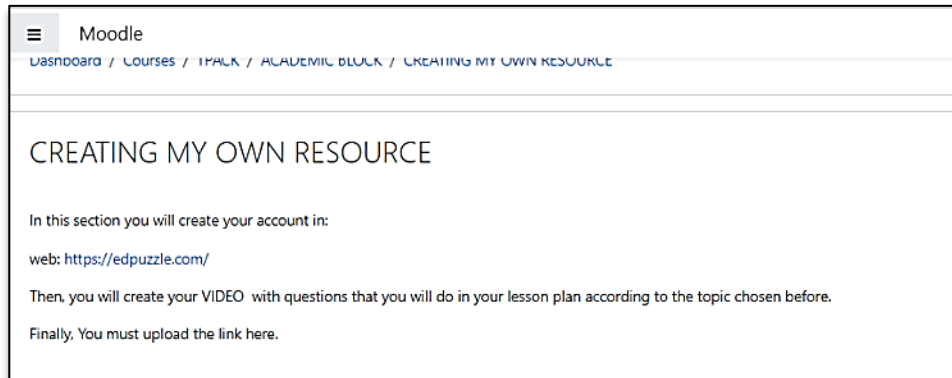
The lesson has a practicing activity where users have a link to access to complete the assessment as students. With this, they realize how they can work with their students interacting in real situations. Apart from that, this activity reinforces the knowledge about the TPACK framework with a video that contains important questions.



Graphic 18. Edpuzzle activity about TPACK framework

Source. <https://edpuzzle.com/media/6056363e06316342852818c4>

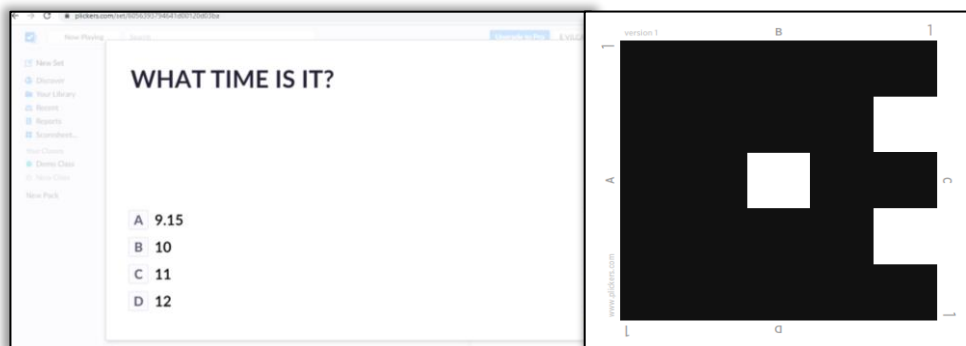
At the end of this lesson, users have to create their material using the topic chosen, so, they have to search a video, and add questions it consequently, they have to apply in classes as in the example given encouraging students and upload the assessment link or screen to the platform.



Graphic.19. the activity of lesson 1 module 3.

Source. <https://emavil92.milaulas.com/mod/assign/view.php?id=67>

Thereafter, **Plickers** is the last lesson in this course, and in this module, the lesson presents information about what is plickers, what are the advantages, and some examples about how it works in face-to-face classes. This is a different activity because teachers have the opportunity to interact with their students when they are in class face to face. With this application, teachers can motivate students using some cards because as teachers are asking the question, students have to choose the correct answer and then explain why they choose that answer.



Graphic.20. the activity of lesson 2 module 3.

Source. <https://emavil92.milaulas.com/mod/assign/view.php?id=68>

And, as in the other lesson at the end, there is an activity in which users have to create an account in plickers.com, create a quiz using the topic that they want, and finally share a screenshot on the platform.

Moodle

SKILLS

Dashboard / Courses / TPACK / ACADEMIC BLOCK / CREATING MY PLICKERS ACCOUNT

CREATING MY PLICKERS ACCOUNT

In this section you will create your account in:
web: <https://get.plickers.com/>

Then, you will create your account with questions that you will do in your lesson plan according to the topic chosen before.

Finally, You must upload a screenshot about that.

Graphic.21. the activity of lesson 2 module 3.

Source. <https://emavil92.milaulas.com/mod/assign/view.php?id=68>

Module 4 Practicing in Class

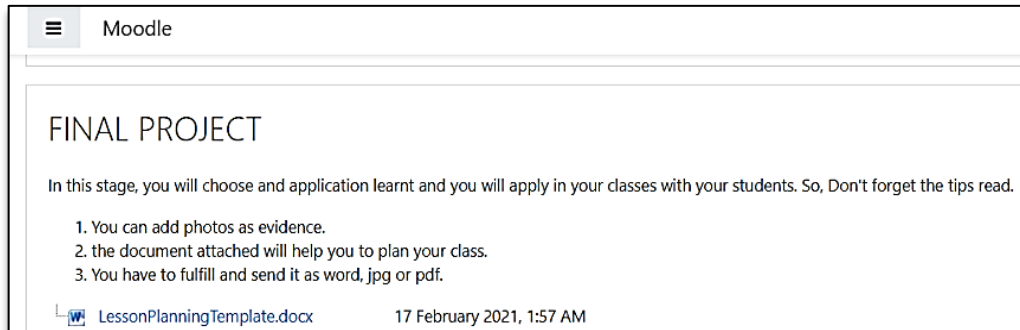
At the end of this Academic Block, **Module 4** contains a topic that gives information about how to create a lesson plan using the TPACK framework, and a lesson plan template is an example for users.

Lesson Planning Template: Technology-Integrated Instruction	
<p><i>"HOW can we ensure effective tech integration if technological decisions are such low-priority tasks?"</i> —Judi Harris and Mark Hofer</p>	
TPACK Lesson Planning	
Teacher/ Grade Level: Magaly Vilcacundo. 9 th level	
Title: TECHNOLOGY IN OUR LIVES	
Core Standard/s - Content: To check the vocabulary about technology through technological tools in order to improve knowledge	
Pedagogy: This lesson encompasses a variety of other instructional methods in order to fit the needs of all student learning styles. The main pedagogy strategy for this lesson is a <u>collaborative activity</u> that is paired with <u>game-based learning</u> . This method takes place as the students work together as teams to answer the video questions about technology. This is an effective method because students are actively engaged and motivated in the learning process	
Assessment Planning: First, a formative assessment will take place as the students rate themselves on the first to five rating. The teacher will assess student understanding by observing their personal rating and comparing it to their responses to the review activities. A second formative assessment will take place as the students work together. The teacher will listen to the student's conversations surrounding the questions in the edpuzzle video. The student discussions with one another can provide the teacher with an understanding of student comprehension. Finally a summative assessment will take place in the form of the student team score results. The teacher will take into consideration the formative assessments as well as the answer data of each student team that is provided to the teacher upon the completion of the video.	
<input type="checkbox"/> Informal:	<input type="checkbox"/> Formal:

Graphic. 22. Lesson plan template presented in the course. Module 4

Source. <http://www.cmslearns.org/technology-pedagogy-and-content-knowledge-tpack/>

Finally, in this module, there is a **Final Project** where users have to perform their lesson plan choosing any topic that they want, then fulfill the template, and upload it to the course platform.



