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Perceptions, practices, and attitudes on the use of technology in the English as a Foreign Language classroom: The iPad in the Andorran school system

Ferran Costa Marimon

Direcció: Dra. Elisabet Arnó Macià i Guzman Mancho Barés
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Dedication

To my parents, my wife, and my daughters

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Undertaking this thesis has been a truly enlightening experience for me.

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List of Abbreviations

CALL: Computer-Assisted Language Learning

CLT: Communicative Language Teaching

EFL: English as a Foreign Language

ESL: English as a Second Language

ICT: Information and communications technology

ILT: Integrative language theories

IT: Information Technology

LMS: Learning Management System

MALL: Mobile-Assisted Language Learning

PERMSEA: *Pla Estratègic per a la Renovació i Millora del Sistema Educatiu Andorrà* (Strategic Plan for the Renewal and Improvement of the Andorran Education System)

TEFL: Teaching English as a Foreign Language

TELL: Technology-Enhanced Language Learning

TESOL: Teaching English to Speakers of Other Languages

Abstract (Catalan)

Al llarg dels anys, els ordinadors i els dispositius mòbils han transformat la manera d'ensenyar anglès a l'escola. Tot i que hi ha força bibliografia disponible d'àmbit mundial sobre l'aprenentatge de llengües assistit per ordinador i dispositius mòbils, aquest camp no ha estat mai explorat en el context local d'Andorra. Aquesta investigació pretén, doncs, estudiar les percepcions, les pràctiques i les actituds dels professors i dels estudiants sobre l'ús dels iPads a les classes d'anglès del sistema educatiu andorrà. Guiat pel paradigma interpretatiu i constructivista, l'estudi segueix el disseny de la investigació qualitativa, emprant l'etnografia com a metodologia, per recollir respostes detallades i fonamentades a les preguntes de la investigació. Per recopilar dades del professorat d'anglès i dels estudiants de primer i segon nivell de secundària de les escoles del sistema educatiu andorrà, s'han utilitzat observacions a l'aula, entrevistes de grups focals semiestructurades i qüestionaris. Per processar la informació, s'han dut a terme anàlisis qualitatives de dades i estadístiques descriptives. Les conclusions revelen que els usuaris tenen percepcions positives sobre l'ús dels iPads a les classes d'anglès i que la tecnologia s'empra principalment per dur a terme tasques identificades a les directrius del currículum del curs. Les actituds dels usuaris són majoritàriament favorables envers els iPads, sobretot a causa dels beneficis percebuts d'inclusivitat, flexibilitat, millor interacció i producció més eficient dels treballs encomanats. No obstant això, també s'han identificat alguns inconvenients, com ara la distracció, la dependència i la saturació. Es recomanen estudis addicionals per explorar els avantatges de l'ús de tauletes tàctils en gestió i tecnologia educatives.

Keywords (Catalan)

aprenentatge de llengües assistit per ordinador, aprenentatge de llengües assistit per dispositius mòbils, actituds i percepcions envers la tecnologia, tauletes tàctils, dispositius mòbils, iPad, Anglès com a llengua estrangera, sistema educatiu andorrà, alfabetització digital.

Abstract (English)

Over the years, computers and mobile devices have transformed the way the English language is taught at school. While numerous bodies of literature are available globally regarding computer- and mobile-aided language learning, this field has never been explored in the local context of Andorra. This research thus aims to study the teachers' and students' perceptions, practices, and attitudes on the use of iPads in the English as a Foreign Language (EFL) classrooms in the Andorran school system. Guided by the interpretive-constructivist paradigm, it uses qualitative research design, employing ethnography as its methodology, to gather detailed and grounded answers to the research questions. Classroom observations, semi-structured focus group interviews, and questionnaires were used to collect data from English teachers and EFL students of the first and second levels of Andorran secondary schools. Qualitative data analysis and descriptive statistics were carried out to process the information. Findings reveal that the users have positive perceptions towards the use of iPads in English classes and the technology is used primarily to accomplish tasks identified in the course curriculum guidelines. Their attitudes are mostly favorable towards iPads especially due to the perceived benefits of inclusivity, flexibility, increased engagement, and more efficient production of better outputs. However, there are also some drawbacks identified, such as distraction, dependency, and saturation. Further studies are recommended to explore the benefits of using tablets in educational management and technology.

Keywords

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

The Strategic Plan for the Renewal and Improvement of the Andorran Education System (PERMSEA) was introduced in the academic year 2013-14 in Andorra. The main characteristic that underpins PERMSEA is its skill-based approach to learning. The new model rests on three basic pillars: a) acquiring knowledge in all learning areas; b) consolidating this learning by resolving complex situations; and c) extending and exchanging knowledge through cooperative teamwork (Govern d'Andorra, 2013). The implementation of PERMSEA required the provision of suitable support and was therefore accompanied by the introduction of a digital tablet, specifically the Apple iPad, which satisfies the functional requirements of this initiative. According to the education authorities, a tablet must guarantee quick and reliable access to diverse sources of information and digital tools; the generation of multimedia materials (texts, exercises, summaries, presentations, images, blogs, websites, etc.); the storage of assignments produced by students and a record of the learning acquired (digital portfolios); and a quick and easy way to compile and exchange information which is generated by teamwork. Moreover, education authorities state that technology will encourage learning (Govern d'Andorra, 2013).

This research work is based on ascertaining the effects of using this electronic device on teachers and students in secondary schools in the Andorran education system (students aged from 13 to 16 years) in the subject of English as a Foreign Language (EFL). This research takes the form of an ethnographic study in which attitudes, beliefs and practices of both students and teachers using the iPad in the English as a Foreign Language classroom are analyzed. This ethnographic approach allows for a detailed immersion into a very specific context providing "a description and an interpretive-explanatory account of what people do in a setting (such as classroom, neighborhood, or community), the outcome of their interactions, and the way they understand what they are doing" (Watson-Gegeo, 1988, p. 576).

There is scarce and partial previous literature on EFL teachers' beliefs of and attitudes toward the use of mobile technologies for learning and teaching (Oz, 2015, p. 23). On top of that, there is a lack of empirical indicators in Andorra that can help to determine the quality of the Andorran educational system. The Andorran Education Ministry has deployed PERMSEA but cannot draw any inferences about its effects on students' performance, because indicators

in that respect have not been gathered yet. Policymakers have repeatedly manifested their intention to establish data-collection mechanisms which could help discern the appropriateness of policies implemented. Nonetheless, as of today, such mechanisms are non-existent.

In this respect, the results of this research study can provide empirical evidence on the deployment of tablets in the classroom of English as a Foreign Language. Several research studies that took place elsewhere show the affordances provided by Mobile-Assisted Language Learning (MALL). A study in Turkish secondary schools showed positive perceptions and attitudes towards the use of mobile technologies in the EFL classroom and acknowledged the potential of mobile learning (m-learning) technology to "eliminate time and space limitations (…) by providing opportunities for practicing English and transmitting knowledge and skills in and outside the classrooms" (Oz, 2015, p. 32). M-learning can be briefly defined as e-learning using mobile devices and wireless transmission (Keegan, 2002). Another research work among college students in China showed that professors had positive attitudes towards informal MALL, but many of them held negative feelings towards introducing MALL in their classrooms (Liu et al., 2016, p. 315).

Significantly, the result of this research work could prove helpful to Andorran decision-makers in the field of education, making the research project especially meaningful from an Andorran perspective, as no previous research studies exist in this field in the country.

1.1.1 Brief History of the Andorran Educational Systems

The peculiarities of the institutional setup of the Principality of Andorra have had an impact on its educational organization. Nowadays, Andorra counts on three different educational systems that guarantee public education.

If we look back, the first educational system that was established in the country was the Spanish system, with the foundation of the congregational schools of the *Sagrada Família* in 1882. Before then, education was guaranteed by the Town Halls (*Comuns*). A few years later, the first French schools were deployed around several towns, as it had been also happening with the Spanish religious schools. In 1930, the first Spanish non-religious schools were established.

This period saw the establishment of a plural educational model for the country. The presence and consolidation of the Spanish and the French educational systems contributed

to a cultural and political balance in Andorra, which necessarily helped to maintain the independence and neutrality of the country (Bastida, 2000).

Spanish and French schools, under the auspices of the Parliament (*Consell General*) kept deploying new schools according to the needs of a growing Andorran population. For example, in 1956 the French educational system started providing secondary education courses, and the Spanish system did so in 1962.

The origin of an Andorran educational system dates back to 1962. Even though Andorran authorities had always been concerned regarding the protection of their language and culture, the first Catalan language lessons for adults started to be offered by the *Consell General* in the early 60s. In 1972, the *Consell General*, aware that the curriculum followed by both Spanish and French schools lacked an Andorran component and perspective, passed the *Nota Informe de l'Andorranització* (Andorranization Bill). There is a strong political will in preserving the Andorran identity and peculiarities within the Spanish and French educational systems present in Andorra. This bill, therefore, allowed training on Catalan and history, geography, and institutions of Andorra to all the children in the country.

In 1982, the creation of the Andorran maternal school was the crucial milestone of an Andorran educational system. Three years later the first courses of primary education are offered. 1995 sees the beginning of courses for post-obligatory education.

The national educational system is deployed in a time of huge demographic and economic advances but, most importantly, in a period of big institutional challenges for the country. The Executive Council (Consell Executiu), the predecessor of the future Government, is created.

Andorra's educational legal framework is based on the Constitution, the Education Bill (*Llei Qualificada d'Educació*) and the *Llei d'ordenament del sistema educatiu Andorrà*, together with other signed educational international treaties and agreements.

In 1993, Andorra signed its first Constitution which establishes how the country is organized. Article 20 claims that "All persons have the right to education, which shall be oriented towards the dignity and full development of the human personality, thus strengthening the respect for freedom and the fundamental rights." Similarly, the constitution establishes that "freedom of teaching and of establishing teaching centers shall be recognized". Finally, "parents have the right to decide the type of education for their children. They also have the

right to moral or religious instruction for their children in accordance with their own convictions" (BOPA, 1993).

Additionally, in September 1993, the new Education Bill was approved by the Parliament. This bill grants new legal mechanisms and establishes the Andorran educational structure from the existing reality: several educational systems which coexist within one educational structure, a very enriching specificity, which needs to be preserved (BOPA, 1993). Together with this Bill, the Andorran government signs new agreements with the Spanish and French governments which regulate education in the country.

The education structure of Andorra is plural and it is formed by those schools which follow the Andorran educational system together with the schools which follow the Spanish and French systems, as regulated by bilateral agreements. Schooling is offered free at public institutions from 3 to 18 years. Education at the primary level is always six years long, while at the secondary level is four years.

Each system uses the languages and follows the curricula contemplated by the respective Ministries of Education in each country. The Andorran education system uses Catalan and French as instructional languages and introduces Spanish and English as a Foreign Language at a later stage. Both the Spanish and French education systems are designed to cater to the educational policies of each respective country. They integrate into the Andorran reality through the stipulations dictated in international treaties, by which the Andorran values are taught: Catalan and Andorran history, geography, and institutional framework.

Today, the Spanish educational system has four primary and secondary schools (Encamp, Andorra la Vella, Sant Julià de Lòria, and Escaldes-Engordany) which offer compulsory education and one high school (Andorra la Vella). Also, there are three congregational schools: Col·legi Janer (Andorra la Vella), Escola de la Sagrada Família (Escaldes-Engordany) and Col·legi de Sant Ermengol (Andorra la Vella), and a bilingual private school (La Massana). An additional private school, which follows the British curriculum opened in Andorra la Vella in 2018.

The French educational system has nine primary schools (Canillo, Encamp, Ordino, La Massana, Andorra la Vella, Sant Julià de Lòria, Escaldes-Engordany, Santa Coloma, and Pas de la Casa, and one Lycée (Andorra la Vella).

The Andorran educational system has 8 primary schools (Canillo, Encamp, Ordino, La Massana, Andorra la Vella, Sant Julià de Lòria, Escaldes-Engordany, and Pas de la Casa), three secondary schools (Encamp, Ordino and Andorra la Vella) and one high school (Andorra la Vella).

All the children and youngsters who live in the Principality of Andorra are granted free access to all levels of teaching, both obligatory and non-obligatory, in any of the three educational systems. The distribution of students throughout the last few years has evolved.

Nowadays, the situation has dramatically changed. The number of total students among the three educational systems has remained stable over the last ten school years. Nonetheless, its distribution within the three educational systems has changed dramatically. A decade ago, the educational system with the fewest students was the Andorran school. Nowadays, it is this system which accounts for the majority of students in the country.

See below the evolution of the total number of students enrolled in each of the three educational systems (Figure 1.1).
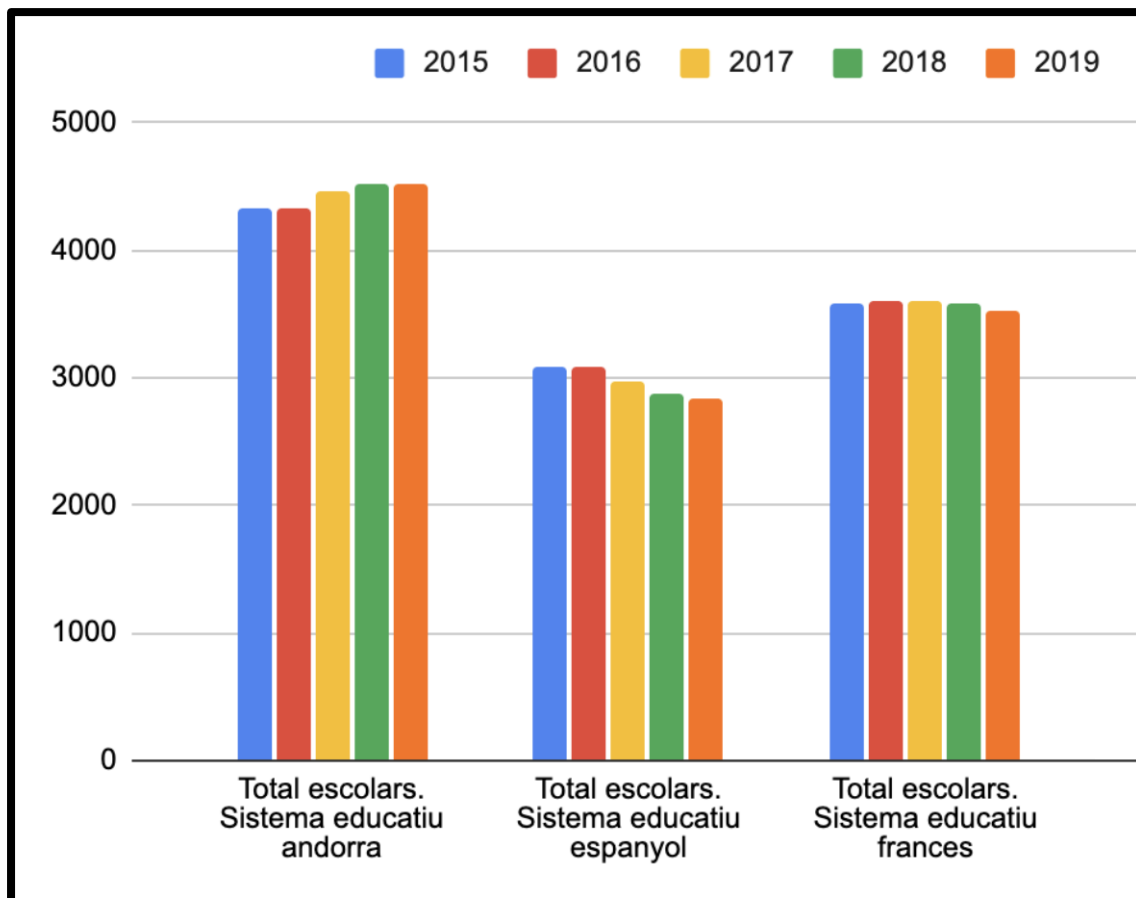
Figure 1.1. Student enrollment in Andorran educational systems (Source: Estadistica.ad)

Forty-two percent of Andorran students attend the Andorran schooling system, while thirty-two percent attend the French-speaking schools and twenty-six percent the Spanish school system. Not even one percent of the students attend the existing private British school that opened in 2018.

The Andorran government is responsible for financing the whole of the Andorran educational system, and all the expenses generated by the three congregational schools depending on the Spanish educational system. Additionally, the Andorran government is responsible for financing and maintaining the buildings and infrastructures of all educational systems, the cost of teachers in charge of the compulsory subject "Andorran Institutions" in Spanish and French schools, the cost of teachers of music (that teach the subject in Catalan in those Spanish and French schools which request them), all primary school assistants (who

speak in Catalan) in all French and Spanish primary schools, and all concierges in all schools in the country.

Andorran public expenditure for education accounts for 15,5% of the annual budget. Nonetheless, total public expenditure for education is higher as the Spanish and French governments contribute to the financing of their employees in their respective schools. It is interesting to observe that this percentage is ostensibly higher than in other countries.

1.1.2 PERMSEA

Pla estratègic per a la renovació i millora del sistema educatiu andorrà (PERMSEA) was introduced during the school year 2013-14. Its goal is to implement a curriculum based on teaching competencies on all levels of compulsory education in the Andorran school system. The main change is moving from a curriculum where students achieve certain objectives to a curriculum in which students develop certain competencies. In order to provide full access to an infinite number of necessary resources, students use a personal tablet, namely an iPad.

The curricular framework includes curricular policies that determine the configuration of the school curriculum, understanding the *school curriculum* as all the educational experiences of students within the school context. These experiences are planned and directed by the various parties involved in the development of the curriculum and are formulated through the systematic construction of scholastic knowledge and experiences – understood in terms of the school community – in order to develop the personal and social skills of the student.

The curricular policy sets out the Government's educational intentions which are specified in the curricular documents, among which are the exit profile of the students, the programs for the various levels of formal education which form part of the education system, the map of temporal units and the class programs. This curricular policy, which adopts a competency-based approach, determines the curricular structure of the educational system and influences the way the psycho-pedagogic bases, the linguistic approach, and the policy of inclusive schooling and of respecting the diversity of the system are understood. In turn, the structure of the curricular framework requires the set of curricular components and documents to which it relates, that is to say, the teaching programs, the study plans, and the organizational structure of the school, to be reconsidered. In this way, the curricular structure refigures its components, determining an exit profile for the student where previously general

level objectives were set, or by establishing maps of temporal units where previously school-based curricular projects were determined.

These components and documents are divided into different levels of specification according to the stakeholders who take the decisions concerning the curriculum, and as a result of a necessary process of development.

The first level of decision making relates to the Government, who translates their educational intentions into the definition of the areas of training, the general competencies that make up the exit profile of the students at the end of a given level of education, as well as the educational programs which realize the general competencies stated in this profile. This first level of decision-making corresponds to the official curriculum, which has a prescriptive character.

The second level of decision-making relates to the school, which sets out the map of temporal units. These temporal units distribute the specific disciplinary and transversal competencies over time, as well as the associated resources that are intended to be mobilized. This second level of decision-making corresponds with the first development of the official curriculum which takes the form of a visible curriculum.

The third and last level of decision-making rests with the teacher/education team, who plans the teaching process and the learning of the students through the program units. These program units are defined based on the design of complex situations and their corresponding activities, where they are placed in relation to one or more specific disciplinary and/or transversal competencies and the other curricular elements that arise from it. This third level of specification corresponds to the operational curriculum that the teacher introduces into the classroom.

In all cases, all the educational intentions and, more specifically, the learning experiences of the students within the school context are carried out within the curricular framework, so that general competencies as stated in the profile and the specific disciplinary and transversal competencies of the program are realized.

The educational practice, determined by the competency-based approach adopted by the educational system, consists of encouraging students to develop competencies and acquire the resources that are associated with them, in the most comprehensive and meaningful way possible, as a reflection of the situations and of the challenges posed by life

in society. In this way, a universal educational practice is achieved, necessary to address the attainment of the exit profile of the student.

The areas of training, linked to issues specific to current Andorran society that students must face in their everyday life, constitute the axes around which the curricular framework of compulsory education of the Andorran School system is constructed. Accordingly, the areas of training determine the orientation of the general competencies that form the exit profile of the student and the various curricular components.

The Andorran education system has, among other purposes, that of contributing to the transmission of cultural aspects pertinent and specific to Andorran society. Thus, its linguistic and communicative approach is intended to promote the knowledge of different languages and different cultures among its students which will allow them to develop socially and professionally.

To put its linguistic approach into practice, the Andorran education system considers the international theoretical benchmarks in relation to the teaching and learning of languages, and the challenges of the age of knowledge in the 21st century and includes them in the definition of its programs and educational practice. To respond to these challenges, a pluralistic approach to the learning of languages and cultures is taken as a model.

This focus encompasses all the educational approaches that consider, throughout the process of teaching and learning, the use of different languages or cultures – or at least more than one – simultaneously. In this respect, this approach is based on the abandonment of a compartmentalized understating of the way an individual develops their linguistic and cultural skills.

As a model, the Andorran education system also takes a communicative approach to language teaching and learning, based on activities that aim to enhance the communicative ability of the student. Secondly, the activity-based perspective implicit in the communicative approach focuses on learning how to interact and on carrying out activities to learn the use of the language. It is based on the idea that a language is learned in action, mainly by listening to and speaking the language.

A multilingual and multicultural education can be carried out successfully if it is developed within the framework of an integrated language project, consisting of a universal approach which aims to encourage the construction of a multilingual and multicultural

competence through a joint perspective in the teaching and the vehicular use of all languages in the curriculum, taking into account what is common to the various languages and what is specific to each.

The iPads in the EFL classroom

With the introduction of PERMSEA, technology has occupied a vital role in the classroom. The use of handheld devices in language training is growing exponentially. With its advent growth, it is evident that much more research and evidence-based analysis are necessary to better understand this new phenomenon. Unlike the past years, when teachers depended on books and other printed materials to teach English as a Foreign Language in the Andorran education system, the irruption of technology in the classroom has had a direct impact on language education.

The technological devices used in EFL classrooms in Andorra are mobile such that learners can take with them wherever they go and can use them whenever they want. Specifically, such technological mobile devices are iPad tablets. The usage of portable devices in the language classroom has been studied intensively. Nonetheless, no studies of this unprecedented compulsory deployment of iPads into the curriculum existed for the Andorran context.

In the Andorran schooling system, teachers use technological devices during their lessons. On the other end, learners use the same technological devices during the EFL classroom. Both teachers and students are equipped with devices that they use in their daily learning. All students bring along their own iPads to their lessons. The Ministry of Education provides tablets when families are in need, preventing a potential digital breach among students. This universal introduction of the iPad into the Andorran school system, where iPads are available to all students and teachers, is a significant breakthrough regarding educational policies. This research addresses the perceptions of both students and teachers dealing with the new technological tool.

The impact of the SARS-CoV-2 world-wide pandemic, which started early in 2020, has accelerated the deployment of technologies into education and, simultaneously, has exacerbated the debate about the role of technology in education. Therefore, this research is dedicated to exploring this influence and perception of utilizing technology, precisely the iPad

tablet, in EFL classrooms. These perceptions and influences include attitudes, beliefs, and the actual practices held in the classroom setting and how they affect English language learning.

1.1.3 Motivation

My motivation to start this research study was the deployment of PERMSEA, a plan devised by administrators in 2011 that contemplated the compulsory introduction and use of technology by both teachers and students in the Andorran school system in order to facilitate teaching and learning. This research offered me the opportunity to examine the role of the iPad, an emerging technology at the time, in the English as a Foreign Language classroom in the Andorran school system. The use of the iPads and its use by all students enrolled in the Andorran school system in the whole country provided a unique chance to explore how this technology was perceived and used in the EFL classroom. Administrators had decided unilaterally to introduce technology as a support tool in the learning process without neither the complicity nor the consent of students and teachers. Getting insight into their attitudes and beliefs towards this technology could explain positive or negative perceptions of its use.

Having been a Foreign Language teacher myself for over twenty years at the time and having seen how several technological initiatives came and went (e.g., drilling and audio exercises, CD-roms, wikis), it felt only natural that such a country-wide event deserved further examination. PERMSEA was the first time that administrators in Andorra incorporated one same technological tool to all students in the Andorran School system. Before then, there were no clear indications on how technology should be introduced in the EFL classroom. Thus, the compulsory introduction of a standard technological solution for all students in the Andorran school system was unprecedented and became an inflection point for educational policies regarding introducing technology in the classroom.

It is worth mentioning some of my biographical backgrounds to ensure the principles of ethical validity and to acknowledge my awareness of the potential for bias, which has been carefully considered throughout the study. My professional career in the Teaching English as a Foreign Language (TEFL) field began in 1994 and continues until today, with students in Andorra belonging to different age ranges. At present, I teach EFL at the University of Andorra, a position that has provided the opportunity to explore new approaches to teaching and learning English at a university level.

In 2015, I was appointed *Conseller General* (Member of the Parliament) in the Principality of Andorra. I have chaired the Legislative Commission of Education, Culture, Research, Youth and Sports, among many other positions within the Parliament's committees and delegations. Due to this position, I have also been the President of AQUA (Andorran High Education Quality Agency) since 2016. These roles have provided me with additional insight into the policy-making mechanisms in educational contexts. This study shall serve other policymakers and I in establishing better plans and strategies for the educational system of the country.

My interest in language teaching, precisely EFL, combined with my insight into educational policies, has played a crucial role in selecting my research topic. In fact, the implementation of the PERMSEA in the Andorran educational system gave me the opportunity to research it against the backdrop of the impact of technology on the English as a Foreign Language classroom. Also, present studies on Computer-Assisted Language Learning (CALL) show a need to shift the focus away from a technocentric emphasis on specific technologies to strategies for technology integration (Chapelle & Sauro, 2017). To my understanding, the introduction and use of technology into the curriculum, namely the Apple iPad, needed further investigation and a wider reflection.

Additionally, the literature indicated the importance of reasoning about the introduction of any specific technology in the EFL classroom. The complete lack of studies about this topic in Andorra motivated the start of this research.

1.2 Statement of the Problem

The policymakers of the Principality of Andorra decided back in 2013 to move away from a content-based approach to learning and slowly introduce a competence-based approach. The plan was to change the curriculum of the Andorran school system and base it on developing students' competencies. To provide access to the widest array of resources available, the use of electronic tablets was incorporated. All students use their tablet in all the subjects. Its use in the English as a Foreign Language classroom is particularly meaningful as the possibility to bring relevant, authentic materials anytime inside and outside the classroom can enhance language learning.

M-learning allows for learning instances beyond the classroom and provides additional opportunities for contextualized, individualized, and informal learning. The area of second

language learning and teaching can enormously benefit from these conditions. According to Chinnery, MALL is language learning that is enhanced or assisted using a mobile device (Chinnery, 2006). It is now commonplace to integrate mobile technology into language classrooms. Kukulska-Hulme adds that: "While, in the early days, mobile learning was often defined in terms of its use of mobile technologies, researchers gradually began to emphasize the mobility of the learner." (Kukulska-Hulme, 2018, p. 7). By analyzing the literature on MALL, one can see that with time, the complexity of factors around MALL began to emerge and enrich the research questions that drive inquiry in this field. Thus, MALL has become increasingly popular as a sub-branch of Computer-Assisted Language Learning (CALL) in teaching second languages.

Several aspects and issues related to MALL have been investigated so far. Earlier studies, such as that carried out by Brown (2001), discussed the first attempts to use MALL in teaching, and concluded that, at that time, MALL was not perceived differently from CALL. Another later study (Shih, 2007) focused on the differences between MALL and CALL. Beyond definitional aspects, research so far has investigated the effectiveness of MALL in developing language skills. Other earlier studies looked into the potential of using mobile devices to access the Internet in order to develop listening skills in the subject of EFL (Nah et al., 2008), and the possibilities to improve English pronunciation using MALL (Saran et al., 2009). Additionally, some research work focused on the effectiveness of MALL on teaching vocabulary in general (Thornton & Houser, 2005; Stockwell, 2007; Cavus & Ibrahim, 2009). Moreover, many studies conducted on MALL study the correlation between the motivation to improve EFL proficiency and MALL (Nah et al., 2008). Some of these research works focused on MALL as a substitute for conventional course books and learning materials, and as an eLearning tool.

Several studies have supported the advantages of using mobile devices as they enhance portability and mobility, allow for anytime and anywhere learning, provide students with fast access to many sources of information, and infuse the fun in learning with innovation (Thornton & Houser, 2005; Chinnery, 2006; Kukulska-Hulme & Shield, 2006, Kukulska-Hulme, 2009). Additionally, more recent studies have moved in this positive trend by pointing to other substantial benefits such as that mobile devices have shown their potential to meet the needs of language learners at the precise moment when these needs emerge, make possible more flexible models of language learning, can support skill development in all the linguistic skills

(listening, reading, writing and speaking), enable location-based learning innovations, and connect both the informal and the formal settings in which language learning can take place (Kukulska-Hulme, 2018). The increasing number of studies in mobile learning shows the growing interest and use of mobile devices for learning practices. Stockwell and Hubbard (2013) state that "Mobile-assisted language learning is quickly securing its place in language learning contexts, and the availability of the powerful tools the learners possess makes it an attractive supplement to other forms of teaching and learning a second language" (p. 11). However, despite the existence of studies focusing on many aspects of MALL in language teaching, the literature still lacks sufficient research exploring the attitude and perceptions of both teachers and students towards technology (Oz, 2015).

Throughout this study, several concepts were used and a clear definition was necessary. For this purpose, MALL (Mobile-Assisted Language Learning) corresponds to the "anytime and anywhere" approach to English language learning that enhances learning through the use of iPads (Kukulska-Hulme, 2005; Samuels, 2003; Traxler, 2005b). It also takes into account the mobility of the learner (Kukulska-Hulme, 2018).