Graphic 23. final project module 4.

Source. <https://emavil92.milaulas.com/mod/assign/view.php?id=62>

CLOSING BLOCK

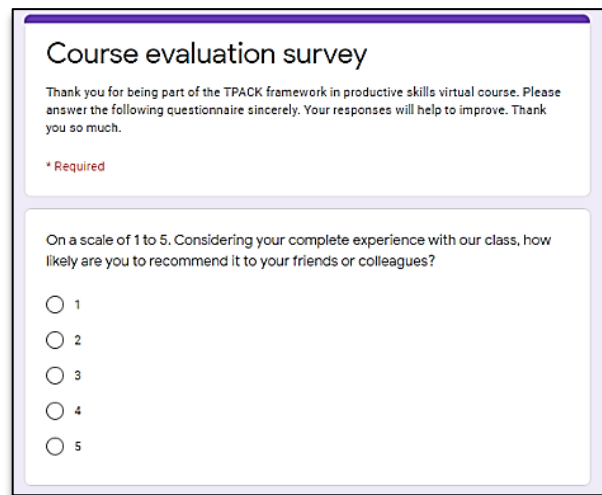
Lastly, the **Closing Block** presents an evaluation and a survey. The **evaluation** is the same given in the diagnostic test, the objective is to obtain information, and compare if the results have changed the users' knowledge before the course until after the course. So, this evaluation helped to make a comparison, and measure the impact of the proposal.

A screenshot of a Google Form titled 'THE TPACK FRAMEWORK FINAL TEST'. The form has a red header bar with the title. Below the title, there is a red asterisk and the word 'Required'. The main content area contains the following text: 'Technology is a broad concept that can mean a lot of different things. For the purpose of this questionnaire, technology is referring to digital technology/technologies. That is, the digital tools we use such as computers, laptops, iPods, handhelds, interactive whiteboards, software programs, etc.' Below this text is another instruction: 'Please answer all of the questions and if you are uncertain of or neutral about your response you may always select "Neither Agree or Disagree"'. The form then displays a section titled 'Technological Knowledge (TK)'. Below this section is a Likert scale question: 'I know how to solve my own technical problems. *'. The scale consists of five radio buttons with the following labels: 'Strongly Disagree', 'Disagree', 'Neither Agree or Disagree', and 'Agree'.

Graphic. 24. Post-test of the course

Source. <https://forms.gle/SSGahaNXqWDxUQ519>

After that, the final activity of this virtual course is a **satisfaction survey** which helps to get the impact of the course in general, if the course was productive or not. This is a questionnaire where the scale is “very dissatisfied”, “dissatisfied”, “satisfied”, and “very satisfied”. There are some questions about the course for example. How likely are you to recommend it to your friends or colleagues?. Then, the forms help the administrator to take into account the changes that users give



The image shows a screenshot of a web-based survey form titled "Course evaluation survey". The form has a white background with a purple border. At the top, it says "Thank you for being part of the TPACK framework in productive skills virtual course. Please answer the following questionnaire sincerely. Your responses will help to improve. Thank you so much." Below this, there is a red asterisk followed by the word "Required". The main question is "On a scale of 1 to 5. Considering your complete experience with our class, how likely are you to recommend it to your friends or colleagues?". Below the question are five radio button options labeled 1, 2, 3, 4, and 5.

Graphic. 25. Course evaluation survey.
Source. <https://forms.gle/CSAGuqYwxHehdyqW6>

The users need to complete 70% of the course to approve it. And, when they approve the course, they received a **certificate of achievement**. This was sent to the emails registered.



Graphic 26. certificate of achievement
Source. https://www.canva.com/design/DAEaRjxZ7UY/1VxUjLnaI9vGNMQMj3vT8w/view?utm_content=DAEaRjxZ7UY&utm_campaign=designshare&utm_medium=link&utm_source=sharebutton

2.4.3 Premises to its implementation

This Proposal was available due to many aspects, firstly, the principal of Ana Páez Educative Unit gave his authorization to implement the course because she considered that any kind of help that can improve the teaching-learning process is good. Moreover, it was feasible because the platform chosen is free so the tutor, and users didn't have to pay money for their training or for using this tool.

Apart from that, as this proposal is a virtual course it means that users can access it when they want, and it doesn't interrupt their daily life, and nowadays facing the problem of COVID-19 any meeting face-to-face represents a danger, that is why this course help that teachers can improve their knowledge while they are teaching virtually.

2.5 Conclusions. Chapter II

1. The elaboration of a virtual course was developed with the purpose to enhance the productive skills development in class using applications like Padlet, google jamboard, edpuzzle, and plickers, which helped teachers to use new technological tools with their students making their lessons more innovative.
2. The present proposal achieves the purpose of what the theory required. It means that the virtual course format followed the guidelines of PACIE methodology which helped to focused on a clear idea to introduce the topics chosen correctly, and orderly about the theory of TPACK framework, applications to be applied, and including evaluations, support materials, and audiovisual media.
3. This proposal is designed not only to give teachers information about TPACK but also gives an introduction of technological tools that can be useful in the current situation which system education in living with the COVID-19, helping teachers to train in those topics staying at home.

CHAPTER III.

Applications and/ or Validation of the Proposal

3.1 Experts Evaluation

To obtain the proposal validation in Chapter II, the participation of education experts, and managing technological tools were taken into account. Professionals who due to their expertise are the referents to endorse this proposal. That is why, the instruments used were a report with determinative parameters that help to verify the Proposal Structure, Wording Clarity, Content relevance, and Coherence between objective proposed, and indicators to measure results. Furthermore, the criteria indicators were 1 = Poor; 2 = Fair ; 3 = Good; 4 = Excellent.

The experts who took part in this validation was:

Master in Arts in Liberal Studies (MALS) Kari Lynn Miller Bauer, who is a teacher's trainer in different universities such as National Polytechnic University, Technical University of Guayaquil, and the Technical University of Cotopaxi with ID number 1715155014, and 26 years of experience. The general validation was Excellent. It refers that the proposed structure and the content relevance are appropriate to the teacher's reality of the system education. Moreover, the coherence of objectives is related to the measurement of results, and they are related to the topic proposed. Finally, the experts consider, and the proposal is innovative that is why she recommends expanding the proposal not only in the institution that is covering nor in all the system of education.

Similarly, Master in Education, Lidia Rebeca Yugla Lema, who is Professor of Technical University of Cotopaxi with ID number 0502652340, and 18 years of experience as a teacher in high schools, and at universities. The expert validates the

proposal as excellent. She mentions that the proposed structure is adequate to the English teachers, moreover, the content relevance is structured in an appropriate way to be understood, and the coherence between objectives, and results is as well as the language used. Finally, she commented that this proposal is into the digital era, and contributes to the teaching-learning process.