The review of present literature reveals several significant points:

- There are a limited number of well-designed experimental studies. Most studies are descriptive and show the uses of technology in language education. Others present theoretical discussions of the principles of technological applications.
- Most studies are limited to university level language learners, and fewer studies are based on primary and secondary education students.
- There is a limited number of target languages under consideration in the studies, mainly English, Spanish, French, and Arabic.
- Most of the studies were about one single technological application instead of large-scale integration of technology into the language classroom.

Similarly, although in the past decade MALL case studies have been carried out considering the national context of specific countries such as Pakistan (Ali, M. M. Mahmood, M.A., Anwar, M.N., Khan, L.A., & Hussain, A., 2019), China (Liu, H., Tao, W. & Cain, W., 2016), the United States (Lepowsky, I., 2015), the Dominican Republic (Martiz, G., 2015), Iran (Alavinia, P. & Qoitassi, K, 2013), Scotland (Burden, K., Hopkins, P., Male, T., Martin, S., & Trala, C., 2012), to name just a few examples from countries in a variety of continents, there is no literature whatsoever investigating new technology integrated approaches in the field of

language teaching in Andorra. The multilingual reality of Andorran students, where Spanish, Catalan, Portuguese, and French are commonplace and naturally coexist inside the classrooms, provides a unique context. In this respect, results from other similar studies elsewhere might not apply due to this different sociolinguistic reality.

Additionally, the attitudes and beliefs of learners and teachers towards MALL in Andorra, where it was introduced a few years ago into the Andorran School curriculum, remain unknown due to a complete lack of research on this topic in the country. The purpose of this research project is to contribute to the literature by providing a rich understanding of MALL and the deployment of tablets in second language classrooms in the Andorran School system. Results could help policymakers and the educational community to understand the implications of this process. Additionally, findings can provide a better insight which could help at adopting future developments in the curriculum of second language teaching.

This study thus aims to find out how the attitudes and perceptions of teachers and students impact the way of using iPads in the English as a Foreign Language classroom in secondary schools in the Andorran educational system. The following specific objectives facilitate the achievement of this aim:

1. To observe and analyze the teachers' and students' perceptions on the effectiveness of using the tablet in the English classroom
2. To observe and analyze the teaching strategies employed by the teachers using the iPads and the learning practices of the students using the device
3. To determine the attitudes of teachers and students regarding the use of iPads
4. To analyze the reasons why iPads are used in the manner they are used in the classroom

This research seeks to answer the specific questions enumerated below. A detailed discussion of these questions is presented in Chapter 3.

1. How do students and teachers perceive the use of iPads?
2. What are the specific practices of students and teachers regarding the use of iPads?
3. What are the attitudes of teachers and students regarding the use of iPads?
4. Why is the tablet used in the manner it is used in the English classroom?

1.3 Significance of the Study

This research work deals with a newly flourishing approach in foreign language learning. Studies about different aspects of MALL are limited in number and do not have a long history. For this reason, the literature lacks research exploring how attitudes and perceptions towards the use of MALL affect its effectiveness in the English language classroom. Furthermore, improvements in mobile technologies are continuous and innovations in EFL learning are also growing. Additional research will be needed in such a rapidly evolving field.

There is a general lack of empirical indicators that can help determine the efficiency of the Andorran education system. The Andorran Education Ministry has deployed PERMSEA but cannot draw any inferences about its effects on student's performance, because indicators in that respect have not been gathered. Policymakers have repeatedly manifested their intention to establish data-collection mechanisms which could help to discern the appropriateness of policies implemented. Nonetheless, as of today, such mechanisms are non-existent. In this respect, the results of this research study could provide empirical evidence on the deployment of tablets in the classroom of English as a foreign language. Particularly, the result of this work could prove helpful to Andorran decision-makers in the field of education, making the research project especially meaningful from an Andorran perspective, as there are no previous research studies in the country.

The review of the related literature revealed that no previous studies have been carried out about the use of the iPad in the Andorran school system. During the last few years, iPads have been rolled out in numerous educational initiatives all over the world, especially at primary and secondary school levels. Results of these projects have varied, with literature providing both negative and positive experiences. Just to cite two examples, their launch in California has been categorized as a debacle (Lepowsky, 2015; Noguchi, 2016). On the other hand, the roll out of the tablets in Scotland has been very positive in general (Burden et al., 2012).

Several academics in the field of digital education point out that research into digital technologies for learning is usually short term (Walker et al., 2015). The emphasis of many studies on emerging technologies focuses on the initial adoption phase. Research on longer term implications of the deployment of emerging technologies in educational settings is scarce.

A substantial number of research studies found in the literature focus on the novelty of the device rather than the effects of its use on the learning experience. At the time of data collection in this present study, students and teachers were far beyond the initial stages of the introduction of the iPad into the Andorran school system.

The preliminary literature reviewed indicates the importance of examining students' and teachers' use of mobile technology in the classroom to support EFL learning, and students' beliefs regarding using smartphones and tablets in class for learning English. Evidence from research studies revealed that adopting mobile devices in the EFL classroom improves language learning (Ogata & Yano, 2004; Stockwell, 2007). Additionally, the literature showed a complete lack of research studies regarding the use of technology for English language learning in Andorra.

This thesis contributes to research on perceptions, practices, and attitudes on the use of technology in the EFL classroom in the Andorran school system by way of collecting a set of Andorran context-specific empirical data regarding EFL learners' learning attitudes, beliefs, and practices using the iPad in their EFL classrooms. Also, it devises a framework and set of guidelines to inform curriculum developers to teach and learn English in similar mobile-technology-assisted EFL contexts.

This study also provides empirical evidence to gauge Andorran secondary school EFL teachers' and learners' perceptions of learning English in a mobile-technology-assisted environment and the array of strategies that they adopt in the classroom. Teacher and learner perceptions and attitudes can help indicate the extent to which mobile technologies can be introduced into teaching practices in the Andorran or similar EFL contexts to facilitate learning and motivate learners. Mapping a general picture of learning strategies used in an iPad-assisted environment helps identify the advantages of mobile technologies in promoting EFL learning compared to traditional lessons. Consequently, this can lead to the development of appropriate pedagogy to inform the policies that regulate the Andorran secondary school English teaching curriculum.

Key findings generated from this research study can provide insights to inform pedagogical innovation and curriculum development in EFL courses in Andorra or other similar EFL contexts. Regarding the learning experiences of Andorran learners in such an emerging environment, the research data provided can guide teachers and curriculum writers to design learning with appropriate materials and tasks for EFL classroom instruction.

Last, but not least, this study addresses the issue of technocentrism. Is the deployment of the iPads in the Andorran school system adopting a technocentric approach? To avoid it, it is necessary that language teachers focus more on strategies that emphasize language and content, 21st-century skills, and the ability to select suitable technologies (Chapelle & Sauro, 2017). If teachers learn the processes and possibilities of using relevant technologies to reach their goals, they will be able to apply these concepts to other technology uses.

1.4 Definition of Terms

The terms listed below are the most important to be defined and clarified among the commonly occurring expressions in this research. The definitions provided are working or operational definitions as to how the key words are used in the study. Some of the more specific phrases below use definitions from technical sources.

Attitudes: behaviors and actions affected by one's perception of an event

Computer-Assisted Language Learning (CALL): study of the application of computers in language teaching and learning

Educational Technology: "technological tools and media that assist in the communication of knowledge, and its development and exchange" (Lathan, *n.d.*)

Effectiveness: positive or negative impact of using the iPads in the English as a Second Language classroom

Mobile-Assisted Language Learning (MALL): "anytime and anywhere" approach to English language learning that enhances learning using iPads

PERMSEA: Andorran government's mandate introduced from the school year 2013-14 with the goal of implementing a curriculum based on teaching competencies on all levels of compulsory education of the Andorran school system. The main change is moving from a curriculum where students achieve certain objectives to a curriculum in which students develop certain competencies. To provide full access to an infinite number of necessary resources, students use a personal tablet, namely an iPad

Perceptions: thoughts, feelings, interpretations, and views or opinions of the participants; in this study, beliefs are also used synonymously with perceptions

Practices: actual usage of the tablets by both teachers and students inside and outside the classroom

Tablet: "a complete computer contained in a touch screen" with the distinguishing characteristic of "using of the screen as an input device using a stylus or finger" (PC Mag, 2010)

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

A lot of research studies have been conducted regarding technology and education. Some researchers point to the 1990s as a time reference during which "the acceleration in technology's incorporation into the classroom" first occurred (Escueta, Quan, Nickow, and Oreopoulos, 2017, p. 9). Undoubtedly, technology affects all spheres of people's everyday lives, with a special emphasis on students and younger people. There has been a growing consensus amongst the educational community that technology should play a more integral role in education (Thornton & Houser, 2005) to accommodate individual learner's needs. A particularly noteworthy case on this topic is, for example, Uruguay's implementation of the one-laptop-per-child program which Yanguas' reviewed in 2020 and is remarkable because "it was the first country to implement a one-laptop-per child program". It involved primary and middle school students, thus providing findings focusing on the effects of children having internet and computer access and its implications for their schooling and choice of major in early adulthood (Yanguas, 2020).

This chapter focused on reviewing the available literature regarding technology integration in education and the positive and negative views that surround its implementation, such as the issues of usage, access, and digital skills, the learners' agency which is their autonomy to control the technology and the goal of normalizing the integration of technological tools in classrooms. Furthermore, this chapter looked deeply through the works on computer- and mobile-assisted language learning, discussed the issues of technocentrism and language policies, and the further research approaches on CALL and MALL.

2.1.1 The Integration of Technology in Education: Challenges and Opportunities

Many of these research studies underscore the importance of integrating technology into education. Researchers today are making claims that characterize this integration not only as important, but as urgent and necessary. For example, in their 2020 study, Burbules, Fan, and Repp, characterize this integration as a key factor to be able to attain Sustainable Development Goals set forth by the UN. They argue that "education is key to the future quality of human life and the sustainability of the world. Generally, education is being transformed in both formal and informal learning contexts by new digital technologies" (Burbules, Fan, and

Repp, 2020, p. 93). They acknowledge both the challenges and opportunities brought forth by these technologies. They assert that the digital transformation that has affected education, the global economy, and society, boosted two factors in the world: complexity and speed of change, for this reason, supporting OECD's statement (2019) that "connecting education to the trends shaping the world we live in has never been so urgent" (p. 94).

As of 2009, in their chapter "Technology-Enhanced Materials", Brett and González-Lloret already addressed at that point in time the fact that second or foreign language classroom teachers were relying more on preparing pedagogical materials that came from a computer desktop and less from sources printed on paper as it had been the case in the previous 20 years. At that point, there was already the perception in the field of education that technology had so deeply permeated the language teaching profession that material creation for teaching invariably implied the use of technology (Brett and Gonzáles-Lloret, 2009).

Nonetheless, there seems to be no single method for such integration. It is the administration or the educational institution's prerogative to decide what technology should be adopted, when it should be introduced and how to use it in specific subject areas. However, in their 2017 paper, *Education technology: An evidence-based review*, Escueta, Quan, Nickow, and Oreoupoolos, put forward that the technological innovation that took place in the prior two decades had a remarkable impact on education and at the same time "the speed at which new technologies and intervention models are reaching the market has far outpaced the ability of policy researchers to keep up with evaluating them" (p. 3). Furthermore, they raise the point that although many people agree that educational technology can be of help in some contexts, there is a challenge in that "researchers and educators are far from a consensus on what types of ed-tech [educational technology] are most worth investing in and in which contexts" (p. 3). They put together evidence on four major topic areas: access to technology, computer-assisted learning, online courses, and behavioral interventions. They consider that ongoing efforts are vital to ensure efficiency and equity in the process of leveraging technology for learning (p. 4) thus pointing to challenges that precede the problem of seamless integration.

There has been an increased perception of adopting technology to the classrooms. Regarding language subjects, the adoption of technology in language classrooms has been associated with higher degrees of vocabulary acquisition and improved reading comprehension, spelling and writing (Warschauer, 2003; Stockwell, 2007). Furthermore,

network-based language teaching, defined as "the pedagogical use of computers connected in either local or global networks, allowing one-to-one, one-to-many, and many-to-many communication" (Kern et al., 2008) has been implemented in service of language teaching since the 1980s, and has helped educators reach specific pedagogical objectives that would not have been possible in the same way without the help of this technology. For example, Kern, Ware, and Warschauer cited one of the first pedagogical uses of local area networks in the 1980s, which was implemented to teach writing to deaf students via synchronous conferencing at Galludet University. Additionally, the University of Texas in Austin used synchronous conferencing in English literature and writing courses and in foreign language teaching in Portuguese, German, and French (p. 281). They cite the specific potential benefits of synchronous conferencing made possible by this technology, in comparison to in-person class discussions as being:

> "(i) increased and more democratically distributed student participation; (ii) more time to develop and refine comments—possibly leading to greater precision and sophistication of expression; (iii) encouragement of a collaborative spirit among students; (iv) enhanced motivation for language practice and, in particular, greater involvement of students who rarely participated in oral discussions; (v) reduction of anxiety related to oral communication in a foreign language; and (vi) positive effects on students' writing ability and perhaps speaking ability as well." (pp. 281-282).

Additional benefits that come with the adoption of technology in language classrooms have been identified as: an enhanced quality of input, providing a greater authenticity of resources, relevant and useful feedback, a connection between students and remote audiences, as well as providing training to students in the use of technological advances that are essential and useful skills for them beyond the language classroom (Brett and González-Lloret, 2009; Lintunen, Mutta and Pelttari, 2017). Efforts to integrate technology for language training have presented challenges to educators due to the occasional changes in language teaching methods and the rapid advances in technology. Thomas, Reinders, and Warschauer point to the fact that in 1996, there was an estimated 36 million people with internet access and by 2012 it had boomed to a staggering 2.2 billion people receiving content via the internet

into devices such as smartphones, netbooks, laptops and media tablets. Yet, in that time, underlying structures of education changed little and showed a lack of socio-technical infrastructure, which they define as "the realistic educational design for integrating digital media in authentic environments" (p. 2), as well as a lack of full understanding about the multiplicity of roles required of teachers and how to learn with digital media instead of merely via this medium (also cited in the chapter, Jenkins 2009; Lee, Dourish & Marc, 2006; Papert, 1993; Thomas, 2012; Warschauer, 2011). The most recent statistics state the following: "ITU [International Telecommunication Union - the United Nations specialized agency for information and communication technologies or ICTs] estimates that approximately 4.9 billion people – or 63 percent of the world's population – are using the Internet in 2021. This represents an increase of 17 percent since 2019, with 782 million people estimated to have come online during that period. However, this leaves 2.9 billion people still offline" (ITU, n.d.). With this huge increase in internet usage in such a short span of time, the research that studies its implementation and the integration of devices with internet connection into language learning should be equally extensive and as complex as the world's different national contexts are to identify more clearly and specifically what the challenges and opportunities are.

Additionally, some studies argue that technology and learning are not two separate entities. Garrett (1991) acknowledged this integration, which provides students with a wide array of learning strategies embedded within a wide range of tools that support students' learning experiences. Furthermore, in Garrett's updated 2009 article she discussed the changes that took place over the 18 years between 1991 and 2009 regarding technology and education, as well as the relationship between pedagogy, theory, technology, physical infrastructure, efficacy, copyright concerns, categories of software (e.g., tutorial, authentic materials engagement, communication uses of technology), and evaluation (Garrett, 2009, p. 719). She distinguishes CALL as being "a dynamic complex in which technology, theory, and pedagogy are inseparably interwoven" (p. 720) and is careful to argue that CALL should not be confused with a simple "use of technology". She asserts that teachers,

> "…may use email, word processing, and digital audio; they may find authentic materials on the Web to use in class or to make available to students, and they may use their institutions' course management systems to post syllabi and assignments and to manage their grading. I would argue though that these uses of

technology do not constitute CALL proper, that is, the full integration of technology into language learning" (p. 719).

This full integration of technology into language learning is inherent to CALL, "the use of the computer is not itself a language teaching method; its efficacy depends overwhelmingly on how it is used—that is, what language learning activities it supports and how well it is integrated into the syllabus" (Garrett, 1991, cited in Garrett, 2009, p. 721). What is more, professionals need to ask themselves critical questions for computer use to have efficacy in the classroom, such as:

"What kind of software (I would now substitute 'technology-based learning activities'), integrated how, into what kind of syllabus, at what level of language learning, for what kind of language learners, is likely to be effective for what specific learning purposes?" (Garrett, 2009, p. 721).

Additionally, in their 2013 chapter on contemporary Computer-Assisted Language Learning, Thomas, Reinders, and Warschauer put forth that technology and instruction must be integrated with a well-thought-out approach, because new technology alone cannot improve the transmission of knowledge in the same way that a pencil cannot improve a student's ability to write an essay. They argue that teachers who believe in a behaviorist approach without technology, were likely to continue to practice repetitive drills and close exercises that do not require critical thinking, collaboration, or interaction once given digital media in their classrooms. Thus, successful implementation of educational technology in which technology and learning move forward hand in hand would imply a process that would be incremental, uneven, and complex, given the wide variety of stakeholders involved and the multiple factors to consider (Thomas, Reinders, and Warschauer, 2013, pp. 2-3).

One of the benefits of mobile technology coupled with a sound pedagogical approach is that students can choose what they want to learn and how they want to learn it. Regarding the point that integration provides students with a wide array of learning strategies, the use of technology, especially because it can be available both inside and outside classrooms, in formal and informal contexts, it can give students more choice and variety in the way they access content to learn. Some researchers argue that it can even change power dynamics in a variety of contexts that function within a hierarchy similar to that of teacher-student, such as

in those of doctor-patient (Hafner and Pun, 2020). Hafner and Pun state that "medical professionals must now expect patients to come to their clinics armed with knowledge from a range of sources, arguably changing power relationships in the traditional doctor-patient relationship" (2020, p. 5). Could not the same be argued for teachers, whose students have access to the subject's knowledge outside of the classroom thanks to the internet and can bring questions to the classroom as a result of consulting such information? Hafner and Pun put forth that:

> "Digital tools allow for the wide dissemination of information over the internet. This can allow academics and professionals to interact with a diversified audience online; at the same time, these interactive affordances can challenge traditional relationships between experts and novices." (p. 5)

The implications are that the learning environment is both opened and enriched by the integration of technology which facilitates inquiry, different forms of meaning-making, debate, research, and discussion based on a variety of knowledge bases, backgrounds, and sources.

2.1.2 Access, Skill, and Usage

The access that teachers and students have to technology is an important factor to consider. Depending on the national, regional, or school context in which they find themselves, circumstances can be very different for both educators and learners. In some cases, there may be a digital gap, or a lack of resources with which to obtain technology-related hardware, software, infrastructure components, and training. In the Andorran case, for example, there is no digital gap in Andorran schools because they guarantee iPads for every student and teacher in the Andorran school system, but it may not be the case for all other school systems and countries. According to 2021 statistics, only 63% of the world is on the internet (ITU, 2021).

In addition to the access factor, once students and teachers have access to and are surrounded by digital communication tools, both need skills to become competent users and knowledgeable meaning-makers, or communicators, with those tools. These skills are often described by researchers as "literacies" (Pegrum, 2016, p. 9). It is argued that in a close-knit world connected by the internet and an ever increasingly competitive job market for which

students are preparing, language teachers must go beyond having and teaching linguistic competencies to teaching also communicative competence (Byram, 1997, cited by Pegrum 2016, p. 9), digital literacies (Dudeney, Hockly & Pegrum, 2013, cited by Pegrum, 2016, p. 9), creativity, innovation, and entrepreneurship (Zhao, 2012, cited by Pegrum), critical thinking, problem-solving, collaboration, teamwork, autonomy, and flexibility (Mishra & Kereluik, 2011, Pegrum 2014, cited by Pegrum 2016, p. 9).

Researchers like Pegrum agree that in a digitized era, there are 21st-century skills that are no longer a luxury but a necessity, and "students need to learn how to interpret the messages that reach them through digital channels, and how to express their own messages digitally. Digital literacies must be taught alongside language and more traditional literacy skills" (Pegrum, 2016, p. 9).

This imperative involves the training of teachers "to become designers of customized learning environments and tailored experiences for their students" (Laurillard, 2012; Pegrum, 2014, cited by Pegrum 2016, p. 10) and digital literacies involve preparation by both parties, the teachers and the students, because "digital literacies will need to become a core consideration, not just in terms of student learning outcomes, but in terms of educator development and learning design" (Pegrum, 2016, p. 10).

Pegrum discusses a framework of important literacies that are significant to the skillset of our time (Dudeney et al., 2013, Table 1.1, p. 6, cited in Pegrum 2016, p. 11). In this framework, they are listed in a hierarchy of intricacy from lower to higher and in all of them language plays a key role. At the same time, those literacies support language comprehension and production (Pegrum, 2016, p. 10). From lower to higher in complexity, they are as follows: print literacy (what we read and write in paper channels), texting literacy, hypertext literacy (what we read online with links), multimedia literacy, gaming literacy, mobile literacy and finally, the most complex: code literacy (the ability to read and write computer language). He stresses that,

> "While it may seem strange to start a catalogue of digital literacies with print literacy, it remains core to communication online (Pegrum, 2011), and can be practiced and honed on a plethora of social media platforms […] print literacy takes on new inflections online; we read and write differently in digital channels compared to paper channels (Baron, 2008; Coiro, 2011), and there may be disadvantages to reading on small screens which

impede our overview of the shape of a text (Jabr, 2013; Greenfield, 2014), or reading hypertext peppered with links that reduce our focus on the content at hand (Carr, 2010; Greenfield, 2014)" (Pegrum, 2016, pp. 10-11).

He goes as far as including code literacy because he argues that "speaking human languages is important for communicating precisely and widely in a globalized era; coding computer languages is important for communicating precisely and widely in a digitized era" (Pegrum, 2016, p. 13).

Apart from those literacies that are about language, Pegrum goes on to describe a "multimodal literacy" (2016, p. 11). He explains that this is a type of literacy that became important and emerged with technological developments and when digital culture "shifted from 'telling the world' to 'showing the world'" (Kress, 2003), a process facilitated by digital tools that make it easy to create and share multimedia artefacts (Takayoshi & Selfe, 2007)" (Pegrum, 2016, p. 11). What is particular about multimodal or multimedia literacy is that "drawing on different semiotic systems (Bull & Anstey, 2010) to interpret and express meaning in formats ranging from word clouds through infographics to digital stories (Pegrum, 2014b), is crucial to support both language comprehension and production online" (Pegrum, 2016, p. 11).

Thus, one can see that with emerging technological developments (Pegrum cites some, such as the spread of mobile smart devices, real-time multimedia recording, on-the-fly editing, near instantaneous dissemination and augmented reality apps (p. 12)), it has become crucial for both teachers and students to gain a wider variety of literacies. Teachers must have the skills to guide the students, and students must have the skills to walk the learning path. Pegrum describes it as a process in which both educators and learners are involved,

> "With the help of teachers, students need to develop the ability to choose appropriate representational modes or mixtures of modes, grounded in a solid understanding of their respective advantages: 'When is text the best way to make a point? When is the moving image? Or photos, manipulations, data visualizations? Each is useful for some types of thinking and awkward for others' (Thompson, 2013, Kindle location 1666)" (Pegrum, 2016, p. 11).

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Thus, the skillset of these literacies must be included in both the teacher training curriculum as well as the syllabi designed by those educators for students so that they can become competent users of technological tools as well as knowledgeable meaning-makers in a variety of communicative modes and contexts.

In their 2018 study, Meurice, Van de Vyver, Meunier, Delforge and Delvigne highlighted the importance of raising the awareness of teachers regarding how to use digital tools in the classroom effectively, how to create open content, and how to upload and download multimedia content when creating language learning games (p. 3) and it is something they achieved with the teachers in their study involving the mobile app *Actionbound.* They believe that there are now several language learning and teaching opportunities through OERs (Open Educational Resources) that are available through technology use, and they believe digital literacy should include knowledge and effective use of those resources which they believe are widely underused even though they have substantial benefits to offer:

> "The numerous advantages of Open Educational Resources (OER) have encouraged the European Union to promote these 'universal educational resource[s] available for the whole of humanity' (UNESCO, 2002, p. 28). On top of enabling international collaboration, they facilitate knowledge sharing and policy dialogue between institutions and states (Sabadie, Muñoz, Punie, Redecker, & Vuorikari, 2014). From a pedagogical viewpoint, studies have demonstrated their potential to stimulate learners' interest, satisfaction and confidence in a task (Bliss, Robinson, Hilton, & Wiley, 2013). Research has however also shown that, despite their interest in the potential of OER, educators to date still have little knowledge of such resources (Pérez-Paredes, Ordoñana Guillamón, & Aguado Jiménez, 2018)." (p. 3)

One can see that the effort to stay abreast of the developments in educational technology, such as mobile apps that can be effectively used for language learning along with other Open Educational Resources, must remain constant and teacher training programs should reflect these rapid and beneficial developments in tools for teaching and learning in a digital age. Their benefits should be explored and considered in the specific context of each learning institution.

2.1.3 Learner Autonomy: Structure, Power, and Agency

Hafner and Miller (2019) put forward that learner autonomy is a positive outcome that emerges from a complex and dynamic relationship between structure, power, and agency (p. 100). They present the premise that the autonomous learner, defined as "one who is intrinsically motivated, learns outside the classroom, on their own, and with no need for support from the teacher or others" (p. 99) is "rare" (p. 99). Thus, under this understanding, learner autonomy is not to be taken for granted, but rather is a positive quality to be nurtured by means of a process and with the help of these three scaffolding elements that will develop it. Hafner and Miller argue that,

> "First, as course designers we have control over the teaching materials and tasks and can therefore *structure* [emphasis added] the course to encourage aspects of learner autonomy. Second, the teacher-designed course tasks can specifically encourage learners to *share in the decision-making* [emphasis added] about learning. Third, students can be encouraged to exercise their *agency* [emphasis added] through their creative use of language and resources when engaging with their learning outside of the classroom" (p. 100)

Considering this, integrating technology in the classroom with a sound, holistic pedagogical approach that incorporates it in the structure, which Hafner and Miller consider as consisting of not only a classroom environment, but also the "curriculum, syllabus, tasks, and assessments" (p. 101), including technology in the shared decision-making about learning in which students have assignments that allow for "freedom from teacher's directions and freedom to make decisions" (p. 101) and including technology as a tool to develop learner "individual agency to enhance their learning in and out of class" (p. 102) can be very powerful for boosting the desired qualities that Hafner and Miller outline as: learner autonomy, motivation, and self-investment (p. 100).

Two examples in which technology is incorporated in the structure as a booster of learner autonomy are given by Hafner and Miller in a syllabus that includes "real-world, out-of-class activities" and "meaningful tasks that meet students' needs and engage them" (p. 101) and which are made possible by technology. The tasks are meaningful and real-world-

centered because the internet is a part of their everyday lives and is a major source of information in society:

> "We engaged students in a series of in-class tasks on how to assess the reliability of source materials on the internet. Then, when they did their own internet searches for background information about their topics, they were able to draw on the structured input to make judgments about the reliability of sources that they found" (p. 101).

And another example of a technology-integrating task on a syllabus is:

> "Students doing a unit on promotional discourse on a course in business communication could become researchers of linguistic landscapes, using their smartphones to take pictures of persuasive language used in advertising and bringing these 'real' texts back to the classroom in order to support in-class learning" (p. 101).

An example of an exercise of learner power that is not teacher-centered, but rather in which power is "created with others rather than being imposed on or exercised over others" and involves a degree of "freedom from the teacher's directions and freedom to make decisions" (p. 101) and that is made possible by the integration of technology is given by Hafner and Miller (citing Peeters, 2015, p. 177):

> "Peeters decided to make use of Facebook with 119 first-year Dutch-speaking English majors at a university in Belgium. As part of preparing their writing assignments for one language-related course, students interacted with each other via a Facebook peer group which they set up in order to give feedback on each other's writing. The class tutor was not a member of the Facebook community so that, 'students would feel less inhibited to communicate with their peers, which is to lead to a more extensive and genuine foreign language output' (Peeters, 2015, p. 179). After completing their assignments, students gave the researcher access to their Facebook posts, and completed a questionnaire about their use of Facebook. He discovered that, in addition to the perceived benefits students gained in helping to

improve their writing, the Facebook site was also used to exchange other information about the course, encouraging one another and telling funny stories. The students' use of the out-of-class learning site went beyond the expectations of the tutor. Students appeared to enjoy making use of Facebook for educational purposes, and it became an effective out-of-class online learning tool" (p. 109).

This example is a case in which learner autonomy was fostered in an uncontrolled online learning environment, in an informal context, with the use of the internet which facilitated that learning was not restricted to the classroom, is a communication environment, and is not merely a resource but a means of carrying out a task (p. 108-109) and it involved only some limited guidance by the tutor. Furthermore, it is an example of a task that involves learner agency as Hafner and Miller define it: "students taking control of their learning" and creating "their own world of learning and that is more than just mastery of a linguistic code. It also involves gaining access to symbolic resources like language, friendship, and education" (p. 102).

One can see by reviewing the literature that technology, well-implemented and integrated, can be a powerful ally for the instructor who aims to foster learner autonomy as well as for the learner who is trying to attain competencies and objectives, and even more so when they are communication-related because of technology's potential as a means and environment of communication.

2.1.4 Normalization

Through an analysis of the literature, it can be argued that a positive sign of a move in the right direction toward an effective and efficient integration of technology in education is that of normalization (Bax 2003), because when it is evident, technology is no longer experienced as an unwieldy obstacle or as an element so separate, complex and full of problems that it cannot serve as a means for learning, but rather, poses its own challenges as a separate subject to be mastered in tandem with other subjects to be learned, such as that of a foreign language, for example.