Finally, Master in Arts of Liberal Studies, Jose Andres Paredes Becerra, who is a Professor at the Technical University of Cotopaxi with ID number 1801872092, and 26 years of experience training teachers. The expert validation is Excellent because the proposed structure and the content show innovative, and good structure and the platform used is excellent due to their benefits such as free, and easy access. The objectives are in coherence with the measurement of results. Generally, the language used is excellent, and according to the level of English teachers, and the tools used are good too. Finally, He commented the proposal was innovative.

After the experts' revision, and validation, it is possible to conclude that there is feasibility, and viability of the proposal, denoting in the results in which the majority considered the virtual course as excellent, and the quality is appropriate and applicable to the educational system.

3.2 Users Evaluation

The users' evaluations were guided to English Teachers from Ana Páez Educative Unit, in this process a validating document was given where they evaluated the content, and structure of the course, the methodology, the topic, and the activities proposed for Integrating the TPACK framework in productive skills. The validation of this instrument was qualitative with the following results: that it is verified that there is significant investigation progress, and at the same time it mentions that the educational community had big impacts on this project. In this case, all users made this form but here are the three most important.

Firstly, Fanny Paulina Sandoval, English Teacher, considered that the virtual course was very satisfactory as well as the ability to navigate through the course. So, it is important to focus that the LMS milaulas.com was well chosen because she qualified the content, and the format of the course was easy to control. Apart from

that, she mentioned that the material provided, the combination of theoretical, and practical experience was very helpful to be applied in her classes, and the language was easy to understand and manage. Then, she also commented that there are big possibilities for recommending the course to other people.

In the same way, Monica Isabel Vaca, English Teacher, mentioned that the virtual course as a general conception was excellent. She is satisfied with the content, and the topic is given in the course. She also considered that the format of the course was handled, and easy to navigate from one topic to another. Moreover, she thought that the language used was clear, and the activities too. So, she opined in recommending the course to another person to take it.

Finally, Maribel Rosario Maisanche, English Teacher, pondered the virtual course as very satisfactory, and very helpful referring to the content, topic, and language used. She considered that the instruments applied were very useful for her classes, and recommended at the same time to incorporate a new course related to this course. Furthermore, she thinks that there is a right combination between the theory and the practicing experience. In the end, she considers that this virtual course is recommendable.

To conclude, it is good to mention that English teachers from Ana Páez Educative Unit as users of this virtual course agree that this is an effective strategy to help teachers to improve the classes through learning about applications that can apply with their students in this technological era.

3.3 Results' Evaluation

A Google form was socialized to enroll teachers in the virtual course to invite them to be part of this course. After that, those teachers were enrolled in the platform, and they received the user and the password to log in to the virtual course.

In the practice, the application of this proposal took 3 months. Concluding the course, the users had to complete the same test to compare if their knowledge has changed, and another form to know the satisfaction of the course. Finally, they received certification for achieving the course. Those results give credibility to the activities proposed. Through the use of this evaluation related to the TPACK

framework such technology, content, and pedagogical knowledge were taken into account to measure if they finished the course knowing to combine the applications explained as Padlet, Jamboard, Plicklers, and Edpuzzle with the topic of the class.

That is why, the evaluation results are considered, and analyzed in the following chart.

Table 3. Results relation from pre-test to post-test

QUESTION	PRE TEST	POST TEST	ANALYSIS
<i>TK (Technological Knowledge)</i>			
I know how to solve my own technical problems.	0%	80%	The interest to solve the technological problems by themselves increased
I can learn technology easily.	0%	75%	The use of technology became easy
I keep up with important new technologies.	12.5%	100%	Users considered the topic as technological updating
I frequently play around the technology.	12.5%	100%	Users improve the playing around the technological tools
I know about a lot of different technologies.	0%	100%	Users considered knows more about technology than before
I have the technical skills I need to use technology.	0%	100%	Users considered having skills to apply technology than before
<i>CK (Content Knowledge)</i>			
I have sufficient knowledge about the English language	62.5%	88%	Teachers improved their English knowledge
I can use English fluently.	50%	77.8%	Teachers improved their English fluency
I have various ways and strategies of developing my understanding of English	87.5%	100%	the strategies to develop English understanding increased
I can use the Productive Skills	25%	88%	the use of productive skills in class improved.
<i>PK (Pedagogical Knowledge)</i>			
I know how to assess student performance in a classroom.	50%	100%	The assessment in class improved
I can adapt my teaching based upon what students currently	25%	100%	the teaching according to the students' needs increased

understand or do not understand.			
I can adapt my teaching style to different learners.	75%	100%	They improve their teaching style
I can assess student learning in multiple ways.	62.5%	90%	They improve assessment using different activities
I am familiar with common student understandings, and misconceptions.	50%	80%	They improve their conception about how to be familiar with students.
<i>PCK (Pedagogical Content Knowledge)</i>			
I can select effective teaching approaches to guide student thinking, and learning in EFL	37.5%	70%	They improve the selection of teaching approaches
I can provide leadership in helping others to coordinate the use of content, technologies, and teaching approaches at my school and/or district.	75%	60%	They can be leaders helping students coordinating the Content, Technology, and Pedagogy
I can identify the difficulties of a class topic	75%	75%	They can identify the difficulties in the topic lesson
I can provide efficient explanations to my students	62.5%	62.5%	They can explain the topic to their students
I know how to organize, and maintain classroom management.	87.5%	90%	They know how to control the class
<i>TCK (Technological Content Knowledge)</i>			
I know about technologies that I can use for understanding and doing English classes	12.5%	100%	their use of technological tools evaluating comprehension improved
I can choose technologies that enhance the content of a lesson.	12.5%	100%	the use of technology to enhance content improved
I can use technology according to the students' level	12.5%	100%	their ability to choose applications according to the student's level is better.

I can use a wide range of teaching approaches in a classroom setting.	12.5%	100%	The implementation of the teaching approaches in class is better
<i>TPK (Technological Pedagogical Knowledge)</i>			
I can choose technologies that enhance the teaching approaches for a lesson.	12.5%	100%	They can combine technology, and approaches to improve a lesson
I can choose technologies that enhance students' learning for a lesson.	12.5%	100%	They can think about the influence of technology in teaching approaches
My teacher education program has caused me to think more deeply about how technology could influence the teaching approaches I use in my classroom.	12.5%	88%	They know how to implement technological tools in class
I am thinking critically about how to use technology in my classroom.	12.5%	100%	They can choose technology considering what they want to teach, and how to do it.
<i>TPACK (Technology Pedagogy, and Content Knowledge)</i>			
I can use strategies that combine content, technologies, and teaching approaches that I learned about in my coursework in my classroom.	12.5%	100%	The users used technology combined with approaches in EFL
I have heard the term TPACK framework before	0%	100%	They learned and understood about TPACK
I have used the TPACK framework before	0%	100%	They have used TPACK lessons successfully
I can adapt the use of the technologies that I am learning about different teaching activities.	0%	100%	their knowledge about how to choose technological tools according to what they learned improved

Elaborated by: Vilcacundo M, (2021) source. Tpack.org

Finally, the researcher considers that the evaluation established gave the expected results because it was possible to compare the user's knowledge before, and after the application of the course.