Furthermore, many language education experts agree that the ultimate goal in terms of use of technology in the classroom is normalization. Bax (2003) defines normalization as "the stage when a technology is invisible, hardly even recognized as a technology, taken for

granted in everyday life" (p. 23). Computers in all sizes and shapes "will not be the center of any lesson, but they will play a part in almost all… They will go almost unnoticed" (p. 24). In this regard, Garrett (2009) states that language educators should strive for "a dynamic complex in which technology, theory, and pedagogy are inseparably interwoven (pp. 719-720). It was suggested by Warschauer in 1999 that when there is deep integration, the separate components involved in the learning process are less and less emphasized, that is:

> "The truly powerful technologies are so integrated as to be invisible. We have no 'BALL' (book-assisted language learning), no 'PALL' (pen-assisted language learning), and no 'LALL' (library-assisted language learning). When we have no 'CALL', computers will have taken their place as a natural and powerful part of the language learning process." (Cited in Brett and González-Lloret, p. 354).

Although the huge increase of consumer technologies facilitated CALL development to a large extent, it generated a negative impact as well. Many administrators do not realize that the use of technology for language learning has little to do with general consumer use (Garrett, 2009, p. 720). To arrive to the point where a type of technology for language learning is not an obstacle but an effective learning tool that is almost "invisible" or normalized (Bax, 2003), Levy points out that "in this new and evolving technology-rich environment, teacher education and learner training are paramount" (Hubbard, 2004; Hubbard and Levy, 2006; Kassen, Lavine, Murphy-Judy, & Peters, 2007 cited in Levy, 2009, p.777). Levy gives a concrete example:

> "It is the teacher's or learner's understanding of what a technology can accomplish that is critical in practice. A good example is provided in the word processing program 'Word'. Although many understand its central role and function, for producing and manipulating text, fewer understand and use its numerous component technologies—such as Comment, Track Changes, Bookmark, and Hyperlink—and appreciate the ways in which these tools may be employed for language learning" (Levy, 2009, p. 778).

Thus, as we can see, there are technological language learning tools available to learners, here classified as "a technology", but without the instructor's knowledge, the learner training, and a sound pedagogical methodology implemented by the teacher-tutor that would need to accompany these technological tools, factors that imply a high-level of involvement on the parts of both the teacher-tutor and the learner, technology cannot arrive to the point of being "normalized".

2.1.5 Detractors to the Adoption of Technology in the Classroom

On the other hand, some scholars have not always favored the adoption of technology into the instruction process. They have given several reasons such as the challenges with the use of technology, the selection of the correct software and the cost of implementation, and state that the mere adoption of technology does not guarantee that learning will take place (Dunleavy, Dexter, and Heinecke, 2007). Furthermore, we must consider that depending on the national and cultural context in which the adoption of technology in education is in question, there may be opposition from educators as well. Preparedness for this implementation is not uniform throughout the world. According to ITU statistics, approximately 2.9 billion people in the world are still offline as of 2021 (ITU, n.d.).

A study carried out by Dashtestani in 2013 showed that Iranian EFL teachers had somewhat of a favorable attitude toward integrating MALL, however the main drawbacks from their point of view at that point in time were the implementation costs and the possible internet connection challenges they could face in the classrooms, as well as their perceived lack of qualifications in this area (cited in Aygul, 2019, p. 32). Additionally, a 2014 study carried out by Golshan and Tafazoli of EFL teachers' attitudes in Iran toward the implementation of technology in their classrooms showed that despite some positivity, they had reservations toward this approach because mobile phone use did not have approval by the administration, thus discouraging this as an option for them in the classroom (cited in Aygul, 2019, p. 31).

One can see in the literature review that the administrative and hierarchical standpoint toward the use of some mobile devices as more countries and citizens acquire internet connectivity coupled with technological challenges and a perceived lack of skills, result in little to no use of technology in some contexts, an inexperience which further results in hesitation and reservations on the part of teachers in certain contexts.

In yet another study carried out by Saudouni and Bahloul in 2016 in Algeria, EFL teachers' attitudes toward integrating MALL into their curriculum were plagued by worry regarding conditions that were not adequate with respect to the training required, the infrastructure, and the general knowledge of all those involved regarding the benefits of MALL (cited in Aygul, 2019, p. 32 and 33). In another critical 2020 study entitled "Confronting the Challenges of MALL: Distraction, Cheating, and Teacher Readiness" Rastislav Metruk addresses these three significant drawbacks to Mobile-Assisted language learning in the classroom. Moreover, Metruk claims that MALL studies have mainly focused on the benefits of MALL implementation and that "further research and exploration in this area is necessary, especially with regard to challenges and barriers language teachers face when m-technologies are employed." (Metruk, 2020, p. 4). There are some sensitive issues related with the implementation of technology, which are, to name a few: the lack of policy support, governmental investment, and negative attitudes towards cell phones in the school environment due to cyber-bullying, cheating, etc. (Metruk, 2020, p. 5). Metruk points to the issues of physical properties and technical features of mobile devices brought up by Tafazoli, Parra and Huertas-Abril (2018) such as: limited audio-visual contact, a small screen and keyboard, limited length of messages and data storage (p. 5) and furthermore cites other disadvantages previously raised by some mobile-learning studies:

> "The potential for distraction or unethical behavior, physical health concerns, and data privacy issues. Plenty of school leaders regard mobile phones as something that hinders meaningful learning, also because of potential distractions from ringtones, emails, texting, tweeting, and cheating (Trilling & Fadel, 2009). O'Bannon and Thomas (2015) and Thomas, O'Bannon and Britt (2014) perceive cheating, disruptions, cyberbullying, and accessing inappropriate content as formidable barriers with regard to using cell phones in the classroom." (Metruk, 2020, p. 5).

However, in this paper, Metruk offers solutions to the challenges and roadblocks mentioned, thus suggesting that they are not reasons to do away with m-learning because they can be addressed despite the fact that they can sometimes represent "a formidable task" and require "effort, time and investment" (p. 10). Some keys to surpassing these challenges are thorough and constant professional development of teachers, step-by-step guided integration of technology into the classroom, instructor monitoring of mobile device use in the

classroom, teacher training regarding modern technology created to prevent cheating via technological devices, teacher preparedness to use mobile devices effectively within their curriculum and highlights that "the perception and readiness of both teachers and learners along with how they will tailor their ways of teaching and learning" (p. 10).

Although there have been some negative experiences associated with the early and recent stages of integration of emerging technology in education, including low meaningful student engagement and a lack of personal connection between the teacher and the student, it may have to do with how the technology was implemented rather than the technology itself (Underdown and Martin, 2016, p. 8). In their study, they state that there are remedies to some of the most concerning aspects of technology use for education, and cites courses that are online and rely solely on this medium of instruction:

> "When compared to traditional ground classes, online courses do have two substantial drawbacks many are quick to identify. Lack of meaningful student engagement and the absence of engaged and present instructors are factors that university administrations are concerned with today (Korkut et al., 2015)."

However, to tackle these problems, this study suggests that the way the course is structured and the content of the course itself plays a very important part in both engaging students and forming a strong teacher-student connection through personalization:

> "Instructors who create and personalize video content for use in their classrooms have seen remarkable results in the engagement and satisfaction levels of students (Draus et al., 2014). Instructors are able to remain at the forefront in a classroom without additional effort on their part. Students feel a greater connection with the instructor, and their efforts and quality of work are greater when compared to those classes without consistent use of instructor-created content (Draus et al., 2014)." (p. 11).

Thus, looking at the literature, we can see that it is important to keep in mind that there may be solutions to the new challenges that are presented by the integration of technology in language learning and that they can be found with time, patience, conscientious implementation, effort, investment, continuous education, and experience using emerging technology.

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2.2 CALL

The introduction of technology to language learning started with the introduction of Computer-Assisted Language Learning (CALL). Thus, in this literature review it is relevant to portray an overview of CALL to better understand the relationship between technology and its use to support language education. Research in CALL vividly explains the association between language learning and computers, and how this relationship is linked to language learning theories (Warschauer, 1998).

A wide number of studies attest that since the adoption of CALL to support language learning, technology has improved students' learning experiences. Precisely, the impact of CALL in language learning has advanced students' four language skills -- reading, writing, speaking, and listening.

Computer technology has been a key player in the field of language learning since the 1950s. Nonetheless, even though mainframe computers were used for language learning back then, it was not until the 1980s with the development of personal computers that technology became evident in educational institutions. During the 1990s, the initial multiple-choice, spelling and drilling programs were enlightened with multimedia and Internet-based exercises (Levy, 1997). The start of this century saw a huge increase of Internet-based activities which allowed for the inclusion of virtual learning environments and virtual worlds, social networks, wikis, blogs, podcasts, and online courses, amongst others (Thomas, Reinders, and Warschauer, 2013).

Most of the literature on CALL associates its development with concrete historical periods. Warschauer and Healey (1998) have identified historical times of CALL based on their methodological and pedagogical approaches and can be categorized into three different stages. These three phases were influenced by both the technology specifically available during each time and by how languages were viewed and taught.

The first phase, which was conceived in the 1950s and implemented during the following twenty years, was called Behavioristic CALL and it is viewed as CALL's inception period. The behavioristic phase in CALL was innovated in the 1950s and was implemented in the following 20 years. This phase was postulated around the dominant behaviorist theory and consisted of basically vocabulary and grammar tutorials, drill programs, and language testing tools. According to behaviorists' theories, computers were used as mechanical tutors that emphasized repetition, reinforcement, and drills (Lee, 2000). This approach applied repetitive

drills in language learning, where the computer would be used as a tool to deliver instruction or, in another term, tutor (Chapelle, 2000). The phase applied drills and practice, where learners repeat the same process until they are perfect in certain language learning concepts. The phase was marked by the computer's abilities to present the same material repeatedly until the learner can grasp the concept. The computer at this phase allowed students to learn at their own pace. According to Ahmad, Corbett, Rogers, & Sussex (1985), PLATO was introduced at this phase and operated solely on its program as a tutor system providing drills for spelling, vocabulary, and grammar.

Between the 1970s and 1980s, the CALL approach's behaviorist phase started to lose its relevance after the disqualification of the behaviorist theory both at the pedagogical level and theoretical on the EFL learning and teaching process. Moreover, the shift was motivated by the range of possibilities that were presented by the innovation of microcomputers at that time. This marked the transition from the behavioristic phase to the communicative phase. Behaviorist's theories for language learning were challenged because they did not promote students' creative ability, an indispensable component of any language. Therefore, there was a need for CALL to adapt to the new emerging language learning theories which emphasized communication, interaction, and collaboration among students (Blake, 2007; Garrett, 1991). This CALL phase consisted of a task-based and collaborative approach during which personal computers were utilized for communicative exercises to attain accuracy and fluency.

The Communicative CALL phase dominated in the 1970s and 1980s and was advocated by John Underwood, among others. The communicative phase's main reason was to reinforce the importance of authentic communication in EFL learning and teaching. The communicative phase of CALL emphasized the use of the computer as a medium, but not a tool for language learning and that language learning became implicit, allowing students to practice original utterances in EFL learning. The communicative phase was designed to help students grow in linguistics by engaging them naturally and freely. The system was developed, avoiding the discouragements of learners, and focused on various students' responses (Yaman & Ekmekçi, 2017). Various CALL programs came up in the communicative phase that promoted interactivity and intrinsic motivation. Some of the programs that were created were non-drill to promote practical skills such as speed reading. At this stage, the computers were still being used as a tutor or a tool for learning as they contained the correct choice of the target task. The students were to discuss and to decide the right choice for the answer, thereby

creating interactivity among learners. Taylor and Perez claim that the computer in this phase was also used as a stimulus where students are provoked to think and identify the right choices through consultation, discussion, and interactivity (1989, p. 63). Additionally, computers at the communicative phase were used as a learning tool whereby computers provoked learners to utilize and practice language without necessarily relying on materials. Such programs consisted of word processors and grammar checkers (Taylor & Perez, 1989; Brierley & Kemble, 1991; Taylor, 1980).

The third phase, considered to have started in the 1990s, was named Integrative CALL and supposed an eclectic blend of previous approaches together with multimedia and the Internet. This blend of tools and approaches has been used to expose language learners to authentic materials and language. It is considered that, during this phase, social interaction is essential to have a meaningful learning experience (Mills, 2010). Multimedia and internet technological developments aided the integrative phase of CALL.

Multimedia is the development of CD-ROM that enables media access such as text and graphics within a unified computer. Hypermedia is a technology that allows the connection of multimedia resources so that EFL students can navigate successfully by themselves. Hypermedia technology in the integrative phase of CALL contained a lot of advantages that facilitate EFL pedagogies in easy and accessible ways. It provides realness by offering an authentic learning environment. Moreover, more practical skills are gained at once, such as listening, writing, speaking, and reading. The autonomy in hypermedia is provided as the students have full control over their activities. On the other hand, the Internet in the integrative phase unified and provided learners with easy interaction with instructors. Through the Internet, people can access online EFL learning resources. At the integrative stage, the quality and quantity of information that a computer can handle have become critical questions. This has seen the production of computers with high storage capacity and processor speeds to increase EFL learning materials available.

Table 2.1

The Three Stages of CALL, adapted from Warschauer (2004, p. 22)

Stage	1970s-1980s: Structural CALL	1980s-1990s: Communicative CALL	21st century: Integrative CALL
Technology	Mainframe	PCs	Multimedia and Internet
English-Teaching Paradigm	Grammar-Translation & Audio-Lingual	Communicate Language Teaching	Content-Based ESP/EAP
View of Language	Structural (a formal structural system)	Cognitive (a mentally constructed system)	Socio-cognitive (developed in social interaction)
Principal Use of Computers	Drill and Practice	Communicative Exercise	Authentic Discourse
Main goal	Accuracy	Fluency	Agency

Bax (2003) proposed changes to the three stages of CALL identified by Warschauer to better reflect the attitudes towards the integration of technology in each of the three phases and argued for three new categories: Restricted, Open, and Integrated CALL. At present, despite the fact that the use of technology to a lesser or greater degree depending on the context is evident, there is still some room before full integration (Bax, 2011; Godwin-Jones, 2015).

2.3 MALL

The fast evolution of mobile technologies and related innovations has caused a steady increase of usage of mobile devices to facilitate language learning. Today, Computer-Assisted

Language Learning (CALL) has been succeeded by the development of the field of Mobile-Assisted Language Learning (MALL) (Burston, 2014; Hwang & Fu, 2019).

MALL is a system that requires language learning using mobile devices such as cellphones and tablets. The main reason for the widespread usage of mobile phones and tablets in EFL classrooms is their easy portability, unlike computers. The Andorran schooling system has implemented the use of MALL among students by introducing the iPad into the classroom. Mobile devices have immense potential to enhance language learning. Apart from portability, MALL has shown great benefits that are associated with it.

As stated earlier, EFL learning and teaching have shifted to social constructivism; MALL has influenced EFL methods and efficiency. Foremost, mobile phones and tablets have high speed and the ability to access all services that can be offered by computers used in CALL. With the rising numbers of young people in Andorra who are constantly connected to the Internet and technology in their life, MALL becomes almost natural. Mobile phones and tablets have been part of the life of young people. These devices determine the way young people associate with each other and communicate. On top of that, mobile phones and tablets have been used in the EFL classroom as a tool and a medium for offering instructions.

The Andorran schooling system has rearranged the EFL classroom layout to implement the MALL strategy in language learning and teaching. According to Traxler, MALL is any strategy that implements handheld technology in teaching and learning EFL. Georgiev, Georgieva, and Smrikarov defined MALL as the technology that enables one to access instructional materials from anyplace and anytime without cable connections to the Internet (2004, p. 28). Supported by Ally (2009, p. 58), MALL is the use of mobile devices that enable the users to have access to instructional materials and can be used for communication between fellow learners and teachers and is not limited to place and time.

Another postulation by Kukulska-Hulme and Shield is that MALL is differentiated from CALL based on its person-ownership and its easy portability and can be used in teaching and learning language based on usage context (2006, p. 273). Palalas claims that MALL has realized the teaching and learning of English as a Foreign Language and has disclosed it into the actual world (2011, p. 71). Based on Miangah and Nezarat (2012), implementation of MALL in the EFL context has enabled students to access the learning material from the comfort of their houses without having to travel to classes and allows them to have control of when and where to access learning materials. According to Stockwell and Hubbard, the

increasing mobile technology in the field of language teaching and learning has been motivated by the fact that many people own a mobile device that can connect to the Internet. This has motivated the faster growth and implementation of MALL in second language learning and teaching (2013, p. 11).

When studying MALL implementation in EFL learning and teaching, the users' readiness cannot be underrated since this determines its power to execute the learning and teaching process. As stated by Schreurs, Ehler, and Sammour (2008), MALL readiness is the capability of the users to adapt to mobile technological learning by tackling the challenges that accompany it, the ability for collaborative training, and individualized training. Based on Eltayeb's and Hegazi's 2014 study, MALL has proved to be ready for teaching and learning of EFL, and its users are ready for mobile learning and teaching because they are used to the devices. The readiness cuts across teachers where teachers are required to be ready to be able to implement mobile learning pedagogies in classes. Readiness can be examined by evaluating mobile devices' availability to teachers and their skills and abilities to use in delivering critical knowledge to learners (Hashim et al., 2017). The readiness is not limited to ownership and availability of mobile devices in mobile learning, but also the perception and attitude among teachers to utilize mobile technology in delivering EFL pedagogies. According to a study carried out by Miglani and Awadhiya for the readiness of five institutions in Commonwealth Asian countries, teachers were well-prepared and showed positive perceptions to utilize mobile technology to deliver pedagogies among students. The study's findings show that MALL has great potential in the engagement of learners in EFL pedagogies by a great percentage (2017, p. 62). Another research by Ismail, Bokhara, Azizan, and Azman in 2013, indicated a low readiness percentage among educators and learners. When studying the implementation and faster occupancy of MALL in EFL teaching and learning, the merits and demerits must be evaluated. Mobile technology is known for its mobility nature. Cellphones and tablets enable users to communicate freely with the instructor and access unlimited learning materials, unlike CALL and ancient literature materials for learning.

MALL is not tied to formal learning as it provides other materials for the learning of EFL, such as games. Some applications are designed for EFL students to learn new English concepts as they play. This makes learning informal as compared to the literature-based methods of teaching English as a Second Language (Alavinia & Qoitassi, 2013). The informality is because students do not have to depend solely on the teacher's materials for

learning as they can access them from the Internet. Moreover, cellphones and tablets are cheap compared to desktop computers, and nearly every person has a smartphone. This makes EFL learning and teaching very easy since one does not struggle to afford them. MALL offers an individualized learning strategy where students can download or use applications that suit their needs and level of understanding. MALL enables collaborative learning using web 2.0 technology, just like an actual classroom. Learners can develop EFL skills together using collaborative learning, enabling authentication of assessments (Hashim et al, 2017). This way, instructors can figure out their learner's capabilities and identify areas of challenges to help them out.

However, despite these advantages, MALL has some demerits, such as the high cost of conducting follow-ups and performance tracking. A class of many students using portable devices in an EFL classroom makes it difficult for teachers to monitor every student's activity on their device. According to Stockwell and Hubbard, MALL experiences both pedagogical and physical issues. Physical demerits are the problems that are associated with a mobile device, such as cell phone battery life and screen size that can affect learning efficiency. Phones with small screen sizes, low battery capacity, and slow processor speed are some of the physical demerits associated with MALL and lower the MALL approach's efficiency in EFL learning and teaching. Pedagogical demerits of MALL include inconvenient tasks for phones. MALL is limited to the tasks that are mobile phone-enabled, such as flashcards and quizzes, but cannot handle complex tasks in EFL learning and teaching (Chaka, 2009).

2.4 From CALL to MALL

There exists a systematic, progressive transition that occurred in the transition from CALL to MALL with the emergence of mobile devices which represented an "anytime" and "anywhere" technology for many people. Language learning studies focus on the use of mobile devices in teaching since language learning needs autonomy and interaction, two key concepts in mobile-assisted language learning (MALL), and also includes an element of spontaneity that mobile technology can provide. Morgana refered to and expanded upon these concepts in her 2021 book *Mobile Assisted Language Learning Across Educational Contexts*. For example, autonomy comes from that thanks to the fact that Wi-Fi networks are available inside and outside school contexts, learners and teachers can use the internet at any time and in any place when they need to or want to. Consequently, they can be independent in their

search for content, access online notes, read any book, share links, as well as participate in lessons that are taking place (p. 3). Moreover, the interactive concept is highlighted in MALL because of the potential it has for student content creation and various types of communication in which learners must interact with their fellow classmates hand in hand with mobile devices. Morgana gives as examples that,

> "Learners can record their performances, shoot videos and modify them as required by the task, communicate with their teachers through specific writing apps, etc. The work they produce can be shared with classmates, teachers, friends, and can even be published online" (Morgana, 2021, p. 3).

Furthermore, she points to the MALL studies of Mompean & Fousz-González (2016) in which the use of social media in formal and informal learning is studied and regarding interaction, she adds that,

> "In MALL for communication, the emphasis is on the interactive process of activities like reading and writing. Learners can, for example, collaboratively read the same e-books, or write synchronously and asynchronously using sharing services such as Twitter or Instagram." (Morgana, 2021, p. 4).

Considering these studies, one can see that new developments in technology regarding not only hardware, but also software, the emergence of social networks, and the widening of access to the internet through wireless networks brought about many changes and trends that accompanied those changes.

Policymakers, educators, and scholars have been inspired by these changing trends and ongoing developments in mobile devices and they are exploring further uses of these devices in language teaching. This was the case in the Principality of Andorra, where government officials in the Ministry of Education decided back in 2013 to deploy a new curriculum based on developing students' competencies. To provide students with an unlimited number of resources, the use of tablet devices was incorporated into all classrooms. In addition to the Andorran case, MALL implementation in other countries has been recently studied by scholars. For example, Chapters 3, 4, 5, and 6 of her book *Mobile Assisted Language Learning Across Different Educational Contexts* (2021), Morgana put forth the

beneficial results of mobile technologies integrated methodically into second language learning curricula at different levels of education and in different countries. Chapter 3 is dedicated to the study of Bortoluzzi, Marenzi, and Bertoldi) in Hanover in which a mobile learning community application was used and results showed positive practices for continuous professional development as well as important aspects when using mobile devices for the education of language teachers (p. 6). Chapter 4 reveals the positive results of a mixed-method research study in Italy (Morgana and Pavesi) on the effects of an e-reading project with secondary school EFL students. The results showed "relevant linguistic gains and positive perceptions towards the use of mobile devices for extensive reading" (p. 6). Chapters 5 and 6 cover a higher education research study (Griggio and Pittarello) with international learners from an Erasmus mobility program in an e-Tandem project that used instant messaging or social networking tools such as Whatsapp, Skype, and Facebook. The results were positive and "data revealed students' perception that they had improved their competence in the target language (English), but they also acknowledged improvements in social and multilingual inclusion strategies as well as digital literacy" (pp. 7-8).

Mobile-Assisted Language Learning (MALL) is a sub-branch of the wider area of Computer-Assisted Language Learning (CALL) research and has recently become a newer focus of study. Implementation and use of new technologies in second language teaching has gained considerable importance both in theoretical and in classroom-based studies (Kukulska-Hulme, 2006; Kukulska-Hulme & Bull, 2009; Houser et al., 2002). There exists a consensus on the clear and direct relationship between CALL and MALL. In his 2014 study, Mandlakayise Mthethwa cites Chang & Hsu, 2011 as well as Sandberg, Maris & De-Guis, 2011 to support the idea that MALL is considered part of CALL, rather than an independent field. He states that while there are differences, there are many similarities such as shared student learning outcomes, goals, language learning theories, and their usefulness in language learning, thus characterizing MALL as a branch or extension of CALL (2014).

Nonetheless, an agreed separate definition of "mobile learning" has not been reached yet. Mthethwa (2014) evokes the difficulty that arose in the MALL literature regarding the definition of its scope; while in some research MALL is employed to refer to mobile phones in general, other research uses the word in reference to devices that can be held on the palm of the hand such as iPads, mobile phones, and other types of tablets.

According to Kukulska-Hulme and Shield, the existing differences between CALL and MALL are that MALL involves the use of personal mobile devices, which are easily portable anywhere, enabling continuity and spontaneity of EFL learning (2006, p. 273). We must also take into account Pegrum's three-tier mobility framework (2017), which distinguishes three different types of mobility involved in MALL - first, mobility of the device; second, situations of mobility of both the device and the learner and third, situations in which the device, the learner, and the learning experience are all mobile. (Pegrum, 2017; also cited in Meurice, Van de Vyer, Meunier, Delforge and Delvigne, 2018, p. 4)

The earlier mobile devices could hardly facilitate the teaching and learning of a new language due to their limited features, and they included cassettes and MP3 players. However, the growing technology enabled the innovation of more advanced mobile devices such as smartphones and tablets that can access the Internet and offer a wide variety of choices for language learning. But, despite the changes that CALL underwent and the rising popularity of MALL, it does not necessarily mean that one is being replaced or disappearing. The advent of technology improved CALL and invented the capabilities of MALL in language teaching (Kim, 2018). Both MALL and CALL complement each other as both aim to teach and learn EFL. Both can be used simultaneously since the MALL is limited to some tasks that can be carried out effectively in CALL. Neglect of MALL means neglecting the portability and omnipresent nature of learning and teaching of EFL.

Mobility can refer to both "learner mobility" and "mobility of technologies" in general, according to Kukulska-Hulme (2009, 2018) and Pelgrum (2017) who also considers when the device, the learner and the learning experience are all mobile. Similarly, there have been attempts to define specific concepts in mobile enhanced learning. For instance, Traxler (2005 cited in Kukulska-Hulme & Shield, 2006, p. 273) defines mobile learning as "any educational provision where the sole or dominant technologies are handheld or palmtop devices". Likewise, Trifanova et al. (2004, cited in Kukulska-Hulme & Shield, 2006, p. 3) define mobile devices as "any device that is small, autonomous and unobtrusive enough to accompany us at every moment". "M-learning is any form of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies" (Shield & Kukulska, 2008 cited in Soleimani et al., 2014, p. 458). And finally, M-learning is identified as educational provision through its availability of "anywhere, anytime" (Geddes, 2004, cited by Azar & Nasiri, 2014)

and by the use of technology where the sole or dominant technologies are handheld or palmtop devices" (Traxler, 2005, cited by Azar & Nasiri, 2014, p. 1837). In brief, there is an evident focus on the concepts of mobility and easy access. These are the key features which make mobile learning a preeminent and present topic among scholars, educators, and learners.

Many studies and surveys report that mobile devices are widely used by students beyond educational purposes. Another study (Cavus & Ibrahim, 2009) has shown that mobile phones were already widely used by university students at that time compared to other mobile devices. Many reasons can explain the popularity of mobile phones: their relatively low prices, a wide range of brands and models, and a longer history of use compared to other kinds of mobile learning devices. Additionally, because the development of mobile phone technology integrated into that single, small, mobile device a wide range of other bulky tools that students have used for purposes other than learning. Furthermore, it is no longer a privilege for a few experts or wealthy people to access, own, and use mobile devices and mobile learning facilities. Ease of use and accessible pricing also applies to non-portable hardware such as desktop computers.

The emergence of MALL as a sub-branch of CALL had its effect on the research that was subsequently carried out. Burston states in 2021 "as with the effect of PCs upon CALL, the advent of readily accessible smartphones, tablet computers, and other mobile devices during the past decade has provided an enormous stimulus for MALL studies, and the same need to facilitate the compilation of bibliographic research references" (2021, p. 815). To make it easier for researchers to access a comprehensive bibliography of MALL studies, which he states is imperative for the future of MALL research, he compiled several MALL bibliographic research references covering more than 20 years of MALL studies (Burston, 2021, p. 814). Some of the challenges that he puts forth regarding MALL research are the lacunae in such research, the repetitiveness of a focus on vocabulary acquisition for a period of time (due to a lack of knowledge of the researchers), that some research is "lodged" in Masters' or PhD theses that are difficult to access in libraries, and that research is carried out in a plurality of languages and sometimes only studies in English are taken into account; these are some of the reasons why many MALL studies go unreported (Burston, 2021, p. 815-816).

2.4.1 The Tutor-Tool Distinction in CALL and MALL

Nonetheless, it is important to stress that one cannot learn only via these mobile devices. Chinnery (2006) explains that mobile learning devices are mere instructional tools, rather than the instructors themselves. He also points out that the effectiveness of mobile learning depends on the availability of an effective teacher who owns sound pedagogical knowledge. In CALL literature, a clear distinction regarding the role of the computer as tool and as tutor, was elaborated on by Levy in his 1997 book *Computer-Assisted Language Learning: Context and Conceptualization* where he also cites the educational computing work proposed by Taylor in 1980 and others (1997, p. 210). When the computer functions as a tool it is neutral and non-directive, it can be employed correctly or incorrectly by the user, there is a learner training component and the student's as well as the teacher's roles are essential as well as an accompanying methodology. When the computer functions as tutor,

> "Materials are designed to be self-contained, and to be used in a stand-alone way without the teacher present. Therefore, if all the computers reside in a self-access center, computer laboratory, or library, and a teacher is not available, in theory the CALL materials can still be used effectively" (Levy, 1997, pp. 211-212).

Once the distinct roles of a computer as tutor and tool are established, Levy further emphasizes that in both roles there are opportunities and threats. Levy states that intelligent tutors (machines) that can "cover aspects of language in a suitably reliable way have the potential to liberate students from the circumstances within which they are currently obliged to learn a language" (p. 206). These circumstances may include, for example, being in a particular place, at a particular time, and with a particular instructor. This paints a picture that lacks flexibility and demands a lot from the learner. Additionally, he argued that "increased sophistication of systems promises richer, more efficient, and hence more enjoyable language learning experiences" (p. 206). Yet, Levy also recognized that it is unlikely that the teacher would be fully displaced any time soon in its tutor role by a computer because of "the complexities for the computer of handling natural language and speech understanding" (p. 207). At the same time, he highlighted that computers would likely "'free' language teachers from an increasing amount of work that has traditionally been regarded as the teacher's domain of responsibility" (p. 207). The development of computer capabilities would also bring

with it an entire range of other questions because researchers also thought that just because a machine could do a task did not necessarily mean that it should do it (Weizenbaum, 1983, cited by Levy, 1997, p. 207). Thus, Levy puts forth that "the teacher's and the computer's roles need to be carefully circumscribed within the tutor framework and the tasks ultimately assigned to the computer will need to be carefully examined, especially as computers become more accomplished as intelligent tutors" (p. 207).

Levy makes a clear correlation between rising computer technology development and the stance of human language professionals, especially in the case of facing an ethical or professional issue of deciding what the computer should or should not be delegated to do: "this issue may not be resolved so simply, without a more assertive stance being taken by the language teaching profession". Some of the major threats of the tutor role being taken by a computer which are mentioned in relation to the human learner are "isolation" and "mere vicarious experience of language". He expresses that the ultimate objective of human language learners is to effectively interact with other humans in other languages, "in the same physical space, using language to accomplish real-world tasks" and thus the computer may hinder this goal by isolating the learners in virtual reality environments with "helmets, goggles and gloves". Levy stated that it is a critical issue to decide when the virtual rehearsal of simulated tasks and environments should end and live performance in the learner's real world should start, considering these potential dangers (1997, p. 207).

In the computer's role as a tool, there are strengths and weaknesses that are analyzed by Levy. In language teaching, he gives clear examples of tools: "e-mail, conferencing programs, monolingual, bilingual, and multilingual dictionaries, thesauruses, concordances, and more recently archives accessible via the Internet such as the OLA." (p. 208). While the computer as tool can help us to accomplish a task more efficiently, it is versatile and can augment our human capacities, the downsides are that it can be used wrong, it is neutral, and "offers the user no guidance on its use in context […] for example, having done the tutorial one may be familiar with all the functions of a word processor, but still not be able to write" (p. 208).

Once the distinction in the roles of the computer as tutor and as tool, as well as the advantages, disadvantages, opportunities, and threats of each are identified and understood, one can more confidently proceed to analyze how the integration of technology can be successfully implemented in an educational context.

2.4.2 The Advantages of Adopting MALL

The advantages of adopting MALL in educational contexts and using mobile learning facilities are reflected in several studies (Thornton & Houser, 2005; Chinnery, 2006; Kukulska-Hulme, 2006, 2009). MALL and portable devices enhance mobility and portability, enable anytime and anywhere learning, provide the students with fast and easy access to numerous sources of information, and the added excitement of learning with innovation. Additionally, MALL has been identified as a positive and transformational catalyst in language classrooms because it involves changing how learning is experienced, perceived, and transmitted (Kukulska-Hulme, 2010a, 2010b, 2013 cited in Morgana, 2017, p. 1).

Further research projects and studies explore the use of mobile phones in relation to different aspects of language learning. Some of them focused on vocabulary learning (e.g., Chen & Chung, 2008; Levy & Kennedy, 2005; Stockwell, 2007); others on pronunciation practices (e.g., Belanger, 2005; Kadyte, 2004), on grammar learning and on story reading, among others. However, research findings in this field up to date reveal no formal theory of mobile language learning (Kukulska-Hulme & Shield, 2006). In their 2018 survey of MALL studies, Maaruf Ali and Shayma K. Miraz mention research papers that support the idea that MALL augments the effectiveness of language acquisition for speakers not native to a language for several reasons. The literature reviewed showed that the benefits of MALL include: the acquisition of a wider range of vocabulary, the retention of content in long-term memory, and considerable improvements in grammar and pronunciation skills (p.1). Further benefits are that in the case of the mobile phone, for example, it can deliver a more immersive language learning environment than a traditional classroom, it grants the user the convenience of making language learning content available even when away from a physical learning institution, that the SMS feature of a mobile phone can have a significant effect on vocabulary retention in comparison to printed texts, and that it facilitates learner-centered and self-paced study (Ali and Miraz, 2018, p. 41).

2.4.3 The Challenges in Adopting MALL

Nonetheless, there also have been several contrary arguments about the disadvantages or potential misuse of mobile-assisted learning. Research (Fallahkair et al., 2007 cited in Kukulska-Hulme & Shield, 2007) states that mobile devices do not justify their cost, and that similar learning outcomes can be achieved by using traditional materials (written

documents and books), home computers, or even television programs. A different criticism directed at mobile learning in another research (Kukulska-Hulme & Shield, 2007) pays attention to the lack of a full exploitation of the portability and mobility of mobile language learning activities, and thus, it argues there is not enough evidence to support the efficacy of MALL in language learning. In their 2018 survey of MALL, Ali and Miraz also cite some disadvantages that the use of mobile technologies inherently implies, for example: the small screens of mobile devices and thus the difficulty of reading content through them, especially for the visually impaired, the restricted or reduced memory of a mobile device, dependence on the functionality and capacities of the device hardware and software, the lack of built-in features for educational purposes such as handwriting recognition, the high cost of some mobile devices, dependence on internet connections and networks and a limited presentation of graphics (p. 40).

New additional studies and research on specific aspects of language will contribute to expand the current knowledge regarding the efficacy of MALL as no single mobile learning tool can provide coverage to all the components of language. In her 2021 study of MALL across different educational settings, Morgana reviews papers published in the last ten years, and she asserts that although research into MALL in education has included both qualitative and quantitative approaches,

> "[…] it has mainly been focused on mobile devices such as smartphones (Burston, 2013; Stockwell, 2010) and on adult learners (university and college students) who demonstrate intermediate or advanced levels of language proficiency in the second language. Although various recent studies have focused on the use of mobile touchscreen devices such as tablets and smartphones in the field of language learning (Lys, 2013; Morgana & Shreshta, 2018), this research still concentrates primarily on adult learners and/or on English as a second language situations. […] the principle of mediation linked with the use of mobile technologies among young learners and in the secondary school language classroom (among teenagers aged 13-17) is very much underexplored" (Morgana, 2021, pp. 4-5).

Thus, instead of making general claims about the efficacy of MALL on learning, research should focus more on specific aspects of language learning in specific learning contexts or for particular levels to ensure better use and understanding.

2.5 Linguistic Policy, Beliefs, and Practices

So far, we have focused on the evolution from CALL to MALL. Nonetheless, my study aims to provide some additional insight to help policymakers to establish their linguistic policies, specifically those aimed at foreign language learning. According to Spolsky, language policy and, specifically, language policies in the educational field are an issue of vital importance in today's world. Spolsky determined three components for the analysis of the language policy of a community: (i) language planning, (ii) beliefs, and (iii) practices (Spolsky, 2008, pp. 5-11). The three components exist in very dynamic, highly complex and constantly interacting contexts, so that the modification of any one component affects the others. According to Spolsky, determining cause-effect relations in the field of language policy hardly brings any clarity to the aspects studied since, in the real world, an endless series of interrelationships between many other different variables intervenes.

When Spolsky talks about language planning, he is referring to any action undertaken, or effort made to manipulate and/or change any linguistic situation by any person or group of people. This person or group of people can be remarkably diverse in nature: a legislative assembly drafting a constitution, legislators passing a national law, regional or local lawmakers determining how things should be labelled, etc. They can also be opinion groups, judges dictating sentences, or companies launching products on the market. And, at the lowest level, it could even be a family member who determines the language spoken at home and which words are acceptable or a teacher who does the same thing within the classroom. No explicit regulation, formulated by an authority, is required to determine whether language policies exist. And even where there are language policies, this fact alone does not determine whether their effects on language practice will be achieved or will be consistent.

Spolsky understands language practices as the sum of sounds, words and grammatical choices that an individual makes, either consciously or unconsciously, which determines the conventional model of a linguistic variant. These variants can be classified and categorized, the highest level of such variants being language itself.

In terms of beliefs, Spolsky determines that every community shares several beliefs regarding appropriate linguistic practices and assigns values and prestige to various aspects of the linguistic varieties used. At the same time, these beliefs both derive from and influence language practices. Again, according to Spolsky, linguistic ideology is nothing other than language planning without a planner to bring it about: it is everything people believe should be done. On the other hand, linguistic practice is everything that people actually do. In fact, language planning efforts can contradict the beliefs of a particular community and the practices they carry out.

Spolsky, analyzing these three components, tries to establish what linguistic policy is. In analyzing them, he critically questions if these linguistic policies achieve the management of language.

Technology in the language classroom presents many affordances and challenges for learning. Additionally, the fact that technology is omnipresent in everyone's life, both teachers and students have varied perspectives and expectations on how technology might be used in the classroom. For example, those teachers who started introducing technology into the classroom three or two decades ago were considered unconventional and innovative. Those teachers who fail to use technology in their classrooms today are perceived as out-of-date.

Many research studies have focused on how technology has changed the language classroom. A more relevant question, though, is capturing the attention of present research, and that is how to evaluate technology and how to use it for language learning. Technological devices allow students to extend their training beyond the classroom and beyond their formal in-class learning (see, for example, Morgana, 2021).

As Hubbard & Levy (2006) put it, "the changes in language learning brought about by technology have profound implications for the knowledge required of a language teacher and therefore the content of a teacher education curriculum". Technological issues are intertwined with other pedagogical concerns. Additionally, traditional methods and techniques do not provide the necessary insight into how to approach technology into the language classroom. The present situation requires "teachers with basic technological skills who understand the capabilities and limitations of technology in teaching, and who accept responsibility for critically examining the options and their implications" (Chapelle & Hegelheimer, 2004).

On the one hand, trainers need to become better acquainted with all the possibilities technology has to offer, such as authoring tools for language education, to help their students

benefit from technology. On the other hand, trainers need to learn the potential that technology can provide in the language classroom, gaining an in-depth understanding of why they should bring technology into their lessons.

During the last two decades, research on technology and language training has been based on claims from those involved in language teaching and their learning practices and research has been essentially descriptive-oriented.

One of the main focuses of this type of research has been to understand how students employ technology for learning. The array of methodologies used for gathering data range from survey research to interaction, and from discourse analysis to ethnography.

One of the main motivations for educational research is to be able to evaluate alternative instructional strategies. This is better accomplished with evaluative research. These studies aim to gather evidence about the comparative results drawn by teaching languages using technology or in the traditional classroom. Nonetheless, designing such research is extraordinarily tricky as the researcher attempts to make the classroom conditions with or without technology the same to detect differences. As a result, most of these studies focus on pedagogical issues rather than on technology, and its generalization is questionable.

Some critical research on the role of technology in language learning argues that the way technology is used limits the scope of students' learning. Chapelle argued "the need for critical research agendas whose goal is to discover who chooses technologies and for what purposes and why and conducted a study that linked technology use to teachers' beliefs" (2008, p. 590). He argued that the implementation of new technologies varied from classroom to classroom, influenced by the general institutional context and the beliefs of each teacher.

Interpretative qualitative research, often but not exclusively based on ethnography, has gained more prominence within the field of Teaching English to Speakers of Other Languages (TESOL) in recent years. However, there has been insufficient qualitative research on technology-enhanced language learning (TELL). Such research could examine not only what language is used by learners in particular technology-enhanced environments, but also how computer-mediated language and literacy practices are shaped by broader institutional and social factors, as well as what these new practices mean from the perspective of the learner (Warschauer, 1998, p. 759).

For example, Lintunen, Mutta and Pelttari's 2017 study surveyed 87 university students majoring in a language in Sweden, students who speak a variety of foreign languages

although a majority were studying English, took into consideration both in-school and extramural use of technology, their exposure to technology in their earlier education, and their attitude toward the use of technology in support of language learning (p. 64-65). The results of the study showed that the use of technology was different in school language-learning and outside of school, that students had knowledge of the possibilities at their disposal and their engagement increased as they got older, that most students had a positive view toward the use of technology, but some criticism voiced the importance of language learning with a human instructor in face-to-face contact (Lintunen, Mutta and Pelttari, 2017, p. 61).

These types of multi-factor studies that take into account the use of technology for language learning in the context of a particular institution, a complex context, attitudes, student profiles and experiences, and curriculum-based as well as extramural use of technology are providing fruitful insights into good practices for integrating technology for language learning and thus will help shape language policy.

2.6 Technocentrism and Language Policy

In the mid-1980s, Seymour Papert wrote "Computer Criticism vs. Technocentric Thinking". It argued that many times all discussions regarding technology and learning ended with technology itself, without considering the complexity of the context in which technology was introduced. He called this limiting view as *technocentrism*. Technocentrism refers to the tendency to give centrality to a technical object (Papert, 1987, p. 23).

We are fully immersed in technologies in our everyday life. In the classroom, learners are faced with technologies for designing, creating, and making, for thinking and learning. Nonetheless, learners' experiences are too often centered on the technology itself (Kimmons, 2015; Selwyn, 2014). As Brennan puts it, "the 'learning' is focused on learning *about* the tool/technology or the effects of the tool/technology itself, rather than learning *with* or *through* the technology. The questions that are asked about impacts and outcomes strive to isolate the technology as the source of change" (p. 289).

Brennan states that technology should not be rejected nor embraced, but rather it should be considered how to best incorporate technology for classroom learning. To do this, before learning with and through technology it is first necessary to get some basic understanding of the technology itself, so part of this task is technocentric on its own (p. 290).

No one discusses the great advances of technology nowadays. What Garrett (1991) observed thirty years ago holds true today: "Technology that can be taken for granted is already light years ahead of the profession's ability to integrate a principled use of it into the classroom and the curriculum" (p. 74). The advances in technology clearly outpace all advances in language learning practices (Chapelle, 2009).

In her update ("Technology in the Service of Language Learning: Trends and Issues") to her 1991 publication, the author reviews the relationship between pedagogy, theory, and technology, and explores the most pressing issues facing CALL, to conclude with the need to rethink CALL research (Garrett, 2009).

According to Garrett (1991), back then pedagogy was by far more preeminent than technology. In her 2009 revision, she emphasizes that none of the three main components of CALL - pedagogy, theory, and technology - should dominate the others. The three components evolve and change in their relationship with the others. Any accepted pedagogical approach should not be the primary determiner of technology use in the classroom (Garrett, 2009, p. 720).

Additionally, the environments or contexts where the learning experience takes place have a strong effect on the way pedagogy, theory, and technology work. Garrett establishes three different levels of physical infrastructure, as she refers to environments or contexts. One is the physical/technological setup of our teaching and learning spaces, such as classrooms, computer labs, faculty development spaces, and so on. A second is the institutional professional development support structure for technology use, and a third is the national structure of language education and the national support structure for it.

Recent studies (Mango 2015; Lintunen, Mutta and Pelttari, 2017) show a movement away from the technocentric approach and take into account the complexity of the participants as well as the complexity of the context in which technology supports language education.

Mango's 2015 study at a university in the U.S. surveyed first-year students of Arabic who were given an iPad to support their language education. The study considered such multidimensional factors of the student participants as how iPad use can affect their engagement which was richly defined by Blumenfeld, Fredricks and Paris (2004) as being made up of 3 types: behavioral engagement, cognitive engagement, and emotional engagement (p. 53). Mango cites additional prior studies that found a positive relationship between tablet devices and their impact on student engagement:

"Clark and Luckin (2013) reported that studies have 'overwhelmingly' reported that 'tablet devices have a positive impact on students' engagement with learning' (p. 4). Similarly, Diemer et al. found that the use of iPads in the classroom increased students' perception of their engagement and in turn left a positive effect on students' active and collaborative learning (2012). In another study, Hargis, Cavanaugh, Kamali and Soto (2014) reported that students who used iPads gained empowerment as they became researchers and more independent learners" (53-54).

Mango's results showed that the students surveyed liked the experience of using the iPad to learn Arabic and had a positive belief that it helped them acquire the language. The students also believed that the iPad made it easier for them to participate in class and collaborate with one another (p.56). These positive perceptions by students translate to a more active engagement and good learning experience which Mango states is significant because

"the more students are engaged with their learning, the more they are likely to succeed in college as there is a link between engagement and students' academic achievements and persistence in college (Kuh et al. 2006). Collaboration is also linked with student success as it 'enhances academic achievement, student attitudes, and student retention' (Prince, 2004, p. 5)" (Mango, p. 56).

Thus, we can conclude that the iPad acted as an ally to help boost student engagement, perceptions, participation, collaboration, and retention rates, which are essential elements to strengthen language learning skills as well as academic programs.

Additionally, Lintunen, Mutta, and Pelttari emphasize in their study that language learning can be implicit or explicit, occurs in hybrid environments that include formal and informal contexts (at school and outside of school), and that both digital technologies and learning are part of the everyday lives of current language learners (Erstad, 2010; Jalkanen & Taalas, 2015; Mutta, Lintunen, Ivaska & Peltonen, 2014; Palmgren-Neuvonen, Jaakkola & Korkeamäki, 2015; Piirainen-Marsh & Tainio, 2009) (p. 61). Additionally, this study takes into consideration such nuances as the fact that,

"Extramural language learning studies can be quantitative or qualitative, for instance, with learners using Facebook (Mitchell, 2012), telecollaboration via email (Schenker, 2012) or voice blogs (Sun, 2012) to facilitate their language and cultural learning. Researchers have also been interested in learners' out-of-school activities, such as gaming, and their impact on language learning (Sundqvist & Sylvén, 2014; see also Sundqvist, 2016; Thomas & Peterson, 2014). These extramural activities seem to increase learners' motivation and thereby, indirectly promote language learning. Extramural language learning can also take place via traditional ways, such as trips abroad and interaction with foreigners." (p. 62)

Furthermore, this study put forth that not only is the context complex because of the number of factors involved in the interplay between technology and language learning such as "the extramural language use that supports language learning before tertiary education, learners' experiences of the technologies used in different contexts, their attitudes towards using technologies in language learning and teaching" (p. 65). Moreover, it identified three different types of student profiles based on the sample of 87 language students surveyed at a university in southern Finland: the digiage learner, the hybrid learner, and the in-school learner (p. 72). The study categorized them based on their answers to survey questions based on the following distinguishing characteristics:

"digiage learners (heavy users of especially the social media, but who have not always mixed it with learning), hybrid learners (have used technologies, but with a critical mindset, for in and out-of-school learning) and in-school learners (have used technologies, but do not believe that they facilitate the learning process)" (p. 72).

In the conclusion of the study, the authors argue that an awareness of these different student profiles is important in order to "help teachers create suitable exercises or suggest new ideas to facilitate extramural and/or hybrid learning and assist learners in understanding their own learning styles and how to develop them in traditional and digital ways" (p. 72). Future language policies both at the national and the institutional level, as well as language-teaching practices will benefit from the results and data gathered from research that is nuanced and reflects the complexity of both the participants and the context in which it was carried out.

2.7 Future Research Approaches in CALL and MALL

The huge increase of consumer technologies facilitated CALL development to a large extent but, nonetheless, generated a negative impact as well. Many administrators do not realize that the use of technology for language learning has little to do with general consumer use (Garrett 2009, p. 720).

An additional problem to the research track record of CALL and MALL is the rapidly evolving pace at which technologies change. There needs to be a track record on research studies on older technologies, which are now obsolete, so that the learnings and their outcomes are not forgotten. Garrett insists on expanding present CALL current practice research and to adopt new research approaches to language teaching and learning "as a basis for justifying the new curricula, establishing both their theoretical basis and existing precedents for their success, to persuade administrators and funders that a massive expansion of CALL is essential [...]" (Garret, 2009, p. 734).

Although recent research is moving in the right direction by considering the complexity of participants and the complexity of contexts in which there are attempts at effectively and productively integrating technology for the benefit of language learning and language learners, more research with depth and breadth should take place in different countries in order to provide an insight into how the particularities of national contexts and the linguistic policies, attitudes and beliefs held there may also affect results. Hence, the importance of carrying out the research for this dissertation which is unprecedented in the Principality of Andorra.

CHAPTER 3: METHODOLOGY

This section explains the choice of methodology employed in the study to achieve the planned objectives, which were reflected in the specific research questions. The research paradigm, research approach and strategy, the sampling criteria as well as the limitations in participant selection, means of data gathering, and the instruments (observation, interviews, and questionnaire) used in this study, are all discussed, including their relationship and relevance to the research questions.

In this research, the data collection methods, which are associated with interpretive paradigms and that are commonly used in ethnographic studies - observation and interviewing, were used. Additionally, and with the intention of further understanding and analyzing the problem object of the study, I have decided to distribute questionnaires to the participants.

Having stated the data collection methods on which this study was based (observations in the classroom toward the end of the academic year in May 2018, discussion groups, and questionnaires), the use of these methods allowed me to obtain precise information about a very specific context. It also provided me with a better understanding of the use of electronic tablets in the English classroom in the Andorran educational system.

This research analyzed different data sets collected through a process of triangulation aiming to provide an exploratory account of the context being observed, paying close attention to participants' views and practices. Triangulation is defined as "the use of two or more methods of data collection in the study of some aspect of human behavior" (Cohen et al., 2007, p. 141). It attempts to explore more fully the richness and complexity of human behavior data by studying it from more than one standpoint and is a more powerful way of demonstrating its validity.

3.1 Research Questions

The research questions guide the design of the research instruments and narrow down the scope of the study. These specific questions are the most essential concerns and the focus of the research process. Thus, to answer the general research question "What are the perceptions, practices, and attitudes of students and teachers in using the iPad in the English classroom in the Andorran education system?", the study addressed the following specific research questions:

1. How do students and teachers perceive the use of iPads?
2. What are the specific practices of students and teachers regarding the use of iPads?
3. What are the attitudes of teachers and students regarding the use of iPads?
4. Why is the tablet used in the manner it is used in the English classroom?

As previously mentioned, this research is the first of its kind in Andorra. Because of the originality in the context of this study, it is necessary to approach it through the perspective of the main stakeholders and users of iPads first, in this research's scope, the teachers and the students in EFL classrooms in Andorran secondary schools. Methods utilized to gather data to answer the specific questions mentioned above aided me in providing evaluative insights into the deployment of the iPads thus far. While the technology in question, the iPads, is highly technical in nature, it is important to fully understand the beliefs and opinions of its users and what practices have risen from the usage of the device prior to conducting a strict quantitative measurement of the effectiveness of these tablets in the educational system. Nonetheless, descriptive qualitative strategies yield extensive data that aid decision-makers regarding the effectiveness of a program or project.

Morgana (2021) noted that research on MALL among young learners (aged 13 to 17) in the secondary school language classroom is underexplored, as revealed from her review of literature on the subject for the past ten years. Furthermore, it was revealed in Chapter 2 that there is an obvious lack of sufficient research that explores the attitudes and perceptions of both teachers and students regarding the use of technology in the classroom. These justifications therefore aided me in developing the research questions of my study.

Perceptions, in the first specific research question (RQ1), encompass the views, opinions, feelings, and thoughts of the users towards the iPad. Given (2008) explains that perception is a way to understand reality and experiences through the senses. These perceptions or beliefs establish an individual's truths. Examples of these perceptions towards the iPad may include whether the users deem the technology as useful or useless, easy or difficult, etc. Qualitative research necessitates studying perceptions "to gain access to understanding the meaning of experience for an individual, a culture, and or social groups" (Given, 2008). How the iPad users perceive this device influences their actions, the way they use it for the purposes it was intended to and even beyond. This is the focus of the second research question (RQ2), to identify how the iPads are actually used, in and out of the EFL classroom. If, for example, the users perceive the device as useful, in which specific situations,

under what setting, and how, do they use it? Consequently, the behaviors, whether they may be favorable or unfavorable, that result from these perceptions and actions, comprise the attitudes which are indicated in the third research question (RQ3). Do the users have a positive behavior towards the use of iPad in the classroom? Do they have a confident and reassuring attitude regarding this technology? The final research question (RQ4) is concerned with understanding the factors and reasons that affect how iPads are used by teachers and students. The beliefs and practices explored in these specific research questions are also reflected in the components of language policy identified by Spolsky (2008) which were discussed in Chapter 2.

3.2 Research Paradigm

It has been stressed that this study is centered on understanding the perceptions, attitudes, and practices of students and teachers regarding the iPad usage in the English classroom in the Andorran schools. This research's interpretive/constructivist paradigm is thus predicated on qualitative research design rather than quantitative.

Contrary to the positivist approach of finding absolute truths through scientific methods that test hypotheses using experimentation and quantitative strategies, this research is contextual and social in nature, as it is in the field of educational research. Its aim is to understand the realities of humans and their socially constructed truths. Therefore, it lies in the spectrum of interpretive philosophy, particularly on the constructivist worldview.

Guba (1990) characterizes a research paradigm with answers to the three basic questions on ontology (i.e., the nature of reality), epistemology (i.e., what and how to know), and methodology (i.e., the procedures to obtain knowledge) (cited in Guba & Lincoln, 1994). In the ontological and epistemological aspects, the focus of this research is to understand and explore the realities and perceptions of two of the Andorran schools' stakeholder groups (i.e., the students and the teachers) regarding the portable device distributed at the schools. Since these realities are subjective and created by these culture-sharing groups, the truths are not absolute and are subject to interpretation. The data collected for this study are therefore qualitative. The methodology, therefore, is centered on the qualitative approach. Cohen et al. (2007) state that qualitative research "draws the researcher into the phenomenological complexity of participants' worlds; here situations unfold, and connections, causes, and correlations can be observed as they occur over time" (p. 397).

The specific methods, which consist of the strategies and tools employed in this research's methodological paradigm, are detailed in the succeeding subchapter.

3.3 Research Methods: Ethnography and Mixed Methods

3.3.1 Ethnography in ESL

This research endeavor makes use of the interpretive qualitative research paradigm, specifically the ethnographic tradition. This approach was chosen to understand in greater depth the perceptions of iPad users (i.e., the students and the teachers) and to observe their behaviors and interaction with the technological tool while within the confines of the educational environment. Contrary to the case study methodology, which is more short-term and examines a specific case in one instance only and which was also considered for this research, this study is meant to cover the participants' experiences over a longer duration of time (in this case over a two school-years period) and to conduct data gathering in sequence, longitudinally, starting from classroom observations, followed by focus group interviews, then the distribution of questionnaires.

Professor Karen Ann Watson-Gegeo, professor emeritus at UC Davis School of Education, mentions how ethnography has been welcomed with enthusiasm in educational and ESL research because of the approach's "promise for investigating issues difficult to address through experimental research" (1988, p. 575). Some of these difficulties may be rooted in sociocultural processes or institutional and societal pressures which produce human behavior to be difficult to quantify, thus needing the aid of qualitative interpretation and explanation. Ethnography is now a common research tool in the field of education. Holliday (1997; cited in Pasassung, 2011) calls research focusing on describing the education settings and contexts as educational ethnography and that this approach is used to evaluate educational programs.

Watson-Gegeo and Ulichny (1988) define ethnography as "the study of people's behavior in real settings and situations" (p. 75). These settings may be the neighborhood, the community, and in educational situations, the classrooms, which is the setting of this research. Accordingly, these researchers point out the main goal of an ethnographer, which is to describe the accounts of what people do in these settings, their interactions and the outcomes of these interactions, and the meanings behind these interactions. Hence, the ethnographic

approach analyzes in full detail the whats, the hows, and the whys of human behavior and interaction in a given context and location. Bogdan and Biklen (1982) highlight the key importance of the researcher in an ethnographic study. Pasassung (2011) contends that the ethnographic approach requires direct involvement of the researcher through the methods of observation and interviews, which is how this study has been conducted. In this dissertation, I was the primary person in charge of carrying out the classroom observations, taking field notes, conducting focus group interviews, and surveying the participant groups.

Watson-Gegeo and Ulichny (1988) further contextualize the use of ethnography in second language acquisition wherein the research tradition attempts to study language teaching and socialization practices, such as children and adult language learning processes, the use of mediation tools like technological devices in teaching second languages, and the student-teacher interaction which may aid teacher training and development.

According to Watson-Gegeo (1988), for a research study to be considered ethnographic, it must emphasize the key principles that define ethnography. First, not only must a study describe the behaviors, but it must also provide an explanation of these behaviors, which must be based upon grounded theory. Grounded theory, as defined by Glaser and Strauss, is "based in and derived from data, and arrived at through a systematic process of induction" (1967, cited in Watson-Gegeo & Ulichny, 1988).

Second, the ethnographic analysis must be holistic, meaning, not only does the analysis provide for the account of the behavior (the observed interactions) but also the contexts within which these interactions occurred. The contexts are the circumstances when a behavior occurs, and they can be said, metaphorically, to occur on two levels, horizontal and vertical. Horizontal context is the unfolding of the events over time, how situations from the past affect the present and future behavior, while vertical context is the effects of hierarchical elements, which, in the case of educational research, could be the roles of teachers, school administrators, higher decision-making bodies and so forth, over the policies and regulations which the research actors work around with. The researchers call this "thick explanation", which is when an ethnographer takes into account "all relevant and theoretically salient contextual influences on the interaction" (Watson-Gegeo & Ulichny, 1988, p. 77). In this study, the horizontal ethnographic context is evident in the research process that spans three years, from May 2018 to May 2021 (refer to Figure 3.1 for the data collection timeline). During these years, data on the perceptions, attitudes, and practices on the use of iPads by the teachers

and students were collected. Taking the vertical context into account, more than just the teachers and students, school administrators, curriculum developers who have designed the UPs (see Appendix F for the guidelines on the use of iPads), and the Andorran Education Ministry, all have affected the study and had roles to play in this educational research.

Third, the ethnographic data collection is guided by a sound theoretical framework that steers the researcher towards successfully addressing all the specific research questions. Watson-Gegeo and Ulichny goes on to say that "ethnographers do not claim that they come to a situation like a "blank slate" with no preconceptions or guides for observations" (p. 578). Indeed, theory plays an important role in assisting ethnographers to gather significant and relevant evidence to achieve the goals set for the research study.