The evaluation of the proposal according to the criteria of the users allowed to know that there is feasibility, and the practice validation has demonstrated that it is possible to reinforce the digital competencies in English teachers.

3.4 Proposal Results

To gather the results of this proposal, a pre-test, and a post-test was applied to 8 English teachers who work at Ana Páez Educative Unit. In this way, the general results, making emphasis in the elements that TPACK framework are composed can be summarized as:

Before the proposal application the knowledge about the TPACK framework, and the use of technology in class were established according to technological knowledge (TK) the most teachers have poor knowledge, content knowledge (CK) is middle, and high knowledge due to the natural knowledge that teachers need to have to practice the profession as well as in the Pedagogical knowledge (PK), and the combination of Pedagogical, and Content Knowledge (PCK). Finally, in all relations elements with technology such as Technological Pedagogical Knowledge (TPK), Technological Pedagogical Knowledge (TPK), and the same Technological Pedagogical Knowledge (TPACK), teachers have Poor Knowledge.

Table 4. Results before the proposal application.

CATEGORY	TK		CK		PK		PCK		TPK		TCK		TPACK	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
HK	0	0	4	50	5	62,5	6	75	1	12,5	1	12,5	0	0
MK	1	12,5	3	37,5	3	37,5	2	25	2	25	2	25	0	0
PK	7	87,5	1	12,5	0	0	0	0	5	62,5	5	62,5	8	100

*Elaborated by: Vilcacundo M, (2021) *note. HK (High Knowledge) MK(Middle Knowledge), PK(poor knowledge), TK (Technological Knowledge), CK(Content Knowledge), PK (Pedagogical Knowledge), PCK (Pedagogical Content Knowledge), (Technological Content Knowledge) TPACK(Technological Content Knowledge)*

After the application of the course, the general results obtained are that all aspects of the TPACK framework mentioned before have improved the knowledge.

Table 5. Results after the proposal application

CATEGORY	TK		CK		PK		PCK		TPK		TCK		TPACK	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
HK	6	75	7	87,5	8	100	4	50	5	62,5	5	62,5	5	62,5
MK	2	25	1	12,5	0	0	4	50	3	37,5	3	37,5	2	25
PK	0	0	0	0	0	0	0	0	0	0	0	0	1	12,5

*Elaborated by: Vilcacundo M, (2021) *note. HK (High Knowledge) MK(Middle Knowledge), PK(poor knowledge), TK (Technological Knowledge), CK(Content Knowledge), PK (Pedagogical Knowledge), PCK (Pedagogical Content Knowledge), (Technological Content Knowledge) TPACK(Technological Content Knowledge)*

That is why the application of this virtual course about TPACK framework reflects that:

- The users plan their classes using the TPACK lesson plan and define the ICTs that are going to be used.
- They decide the most appropriate ICT tool to be used in class.
- They can use the ICTs in different stages in the teaching, and learning process
- They can create their support content for the development of virtual classes
- They can identify appropriate the TPACK framework

As a strategy to reinforce the topic given, they developed media products so that students can have permanent access. Moreover, the level of validation, and satisfaction about the use of the TPACK framework, and the use of ICT in the classroom are the following

Table. 6. Survey's results

CATEGORY	STRONGLY AGREE		AGREE		DISAGREE	
	f	%	f	%	f	%
RECOMMENDABLE	8	100	0	0	0	0
CONTENT	5	62,5	3	37,5	0	0
FORMAT	4	50	4	50	0	0
NAVIGATION	4	50	4	50	0	0
TOPIC	6	75	2	25	0	0

Elaborated by. Vilcacundo, M (2021)

Through the evidence presented, the proposal applied was interesting for users, and they consider that it is recommendable for other people because the content, format,

and navigation through the platform were easy, and they suggest creating more courses with more technological tools. So, the competence about how to use the framework to improve the productive skills activities in class has been reinforced. so, the intention was to enhance the teaching-learning process, and achieve that Ana Páez Educative Unit get learning based on excellence.

Conclusions. Chapter III

1. A virtual course addressed to English teachers about a framework that can help in the teaching-learning process was elaborated following the PACIE methodology which has been a guide to setting an efficient virtual platform of easy access. This method helped to maintain the order, and sequence of the course's format and making easier the users' navigation through the platform.
2. The learning modules included in the virtual course such as Padlet, Google Jamboard, Edpuzzle, and Plickers as the theory about TPACK framework has allowed creating a clear, and concise knowledge to enhance teachers to use them in their daily life. Those applications are the most suitable tools to use in class but they are not unique but they are a support for teachers in a regular class.
3. Finally, it is important to stand out the proposal validation by experts, and users where there is evidence that exists viability demonstrating that it's possible to reinforce the teacher's knowledge through virtual platforms resulting in a proposal into the current demands into the educational field. Such experts as users are people who have experience training teachers, technology usage, and teaching students. Then it gave validations fidelity.

General Conclusions.

- 1.** The TPACK framework in the English language learning was epistemologically studied because different theoretical, and relevant documentation was listed and analyzed to understand much better and highlight this model that has not been used enough in the educative process nor the English productive skills.
- 2.** The problems that the English teacher from Ana Páez Educative Unit faced at the moment to introduce technology in class were diagnosed. A test was applied to analyze those data resulting in most teachers having outdated knowledge to manage technological tools, but using the instruments applied, those problems could be avoided, and eventually, those were helpful to the correct, and efficient teaching performance.
- 3.** The Virtual course proposed for training teachers has played an important role to allow teachers to know about a new model which helps to introduce technological tools according to the level of students, the pedagogical objectives, and the subject's content making more innovative classes enhance productive skills of students.
- 4.** This research, Integrating TPACK framework in the English productive skills addressed to English Teachers achieved the objectives proposed because the correct application of the virtual environments for training, allowed to encourage teachers to use the wide range of technology that can be found in the web so that teachers can motivate the teaching-learning process.

Recommendations.

1. Teachers need to give importance to the use of the TPACK framework in class to be able to combine the pedagogical, and content knowledge with the use of technology. That is why, it is recommendable to continue investigating this model on the internet, especially in the web created to this model tpack.org.
2. The Moodle platform must be used to obtain better learning results in all areas because it provides all the tools that teachers need to train themselves and their students. Essentially, milaulas.com is a good instrument to create or follow training courses because it has lots of benefits such as administrators as users.
3. The training about the TPACK framework through virtual courses is recommended for all teachers' staff of Ana Páez Educative Unit to make them aware of the technological usage importance, and their management so that knowledge can be implemented in the teaching-learning process.
4. It is fundamental to update the teachers' knowledge not only in the current situation which is COVID-19 where teachers needed to use technological media but in all the teaching modalities so that students can construct their concepts, and achieve the learning required because If teachers can use technology, students can do it at the same time. So, reciprocal learning is present.

References.

- Edpuzzle Help Center,. (2020). *edpuzzle.com*. What-is-Edpuzzle-: <https://support.edpuzzle.com/hc/en-us/articles/360024281491-What-is-Edpuzzle->
- Alghamdi, Sami & Parkes, Mitchell & Reyes, Vicente. (2018). The effect of EFL teachers' Technological Pedagogical Content Knowledge (TPACK) on EFL teaching in Saudi Arabian Secondary Schools. https://www.researchgate.net/publication/349605391_The_effect_of_EFL_teachers'_Technological_Pedagogical_Content_Knowledge_TPACK_on_EFL_teaching_in_Saudi_Arabian_Secondary_Schools
- Alhababi, H. H. (2017). "Technological Pedagogical Content Knowledge (Tpack) Effectiveness on English Teachers, and Students in Saudi Arabia. *Dissertations*, (p. 160). Greeley, Colorado. Retrieved from https://digscholarship.unco.edu/dissertations/456?utm_source=digscholarship.unco.edu%2Fdissertations%2F456&utm_medium=PDF&utm_campaign=PDFCoverPages
- Assar, S. (2015). Information, and Communications Technology (ICT), and Education. *Encyclopedia of the Social & Behavioral Sciences*, 66-75. https://hal.archives-ouvertes.fr/hal-02386986/file/ASSAR-ICT_and_Education.pdf
- Baishakhi Bhattacharjee, and Kamal Deb. (2016). Role of ICT in 21st Century's Teacher Education. *International Journal of Education, and Information Studies.*, 1-6. Retrieved from https://www.ripublication.com/ijeis16/ijeisv6n1_01.pdf
- Brand. (2017). *tpackbybrad*. Retrieved from What is TPACK: <https://tpackbybrad.weebly.com/>
- Brenda Juárez et al. (2020). Learning Management System-Based Evaluation to Determine Academic Efficiency Performance. *sustainability*, 17. <https://www.mdpi.com/2071-1050/12/10/4256/pdf>
- Caicedo, A. O. (2019). *Enseñanza del inglés como lengua extranjera y desarrollo de*. Universidad Andina Simón Bolívar. <https://core.ac.uk/download/pdf/200988553.pdf>
- Cobos Velasco, J. C., & Mejía Segura, D. D. (2020). *Implementación del modelo TPACK en el plan micro-curricular de matemática dirigida a los estudiantes del primer año de bachillerato general unificado de la Institución Educativa Fiscal Amazonas en el periodo 2018- 2019*. Quito. <http://www.dspace.uce.edu.ec/browse?type=author&value=Mej%C3%ADa+Segura%2C+Darwin+David>

- Davis, V. (2020). <https://www.edutopia.org/>. Essential Apps for the Physical, and Digital Classroom: <https://www.edutopia.org/article/essential-apps-physical-and-digital-classroom>
- Drajati, Nur & Tan, Lynde & Haryati, Sri & Rochsantiningih, Dewi & Zainnuri, Hasan. (2018). investigating English language teachers in developing TPACK, and multimodal literacy. *Indonesian Journal of Applied Linguistics*.
https://www.researchgate.net/publication/323047453_Investigating_English_language_teachers_in_developing_TPACK_and_multimodal_literacy
- European Training Foundation. (2019). *E-Learning for Teacher Training*. Luxembourg.
etf.europa.eu/sites/default/files/m/C12578310056925BC12577750047E991_NOTE87ZHCL.pdf
- Fathi, J., Yousefifard, S. (2019). Assessing Language Teachers' Technological Pedagogical Content Knowledge (TPACK): EFL Students' Perspectives. *Research in English Language Pedagogy*, <https://dx.doi.org/10.30486/relp.2019.665888>
- Frost, R. (2015). *A Task-based approach*. <https://www.teachingenglish.org.uk/article/a-task-based-approach>
- Harris, Judi & Koehler, Matthew & Mishra, Punya. (2016). What Is Technological Pedagogical Content Knowledge? *Contemporary Issues in Technology, and Teacher Education*, 9. <https://www.punyamishra.com/research/tpack/>
- Hossain, M. I. (2015). *Teaching Productive Skills to the Students: A Secondary Level Scenario*. <https://core.ac.uk/download/pdf/74352632.pdf>
- James Stronge et al. (2018). The influences of teachers' perceptions of using student achievement.
https://www.researchgate.net/publication/327383972_The_influences_of_teachers'_perceptions_of_using_student_achievement_data_in_evaluation_and_their_self-efficacy_on_job_satisfaction_evidence_from_China/citation/download
- Kaino, L. M. (2018). *Information, and Communication Technology (ICT) developments, utilization, and challenges*. <https://www.unige.ch/math/EnsMath/Rome2008/WG4/Papers/KAINO.pdf>
- Karakaş, A. (2019). *Approaches, and methods in ELT*. https://www.researchgate.net/publication/329591464_Grammar_Translation_Method
- Matthew J. Koehler, Punya Mishra, Kristen Kereluik, (2014). The Technological Pedagogical Content. punyamishra.com/, 101-114.

- <https://www.punyamishra.com/wp-content/uploads/2013/08/TPACK-handbookchapter-2013.pdf>
- Ministerio de educacion. (2016). *English as a Foreign Language Curriculum*. <https://educacion.gob.ec/wp-content/uploads/downloads/2016/03/EFL1.pdf>
- Ministerio de Educacion y Cultura. (updated 2018). *Plan Decenal de Educación del ECUADOR 2006*. https://siteal.iiep.unesco.org/sites/default/files/sit_accion_files/ec_9029.pdf
- Ministry of Education. (2017-2021). *Ministerio de educacion*. Retrieved from <https://educacion.gob.ec/wp-content/uploads/downloads/2017/11/Agenda-Educativa-Digital.pdf>
- Mishra & Koehler, 2006; Koehler et al., 2013; Amhag et al. (2019). *the TPACK framework*.
- Mohd Muhridza et al. (2019). *Observation of Communicative Language Teaching (CLT) in a Year 3 Primary School in Johor Bahru*. https://www.researchgate.net/publication/336368666_Observation_of_Communicative_Language_Teaching_CLT_in_a_Year_3_Primary_School_in_Johor_Bahru/citation/download
- Pablo Danilo Guerra. (2020). *El uso de entornos virtuales en el proceso enseñanza aprendizaje de una segunda lengua: estudio de caso Institución Educativa Fiscal Amazonas*. Quito. <http://hdl.handle.net/10644/7215>
- Parmley, L. (2018). <https://coursemethod.com/>. What is LMS Software?: <https://coursemethod.com/lms-definition.html>
- Peralta, G. (2016). *Merging evolutionary history into species interaction networks*. <https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/1365-2435.12669>
- Quintero, J. (2016). *metodologiapacieacuariogeminis*. Aplicacion de la metodologia PACIE en un proceso institucional de incursion en E-learning: <http://metodologiapacieacuariogeminis.blogspot.com/>
- Renard, L. (2017). <https://www.bookwidgets.com/>. Retrieved from 30 creative ways to use Padlet for teachers, and students: <https://www.bookwidgets.com/blog/2017/08/30-creative-ways-to-use-padlet-for-teachers-and-students>
- Rodgers, D. (2018). *The TPACK Framework Explained*. <https://www.schoolology.com/blog/tpack-framework-explained>