According to Watson-Gegeo (1988), the primary product of ethnography is the "detailed description and analysis of a social setting and the interaction that goes with it" (p.582). But in order to obtain this product, it must go through various methods of data collection. These methods may be done through the following procedures:

> "...techniques of observation, participant-observation (observing while interacting with those under study), informal and formal interviewing of participants observed in situations, audio- or videotaping of interactions for close analysis, collection of relevant or available documents and other materials from the setting, and other techniques as required to answer research questions posed by a given study. Historically, ethnographers have been methodologically very eclectic, using both quantitative and qualitative research methods where appropriate (Pelto & Pelto, 1970, cited in Watson-Gegeo, 1988, p. 582)."

That last statement discussing the eclectic data gathering approach of ethnographers alludes to the comprehensiveness and extensiveness of data required to provide a full interpretive explanation of the observed phenomena, hence, the need, at times, to combine methods for validation. This research employs not only the methods of classroom observation and focus group interviews, but also the use of questionnaires to gain better insights into the perceptions, attitudes, and practices of the Andorran schools' students and teachers regarding the use of the iPads in the classrooms.

3.3.2 Mixed Methods

To obtain appropriate data, a mixed-method approach was added. Using both qualitative and quantitative tools to gather data from different time points and sources is part of data triangulation methods and increases confidence. Two sets of questionnaires were developed, one for the students (see Appendix A) and the other for the teachers (see Appendix B). The use of questionnaires, while predominantly employed in quantitative studies, allows for data triangulation that positively affects the research's validity.

Winter (2000, cited in Cohen et al., 2007, p. 133) talks about the characteristics of valid research data and how to achieve them. He specifies that "in qualitative data, validity might be addressed through the honesty, depth, richness, and scope of the data achieved, the participants approached, the extent of triangulation and the disinterestedness or objectivity of the researcher."

Data triangulation, therefore, is an essential contributor to research validity. In this research, methodological triangulation was achieved by gathering multiple data sets through multiple research instruments and data analysis methods to answer specific questions (see Table 3.1 for the instruments which address each research question). Fielding and Fielding (1986) and Diesing (1981), as cited by Watson-Gegeo (1988, p. 584), say that triangulation or the act of "putting together of information from different data sources and/or data collected through different research methods, such as participant-observation, interviewing, network mapping, and surveys" is "an important strategy for arriving at valid (or "dependable") findings in ethnographic work".

To address the research questions mentioned above, the study employs various research instruments. Table 3.1 depicts how these research questions map onto which data collection instruments, the corresponding group sizes, and which data analysis techniques were used.

Table 3.1

Research Questions and the Data Gathering Methods

Specific Research Question	Instrument/s that Addressed the Question	Participants	Data Analysis Technique
1. How do the students and teachers perceive the use of tablets in the classroom?	Focus Group (FG) Interview, Questionnaire	FGs: 2 teacher groups of 3, 2 student groups of 6; Questionnaire: student and teacher population for secondary school year 1-2	Qualitative Data Analysis, Descriptive Statistics
2. What are the specific practices of teachers and students regarding the use of tablets in the English classroom?	Classroom Observation (CO), FG Interview, Questionnaire	CO: 3 classrooms; FGs: 2 teacher groups of 3, 2 student groups of 6; Questionnaire: student and teacher population for secondary school year 1-2	Qualitative Data Analysis, Descriptive Statistics
3. What are the attitudes of teachers and students regarding the use of iPads?	FG Interview, Questionnaire	FGs: 2 teacher groups of 3, 2 student groups of 6; Questionnaire: student and teacher population for secondary school year 1-2	Qualitative Data Analysis, Descriptive Statistics
4. Why is the tablet used in the manner it is used in the English classroom?	CO, FG Interview, Questionnaire	CO: 3 classrooms; FGs: 2 teacher groups of 3, 2 student groups of 6; Questionnaire: student and teacher population for secondary school year 1-2	Qualitative Data Analysis, Descriptive Statistics

3.4 Sampling Criteria and Selection of Participants

There were multiple data sets (i.e., the collection of raw research data) generated by the three data collection instruments of this study. There were three classroom sessions observed, with each session's recording and field notes considered as a data set. Four data sets were collected from the semi-structured focus group (FG) interviews - two from the teachers' FG and another two from the students' FG. Two data sets were generated from the questionnaire responses - one from the teachers' version and another from the students'

version. This meant that there was a total of nine participant groups for this research. Table 3.2 below shows the summary of the total number of participants and respondents and the group count per research instrument.

Table 3.2
Summary of Participants/Respondents per Research Instrument

Research Instrument	Teachers	Students
Classroom Observations	3 classroom sessions	
Focus Group Interviews	6 participants (2 groups of 3)	12 participants (2 groups of 6)
Questionnaires	6 respondents	220 respondents

One of the limitations of this study is that the researcher is dependent upon the Andorran Ministry of Education regarding the recruitment of participating groups from the population. A request was submitted to the Ministry with the specifics on the target population (i.e., teachers and students in the EFL classroom from the first and second levels of the Andorran secondary schools). The education board was the body responsible for contacting the target teachers in the focus group discussion and the classes that will be observed. The Andorran Ministry of Education sent a petition to all these target English teachers for the corresponding levels. Those who responded to the petition were volunteers who willingly expressed participation in the study. The participating students for the focus group interviews, on the other hand, were also recruited on a voluntary basis.

As for the questionnaire, the Google Form link was sent to the Ministry of Education for distribution to all the students belonging to the first and second years of secondary school from the three Andorra schools located in Santa Coloma, Encamp, and Ordino, and to all the English teachers of the same year levels from the same three schools. This Google Form link was sent to their @educand.ad email address, the official Google for Education account of teachers and students at the Andorran schools.

Table 3.3 depicts the total number of teachers and students in the EFL classrooms from the first and second levels of Andorran secondary schools at the time of data gathering.

Table 3.3

EFL Classrooms' Student & Teacher Population for Questionnaire Distribution

School	Student Count	Teacher Count
Santa Coloma	118 (1st year) 99 (2nd year)	5
Escaldes	116 (1st year) 137 (2nd year)	3
Ordino	123 (1st year) 97 (2nd year)	5

3.5 Data Collection Site, Process, and Sequence

There are numerous ways of collecting data from research participants, including but not limited to in-person interviews or surveying, phone correspondences, email outreach, digital forms, and now the online and hybrid conferences have been introduced as affected by the quarantines and restrictions due to the pandemic.

Since this research employs mixed methods, the researcher utilized in-person data collection or physical appearance for the focus group interviews and classroom observations, guided by the semi-structured interview protocol in Appendix C and the classroom observation guide in Appendix D, respectively, while the questionnaires (see Appendices A and B) were designed using and distributed via Google Forms. The latter allowed for an easier distribution scheme since there was a bigger sample size of participants who will need to respond to the survey. Online forms make it easier to reach a wider audience and receive submissions in a timely manner with less physical effort from both the researcher and the respondent. The Google Form platform also allows for automated collating and graphing of data.

The research data from class observations (May 2018) and the first part of the focus group interviews with teachers and students (May 2018) was collected before the onset of the COVID-19 pandemic in Andorra. Therefore, every step of the data gathering could be coordinated personally or face-to-face, with no particular consideration on group size or social distancing. However, the questionnaires were distributed in February 2021 online and a final focus group interview with the teachers took place in May 2021. This last data gathering phase was performed online to follow the government-mandated health protocols.

The reason behind this chronological order is that first I carried out the class observations in May 2018. What I had observed informed the putting together of the focus groups and the corresponding interviews within those groups, which took place later that same month (May 2018). As a result of analyzing the data gathered in the focus groups, I was able to create the questionnaire (distributed in February 2021) in order to double-check and gather more detailed data on topics that had emerged. Finally, in May 2021, a second focus group interview was conducted with the teachers to gather additional data on a variety of questions that had arisen.

The timeline that illustrates the timing of the different data collection methods is shown in Figure 3.1 below.

May 2018
Class observations and semi-structured interviews with students and teachers, part 1

May 2021
Semi-structured interviews, part 2 (online, with teachers only)

February 2021
Distribution and collection of questionnaires
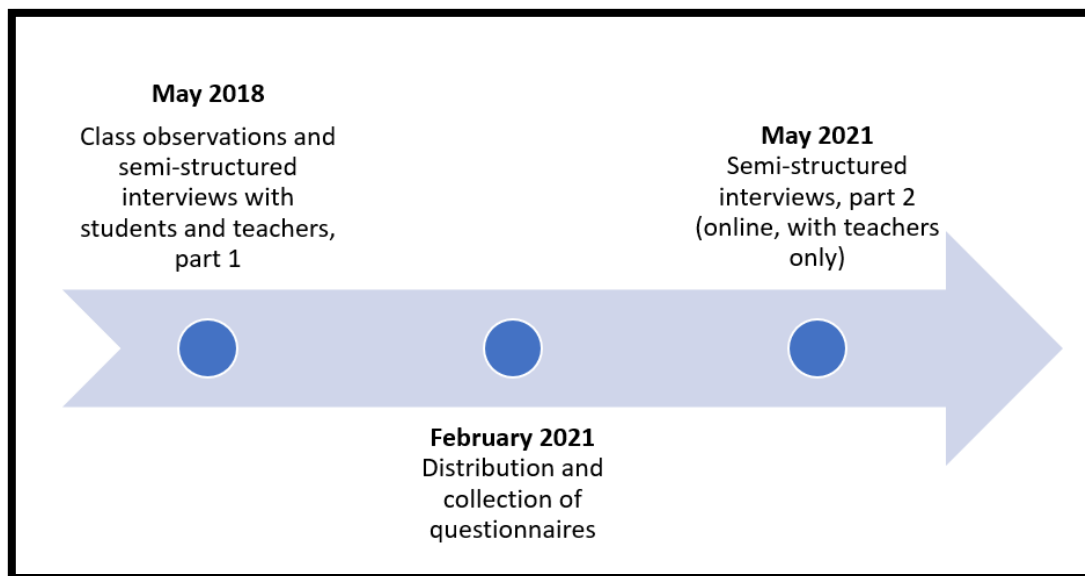
Figure 3.1. Data Collection Timeline

There is a gap in the data collection dates from 2018 to 2021 due to the onset of the global pandemic and subsequent lockdown, as well as the implementation of restrictions in Andorra where the research took place.

3.5.1 Classroom Observations

In this study, there were three class observations that took place on different days during the month of May 2018, toward the end of the academic year. Two of these were at the

Encamp school, where two sessions of one hour each were observed in full. The third session observed was at the Ordino school, for a full one-hour class session.

It was necessary to find out which practices and strategies of teachers and which practices of students were employed regarding the use of the tablet devices within the English class. Hilberg, Waxman, and Tharp (2004) argue the importance of observational studies to remedy the bias towards overreporting (i.e., reporting of more frequent usage than what is actual) of technology use in classrooms prevalent in self-reported data by the students, teachers, and school administrators.

Initially, this study's intention was to observe any type of observable event. Nonetheless, observing and tracking all accounts going on during a lesson, with a considerable number of students, was not realistic. Therefore, the observation process zoomed in on specific patterns that occurred in the classroom in a more systematic way. In order to do so, a semi-structured observational framework, that is, a set of observable conducts and behaviors which would identify the teacher's and students' attitudes, was contemplated. Nonetheless, the fact that it is advisable not to take preconceived ideas to the fieldwork was acknowledged and as Holliday (2002) states, the researcher should be open to any instance that might emerge during observation.

Non-participant observations were carried out inside the classroom. These non-participant observations allowed the analysis of the practices and strategies employed by the teachers and the students, with the least interference possible. As set out by Cots, when it comes to observing, what it is that we wish to observe must be borne in mind. Cots proposes three key groups as objects of observation: the agents (teachers and students), the rules (the patterns of interaction within the classroom and the teaching session), and the classroom as an environment (both educational and social). He stresses that it is not only necessary to know what needs to be observed, but that the observer must also be aware of the different ways to carry out observations and make further analysis:

> "Among these procedures we mention structured observation (using observation sheets/templates which establish what is to be observed in advance), non-structured observation (in which the observer takes notes and later writes up a description of what happened in the classroom), audio and video recording, transcription of sample interactions in the classroom, interviews, class diaries and questionnaires." (p. 22)

Finally, it is necessary to take into account what data it is that one wants to collect and what will be relevant in its subsequent analysis. Accordingly, Cots points out that:

> "While certain aspects in the classroom can be quantified (i.e., the number of questions a teacher asks, the amount of time that students devote to working individually, the number of words produced by each student, etc.), other aspects are not so easy to measure (i.e., anger, anxiety, receptivity, etc.). On this subject, the authors describe analytical categories of 'low inference' or 'high inference', according to whether appreciation of the phenomenon in question requires a greater or lesser effort of interpretation, going beyond what is immediately visible." (p. 46)

Therefore, considering what must be observed in the classroom, the procedures required for good observation and the type of data to collect, observation is necessary to be able to better understand the reality that surrounds us. Thus, the field work consisted of observing three secondary school class sessions in Andorra, each full English class ran in one hour duration. It was necessary to observe diverse contexts, meaning the students have sufficient time interacting with tablets, various activities to be completed, different students and teachers, to better understand the use of electronic tablets in English classes. The observation focused on the interactions with the technology by teachers and students - the task types and how they were achieved using the technology, the skills being developed with the aid of the iPad, the amount of time and extent they were utilized, and so on. All observations were recorded in writing through fieldnotes, and some photographs were captured as well. For this purpose, a Classroom Observation Guide with different categories had been created (Appendix D). This guide contemplated issues such as the type of activities taking place in the classroom, the way participants were organized, the nature of the content of the lesson, the type of skills students were practicing, the materials used, and the use of the target language in the classroom.

Regarding tasks, I observed what the task types were and whether the students needed to use the tablet for that task or not. Accordingly, I also noted whether students started using technology by their own initiative and if there were any instructions about technology use at the beginning of the course.

Part of my observations was the classroom setting to detail whether the teacher was working with the whole class or not and if students were working in groups or individually. In the case when students were doing group work, how this was organized was checked as well.

During the observation, I paid attention to the content of the lesson, if the focus was on classroom management, language (form, function, and discourse), or other. Also, I observed who oversaw the selection of the topic, whether the teacher, the students, or both.

I observed the skills also, paying attention to whether the students were involved in listening, speaking, reading, writing, or combinations of these. In all instances, I paid close attention to the use of tablets.

Moreover, I noted what types of materials were used, what was the source or purpose of the materials, when were the iPads used (e.g., purposes, types of resources, in what activities, whose initiative, etc.) and how controlled their use was. Additionally, I checked if students were directed by the teacher or students worked on the tablet on their own initiative.

Finally, the use of the target language, that is, English, during the lessons and to what extent the target language was used, was observed in detail. I also checked if the use of the tablet interfered in the use of the target language.

All the above-mentioned aspects during the lesson were written down and field notes were completed immediately after the session took place. Once there was computer access, I transferred all the notes and photos to a word processing file and added any additional necessary details to further expand upon what had been observed during the sessions.

3.5.1.1 Class Observation Guide

Several iterations were made in the class observation guide (Appendix D) after the piloting took place. The guide classified the items to be observed into six main categories. This number remained unchanged as it covers a broad enough number of aspects. Nonetheless, after the piloting, it was perceived that more precise data regarding the use of the tablets in the classroom was necessary as this is ultimately the purpose of this study.

The first category was *Activity Type*. Students were engaged in many different tasks to complete an activity. In both observations, the activity transcended the duration of one lesson period. Also, data was gathered regarding how students used technology to complete the task (individual work, pair work, group work, software/apps used, etc.), whether they were prompted by the teacher or not to start using technology, and about what instructions were

given by the teacher on how to use the technology. Therefore, after reevaluating this first section, three more items to contemplate the above-mentioned issues were included.

The second category involved aspects related to the participant's organization within the classroom. The piloting took place in two different schools of the Andorran school system: Encamp and Ordino. The students' desks were distributed differently in both classrooms, so a new question regarding seating arrangement was introduced under this section.

The item "Is the range of topics broad or narrow?", was dropped from section three *Content*, as it did not provide any relevant information for the study.

Section four was renamed *Skills*, as the previous name Student modality did not convey the right meaning. This section was also enlarged with additional items to better reflect the use of the tablet under each circumstance (i.e., how the tablet was used to practice different skills or a combination of skills).

The fifth section which deals with the type of materials being used to complete each task was altered to include more detailed information regarding the use of the tablet under each circumstance.

Finally, the last section, *Use of the Target Language*, has included an additional item to closely check whether the use of the tablet interferes with the target language used.

3.5.1.2 Turning Up in the Field and Becoming a Stranger

The researcher's role during the lesson observations was that of a non-participant observer (Creswell, 2003; Merriam, 2009). Gold (1958, cited in Cohen et al., 2007) identifies four classifications of researchers' roles in observations. These are *complete participant*, *participant-as-observer*, *observer-as-participant*, and *complete observer*. In this research's methodology, the observer takes a passive role and does not participate in any of the instances taking place that the researcher is observing. However, when observing the class, no matter how unobtrusive the observant is, the actions of those being observed might be affected (i.e., the kids might behave differently than normal because someone else is around). This is known as the Observer's Paradox, which Labov (1972) explains as the tendency of the observed to talk in a different manner than their normal speech when they are conscious of being observed. The Observer's Paradox, which states that "the presence of a fieldworker or recording equipment paradoxically inhibits researchers from exploring that which they seek to study" (Gordon, 2012, p. 299). This study by Gordon discusses the problem of study

participants manipulating their image and projecting a different identity in the presence of a recorder or field observer. Adler and Adler (1994) argue that a total non-participant observational role of researchers is impossible and that "all research is some form of participant observation since we cannot study the world without being part of it". But they also advocate the possibility of non-interventionist traditional observation methods where the researchers "do not seek to manipulate the situation or subjects, nor do they deliberately create 'new provocations'", which represent detachment, distance, and strangeness from the participants (p.378).

This observation phase aimed to understand the actual uses of tablets during the English lesson while the students and the teacher were interacting. The curricular guidelines that the teachers at Andorran schools use for English classroom instruction can be found at Appendix F, which corresponds to the iPad instruction guides used for the classes observed for this research.

3.5.2 Focus Group Interviews

3.5.2.1 The Semi-Structured Interview Protocol

Two different protocols (Appendix C) were designed for the two semi-structured interviews: one with students and another one with teachers. The two interviews were carried out following these protocols. There was a clear difference between the two groups. Whereas the discussion with teachers flowed naturally and needed very little prompting, it was not as evident to keep the conversation rolling with the students. The former expanded on their answers and connected ideas, transitioning from one item to another naturally. The latter provided for the most part shorter answers and needed additional cues to keep the conversation going. After analyzing the data gathered in both interviews, it was decided to maintain the two protocols as originally designed as they proved to be useful, despite the fact that not all cues were needed, especially in the case of the interview with teachers.

3.5.2.2 Conducting the Interview

In-depth semi-structured interviews were carried out with the discussion groups. In these groups the aim was to bring together members of the educational community who, under the guidance of the moderator, were able to express their perceptions, values, attitudes, and

motivations toward the use of technology in the classroom. Accordingly, it was proposed to organize different focus groups (FG).

The interviews with teachers and students were held separately. These were the focus groups proposed:

- FG1: Two groups of three English teachers (one for each of the two secondary schools selected). It is necessary to bear in mind that, at present, there are three Andorran secondary education schools in the country located in Ordino, another in Santa Coloma and the third one in Encamp.
- FG2: Two groups (one for each of the two secondary schools selected) of six secondary school students.

The approach employed in the discussion group is qualitative in nature and allows the topic of linguistic uses, perceptions, and beliefs to be studied in-depth, even though the sample is not very extensive, and the phenomena cannot be quantified (as it happens in quantitative studies). Qualitative work aims at probing into people's motivations, actions, and ideas. The goal of this study is not generalizing or quantifying but rather shedding light on a very specific situation in a very specific context.

It is relevant to mention that focus groups were established in all the existing secondary schools in the country, and therefore teachers and students from all the schools were interviewed. There are several advantages to implementing a semi-structured interview protocol. On the one hand, during conversations in discussion groups, the "snowball effect" was produced, whereby the opinions held by one of the members cause a chain reaction in the other participants. The fact of keeping interviews in discussion groups creates a group synergy that brings about a greater exchange of information and contribution of ideas, especially when compared to individual interviews. Once the initial presentations have been made, focus group participants can express their ideas freely and spontaneously, without the predetermined constraints of the rigid and inflexible structure of a questionnaire.

These focus groups had the opportunity to express themselves for over sixty minutes. During the discussion, I followed a list of topics of interest for the research that must be brought up to ensure that the key issues contained in the study are covered. The aim was to achieve a sufficiently conducive and relaxed atmosphere in order to encourage the contribution of ideas from all members of the group. Although notes were taken during the discussion, sound recording systems were also used. Afterward, all interviews were transcribed to facilitate data

systematization. To guarantee that all relevant topics were addressed in the focus groups, two sets of guidelines have been designed. These guidelines (Appendix C) helped to emerge relevant topics necessary for the research which were addressed by participants.

3.5.3 Questionnaires

3.5.3.1 Preparing and Designing the Questionnaires

Questionnaires are widely used and useful to collect data, mainly in quantitative studies. Nonetheless, they were found suitable for the purpose of this research. They provide structured data, and they can be administered without the presence of the researcher. The intent of this final phase in data gathering was to triangulate the data from the classroom observations and focus group interviews.

The questionnaire was designed as inspired by the survey instruments used in various relevant studies such as Martiz (2015), Morgana & Shrestha's (2018), Peel's (2019) and others. The researcher consulted a broad range of reference studies that were related to this dissertation in terms of their topic. In the construction of the research questionnaire, however, no specific design or template was used because it was deemed important that the survey cover a wide range of questions to support the exploratory nature of the study. The questions included in the survey were designed with careful consideration of the social and cultural context of Andorra, with Catalan being the primary language of the instrument. Questionnaires take time to be developed, refined, and piloted to avoid gathering unsophisticated data and limited in their scope. When designing the questionnaire, special attention should be paid to its content, the wording of the questions, the form of response to the question, and the place of the question in the sequence.

In this study, the questionnaire was designed with thematic sections, each section gathering data to answer specific research questions. The first section was on respondent demographics, asking for their general information. The second was on the user's familiarity with or knowledge of the device. Next was on their frequency of usage of the iPad. Following it was the section relevant to the tasks or duties performed with the technology, which refer to their practices in the classroom. And finally, the section that specifies the respondents' beliefs regarding the iPad for the English classroom (see Table 3.4 for the summary of question counts and types per section). Grouping the questions into sections made the instrument more

reader friendly. The questions were also arranged in the continuum of easy-to-more challenging, which is considered the best practice (Peel, 2019). The researcher consulted with the research advisers to gather feedback on the distinct aspects of the instrument prior to the distribution during the piloting.

Table 3.4

Summary of Question Counts and Types per Questionnaire Section

	Students' Questionnaire		Teachers' Questionnaire	
Section	Number of Questions	Question Types	Number of Questions	Question Types
General Information	2	multiple-choice questions (MCQ), open-ended questions (OEQ), rating scale (RS)	4	MCQ, OEQ
Knowledge	3	MCQ, RS	7	MCQ, OEQ, RS
Using the iPad	5	MCQ, OEQ	10	MCQ, OEQ, RS
Duties	4	MCQ, OEQ	5	MCQ, OEQ
Beliefs	3	MCQ, RS	7	OEQ

To validate the questionnaires prior to their distribution to the target population, a pilot study was conducted. In this regard, the questionnaires were handed out to a group of 8 students and 3 teachers in the Encamp school. The students volunteered to fill in the printed questionnaire during one of their breaks between lessons. None of them posed any doubts or problems to me while answering the questions. All student questionnaires were collected once they were complete. It took students an average of ten minutes to fill them in. One teacher volunteered to hand out the questionnaires to their colleagues. They were returned fully completed the following day.

When piloting a questionnaire, all its aspects need to be evaluated, from font type to the distribution channel (Oppenheim, 1992). Once the questionnaires (Appendices A and B) were created, they needed to be pretested to check the relevance of the questions posed, the wording, and any other issues which could potentially affect their smooth completion. The goal was "to increase the reliability, validity, and practicability of the questionnaire" (Cohen et al., 2007, p. 341).

A crucial factor was to pay attention to the respondents, trying to see the questionnaire from their perspective and envisage how they perceive it. To do so, three students within the same age range and two teachers using technology in their classroom provided feedback. In this regard, several questions were dropped because of their little relevance. Questions like "Do you know how to install an app on your smartphone?" or "Have you ever created an app?" were deleted. Word choice was also carefully analyzed. As a consequence, some questions were reworded to facilitate a clearer understanding, and some verb tenses were altered.

From the analysis of the answers given by the volunteers who pretested the questionnaires, some changes were made. For example, the question "How many hours a day do you use your device?" originally provided only three answers: 1- Less than an hour; 2- From one to two hours, and; 3- More than two hours. As the majority of students answered the latter, the options were increased so as to distinguish students using their devices between two to three hours a day, and more than three hours a day. This problem was not encountered in the teachers' replies. Nonetheless, and because the sample selected was very small, it was decided to include this array of choices in the teacher's questionnaire as well.

Early feedback gathered noted that questions 12 and 14 were very similar. Question 12 originally asked "Which has been the best activity that you remember taking place in the English classroom in which you use the iPad?" while question 14 was phrased "Please give a specific example of an activity that you have done with the iPad in the English classroom that you particularly enjoyed." Indeed, these two questions were highly related when considering the verb tenses used. Therefore, following the edit suggestions, the latter question was finally rephrased as "In your opinion, why should the iPad be used in English class?" to ask not about the respondent's experience (i.e., the use of present perfect in the words "have done"), but rather to encourage them to provide suggested future activities with the iPad (i.e., the use of the modal verb "should").

There were changes in word choices as well, to cater to the Catalan vocabulary level of the student respondents. In one instance in the 8th item in question 16, the original adjective pair in the options included the Catalan word *innocu*, which, when translated to English, meant that something is harmless or does not have any harsh effects on health. But since this word was not easily understood by the students, the adjective pair was then changed to "*no és perillós per a la salut*" (not dangerous to health) or *és perillós per a la salut* (dangerous to health).

In question 17, the third option was first phrased as *Et permet estar en una situació real de comunicació?*, which loosely translates to "Allows you to be in a real communication situation" but since this question was quite difficult for children to comprehend, it was then phrased to *Et proporciona materials en anglès en un context real?*, which means "Provides you with materials in English in a real context?" In this same question 17, the 8th option in the original questionnaire was deemed incomplete. At first, the option only said, "It's easy". But after receiving the feedback "It's easy in respect to what?", the option was rephrased to say, "Facilitates the learning of English".

Other feedback generated from the wording of the questionnaire were for questions 2 and 3. In question 2, it read "To which class do you belong?", and this was changed to "To which course do you belong?". For question 3, on the other hand, the respondents were to select from a scale of 1 to 5, referring to the levels Novice to Expert. Novice, directly translated to Catalan, is *novell*. However, this is one of the words that are hardly ever used now by younger speakers. This has, therefore, been changed to Beginner, which, in Catalan, *principiant*, is a more commonly used word nowadays. It was also observed that there were instances across the questionnaire wherein the Catalan words for teacher (i.e., *mestre* and *professor*) were used interchangeably. For the purposes of consistency, the researcher chose to stick to the word *mestre* throughout the form.

All the above-mentioned feedback and changes to the students' questionnaire were reflected in the teachers' questionnaire as they carried the same questions on most of the pages. Although, there were also some specific edits done to the teachers' version only, especially in the section detailing the respondent demographics. One of these is for the first question, which originally had a blank line for them to fill in their specific ages. This was later revised to age ranges, to be able to gather the data for age groups rather than individually distributed ages. Question number 2 first asked "How many years have you been teaching

English?" and just like in the first question, the year range was added so that the most frequently occurring group with the length of experience can be seen clearly in the results.

For question 15 asking teachers how the usage of the iPad in the English class was, there were some adjective pairs that were dropped from the original teachers' questionnaire as these were not very clear for the respondents. These adjective pairs were "feasible or unfeasible", "necessary or unnecessary", and "manageable or unmanageable". In this same question item, one of the adjective pairs' orders was inconsistent with the order of the other options which were arranged first as positive adjective then negative adjective. This was fixed to follow this general ordering in the options where the positive adjectives came first.

Other changes were introduced in the questionnaires. In several questions, the option "Others" was included among the answers, so as not to limit the options to the originally proposed closed list. This alteration was introduced several times: three times in the student's questionnaire and seven times in the teacher's questionnaire.

Additionally, another change was introduced to simplify and facilitate the process of providing the answers. In several questions, respondents were asked to consider how often they did certain actions. The original scale provided seven options which have now been reduced to five. This change does not affect whatsoever the preciseness of the responses but helps respondents to produce a precise answer in a speedier fashion.

Finally, the numbering of the questions was reformulated. In the original questionnaire, questions were numbered anew under each heading. It proved to be impractical when it came to analyzing the data, so all questions in the questionnaire were renumbered in sequential order, regardless of under which category they were classified

3.5.3.2 Distributing the Questionnaires

The final, validated questionnaires were distributed using Google Forms, via the following links sent to the teachers and the students, respectively: http://bit.ly/professorat2021 and http://bit.ly/alumnes2021. The questions in these instruments may be viewed in full in Appendices C-1 and D-1. For the benefit of non-Catalan speaking readers of this dissertation, the English versions of the questionnaire may also be viewed at Appendices C-2 and D-2.