- Rodgers, R. a. (2018). *'Approach', 'Design', and 'Procedure'*. Retrieved from <https://www.myenglishpages.com/blog/approach-method-procedure-and-technique/>
- Rollnick, Marissa & Mavhunga, Elizabeth. (2017). *Pedagogical Content Knowledge*. https://www.researchgate.net/publication/312014545_Pedagogical_Content_Knowledge/citation/download
- Salinas, A. e. (2018). *Teaching in a Digital Environment (TIDE): Defining, and measuring teachers' capacity to develop students' digital information, and communication skills*. Comput-Educ.
- Sandra Attard Montalto, et al. (2015). *The CLIL guidebook*. <https://www.languages.dk/archive/clil4u/book/CLIL%20Book%20En.pdf>
- Staff, T. (2020). <https://www.teachthought.com/>. Google Jamboard Uses In The Classroom: <https://www.teachthought.com/technology/what-is-google-jamboard/>
- Stanford University. (2019). *Pedagogical Content Knowledge*. <https://www.stanford.edu/academics/>
- students in EDUC 390D, 592A, & 692D . (2016). <https://blogs.umass.edu/>. Online Tools for Teaching & Learning: <https://blogs.umass.edu/onlinetools/assessment-centered-tools/plickers/#:~:text=Plickers%20is%20an%20assessment%20tool,devices%20or%20paper%20and%20pencil.>
- Team, L. (2017). *ICT enabled education*. <https://stories.linways.in/ict-enabled-education-d190bcc91bf0>
- Tovar, R & Velasco, D. (2020). Research on Technology Competencies in EFL Language Instructors Technology-Pedagogy-Content in. *Crypt Journal*, 12. <https://pdfs.semanticscholar.org/548d/7a2eea9a860fcae4b31f5ca48679d9b87af1.pdf>
- Tovar, R. (2019). Examining Technological Pedagogical Content Knowledge Competencies in In-Service Teachers. *Veritas & Research*, 115-225. <http://revistas.pucesa.edu.ec/ojs/index.php?journal=VR&page=article&op=view&path%5B%5D=13>
- University, O. (2020). <https://www.oxfordlearnersdictionaries.com/us/>
- Wang, W. (2016). Development of Technological Pedagogical Content Knowledge (TPACK) in PreK-6 teacher preparation programs. *Graduate Theses, and Dissertations*. https://lib.dr.iastate.edu/etd/15833?utm_source=lib.dr.iastate.edu%2Fetd%2F15833&utm_medium=PDF&utm_campaign=PDFCoverPages

III. APPENDIXES

1. Proposal's Application Request sent to the institutions' authority



UNIDAD EDUCATIVA "ANA PÁEZ"
AÑO LECTIVO 2020- 2021



Latacunga, 26 de enero del 2021

Msc. Martha Proaño Proaño
RECTORA DE LA UNIDAD EDUCATIVA "ANA PAEZ"

Presente,

Reciba un cordial saludo y a la vez deseándole éxitos en sus funciones.

Por medio de la presente solicito de la manera más comedida autorice la aplicación de una encuesta y un curso virtual programado de 2 horas por semana con una duración de 3 semanas, a los docentes del área de Inglés, para el desarrollo del Trabajo de Titulación con el Tema: "**Integrating Tpack Framework in Productive Skills.**" propuesto por la Lic. Erika Magaly Vilcacundo Pérez, portadora de la Cédula de Ciudadanía N° 050361242-6, de la Maestría en Lingüística Aplicada a la Enseñanza del Idioma Inglés como Lengua Extranjera, de la Universidad Técnica de Cotopaxi.

Por la favorable atención que se de a la presente, anticipo mi sentimiento de gratitud y estima.

Atentamente,

Lic. Magaly Vilcacundo
C.C. 050361242-6
Correo: emavil92@hotmail.es
Cel. 0996835888

RECIBIDO 26-01-2021
SRA. RECTORA

2. AUTHORIZATION OF THE INSTITUTION



**UNIDAD EDUCATIVA
"ANA PAEZ"**
LATACUNGA – ECUADOR
Teléfono: 032252-755



OFICIO N°047 U.E. ANA PAEZ-R
Latacunga, 29 de enero de 2021

Licenciada.

Vilcacundo Pérez Erika Magaly

DOCENTE DE LA UNIDAD EDUCATIVA "ANA PAEZ"

Presente. -

De mi consideración:

Por medio de la presente hago llegar un cordial y atento saludo, al mismo tiempo me permito AUTORIZAR la aplicación de la propuesta para el desarrollo del Trabajo de Titulación con el Tema: "Integrating Tpack Framework in Productive Skills." a los docentes del área de inglés en respuesta al oficio enviado el 26 de enero del presente año.

Particular que pongo en su conocimiento para los fines pertinentes.

Atentamente,

Msc. Martha Proaño

RECTORA(E)



MPP./Cod
OF. Aut

3. PRE-TEST, and POST-TEST QUESTIONNAIRE

4/27/2021

TECHNICAL UNIVERSITY OF COTOPAXI PRE- SURVEY ADRESSED TO ENGLISH TEACHERS FROM ANA PAEZ EDUCATIVE .

TECHNICAL UNIVERSITY OF COTOPAXI PRE- SURVEY ADRESSED TO ENGLISH TEACHERS FROM ANA PAEZ EDUCATIVE UNIT

POST GRADUATE DEPARTMENT
MASTERY IN APPLIED LINGUISTIC TO ENGLISH AS A FOREIGN LANGUAGE

* Required

Thank you for taking time to complete this questionnaire.

Please answer each question to the best of your knowledge. Your thoughtfulness and candid responses will be greatly appreciated. Your individual name or identification number will not at any time be associated with your responses. Your responses will be kept completely confidential.

DEMOGRAPHIC INFORMATION

1. GENDER *

Mark only one oval.

- MALE
 FEMALE

2. AGE RANGE *

Mark only one oval.

- b. 23-26
 c. 27-32
 d. 32-35
 +35

8. I frequently play around the technology. *

Mark only one oval.

- Strongly Disagree
 Disagree
 Neither Agree or Disagree
 Agree
 Strongly Agree

9. I know about a lot of different technologies. *

Mark only one oval.

- Strongly Disagree
 Disagree
 Neither Agree or Disagree
 Agree
 Strongly Agree

10. I have the technical skills I need to use technology. *

Mark only one oval.

- Strongly Disagree
 Disagree
 Neither Agree or Disagree
 Agree
 Strongly Agree

CONTENT KNOWLEDGE (CK)

11. I have sufficient knowledge about English language *

Mark only one oval.

- Strongly Disagree
 Disagree
 Neither Agree or Disagree
 Agree
 Strongly Agree

12. I can use an English fluent thinking. *

Mark only one oval.

- Strongly Disagree
 Disagree
 Neither Agree or Disagree
 Agree
 Strongly Agree

13. I have various ways and strategies of developing my understanding of English *

Mark only one oval.

- Strongly Disagree
 Disagree
 Neither Agree or Disagree
 Agree
 Strongly Agree

4/27/2021 TECHNICAL UNIVERSITY OF COTOPAXI PRE- SURVEY ADDRESSED TO ENGLISH TEACHERS FROM ANA PAEZ EDUCATIVE ...

4/27/2021 TECHNICAL UNIVERSITY OF COTOPAXI PRE- SURVEY ADDRESSED TO ENGLISH TEACHERS FROM ANA PAEZ EDUCATIVE ...

17. I can adapt my teaching style to different learners. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neither Agree or Disagree
- Agree
- Strongly Agree

18. I can assess student learning in multiple ways. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neither Agree or Disagree
- Agree
- Strongly Agree

19. I am familiar with common student understandings and misconceptions. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neither Agree or Disagree
- Agree
- Strongly Agree

PCK (Pedagogical Content Knowledge)

4/27/2021 TECHNICAL UNIVERSITY OF COTOPAXI PRE- SURVEY ADDRESSED TO ENGLISH TEACHERS FROM ANA PAEZ EDUCATIVE ...

4/27/2021 TECHNICAL UNIVERSITY OF COTOPAXI PRE- SURVEY ADDRESSED TO ENGLISH TEACHERS FROM ANA PAEZ EDUCATIVE ...

23. I can provide efficient explanations to my students *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neither Agree or Disagree
- Agree
- Strongly Agree

24. I know how to organize and maintain classroom management. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neither Agree or Disagree
- Agree
- Strongly Agree

TCK (Technological Content Knowledge)

25. I know about technologies that I can use for understanding and doing English classes *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neither Agree or Disagree
- Agree
- Strongly Agree

4/27/2021 TECHNICAL UNIVERSITY OF COTOPAXI PRE- SURVEY ADDRESSED TO ENGLISH TEACHERS FROM ANA PAEZ EDUCATIVE ...

4/27/2021 TECHNICAL UNIVERSITY OF COTOPAXI PRE- SURVEY ADDRESSED TO ENGLISH TEACHERS FROM ANA PAEZ EDUCATIVE ...

29. I can choose technologies that enhance the teaching approaches for a lesson. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neither Agree or Disagree
- Agree
- Strongly Agree

TPK (Technological Pedagogical Knowledge)

30. I can choose technologies that enhance students' learning for a lesson. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neither Agree or Disagree
- Agree
- Strongly Agree

31. My teacher education program has caused me to think more deeply about how technology could influence the teaching approaches I use in my classroom. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neither Agree or Disagree
- Agree
- Strongly Agree

4/27/2021 TECHNICAL UNIVERSITY OF COTOPAXI PRE- SURVEY ADDRESSED TO ENGLISH TEACHERS FROM ANA PAEZ EDUCATIVE ...

4/27/2021 TECHNICAL UNIVERSITY OF COTOPAXI PRE- SURVEY ADDRESSED TO ENGLISH TEACHERS FROM ANA PAEZ EDUCATIVE ...

35. I can use strategies that combine content, technologies and teaching approaches that I learned about in my coursework in my classroom. *

Mark only one oval.

- Strongly Disagree
 Disagree
 Neither Agree or Disagree
 Agree
 Strongly Agree

36. I have heard the term TPACK framework before *

Mark only one oval.

- Strongly Disagree
 Disagree
 Neither Agree or Disagree
 Agree
 Strongly Agree

37. I have used TPACK framework before *

Mark only one oval.

- Strongly Disagree
 Disagree
 Neither Agree or Disagree
 Agree
 Strongly Agree

38. I can adapt the use of the technologies that I am learning about to different teaching activities. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neither Agree or Disagree
- Agree
- Strongly Agree

This content is neither created nor endorsed by Google.

Google Forms

4.SATISFACTION COURSE SURVEY

4/28/2021

Course evaluation survey

Course evaluation survey

Thank you for being part of the TPACK framework in productive skills virtual course.
Please answer the following questionnaire sincerely. Your responses will help to improve.
Thank you so much.

* Required

1. On a scale of 1 to 5. Considering your complete experience with our class, how likely are you to recommend it to your friends or colleagues?

Mark only one oval.

- 1
 2
 3
 4
 -

4/28/2021

Course evaluation survey

2. Please set your level of satisfaction of the following *

Mark only one oval per row.

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
how satisfied or dissatisfied were you with the course?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied or dissatisfied were you with the content of the course?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied or dissatisfied were you with the format of the course?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied or dissatisfied were you with the ability to navigate through the course?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The presentation of course topics was clear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. How helpful was the class material provided to you? *

Mark only one oval.

- Extremely helpful
 Very helpful
 Somewhat helpful
 Not so helpful
 Not at all helpful

4. Do you think the class provided the right amount of theoretical and practical experience?

Mark only one oval.

- Yes
- No
- Maybe

5. Do you have any comments/suggestion to help improve this class?

This content is neither created nor endorsed by Google.

Google Forms

5. EXPERT VALIDATION M.A.S KARI MILLER



UNIVERSIDAD
TÉCNICA DE
COTOPAXI



POSGRADO

TECHNICAL UNIVERSITY OF COTOPAXI Expert Validation

PROPOSAL TOPIC: Virtual course developed in milaulas.com about the TPACK framework to improve productive skills addressed to English Teachers from Ana Paez Educative Unit

OBJECTIVE:

To submit validation by experts the proposal designed to obtain the average and check the instrument viability.

INSTRUCTIONS:

1. Read carefully the aspects of this questionnaire and mark with an (X) the answer that most closely matches your criteria.
2. Answer each question, and apply the following scale:

1 = Poor; 2 = Fair ; 3 = Good; 4 = Excellent

3. Please answer the following aspects truthfully; your criteria will be used only for this research purpose.

ITEM N°	ASPECTS	ANSWERS			
		1	2	3	4
1	Proposal Structure				x
2	Wording Clarity (easy language is used)			x	
3	Content relevance of the proposal				x
4	Coherence between objective proposed and indicators to measure results				x
5	Others who want to be considered by the specialist				x

	General evaluation of the questionnaire			
	Poor	Fair	Good	Excellent
Questionnaire content validity				x

INFORMATION OF THE EXPERT:

Name	Kari Miller
Occupation, academic degree and workplace	Teacher trainer, CEC-EPN, Master of Arts in Liberal Studies (MALS)
Work experience (years)	26
e-mail	kari.miller5014@utc.edu.ec
Telephone number	0983511729
Validation Date (day, month and year)	March 8, 2021
Signature	<i>Kari Miller</i>

Thank you for your cooperation!

6. EXPERT VALIDATION MSC. REBECA YUGLA



POSGRADO

TECHNICAL UNIVERSITY OF COTOPAXI
GRADUATE DEPARTMENT
Master's degree in Applied Linguistics to
Teaching English as a Foreign Language
PROPOSAL VALIDATION

1. Research proposal data:

Author: Magaly Vilcacundo

Topic: Virtual course developed in milaulas.com about the TPACK framework to improve productive skills addressed to English Teachers from Ana Paez Educative Unit

Objective: To submit validation by experts the proposal designed to obtain the average and check the instrument viability.