There were some limitations that arose from the chosen distribution platform. Initially, the default set up of the questions only showed the main heading to the first questions and did not reflect this main heading in the succeeding questions. As a concrete example, question

number 16 in the form asked the student respondents to complete the sentence "Using the iPad in class is" with one of the two adjectives in the options (e.g., "interesting" or "not interesting"). This main question was repeated for the next nine following questions, with answer pairs such as "useful" or "not useful", "easy" and "difficult", and so on. However, due to the aforementioned limitation wherein the heading was only displayed in the first screen, the respondents found it troublesome to choose without the main question. Thus, there were changes that needed to be accommodated so that each succeeding question also bore the question prior to displaying the two options.

Apart from this, the rest of the feedback from the respondents regarding the online method of questionnaire distribution were solely on the formatting, which was mainly about the font size or font choice changes to make the text easier to view and read on various technological devices such as desktops, laptops, tablets, or mobile phones.

3.6 Data Analysis Techniques

3.6.1 Qualitative Data Analysis

Qualitative data analysis is "working with data, organizing it, breaking it into manageable units, searching for patterns, discovering what is important and what is to be learned and deciding what you will tell others" (Bogdan & Biklen, 1998, p. 21). This research employed thematic qualitative data analysis, which means that the data were processed following the six steps described by Braun and Clarke (2006). First step is "data familiarization", where the researcher familiarized himself with the raw data collected - read and re-read the fieldnotes and attentively listened and re-listened to the recordings to identify any emerging themes. In this step, the data items were recorded, individually, without classifying them into particular categories yet. Following this, step two is for "generating initial codes". Alshabeb (2020) recalled this step as boring and time-consuming yet explains that it is an excellent way for the researcher-analyst to familiarize himself with the data. Open coding was done following this step of identifying the emergent themes. Open coding is the process of data classification and organization whereby "researchers make notes and headings in the text" (Morgana, 2018, p. 86). This process generated coding units, which are words, phrases, or sentences that have aspects that may be connected to other codes either through content or context. Then, the third step of "searching for themes", wherein themes, the key concepts

relevant in addressing the research questions, were identified among the recorded data. The fourth step included reviewing themes and revising where needed. Once polished, the finalized themes were identified and named. Finally, an analysis was written up as part of the qualitative data report of the study.

To carry out the data analysis, coding of the data was implemented. Later, it was determined how all the elements were linked together, by narrowing down the focus. Further systematization, tagging, coding, and categorization were essential in order to interpret the data. This interpretation allowed us to come up with categories, topics, and themes derived from the data explored. Looking at the transcripts, coding selects relevant sections, and overlapping similar pieces of data with similar information, made a theme emerge, which is then discussed and analyzed.

For the purposes of this study, whenever we refer to "coding" we are referring to code as it is known in qualitative inquiry, which is defined by Saldaña (2016) as:

> "most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data. The data can consist of interview transcripts, participant observation field notes, journals, documents, open-ended survey responses, drawings, artifacts, photographs, video, Internet sites, e-mail correspondence, academic and fictional literature, and so on" (Saldaña, 2016, p. 4).

Since "code" can be interpreted to have other meanings, especially in the context of a variety of academic fields, Saldaña points out that it is important to distinguish "code" in qualitative studies from that of "code" in the field of semiotics. He highlights:

> In semiotics, a code relates to the interpretation of symbols in their specific social and cultural contexts. (...) In qualitative data analysis, a code is a researcher-generated construct that symbolizes or "translates" data (Vogt et al., 2014, p. 13) and thus attributes interpreted meaning to each individual datum for later purposes of pattern detection, categorization, assertion or proposition development, theory building and other analytic processes. Just as a title represents and captures a book, film, or poem's primary content and essence, so does a code represent

and capture a datum's primary content and essence (Saldaña, 2016, p. 4).

To give an example of this coding for the purposes of this study, we can look at an excerpt from the semi-structured interview of students and then attach a one-word or short phrase of capitalized code, which as Saldaña explains, "summarizes the primary topic of the excerpt" (p. 4).

RESEARCHER: And do you use it when the teacher tells you or can you also use it...?

STUDENTS: No, no…

MALE STUDENT: No, because of the temptation…

FEMALE STUDENT: Many times, they tell us to close it.

MALE STUDENT: Because if we open the iPad without saying what we're doing…

FEMALE STUDENT: It will be thought that we are playing.

MALE STUDENT: Sure, we may be playing and he doesn't know it.

RESEARCHER: Oh, but they can keep an eye on you. They know it, whether you're playing or not. There is a program…

STUDENTS: Yes, but…

FEMALE STUDENT: Yes, but even if they assume... If they assume you are playing, they make you delete the game, even if it is not true.

RESEARCHER: Okay, okay. But first you told me that you do use the iPad, for example, for WordReference and stuff like that…

STUDENTS: Yes…

RESEARCHER: That's why the teacher doesn't tell you: "Look at this in WordReference..." You use it when you feel like it.

MALE STUDENT: No. The teacher says, "What are you doing on the iPad?" Then we say: "WordReference".

> FEMALE STUDENT: When we sometimes ask Irene, "Irene, what does that mean?" And then she says, "WordReference." And then we have to look it up in WordReference.
>
> **CODE: DIRECTED USE OF THE IPAD**

Lines 540-588 in the semi-structured interview of students with the code

Thus, in our analysis below at Chapter 4, codes were presented as subtitle headings and subtopics which are the themes that emerged from the various data, and subsequently, the corresponding excerpts that support the choice of code.

To aid in a more efficient analysis process, I utilized ATLAS.ti, a software used to analyze large quantities of qualitative data in various formats such as texts, audios, graphics, or videos. The software allows importing of the raw file in different file formats, but in the case of this study, the transcript which was in text version was the one added. This text document is the result of the transcription of all audio recordings produced from the focus group interviews.

3.6.2 Descriptive Statistics

The questionnaire results were analyzed using descriptive statistics, through the three measures of central tendency (i.e., mean, median, and mode). Describing the data is a necessary step to reduce the voluminous data into easily readable and digestible information for the readers. Given (2008) writes how descriptive statistics provide an alternative context in qualitative research and how it depicts a richer or enhanced view of the phenomenon being studied.

The multiple-choice questions were reported by analyzing the mode, or the most commonly occurring value or response. The Likert scale questions were assigned numerical values. The averages of these values were automatically calculated by Google Forms and reported in graphs. Open-ended questions, on the other hand, were analyzed in much the same fashion as qualitative data; the processes were detailed in the previous section.

3.7 Measures of Validity and Reliability

In its simplest terms, validity measures how genuine a study is while reliability tests how consistent the measurements are. Validity refers to the believability of the research, and

it can be characterized in two aspects, internal and external validity. The first is anchored on the way the research instruments and data gathering methods aptly answered the research questions, which are the goals that the study intended to achieve. According to Cohen, Manion, and Morrison, internally valid research must have "findings that accurately describe the phenomena being researched" (2007, p. 135). Having a strong internal validity means that the instruments used were appropriate to the study and they were tested, either via pre-testing or via piloting. External validity, in contrast, refers to the replicability of the results to other related fields outside the current scope of the study. It is the "degree to which results can be generalized to the wider population, cases, or situations" (Cohen et al., 2007, p. 136). In essence, validity is the research work's credibility. Cohen, Manion, and Morrison go as far as saying that "validity is the touchstone of all types of educational research" and that "if a piece of research is invalid then it is worthless" (2007, pp. 133-134).

Reliability, on the other hand, refers to the consistency of data, which posits that if the test is re-run to the same respondents, a reliable study would yield almost the same, if not exactly the same research results. It advances the notion that if multiple researchers were running the same test at the same time, generating the same data would mean the study is reliable as there is repeatability in the test results. It is getting "similar data from similar respondents over time" (Cohen et al., 2007, p146).

3.7.1 Closeness to the Participants

Qualitative research calls for extensive data generated from research participants and the kinds and expanse of information gathered may vary depending on the nature and extent of relationship and rapport the researcher has with these participants. Since ethnographies as a qualitative methodology do away with objectivity and quantitative analysis, the researcher's intrinsic subjectivity is "centrally involved in the research process" (Campbell & Wasco, 2000, cited in Hewitt, 2007) and the depth of relationship with the participants may affect this subjectivity in the acquisition of research data through observation, documentation, and interviews.

The Researcher-Participant Relationship chapter of the SAGE Encyclopedia of Qualitative Research Methods mentions a continuum of the relationship between the research proponents and their respondents. This continuum ranges from "distant, detached, and impersonal to close, collaborative, and friendly" (Given, 2008, p.2).

Investigators Margaret Jane Pitts and Michelle Miller-Day (cited in Given, 2008) identify five phases of researcher-researched relationships. According to them, there are five possible turning points in the relationship within the duration of the study. The first phase deals with voicing out the researcher's concerns to meet the participants' needs as well as establishing a comfortable connection with them. The second phase finds both parties beginning to consider partnerships and interpersonal relationships with one another. These may evolve into more personal relationships towards the third phase. Consequently, friendships may be formed during the fourth phase, and finally, the personal relationship supersedes the research partnership.

Accordingly, this investigation indicates that many research relationships are not expected to progress towards the last phase, especially with studies conducted over short periods of time, which normally sees researcher-participant relationships reaching only the first level. It is also important to note that having a deeper and more evolved relationship with the participants does not equate to having better and higher quality research. Jeannette Hewitt (2007) adds that the qualitative research methodology is "vulnerable to bias through the attitudes and qualities of the researcher, social desirability factors, and conditions of worth" (p. 1149).

In the case of this study, there were two relationships between the researcher and the respondents - the researcher's relationship with the students and with the teachers. These relationships did not evolve beyond the second phase that Pitt and Miller-Day identified (i.e., research partnership). The respondent students and teachers remained as mere acquaintances and no close personal relationships were established. All interviews were done in a cordial manner, which traced no biases towards the collected information from the participants.

3.8 Fulfillment of Ethical Issues and Trustworthiness

3.8.1 Ethical Considerations

In order to conduct my research, I needed to be aware of ethical concerns. My research had to find the balance between the demands placed on me as a researcher describing and interpreting reality and the subjects' values and rights which could potentially be threatened

by the research itself. This ethical dilemma had to be resolved throughout the whole research process.

The different types of issues I investigated and the methods I used in order to obtain relevant and valid data brought forward different ethical issues: from the nature of the research project itself, its context, procedures adopted, data collection methods, the nature of the participants, type of data collected, and what use was given to the data (Cohen et al., 2007).

Researchers face the fact that methodological and ethical issues are inextricably interwoven in much of the qualitative research. Nonetheless, the behavior of researchers should not be subdued by a rigid and inflexible system of ethics. It should be taken into account that, for the majority of situations, the resolution of moral problems falls within a range of possibilities.

The following were the main issues that were dealt with during the research and the possibilities at our disposal in order to ensure ethical research were also investigated.

Additionally, I followed the European Code of Conduct for Integrity in Research of ALLEA (All European Academies) that the University of Andorra adheres to, whose main principles are:

> "• Reliability in ensuring the quality of research, reflected in the design, the methodology, the analysis and the use of resources.
> • Honesty in developing, undertaking, reviewing, reporting, and communicating research in a transparent, fair, full and unbiased way.
> • Respect for colleagues, research participants, society, ecosystems, cultural heritage and the environment.
> • Accountability for the research from idea to publication, for its management and organisation, for training, supervision and mentoring, and for its wider impacts" (ALLEA, 2017, p. 5).

3.8.2 Informed Consent

The principle of informed consent is crucial at the initial stage of our research. In fact, I needed to get access to the institution where the research took place: the Secondary schools of the Andorran educational system. To get this permission, the Ministry of Education was contacted. Also, I needed to get the acceptance of all those involved in the research.

My educational research involved teenagers (i.e., minors). These individuals were obviously not on equal terms with me, researcher, so it was crucial to keep this in mind during all the time the research was taking place. Obtaining informed consent for research with children was a two-step process. First, informed consent was sought both through the children involved and the adults legally responsible for them by explaining the point of the research and asking for permission to proceed. Any objections raised had to be fully respected, but there were no such instances neither during the class observations or during the interviews. The digital online questionnaires explicitly requested the participant's consent. Therefore, children could be approached. The information provided was intelligible and adapted to the age of the children.

Finally, I, the researcher, needed to make sure that the volunteers participating in the research had real freedom of choice. Sometimes, participants might feel coerced (by a teacher or director, for example), or might not want to offend the researcher by refusing to participate or might be influenced by peer pressure.

3.8.3 Access and Acceptance

Gaining official permission to undertake research in Andorran public schools involved contacting the appropriate persons in charge. Both the Minister of Education and the General Director of the Andorran school system were contacted. After these contacts, information regarding the aims, the nature and the procedures of the research were provided, and the logistics established to access the different schools for data gathering purposes.

3.8.4 Privacy

There is a clear tension between the individual "right to privacy" and the public "right to know". The Social Sciences and Humanities research council of Canada defined privacy as all the information relating to a person's physical and mental condition, personal circumstances and social relationships which is not already in the public domain. It gives the individual or collectivity the freedom to decide for themselves when and where, under what circumstances and to what extent their personal attitudes, opinions, habits, eccentricities, doubts and fears are to be communicated to or withheld from others (Social Sciences and Humanities Research Council of Canada, 1991).

We can clearly see that this right to privacy can easily be violated during the course of research or can also be denied after the research is completed, the participant being vulnerable at all times. In our research, this was particularly so, especially when we dealt with children. The greater the sensitivity of the information, the more safeguards had to be put in place. Aspects like intelligence, skills and ability of the participants are obviously more sensitive than their name and age.

As we will see next, the right to privacy is more than mere confidentiality. Our subjects had the right to refuse to take part in any or all our research, to obtain permission to undertake the research, to limit the time devoted to the research and to limit the observation to public behavior (Cohen et al., 2007).

3.8.5 Confidentiality

I, the researcher, was fully aware of what participants provided what information confidentiality entailed that the connection between the two could not be revealed publicly. This position was made clear to all subject participants at the time of data collection.

3.8.6 Anonymity

By anonymity we understand that the information which is provided by the participants of the research should never reveal their identity. Thus, participants' privacy was guaranteed as subjects could not be identified from the information provided in the research. Let us consider, though, that a subject who agrees to face-to-face interaction with the researcher can in no way expect anonymity. In this case, the researcher can promise confidentiality.

3.8.7 Research and Regulation

Nowadays, ethical regulation exists at various levels: legislation, ethics committees at universities (and other institutions conducting research), ethical codes for professional bodies, and finally the own ethics of the individual researcher.

To some extent, all these different levels of ethical regulation set guidelines to prevent unethical behavior during the research. Nonetheless, they did not solve all problems and ethical dilemmas that could potentially arise, as ethical principles are subject to a wide range of interpretations. "The difficulty and yet the strength with ethical codes is that they cannot and do not provide specific advice for what to do in specific situations" (Cohen et al., 2007).

In an increasing information-technology-driven world, a lot of stress has been placed on protecting information and the use it is given. Data Protection Acts are designed to protect data from misuse or abuse. These cover the principles of data protection, the responsibilities of data users and the rights of data subjects (Cohen et al., 2007).

3.8.8 Responsibilities to the Research Community

The researcher is a member of the research community, who inherently is involved with ethical responsibilities. It is crucial that no researcher jeopardizes the reputation of the research community or spoils future research opportunities. In our study, approaching a school directly, using an inappropriate approach, with clumsy data collection instruments and a poor research design, and then producing results as if they were reliable and valid was completely unacceptable. Doing so could put the institution at risk of being denied future access and damage the school's reputation.

CHAPTER 4: FINDINGS

4.1 Introduction

This chapter is dedicated to the presentation of the data gathered beginning with the classroom observations carried out in May 2018.

Secondly, we present the data from the semi-structured interviews with teachers and students that also took place first in May 2018, and again with the teachers only in May 2021, to gather further details on the topics that had emerged. It is important to take into account that 6 teachers and 12 students participated in these interviews, which makes up a considerable percentage knowing that there was a total of 13 EFL teachers in the Andorran school system at the time the data was collected and a total of 690 students in 1st and 2nd levels of secondary school in the Andorran school system at that time. This means that 46 percent of teachers qualified for interview were consulted and 2 percent of qualified students.

Thirdly, we present the data collected from the questionnaires in which 6 teachers and 220 students participated. This means that 46 percent of the surveyable teachers were surveyed, and 32 percent of students were surveyed as well. These high percentages are made possible by the fact that the Principality of Andorra's greatness lies in its small size which facilitates contact with many types of subjects for the purposes of carrying out ethnographic and close qualitative research.

The triangulation of these three types of data collected attempt to better explain the complexity of the situation under study: the use of the iPad in the English classroom in the Andorran school system. This was a powerful process to demonstrate concurrent validity.

4.2 Data from the Classroom Observations

It should be noted that in these observations, the manual of curriculum guidelines played a part and was read by the researcher who was the non-participant observer, as it is part of the rules under which the classes were taking place (as it was mentioned in Chapter 3, class observations consider the agents, the rules, and the classroom environment which influence the overall situation being observed). The curriculum guidelines guide the teacher through each unit that should be studied by the students, what the learning objectives of that unit are, what content to cover, what skills are involved, how much time should be spent on carrying out the task, and the evaluation criteria and indicators so that the teachers know how

to assess the students through each step of the learning process until the unit and all its tasks are finished. The curriculum guidelines (Appendix F) are highly detailed in nature, and they are followed by the teachers to a great extent, although they do have a room for adaptation according to the needs of the class. They are thorough in nature; to give an example, one unit, which is UP 1.3 ANG is entitled "Understanding and Creating Comics: Comic CAND Convention" and it consists of 30 pages of details on the points aforementioned and goes as far in detail as to state that it would take 1460 minutes (24 sessions) to complete that unit. Three classroom sessions were observed, in classrooms that on average have between 20-25 students.

Every pair of students (see Figure 4.1 below) had to produce a digital comic with superheroes which would then be presented to the rest of their colleagues. They needed to decide on the plot and characters they wanted to use in the comic. Once they had selected the plot, they searched for backdrops and pictures to be used in each panel. Some tasks in this activity involved working together, discussing what needs to be produced, while other tasks were done individually.

Figure 4.1. Students engaged in pair work at the Andorran School in Encamp

Individually, students looked for potential characters for their comic and chose the ones in their stories. See Figure 4.2 below for a photo of the students performing individual work.

Figure 4.2. Individual work while completing a task

The topic of the day's lesson was Sense of Humor. Each group needed to select a video clip which contained a joke or some humor they understood. Later, they shared the video and explained its content with the rest of their colleagues in the classroom.

The teacher was working with the whole class and the class was divided into small groups of four or five students. The group work was organized in such a way that students were either sitting next to each other or they were sitting in a square layout with pairs of students facing each other (refer to Figures 4.3 and 4.4 for the seating arrangements).

Figure 4.3. Seating arrangement at the Andorran School in Ordino

Figure 4.4. Students engaged in group work at the Andorran School in Ordino

4.3 Data from the Semi-Structured Interviews

The transcription of the semi-structured interview was initially analyzed in order to detect emerging topics. Ideas were tagged according to their similarity. All these tagged ideas then fell into categories, from which common topics emerged. Some excerpts from the semi-

structured interview that was conducted with teachers exemplified this process. These excerpts were coded and categorized under the common topic "Difficulty or easiness of using tablets".

TEACHER 1: To me, it was very motivating. I love new technology. I knew that the students would always be one step ahead of me. I was quite sure, because you say to them "Let's create a comic", and they download an app they've never seen before and in two minutes they've learned how to use it, and I still can't...

TEACHER 2: I had a similar experience to Irene. The truth is that, before this, I had always tried to use the new technologies, but I had never worked with an iPad and, well, I did see many possibilities, I saw many possibilities, but it is also true that I was a bit nervous because it is a tool that can also cause a bit of distraction, so when it came to managing all that in class I was a bit... maybe not afraid, but worried about how we would use it to maximise the students' learning and make sure that it did not become a distraction at times.

TEACHER 3: Previously, you might go to the computer room once a month and there was always the risk that the computer room, the server, Xena or something might not be available, so you had wasted fifteen minutes getting down there, calling the register and everything, whereas now it's "Let's do a search, find me whatever with this", and in ten minutes they're giving you presentations… In terms of presentations, these kids have really come on a lot. I was born in 1985 and even though we are the Word, email and Windows generation, we still find doing certain things difficult. it's hard for us to make a PowerPoint presentation and all that. But these kids will produce

really cool, super-visual presentations in minutes. It's amazing!
TEACHER 1: That's true.
TEACHER 2: They are not a bit afraid to investigate, explore, look…

2018 semi-structured interview with teachers, lines 14-29, 62-70, 73-78

The example above portrayed the way themes emerged from the analysis of the transcripts. Teachers acknowledged the fact that students were better prepared to cope with technologies than they were, but this was not worrisome. According to them, this proved to be an advantage as students constantly investigate new applications and alternative ways to achieve results and share that knowledge with teachers in a very natural way. According to some, this interchange of knowledge enhances the relationship between student-teachers as students actively play a role of "teaching" new concepts to the teachers. Advantages of using the iPad in the English classroom outweighed the disadvantages.

4.3.1 Convergences and Divergences Between Teacher and Student Interviews

After analyzing the transcripts of the semi-structured interviews that were conducted with teachers and students separately, we can see where both parties agree and disagree on the topics that both expressed their attitudes and beliefs in the interviews. Below are the topics addressed and the convergences and divergences that emerged regarding each one.

4.3.1.1 Enthusiasm

On the degree of enthusiasm regarding incorporating iPads in the classroom, both teachers and students expressed positive beliefs, although there was more enthusiasm on the part of the teachers because while some students expressed indifference, this was not a theme that came up on the part of the teachers. Teachers showed enthusiasm due to increased motivation on their part (the teachers), the possibilities that they see to maximize student learning through the iPad, the time they have saved because each student has the iPad at hand, and the fact that they have observed increased quality in the productions the students are able to put together on the iPad with all it has to offer.

> *TEACHER 1: For example, one thing I find very positive is that a lot has been gained in teacher-student or student-student communication, right? You saw it this morning... That is, communication is immediate. I ask for homework or I don't know what activity and, bam, they immediately share it through Showbie, it comes to me, I can review it. I don't have to take twenty notebooks home, but I can automatically check with this tool, I don't need any kind of paper, on the go with Showbie I correct and I re-send feedback back to the student.*

Lines 143-150 from the May 2018 semi-structured interview with the teachers

Here we can see that the teacher is enthusiastic about not having to take 20 student notebooks home because the correction of assignments has been streamlined through the iPad and the feedback is instantaneous. Teachers no longer need to rely on seeing a student in class on the next school day to provide this feedback, it can be provided regardless of time, place, or class attendance. In this way, feedback is both given and received with more uniformity and efficiency.

4.3.1.2 Reduced Time and Improved Efficiency

Regarding time management when completing assigned tasks, both teachers and students agreed that the iPad saves them time in the classroom. In the teachers' semi-structured interview, it came up that they did not have to go to a computer lab which was very time consuming (due to having to relocate away from their classroom, re-take attendance, and make sure all the computer lab equipment was in working order) to do what they can do with the iPad (see quotation from Section 4.1.1). Also, with the iPad, students can create productions very quickly and deliver them to their teacher directly for feedback and evaluation (or share it with classmates on Apple TV) with agility. The time efficiency aspect was mentioned in the student semi-structured interview, and it was acknowledged that they would not be able to work as quickly without the iPad.

FEMALE STUDENT: It is more practical to do your homework in English.

RESEARCHER: Which is more practical?

FEMALE STUDENT: For example…

RESEARCHER: Put the iPad on?

STUDENTS: Yes.

FEMALE STUDENT: If you don't have that much time, then you do it with the iPad and then it's faster.

MALE STUDENT: And with the iPad…

RESEARCHER: But why is it faster? I don't understand why it's faster…

FEMALE STUDENT: Well, because of the dictionary…

RESEARCHER: Okay, okay.

FEMALE STUDENT: Because, for example, you use the spell/grammar check, so you don't make mistakes…

RESEARCHER: Oh okay, great.

MALE STUDENT: And besides, if you have to look for something, for example, I don't know, an ecosystem of... the tundra, then it's much easier with the iPad because you look it up on the Internet.

RESEARCHER: If not, how would you look for it?
MALE STUDENT: Encyclopedias or things like that.

Lines 383-427

Students showed an awareness of how much time they save thanks to the iPad on tasks that involve spelling words correctly and using grammar correctly as well as involving research on obscure or very concrete topics. They realize that without the iPad to accomplish this, they would need dictionaries and encyclopedias, which would imply more time to look for, find, and access the information they would need. They also mentioned that whereas before they used computers at home, they do not rely on that tool anymore.

RESEARCHER: Okay. Do you use your computer at home or do you use your iPad?

FEMALE STUDENT: Not now, but before.

STUDENTS: Not now, now the iPad.

FEMALE STUDENT: Before, when we weren't using the iPad, yes.

RESEARCHER: Okay, okay. Do you all have a computer at home?

STUDENTS: Yes.

Lines 438-455

It is because a shared home computer is less convenient since it may need to be used by other members of the family or in a particular room of the house, whereas the iPad is already assigned to them individually and they can use it in any room of the house. Additionally, if they are used to using the apps on the iPad to create their projects after their research is completed, it would be impractical to do the research on a desktop computer or laptop and then send it to the iPad where they have the program installed. The iPad is also the device they use to share their work with their teacher for evaluation, and it is the device that they take to school with them each day to share their work with their peers or continue working on their project at school.

Both groups mentioned WordReference as an important app, and it is an accepted use of the iPad for both parties that made it easier and quicker to search for words when reading or completing tasks. Although, while a teacher mentioned the importance of students knowing

how to use printed dictionaries and not relying solely on the iPad, students did not bring up that it was important, necessary or time efficient to look up information in printed encyclopedias or dictionaries when it can be done on the internet through their iPad.

> *TEACHER: I occasionally bring dictionaries to class and complement the iPad. Most of the activities are with the iPad, they are cooperative, we do it that way, but I do recognize that there are times when I do something because I want them not to get used to working exclusively with the iPad either. I don't know, to write, we have to work on the writing, the expression... Well, "then do it this way first and then use the iPad to complement what you wrote, no, but the first version do it with the help of a dictionary, for example, and with your ideas, ok?"*

Lines 239-246 from the May 2018 semi-structured interview with the teachers

Teachers, unlike students, showed a preoccupation with learning how to complete work independently from the iPad. It is because they are aware of the possibility that the device may encounter problems such as that it could break or be unavailable somehow and that students should be prepared with a plan B to complete their work in an alternative manner with other (printed) resources and relying on their own ideas.

Teachers and students differed widely on the point of printed books for reading (not for reference purposes).

> *TEACHER 1: The themes. The themes of the textbooks were very obsolete and today they are, well, they are very current and that… (...)*
>
> *TEACHER 2: But that's what she said, that is, with the old book system a lot of people disconnected and then we put English at the level of math. I think*

> *English, my personal opinion, English and math right now are not in the same bag. English and math have always been considered the most difficult for a student profile. English with the new system...*

> *TEACHER 1: There are not so many barriers, I think...*

> *RESEARCHER: And what do you prefer? Reading with the iPad or reading with a real book?*
> *STUDENTS: With a real book.*
>
> *RESEARCHER: Really?*
>
> *MALE STUDENT; Yes.*
>
> *RESEARCHER: Yes? Why?*
>
> *FEMALE STUDENT: Because it makes you want to read it more when you see it.*
>
> *MALE STUDENT: And because with the brightness of the iPad too, your eyes end up getting tired*
>
> *FEMALE STUDENT: Yes, for your sight, yes.*

Lines 943-944 and 973-980 from the May 2018 semi-structured interview with the teachers and lines 803-824 from the May 2018 semi-structured interview with the students

While teachers mentioned that books are rigid and not easy to adapt to the needs of the students and thus are not always inclusive, students mentioned that printed books were visually appealing and made them want to read them and offered their vision a break from the iPad screen because their eyes get tired. Teachers also mentioned that English and mathematics were traditionally considered the most difficult subjects but that has changed with the new iPad system due to that it helps students, but students did not mention mathematics or this aspect. Students mostly focused on what seems like literary books or reading passages rather than textbooks and their previous difficulty. Also, teachers did not at any point mention that the iPad light makes their eyes feel tired, whereas the students did mention this aspect.

They also differed on the point of printed books, because while teachers mentioned that books are rigid and not easy to adapt to the needs and levels of the students and thus are not always inclusive, students mentioned that printed books were visually appealing and made them want to read them and offered their vision a break from the iPad screen because their eyes get tired.

4.3.1.3 What the iPad Makes Possible in the English Language Classroom

Both teachers and students mentioned the importance of the iPad in the creation and delivery of in-class presentations and projects such as the making of a comic. For instance, the students mentioned in the semi-structured interview:

RESEARCHER: If you didn't have an iPad, could you do exactly the same things you did in English class or not?

STUDENTS: No.

RESEARCHER: Even if we take more or less …

FEMALE STUDENT: Yes, the comic, yes.

MALE STUDENT: But it wouldn't look so cool.

RESEARCHER: But everything, everything... I think about everything, eh. Think of everything you did in English class with the iPad... Could you have done it without the iPad?

MALE STUDENT: It might not be as appealing as it is with the iPad.

FEMALE STUDENT: We would need a lot more time.

RESEARCHER: Why?

MALE STUDENT: Because with the iPad, since there are photos, animations, you know, animated presentations and all that, it becomes more interactive and attractive.
[…]
RESEARCHER: So, if I were to tell you, "Next year, choose either the iPad or no iPad..."

FEMALE STUDENT: We have to make presentations.

112

> *RESEARCHER: So, is it good to have an iPad?*
>
> *FEMALE STUDENT: Yes.*
>
> *RESEARCHER: Okay. [Good bye]*

<div align="center">Lines 328-358 and 859-871</div>

Students offered these examples as those which would require an iPad in order for them to be of high quality and would be able to be made without excessive need of time or other skills. Presentations are shared via Apple TV and thus include multimedia which would not be possible without the iPad. Also, comic making would be difficult because of the need to draw by hand without the iPad application and digital graphics.