2. Evaluator's information

Name	Lidia Rebeca Yugla Lema
Occupation, academic degree and workplace	Professor of Language Center, UTC.
Work experience (years)	Colegio "Luis Fernando Ruiz" (2002 – 2003) Escuela Fiscal Mixta "Canadá" (1998 – 2001) Colegio Intercultural Bilingüe "ABYA YALA" (2003 – 2007) Escuela Fiscal "Naciones Unidas" (2006 – 2007) COMIL 13 "PATRIA" (2007 - 2009) Colegio Nacional "José Peralta" (2009 - 2011) Universidad Técnica de Cotopaxi (2008 - cursando)
e-mail	Lidia.yugla@utc.edu.ec
Telephone number	0984289465
Validation Date (day, month and year)	14.03.2021

Signature	 <hr style="width: 50%; margin: auto;"/> <p>Lidia Rebeca Yugla Lema DOCENTE DEL CI</p>
------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Evaluation

1. Read carefully the aspects of this questionnaire and mark with an (X) the answer that most closely matches your criteria.
2. Answer each question, and apply the following scale:

1 = Poor; 2 = Fair ; 3 = Good; 4 = Excellent
3. Please answer the following aspects truthfully; your criteria will be used only for this research purpose.

ITEM N°	ASPECTS	ANSWERS			
		1	2	3	4
1	Proposal Structure				X
2	Wording Clarity (easy language is used)				X
3	Content relevance of the proposal				X
4	Coherence between objective proposed and indicators to measure results				X
5	Others who want to be considered by the specialist				X

Comment on the following statements, please.

1. TEMPORALITY: Is the proposal the result of an advanced research process, which means that it shows a methodological structure (problem, methodology and application)?

Using some of these interactive tools in the Moodle, this proposal is a useful tool for student's necessities.
2. CONTENT: The content of the proposal is structured and written in an appropriate way to be understood and discussed by the educational community, and researchers?
Yes, the content of this proposal is structured and written in an appropriate way to be understood and discussed by the educational community, and researchers.
3. SELECTIVITY: Can this proposal be considered a valid and significant contribution related to the field?
Yes, it can. Because this proposal is into technological era and contribute it to significant teaching learning process.

4. Impact. What is the impact of this research? (Place an X on the square)

Local	<input type="checkbox"/>
Regional	<input type="checkbox"/>
Nacional	<input checked="" type="checkbox"/>
Internacional	<input type="checkbox"/>

5. General comments and recommendations for the Author.



 Lidia Rebeca Yugla Lema
 DOCENTE DEL CI

Evaluator's signature

I.D 050265234-0

7. EXPERTS VALIDATION M.A.S ANDRES PAREDES



POSGRADO

TECHNICAL UNIVERSITY OF COTOPAXI
GRADUATE DEPARTMENT
Master's degree in Applied Linguistics to
Teaching English as a Foreign Language
PROPOSAL VALIDATION

1. Research proposal data:

Author: Magaly Vilcacundo

Topic: Virtual course developed in milaulas.com about the TPACK framework to improve productive skills addressed to English Teachers from Ana Paez Educative Unit

Objective: To submit validation by experts the proposal designed to obtain the average and check the instrument viability.

2. Evaluator's information

Evaluator's name:	Jose Andres Paredes Becerra
ID number:	1801872092
Academic degree:	Professor, Master in MALS, Universidad Tecnica de Cotopaxi
Senescyt registration number	840280035
Current job:	Professor
Phone number:	02 3500156
e-mail:	jose.paredes2092@utc.edu.ec

Evaluation

1. Read carefully the aspects of this questionnaire and mark with an (X) the answer that most closely matches your criteria.

2. Answer each question, and apply the following scale:

1 = Poor; 2 = Fair ; 3 = Good; 4 = Excellent

3. Please answer the following aspects truthfully; your criteria will be used only for this research purpose.

ITEM N°	ASPECTS	ANSWERS			
		1	2	3	4
1	Proposal Structure				x
2	Wording Clarity (easy language is used)				x
3	Content relevance of the proposal				x
4	Coherence between objective proposed and indicators to measure results				x
5	Others who want to be considered by the specialist			x	

Comment on the following statements, please.

1. TEMPORALITY: Is the proposal the result of an advanced research process, which means that it shows a methodological structure (problem, methodology and application)?
<i>Interactive proposal, correct methodology and application</i>
2. CONTENT: The content of the proposal is structured and written in an appropriate way to be understood and discussed by the educational community, and researchers?
<i>the content is according to the current topic</i>

3. SELECTIVITY: Can this proposal be considered a valid and significant contribution related to the field?

excellent contribution in training teachers.

4. **Impact.** What is the impact of this research? (Place an X on the square)

Local	<input checked="" type="checkbox"/>
Regional	<input type="checkbox"/>
Nacional	<input type="checkbox"/>
Internacional	<input type="checkbox"/>

5. **General comments and recommendations for the Author.**

Innovative proposal.

Evaluator's signature

I.D.1801872092

8. URKUND REPORT



Document Information

Analyzed document	tesis para urkund (1).docx (D100935566)
Submitted	4/8/2021 2:04:00 AM
Submitted by	Rodrigo Tovar
Submitter email	rodrigo.tovar@utc.edu.ec
Similarity	4%
Analysis address	rodrigo.tovar.utc@analysis.urkund.com

Sources included in the report

SA	TESIS FINAL COMPLETADA XAVIER BORJA.docx Document TESIS FINAL COMPLETADA XAVIER BORJA.docx (D43300171)		1
W	URL: https://www.researchgate.net/publication/241616400_What_Is_Technological_Pedagogic_... Fetched: 4/8/2021 2:05:00 AM		1
SA	Betty.docx Document Betty.docx (D38489479)		1
W	URL: https://lib.dr.iastate.edu/etd/15833?utm_source=lib.dr.iastate.edu%252Fetd%252F158_... Fetched: 4/8/2021 2:05:00 AM		2
SA	Priya Dissertation-12-5-2019.docx Document Priya Dissertation-12-5-2019.docx (D51905750)		1
W	URL: https://pdfs.semanticscholar.org/548d/7a2eea9a860fcae4b31f5ca48679d9b87af1.pdf Fetched: 4/8/2021 2:05:00 AM		5
W	URL: https://www.ets.org/s/educator_licensure/ckt_handout.pdf Fetched: 4/8/2021 2:05:00 AM		2
W	URL: https://rua.ua.es/dspace/bitstream/10045/76632/1/2018_Gomez-Trigueros_EurJGeograph_... Fetched: 5/28/2020 7:58:29 PM		2
W	URL: https://tecfu.unige.ch/tecfu/teaching/BSEP/articles/Shin_et_al_SITE2009.pdf Fetched: 11/27/2019 8:40:11 AM		3
W	URL: https://media.neliti.com/media/publications/243816-towards-successful-tpack-profes-... Fetched: 4/8/2021 2:05:00 AM		1
J	Assessing Pre-service English as a Foreign Language Teachers' Technological Pedagogical Content Knowledge URL: 4e545612-f513-4913-8a43-184dfa2c38b9 Fetched: 10/10/2019 7:53:24 PM		1
SA	ICT N Instructions.ppt Document ICT N Instructions.ppt (D39729780)		1

1/37