Teachers expressed amazement at the intricate and complex presentations their students could produced using the iPad.

> *TEACHER 2: Totally. What was perhaps a marvel, I'm sorry, was that each student had their own tool during all the class sessions, no, that maybe before you had somehow managed to use laptops or work from home, and here you did know that you had it at your disposal with all the benefits it can offer, Internet access, with all the resources it offers. You know you could have that almost indefinitely, no, depending on…*
>
> *TEACHER 3: Before, maybe you went to the computer room every month and you risked that computer room, that if the server, that if the Xena... and all this didn't work and then you already lost fifteen minutes between downloading, taking attendance and all this, and now it's "Let's do a search, find me whatever it is" and in ten minutes they'll give you some presentations... They've accomplished a lot, these kids, in a personal way at the level of presentations. I'm from '85 and we do things, even being the Word, email and Windows generation, it is not easy for us; it's hard for us to get into doing a PowerPoint and all that. But these young kids make you some really cool, hyper-visual presentations in a matter of minutes. It's incredible.*
>
> *TEACHER 1: It is true.*
>
> *TEACHER 2: They have no fear to investigate, to explore, to look...*

<div align="center">Lines 54-78</div>

Thus, we can see that teachers and students are both aware of what the iPad can make possible in relation to the presentations that are regularly carried out in class as communicative tasks and that would not be feasible via a paper medium in the same amount

<div align="center">113</div>

of time or without requiring artistic skills or other equipment. It should be noted, however, that teachers went on to mention a long list of additional things they could do with the iPad that was not possible on paper, but these will be explored further and listed in Chapter 5 where we separate the points brought up by the students and those brought up by the teachers, respectively, regarding this topic.

4.3.1.4 Writing on the iPad vs. Writing on Paper

There was a consensus between teachers and students regarding the fact that when it comes to writing in English, the use of the auto-correct function was facilitating the task too much and was thus not ideal in cases were the student needed to do the work and make more of an effort rather than relying on the automated function. The students said:

> *RESEARCHER: Really good. That is, it makes no difference. And do you think it helps you learn English better or not? If you didn't have it (the iPad), would the classes be better or worse?*
>
> *FEMALE STUDENT: Yes, because sometimes it's annoying to grab a (paper) dictionary.*
>
> *STUDENTS: Yes.*
>
> *RESEARCHER: Because?*
>
> *FEMALE STUDENT: Well, because looking for the words and all that... Then in WordReference you put the word and it already translates it to you...*
>
> *FEMALE STUDENT: I think it would be better (without the iPad) because the iPad gives you everything. And if you didn't have it, then you would try harder...*
>
> *[…]*
>
> *FEMALE STUDENT: Yes, we often say, "Can we do it with paper?"*
>
> *FEMALE STUDENT: ... told us [Unrecorded Content]*
>
> *RESEARCHER: So, auto-correctors are great, but they make you not be so aware of your errors, right?*
>
> *FEMALE STUDENT: No, because they do the job.*

Lines 112-131 and 776-786

Along the same lines, the teachers reported:

> *TEACHER 2: I, for example, when writing... Of course, with the traditional method, right, maybe they have to write an essay and they have more dictionary difficulties. You have to think about it and you have to do it because the only help you had before was the dictionary. Now, with auto-correctors, auto-translations especially, maybe you get distracted and suddenly you see that a student has copied, or that a student has written in Spanish or Catalan and automatically he has the assignment half-finished and you say, "But how can that be, right?" Maybe that would be a downside, right? There are certain things here that help them a lot, but there are others that perhaps, as they use them, are counterproductive.*

Lines 152-160

However, a student did express that his handwriting is not particularly good and so writing on the iPad made his writing better.

> *RESEARCHER: What do you like best?*
>
> *STUDENTS: The iPad.*
>
> *MALE STUDENT: To me, iPad.*
>
> *FEMALE STUDENT: I don't care.*
>
> *MALE STUDENT: Because my handwriting isn't very pretty, and with the iPad, it's better.*
>
> *FEMALE STUDENT: And sometimes they tell you that you can do the work with the iPad or on paper, and many times we do it on paper.*

Lines 301-317

4.3.1.5 Students' Home Use of the iPad Provided by their Andorran School

Regarding home use of the iPad, while a teacher highlighted more the fact that students don't see the iPad as for academic use only but also for personal use, when students were asked what they did at home with the iPad they expressed that they watch and listen to songs in English and read blogs in English and with the help of WordReference they do think they end up learning English in that process because they have the resources to look up language they do not yet know and thus end up learning.

> *RESEARCHER: Really good. And the fact that you use the iPad in English class and such, for example, made you do things with the iPad in English at home that you might never have done? Or not? I don't know, watch a video on YouTube and say, "Come on, let's watch it in English" or...*
>
> *FEMALE STUDENT: Oh, yes, for example, the songs, when the subtitles...*
>
> *RESEARCHER: Yes?*
>
> *FEMALE STUDENT: Well you end up learning English whether you like it or not because, if there is a word you don't know what it is...*
>
> *RESEARCHER: You look for it in WordReference and then you say, "Oh, look..." In other words, for your own things, you use tools that you used in English class. Who else does this? You do it with songs and subtitles. Do you all do it?*
>
> *STUDENTS: I... I when I search the internet.*
>
> *RESEARCHER: What are you looking for on the Internet?*
>
> *MALE STUDENT: I don't know, things... I mean...*
>
> *FEMALE STUDENT: When they are contents in English.*
>
> *MALE STUDENT: Whatever, you know. I mean, for example, I go to a blog that an English person has made and I end up, then, learning.*

Lines 163-197

While teachers mentioned the repository iPads that can be used if students forget their iPad that day since the iPad goes home and then back to school each day, students answered that if they forgot their iPad, they had to do everything by hand and with printed dictionaries.

> *RESEARCHER: It's very intuitive, okay. What if one day you leave your iPad or something...? If you have to use the iPad in class and don't bring it...?*
>
> *STUDENT: We have to do everything by hand. Yes.*
>
> *STUDENT: Everything by hand, dictionaries, paper...*
>
> *RESEARCHER: And is that better or worse?*
> *STUDENTS [diverse opinions]: Man, worse.*
> *It's the same.*
> *It depends on how you look at it.*
> *It takes you more time to look up words in the dictionary...*
> *Because you're always with the iPad and switching to paper, well...*

Some students said it was a worse experience to work on paper, others that it was the same, others that it depends on how you look at it, and others stressed that everything takes more time on paper. Both students and teachers mentioned that assignments came out nicer and were more attractive to make with the iPad.

4.3.1.6 Hardware and Software Problems with the iPad

Both teachers and students mentioned hardware and software problems related to the iPad. On the one hand students said that sometimes things get erased on the iPad and that sometimes the apps they searched for were in languages they were not studying so there were limits to what they could use.

RESEARCHER: Okay. Really good. And do you think that the whole class likes to use the iPad or...?

STUDENT: There are some that don't.

STUDENT: Yes... Well...

STUDENT: Mostly, I think so...

STUDENT: I mean, it's not like they don't like it, but if you ask them the question if with the iPad or not... Some, most, would say with an iPad no.

STUDENT: Some would say no.

RESEARCHER: And for what reasons do you think they would say no?

STUDENT: I don't know... Well, to me personally...

STUDENT: Well, sometimes things get erased.

RESEARCHER: But that wasn't an option here, eh. You had to read the book and... Ever had trouble figuring out how to do something with your iPad? I mean, technology issue, eh, something wasn't going on, you didn't understand, you didn't know how to do it...

STUDENT: Applications that are in another language...

> *RESEARCHER: Yes?*
>
> *STUDENT: Well, you don't know how to do it because the instructions are in another language that you aren't studying.*
>
> *RESEARCHER: And that...? Have you all come across this or not?*
>
> *STUDENT: No.*
>
> *STUDENT: I have come across that, but you end up knowing it by memory.*

Lines 491-516 and 827-848

> *TEACHER: The school has about 8-10 iPads, each school. Then the students, a student who leaves it can use it; a teacher who needs it, who needs two that day and not one, too... And no, no problem. The issue is this... What I find contradictory is that they become obsolete, no, and that there is no [economic] help whatsoever... I, for example, bought the one with fewer gigs and I find that I can't record students; when I record them, I have to upload them…*

Lines 355-360

The teacher above mentioned the issue of economic assistance or subsidy to upgrade iPads due to the fact that they become obsolete due to their memory being fixed and eventually becoming too small for the new and more advanced programs or memory requirements. The teachers need to purchase their own iPads and thus assume this cost. Thus, it is a hardware issue tied to an economic demand as well.

Teachers mentioned problems with the WiFi network, and hardware problems such as not having the battery last a long enough time, needing a variety of cables and other technological equipment in the classroom apart from the iPads to work properly such as projectors.

> *TEACHER: But the whole problem comes through the net. I mean, it's not us, it's not that Apple TV is poor quality, it's not that the teacher... It's the network. So today we don't have a network that is powerful enough to load everything we want. Sure, if we are... If 80 teachers and 400 students load something at the same time... Without updates, the student is not downloading anything. So, you have to have a plan B. For that case you have to have a solid plan B because you know that the best class, the best programming and all that, if you don't have that, you can't do it. Of course, it's not the iPad, it's that you have to use this app on the IPad. I mean, now, for example, Comic Maker... I could do it by hand, but, of course, people when it comes to drawing... I don't evaluate drawing; I evaluate directly and with Comic Maker it's a lot... But, of course, if it doesn't work... What can I do?*

TEACHER 1: I, for example, sometimes have the problem that when I ask them to upload something with a drive that we have shared, I have to ask them at home because, if they do it all in the classroom at the same time, they don't 23 students can work on the drive. Then you have to do this in advance. And to say: "Today I will ask them for these duties, I will write it down." Have it under control. Well, that's what we say, always having alternatives, always having, always thinking a little beyond what will happen, what can happen and what... Anticipate.

TEACHER 2: I don't know if it's just Santa Coloma's problem, that we have the oldest school in terms of infrastructure, because we have the school that we have. It may not happen to you, but I... projections, creations, 4-minute mini-videos with AirPlay, I cannot project them.

TEACHER 1: No, with AirPlay, neither do we.

TEACHER 2: That is, the students have their creations here, they have come out and made a political speech about what their ideal society would be, 3 minutes HDS5, we are not talking... Then you have to go to a classroom that has a computer... I, for example, now with 4th, that we are seeing a fragment of XXXX by Michael Muro, that we are talking about education and all that, because for me to put it, that is to say, I have it in the drive and I have to put it here but that is impossible. I have to go, turn on a computer, pen drive and project it through there because video is impossible.

TEACHER 1: It drops. The connection drops.

TEACHER 2: No. It's just that... Then you have to evaluate and then this goes well at home, but then it gets stuck. Then the child is also frustrated. Many hours have passed when they have to do the inter-assessment and all that, and they can't be assessed because the child is stuck. And, there, technology is a problem.

TEACHER: But the thing is, when you work with technology, you can't assure a family that something will be useful for you for four years. Apple has this, scheduled obsolescence, that every day pulls something out and asks for something, that on the one hand. And then the issue of charging the battery. Charges, that is, there are some charges and the iPad lasts less and less. Sure, if you only used this as a personal thing, it could last a lifetime. But, of course, if I use it every 8 hours, today it will last you the length of those hours, but maybe this iPad in a year will last 7. There is a solution: "I go to the register" and I buy a new one. "I go to the register", 750 euros and I buy a new one, and I end up selling it or giving it away as a gift. And the iPad is perfect. So the only thing the battery has is a lifespan, like any other electronic device.

RESEARCHER: And what is the reality of the day to day in class?

TEACHER 1: It's... You never know what you're going to do because the day before everything can work really well, the Apple TV works well, it connects well, and the next

> *day you find that it doesn't... that nothing works. It has stopped working. You must have a plan B.*
>
> *TEACHERS 1 AND 2: Always.*
>
> *TEACHER 2: You prepare for two classes, right? One with ICT, right? And another one in case the first one does not work.*
>
> *TEACHER 1: There are classes that you have to go to with a cable for the adapter, with the adapter, with such... because they only have a projector, and other classes that have Apple TV and you don't need all this material.*
>
> *TEACHER 2: In the end we have our computer, right: audio cable, that cable, I don't know what cable and in the end you're doing it on the fly.*

Lines 567-577 and 597-634

Some teachers mentioned that students knew more about how to work the technological equipment in the classrooms (projector, Apple TV, etc.) than them, but that teachers knew more about the appropriate educational use of applications and in this aspect, they serve as guides.

> *RESEARCHER: Who knows how to make the iPad work better for you or the students?*
>
> *TEACHER 1: Good question to start!*
>
> *TEACHER 2: It depends a lot on the applications. If they are educational applications, which we have trained, we know how to make them work better. Now, if you want to ask us to put together an e-movie and ask a kid to put together an e-movie, surely the kid will be better.*
>
> *RESEARCHER: Yes? Do you all agree?*
>
> *TEACHER 3: As for classroom devices, I think they master them more than we do.*
>
> *RESEARCHER: What do you mean classroom devices?*
>
> *TEACHER 3: The projector sometimes has to be set up because the connection to the Apple TV has been disconnected... Well, many times, at least in my case, they know more than I do. Yes, as Pria says, it is with educational applications that we are obviously the ones who teach them.*

Lines 4-28 in the May 2021 semi-structured interview with the teachers

4.3.1.7 Instances of Distraction

Teachers and students agreed that the iPad could sometimes be a distraction in the classroom due to the ease of access to games and a student mentioned receiving recurrent message notifications which were distracting. A student mentioned that if teachers suppose that they are playing off task, they are asked to erase the game on the iPad even if it was not true that it was being played. Teachers mentioned the difficulty of keeping track of the activity of 24 students at the same time and that when helping some students across the room, they could not really see if the students far away from them were staying on task. Students said that they could use the iPad when the teacher said so and not only at any time that they wanted to. Thus, classroom management could be made more difficult in some cases and without the help of monitoring apps like Casper Focus.

4.3.1.8 Summary

Overall, both teachers and students are aware of the pros and cons of using the iPad in the classroom, although the teachers showed more awareness since they face and deal with aspects that the student do not experience in depth such as the administrative aspect of technology such as reporting incidences, discussing or being aware of costs, attending professional development workshops, etc. Neither teachers nor students advocated for using solely the iPad in the classroom 100% of the time. Both can see the benefits of having the iPad as well as paper notebooks and a variety of ways of working depending on the task at hand and the technological situation of that day. Both groups are aware of the added value of the iPad and the direct correlation of high-quality productions to the iPad. Both groups are aware of the drawback of the iPad as a distraction and as a tool that needs maintenance and depends on other factors such as it being charged properly and often enough and an ability to synchronize to other devices and a functioning Wi-Fi network.

4.4 Data from the Questionnaires

4.4.1 Overview of the Questionnaires

The questionnaires were given to 6 teachers (46% of the total surveyable population) and 220 students (32% of the total surveyable population) in high schools of the Andorran educational system in Catalan. They were one of the three ways in which data was gathered

in order to explore the attitudes, beliefs and practices of both parties using the iPad in the English classroom. The students' questionnaire (see Appendix A-1 in the original Catalan language and Appendix A-2 in English translation) was made up of questions in the following categories: general information, knowledge of the iPad, use of the iPad, tasks that involve the iPad and beliefs about the iPad. The same categories were included in the teachers' questionnaire (see Appendix B-1 in the original Catalan language and Appendix B-2 in English translation).

4.4.2 Students' Questionnaire Responses

In this section, we present the responses to the questionnaire given to 220 students regarding: student knowledge of the iPad, the use of the iPad in their English class, and their beliefs regarding the iPad. The objective of this questionnaire was to gauge how well the students think they know how to use the iPad, the practices of students regarding the iPad (use of the iPad) and their attitudes and perceptions toward the use of the iPad. 42.9% of the students were 1st year students and 57.1% students were 2nd year students. 470 students did not answer the survey, the total population of surveyable students being 690 at the time the data was gathered (all three Andorran school locations being considered and both 1st and 2nd year students included).

4.4.3 Students' Knowledge of the iPad

In the questionnaire, students were asked: "How would you rate your knowledge of how to use the iPad?" which is a self-evaluation of their knowledge of how the iPad works (Question 3). On a scale from 0-5, 1 being a beginner and 5 being an expert, 0 students said they considered themselves to be beginners (rated 0 or 1), 2 students rated themselves a 2 on the scale, 31 students rated themselves a 3, 130 students rated themselves a 4, and 56 students rated themselves a 5 (considering themselves to be experts). Results show that the majority of students surveyed (59.4%) have a high opinion of their knowledge of how to use iPads and the second highest percentage (25.6%) consider themselves to be fully knowledgeable. See Figure 4.5 below.
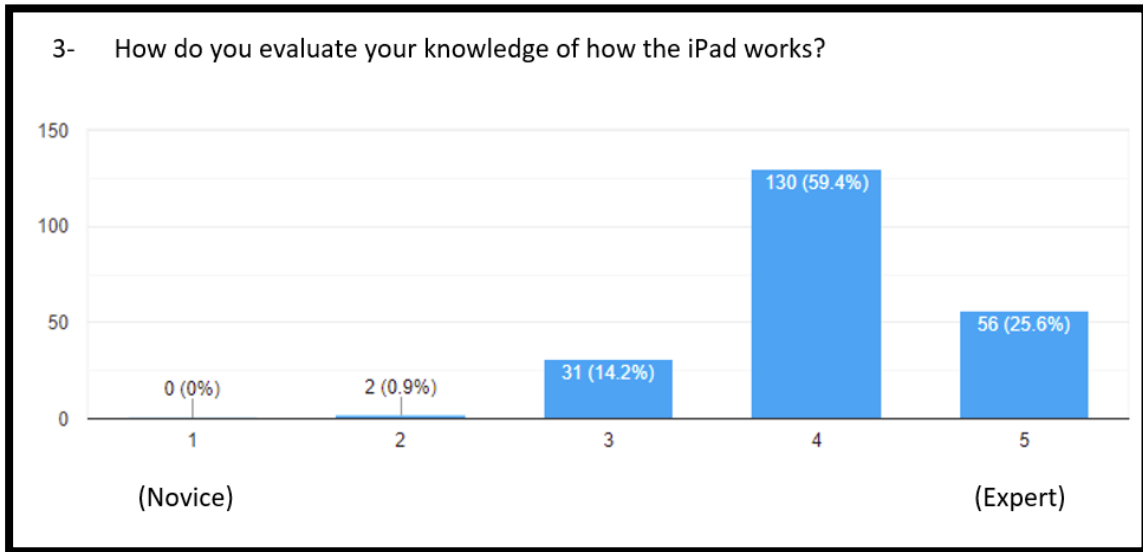
Figure 4.5. How students evaluate their knowledge of how the iPad works

Regarding the question of whether the students had received any training to know how to use the iPad (Question 4), 65.3% of students said they did not receive any training on how to use iPads, only 34.7% of them claimed that they did. See Figure 4.6 below.
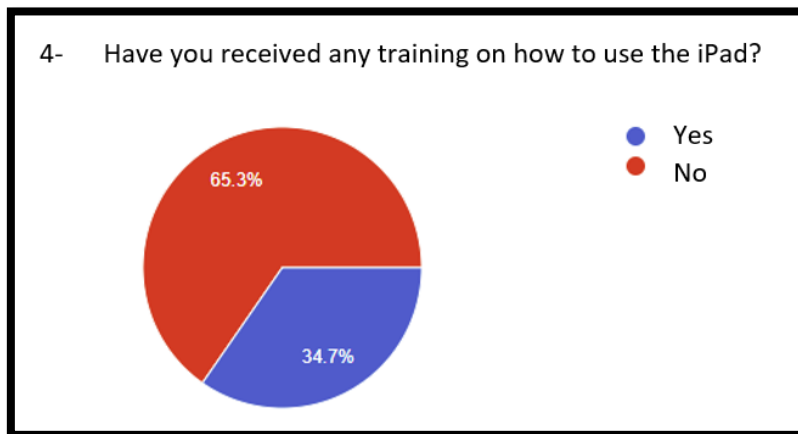
Figure 4.6. Student responses regarding their training on how to use the iPad

The answers to these two questions mean that while the majority of students did not receive training to know how to use the iPad, the majority have a high opinion of their knowledge of how to use it even to the degree that some of them consider themselves to be experts.

Additionally, 69.9 percent of students believe that they know how to use the iPad better than their English teacher and only 30.1 percent thought their teacher knew more. See Figure 4.7 below.
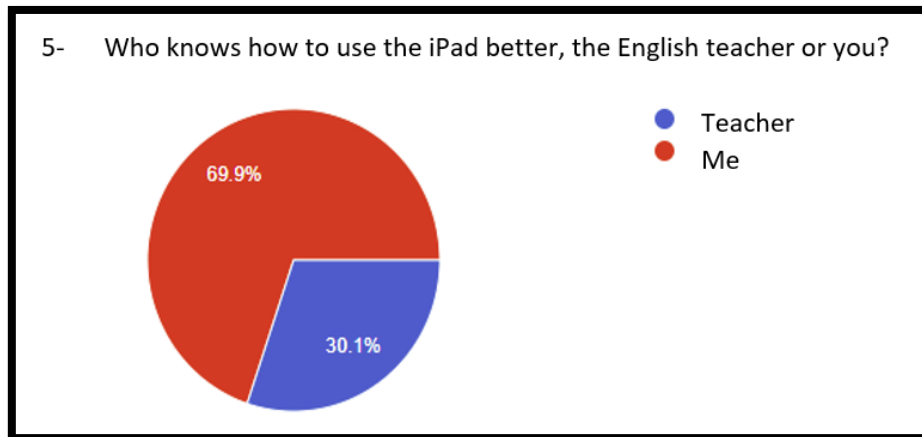
Figure 4.7. Student responses regarding their knowledge of the iPad vs. their English teacher's knowledge of the iPad

This suggests that most of their technological knowledge comes from outside of their school setting and/or was informally acquired in a way that students do not perceive that they received "training".

Taking these figures into consideration, one can see that the beliefs expressed by teachers in the semi-structured interviews are reflected here in the students' beliefs as well. It was said by a teacher that the students know more about how to use the technological devices in the classroom than they do (see transcript on 4.3.1.6 regarding knowledge of the iPad). However, the same teacher brought up that with regard to educational apps it is the teachers who know more and who teach the students how to use them. Yet, a teacher also mentioned that apps are released very quickly and that it involves constantly keeping up with them and sometimes he thinks that this advancement is too fast.

4.4.4 Students' Use of the iPad

Under the section "use of the iPad" the question was asked, "How often do you use the iPad in English class?" (Question 6). 66.7% of students answered "often" and 29.7% answered "sometimes" with the remaining smaller percentages being split between "always" and "rarely". See Figure 4.8 below.
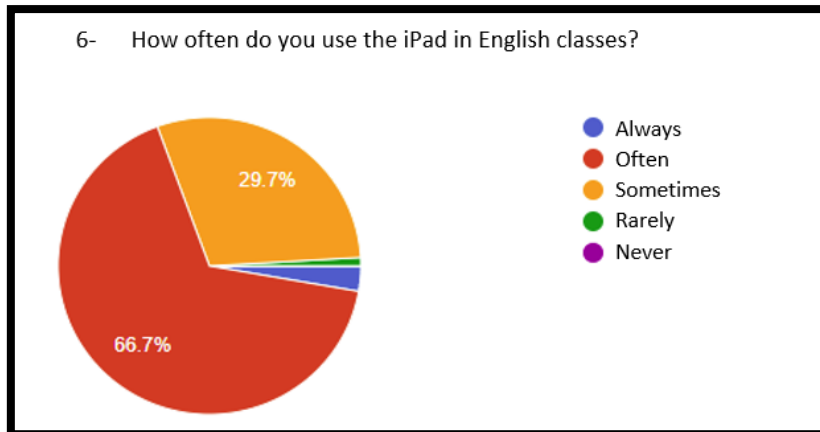
Figure 4.8. Student responses regarding the frequency with which they use the iPad in English classes

That more than half of the students answered "often" probably means that the iPad has a substantial role in the classroom and is an often-used tool, even though it is not the only resource they rely on.

When students were asked if they use the iPad in the English language classroom exclusively when the teacher tells them to (Question 7), an overwhelming 86.8% of students answered that they use the iPad in English class only when the teacher says so. The remaining minority, 13.2 percent, answered "no", they do not use the iPad in English class only when the teacher says to do so. See Figure 4.9 below.
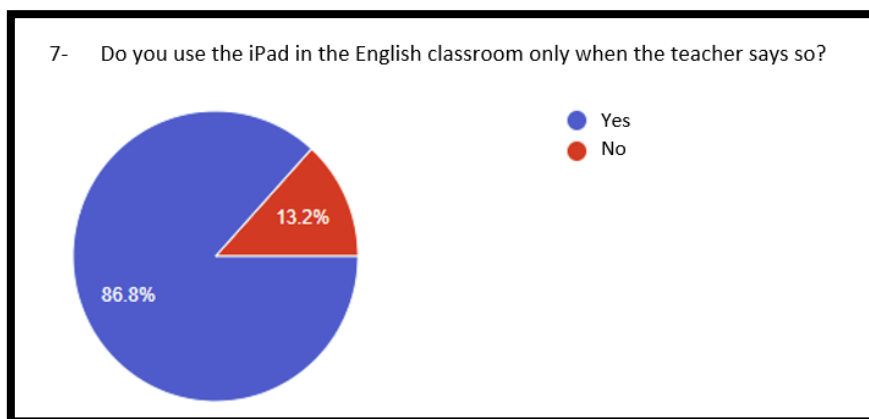
Figure 4.9. When students use the iPad in the English classroom

This means that the iPad is part of structured activities that are teacher-led in order to keep distraction and off-task engagement to a minimum. The other 13.2 percent could be

referring to the fact that they are allowed to look up words on WordReference on the iPad whenever they need it (student-led) if they need to search for unfamiliar vocabulary in English.

These figures show the practices of students regarding how and when they use this tool in a classroom setting. The majority relies on the teacher directing what activities and tasks should be carried out using the iPad in class. Although students are confident in their ability to use the iPad, it is the teacher who is still the guide regarding what can and should be done during class with the iPad.

In relation to this point, in the semi-structured interviews with students, when the students were asked the same question, they said that they cannot use the iPad whenever they want "due to the temptation" that the iPad can offer to get distracted or do off task activities. A student said that many times teachers ask the students to turn it off. A student also mentioned that if they turn on the iPad without telling the teacher what they are doing the teacher can think that they are playing games and will make them erase the game. A student also said that teachers monitor what students are doing by asking them "What are you doing on the iPad?" and that what is permitted by both parties as "spontaneous" use is when the students are using the Word Reference app which is used like a dictionary to look up words which can emerge during any activity that involves the English language.

Moreover, in the category "use of the iPad", in order to investigate more in detail and more concretely student beliefs about practices and their actual practices with the iPad, students were asked the following questions in the questionnaire.

First, they were asked to give their opinion regarding the frequency with which they think they should use the iPad in English class, the majority said "often", 56.6%; coming in second, 22.8% said "sometimes"; and third, 17.8% of them said "always". The smallest percentages remaining were split among "rarely" and "never". See Figure 4.10 below.
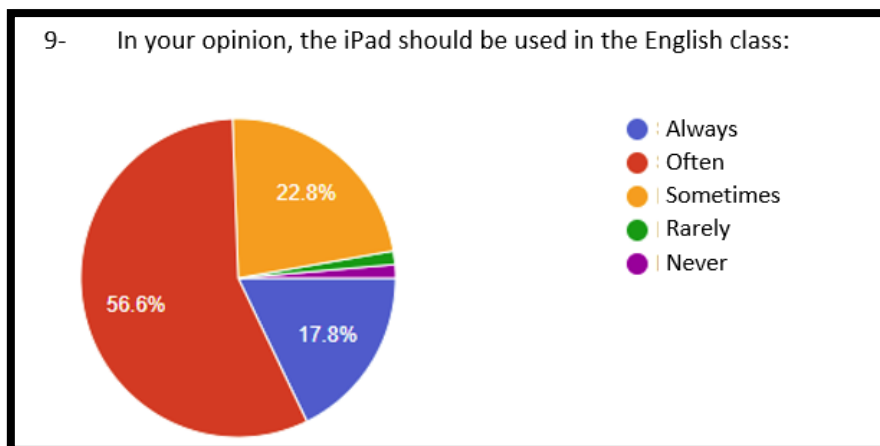
Figure 4.10. Student opinions regarding the frequency with which the iPad should be used in English class

Student attitudes toward the use of the iPad proved to be favorable as more than half believe it should be used "often" in class, however, only 17.8 believe it should "always" be in use. This demonstrates that students perceive the iPad as a positive tool and see its value, but they do not fully wish to rely on it always. Given that under normal circumstances they are in a classroom social setting with a teacher and peers of their same age with shared interests and points in common, they find value in taking part in other activities and tasks that do not involve using the iPad exclusively. This was also echoed in the semi-structured interview with the students in which they expressed both that they really need the iPad to make their presentations (they share them via Apple TV with the class and the teacher) and they find that it is an attractive method that results in very high-quality results with an efficient use of time. However, they also expressed that they like to read books on paper because seeing them makes them want to read them and because their eyes get tired from looking at the iPad screen too much. For writing, both students and teachers mentioned that it can also be useful not to use the iPad because the auto-correct feature does too much of the work for them, although a student brought up that his handwriting was not easy to read and was better on the iPad.

Also, on the topic of degree of iPad use in the classroom, we can see an echo in the semi-structured interviews when a teacher says that he did not like seeing students as early as 8:30am at the beginning of the school day looking only at the iPads separately in silence instead of seeing them communicating with each other by speaking in English class. Both

students and teachers mentioned that it is good to have a balance and a variety in which they can choose when to use the iPad and when not to, and neither party made arguments in the interviews for iPad use 100% of the time in the English language classroom.

Moreover, it is interesting to note that if we compare the frequency of use in the classroom that was reported by students (Question 6 above), 66.7% of them said "often" and 29.7% said "sometimes" and when asked how often they think it should be used (Question 9 above), 56.6% of them said "often" and 22.8% said "sometimes". Those figures are closely aligned, which means that the frequency with which the iPad is actually used in class is aligned with how often many students think it should be used.

Still on the topic of iPad use in practice (differentiated from how they think it should be used), regarding the question of whether they use the iPad to carry out activities related to their school subject, outside of English class (Question 10), 58% of them said no and 42% of them said yes. See Figure 4.11 below.
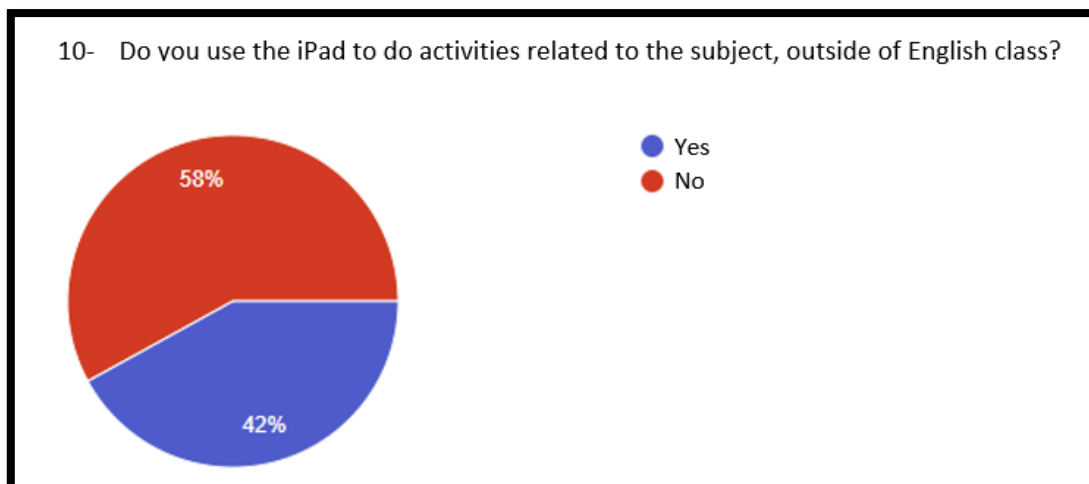
Figure 4.11. Student responses regarding their iPad use related to English, but outside of English class

Those who said yes specified that those related activities were homework, tasks, extra-curricular English, using English apps, listening to music in English and playing games. These answers foreground that the student use of the iPad seems to be in most instances as a tool rather than as a tutor in the absence of a teacher. If the iPad is merely replacing paper as a form of writing down homework answers, it is serving as a tool by replacing paper, yet with other added functions such as spell-check and grammar-check automatic functions (which

some would argue are actually detrimental to developing writing skills, yet this is a debatable topic). However, if students are using self-correcting English apps that are "teaching" them (it would need to be investigated which English apps exactly and what their capabilities are), the iPad in those instances is closer to taking on the tutor role in the absence of the teacher. It can also be argued that when used to listen to music it is merely replacing what was once a music player (cassette, CD, or other) and as a game, it could just be replacing physical board games, depending on the games being played.

The types of games being played vary significantly, and can substantially affect outcomes (Sailer & Homner, 2020). People have learned English while playing multiplayer games over the internet with a variety of international players who interact by speaking through an English-language interactive game, but if a card game like Solitaire is played in isolation and with a total absence of language, then the outcome would be drastically different. In this case, the students surveyed did not provide details on all the types of games they play with the iPad outside of English class.

When they were asked to name a recent activity in English class in which they had used the iPad (Question 11), the majority named an English rap, among other activities such as: watching videos, answering questionnaires, making a video, analyzing an advertisement, making a presentation, using a translator, doing an exercise in Google Classroom related to verb tenses, and to view a comic. Some of these results echo what was found in the semi-structured interviews with students and teachers in which it was revealed that both parties are aware that the iPad gives students the capacity to produce higher-quality work than in the absence of a technological device because it gives them the means through which they can make intricate videos, elaborate and visually-appealing presentations that can be shared across digital platforms, and they can quickly browse and analyze a variety of international advertisements available on the internet. It can be inferred that these capabilities greatly enhance the learning opportunities of the students and give them the chance to develop digital literacies that will serve them well in their future endeavors.

Regarding which was the best activity they could remember carrying out in English class in which they used the iPad (Question 12), some answered that they did not know or remember, others mentioned a rap, others recording and editing videos, playing Kahoot, making a comic, playing games, making a presentation, watching a video, learning about English-speaking countries, learning about different customs, an activity related to Andorran

celebrations, analyzing advertisements and answering questionnaires. There is a noticeable overlap in the answers to the questions "name a recent activity you did using the iPad in English class" (Question 11) and "which was the best activity" (Question 12), which could suggest that the students mostly remembered a recent activity they carried out with the iPad rather than a truly memorable one (also, because some students claimed they did not know or remember such an activity). This could also indicate that for the students there aren't clearly defined or large-scale memorable projects that they have carried out in the long term via the use of the iPad in English class. Additionally, activities that specifically need the use of an iPad were not mentioned, as all of the activities they named could have been carried out with the use of a desktop or laptop computer, and in the case of Kahoot, which does not require a large screen, it could have been carried out with a mobile phone, except maybe in the case of the presentations which it was mentioned by teachers that they are shared via Apple TV for co-evaluation by the peers and the instructor.

When asked for which types of activities they used the iPad in English class (Question 13) they mentioned: to carry out activities, to edit videos, to do projects, some answered that they did not know or remember, to use Word Reference, to do fun and educational activities, to make presentations and answer questionnaires, to work, to do activities that the teacher says to do, to do English activities, to do research, to consult documents, to use the dictionary and to look for information, to do subject-related activities, to use the translator, to do homework, to play Kahoot, to do exercises posted on the "Classroom" site, to do digital activities, to play games, to use social networks, to use Google documents, to carry out activities directed by the teacher, to view comics, to look for advertisements, to make presentations and to search for information. Based on the students' answers, the use of the iPad is mostly done under the direction and supervision of the teacher and is used as a tool to search for or synthesize information for language-learning purposes, except for the mention of social network usage in which case it would qualify as including the social component of linguistic interaction with other speakers of the language.

Still in the category of "iPad use", from the highest to the lowest percentage, out of 219 responses, when students were asked what they thought the iPad should be used for in English class (Question 14 as shown in Figure 4.12 below), 79.9% of students said "to look for information", 75.8% "to learn vocabulary", 68.9% "to carry out projects", 52.5% "to do homework", 43.8% "to read texts", 46.6% "to watch videos", 42% "to do personalized

exercises", 38.8% "to have fun (games)", 13.7% voted for "others", and 10.5% voted for "to have conversations (chat)".

14- In your opinion, why should the iPad be used in English class?

Have fun (games) — 85 (38.8%)
Search for information — 175 (79.9%)
Watch videos — 102 (46.6%)
Learn vocabulary — 166 (75.8%)
Read texts — 96 (43.8%)
Do personalized exercises — 92 (42%)
Communicate (Chat) — 23 (10.5%)
Do homework — 115 (52.5%)
Carry out projects — 151 (68.9%)
Others — 30 (13.7%)
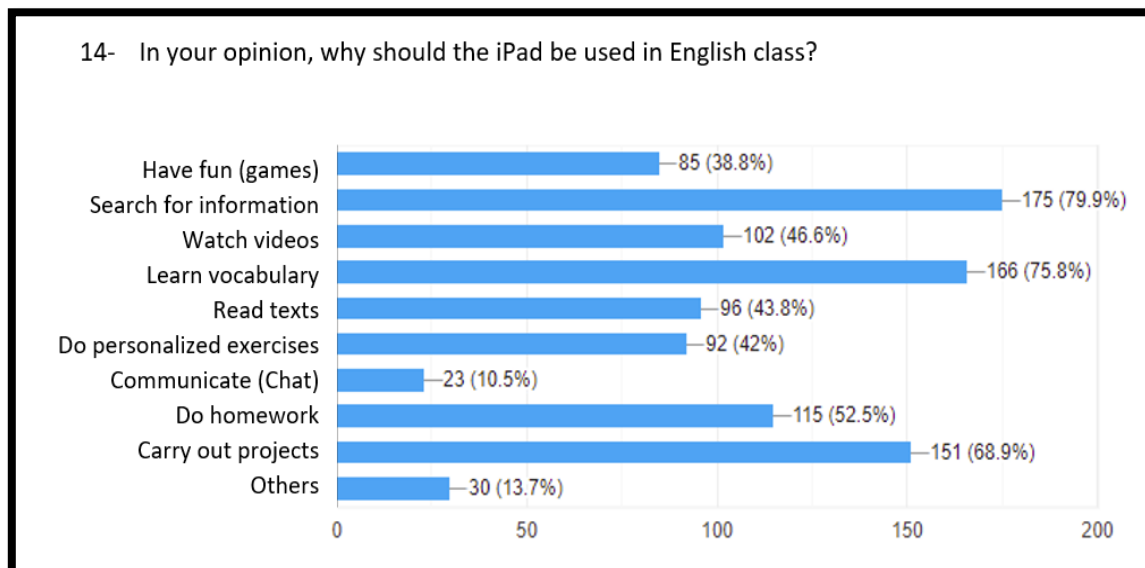
Figure 4.12. Student opinions regarding the use of the iPad in English class

These figures reveal that student perceptions of the iPad are largely in its use as a tool that allows them to look for and access information quickly and effectively. Additionally, a majority see it as a source of vocabulary knowledge and as a tool to carry out their projects and homework assignments. This was also echoed in the semi-structured interviews with the students in which a student gave as an example of something he does at home as delving into reading English blogs and reading the subtitles to songs because they have the confidence that with Word Reference also handy on the iPad, they can look up any word necessary in this material that is not adapted for English learners and is realia.

In reference to Figure 4.12 above, according to these questionnaire results, some students see the iPad as a tool that replaces other means of learning such as "to read texts" (replacing books, and other printed media), "to watch videos" (replacing the television, cinema, or other such media channels), "to have fun (games)" (replacing other types of games such as physical board games or video game consoles). A minority of students show an awareness of the iPad's potential to connect them in real-time to other speakers of the English-language, because only 10% of them think it should be used to have conversations. Conversation in the

target language has an enormous potential for developing linguistic skills when implemented with a sound pedagogical approach.

4.4.5 Students' Beliefs Regarding the iPad

The questions in the category of "beliefs" were regarding the students' particular beliefs on specific aspects of the iPad: "Do you like to use the iPad in English class?" (Question 15), "Using the iPad in English class is (choose one or the other: interesting/not interesting, useful/useless, easy to access/difficult to access, necessary/not necessary, easy/difficult, boring/fun, motivating/demotivating, safe for one's health/dangerous to health, indispensable/complementary)." (Question 16) and their degree of agreement from "not at all in agreement" to "totally in agreement" on the statements: does the iPad…(distract you, motivate you, help you improve your work in class, help you get up to date with class contents, provide you with English materials in a real context, save you time in your class activities, give you better English skills, save you time when doing homework, is the iPad easy and does the iPad facilitate the learning of English? (Questions 17.1-17.10).

When asked if they liked using the iPad in English class (Question 15), 97.7% of students said yes, and 2.3% said no (refer to Figure 4.13). In relation to the battery of statements in question 16 (refer to Figure 15), 93.2% of students said using the iPad in English class is interesting and 6.8% said it is not interesting. 97.3%% of students said using the iPad in English class is useful and 2.7% said it is not useful. 91.8% of students said using the iPad in English class is easily accessible and 8.2% of students said it is difficult to access. 89% of students said it was necessary to use the iPad in English class and 11% of them said it was of little necessity. For 95.9% of students using the iPad in English class is "easy" and for 4.1% of them it is "difficult". For 90% of the students using the iPad in English class is "fun" and for 10% it is "boring". For 95% of students using the iPad in English class is "motivational" and for 5% of them it is "demotivational". For 83.1% of students using the iPad in English class is "not dangerous to health" and for 16.9% of them it "is dangerous to health".
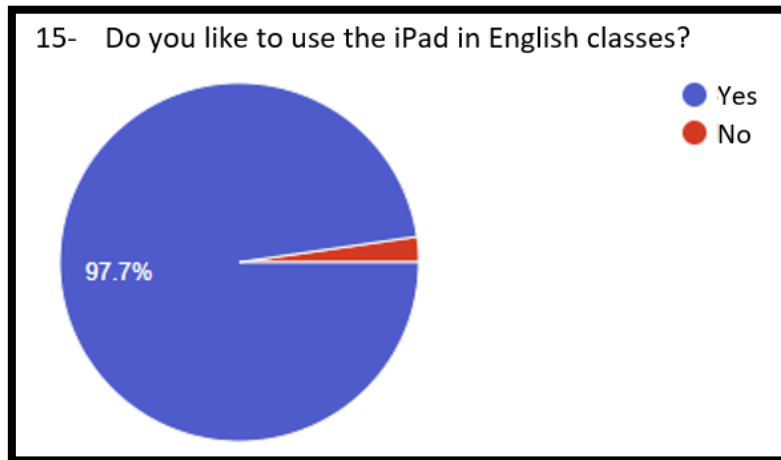
Figure 4.13. Student responses to whether they like to use the iPad

Simple (210-95.9%)   Difficult (9-4.1%)

Motivational (208-95%)   Demotivational (11-5%)

divertit (197-90%)   avorrit (22-10%)

Fun (197-90%)   Boring (22-10%)
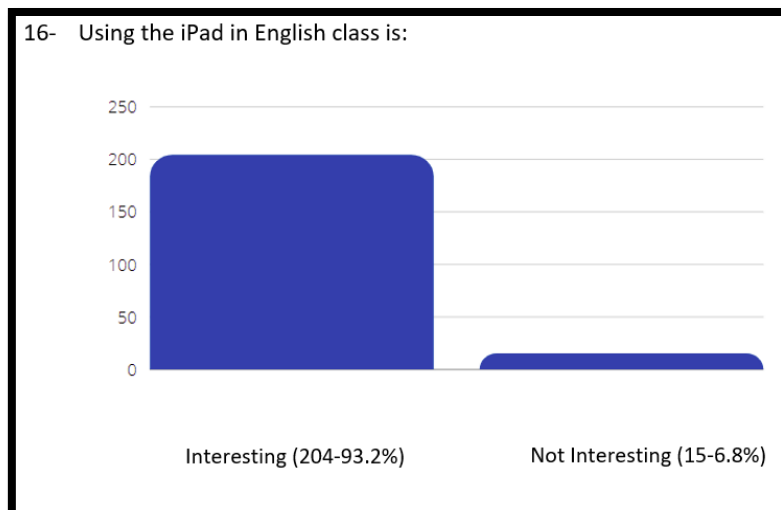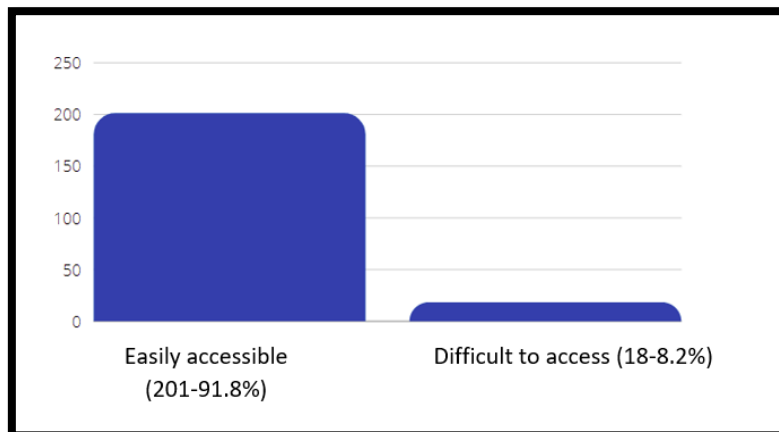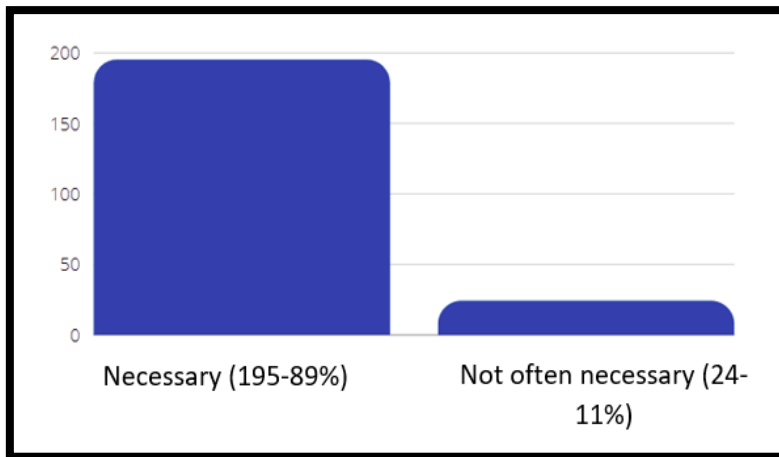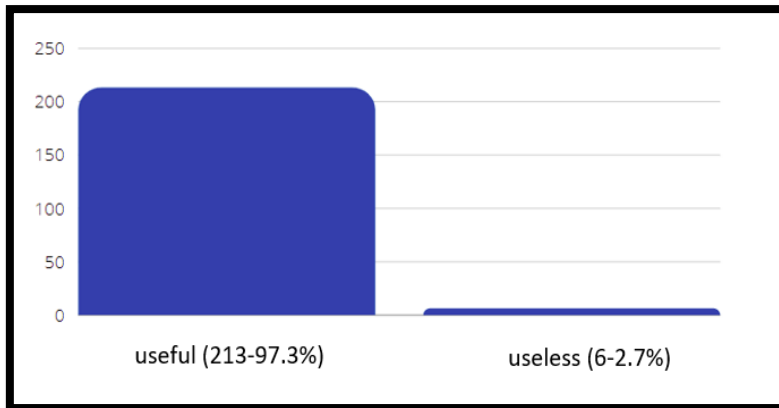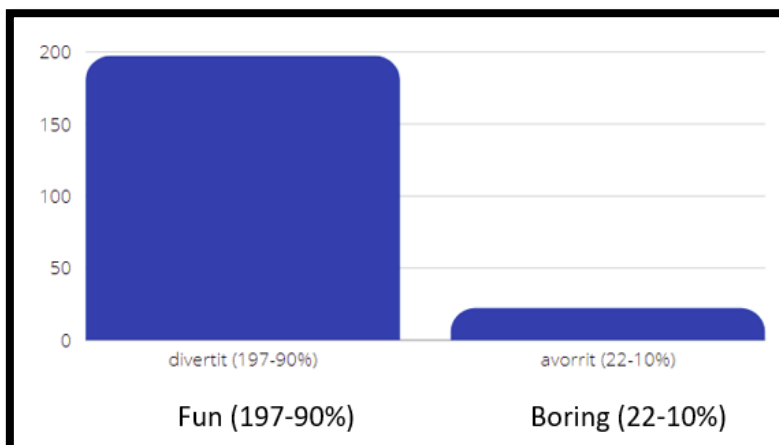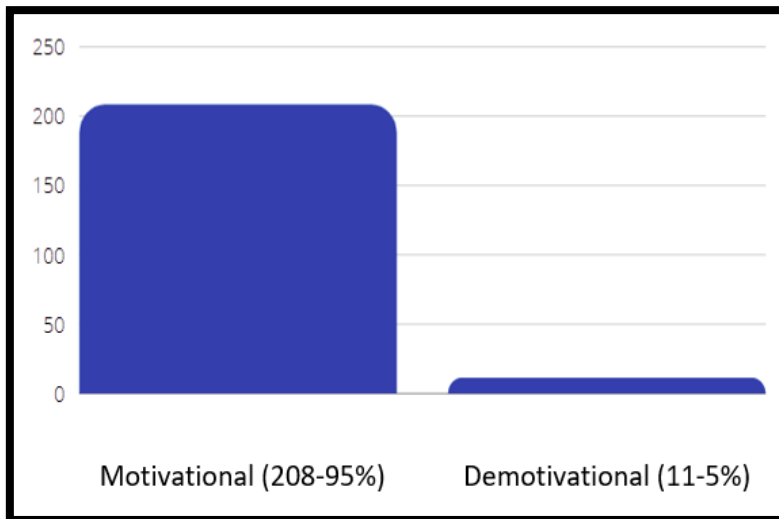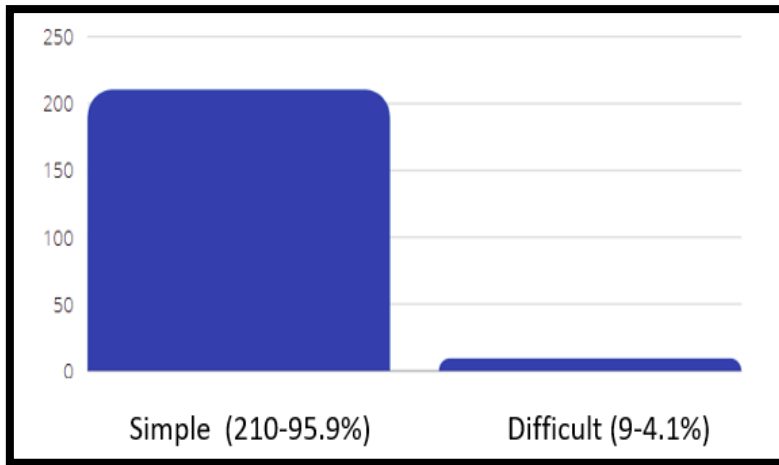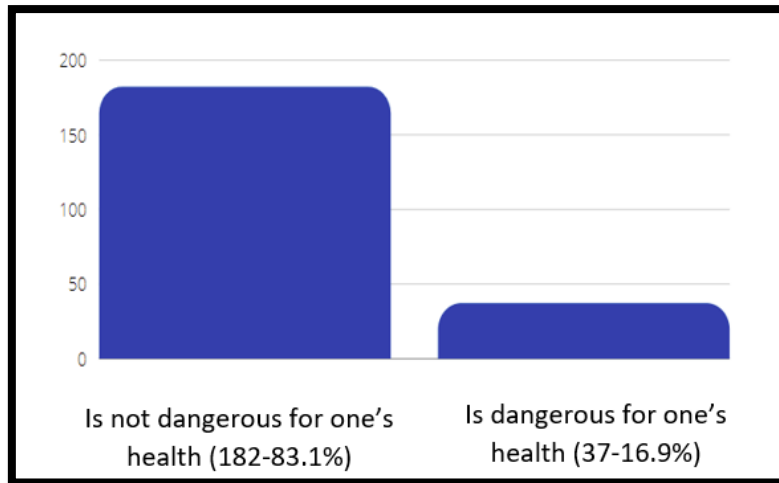
Figure 4.14. Students' beliefs regarding the use of the iPad

The positive beliefs of the students regarding the iPad by the majority characterizing it as enjoyable, interesting, useful, easily accessible, easy to use, fun, motivational and not dangerous to health, show that students have had a favorable experience so far in the use of the iPad in their English class and that they have positive beliefs about it.

For 53.9% of students using the iPad in English class is "complementary" and for 46.1% it is "indispensable". See Figure 4.15 below.
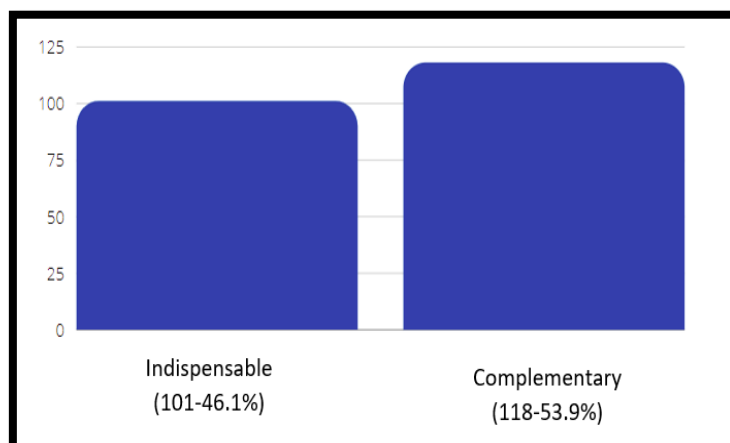
Figure 4.15. Do you (student) think the iPad is complementary or indispensable?

On this topic of if the iPad is complementary or indispensable, students are largely split into almost two equal halves. This could be due to the fact that they are aware that their peers in other school systems (and the world) do not all use or have access to iPads and thus the iPad cannot truly be considered indispensable. However, those on the other hand who consider it indispensable may have experienced its benefits so clearly that they cannot conceive of not having it as a learning tool. That some students consider the iPad indispensable is not only visible here in the questionnaires, it was also echoed in the semi-structured interview with students. When they were asked that if they had to choose for the following academic year to work with or without iPads, for them it was not really a difficult choice, they did not conceive of the possibility of working without the iPad on the grounds that "they have to make presentations", thus for them it is now an indispensable tool since they have experienced all that it can offer them and that without the iPad they would have many limitations.

In the last question (Question 17; refer to Figure 4.16) students were asked to show their degree of agreement or disagreement with the following questions statements(x): Do you think that the use of the iPad: 1. distracts you in class? 2. motivates you? 3. helps you improve your work in class? 4. helps you catch up with the class content? 5. gives you material in English in a real context? And the students responded the following.
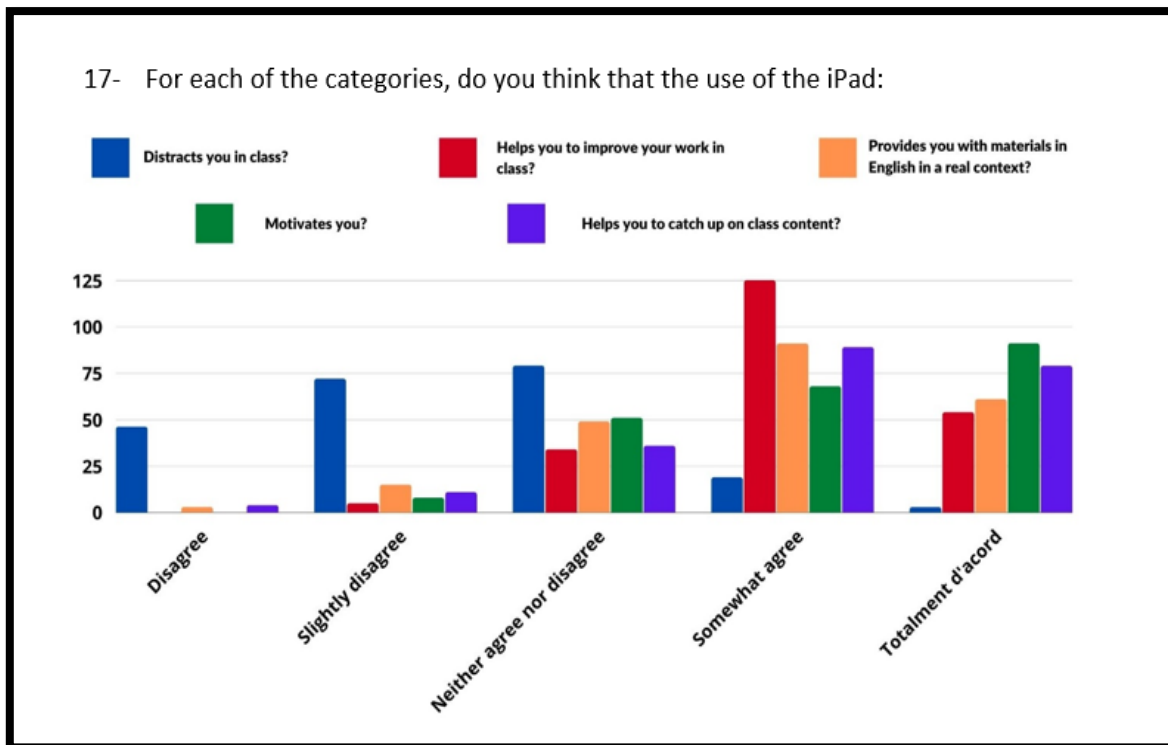
Figure 4.16. Degree of student agreement regarding each topic. The iPad (distracts you, motivates you, helps you improve your work in class, helps you get up to date on class content, gives you access to materials in English in a real context)

Regarding the topic of distraction (Question 17.1) in relation to the iPad, students have likely experienced two sides of the coin, being both helped to focus by the iPad and have been tempted to become distracted by it to do off-task activities (as it was expressed in both the interviews and the questionnaires), it could explain why students showed responses to this question across all points in the spectrum provided.

Regarding if the iPad motivated them (Question 17.4), most students were either in neutral or mostly agree or totally agree side of the spectrum. The neutrality could be because it is not only use of the iPad that motivates them, but interesting and varied use of the iPad. This is because in the semi-structured interviews with the teachers, it was expressed by one of them that there can be a point of saturation at which students get tired of doing the same type of technological activity. They gave the example of "making a video". A teacher said that students went from thinking that "making a video" was very interesting as an assignment to, over time, getting saturated by the repetition of this activity and saying, "another video?"

> *TEACHER 1: Of course, of course, you have to turn it around a bit, let's go into a little more detail, you know... Yes, there is perhaps this perception, obviously not the same that we have of all the advantages, which we do have in many aspects, but perhaps they complain a little, then, of this, of the repetition of certain things. "The Know", we're talking about, right, with all the possibilities it offers, sometimes they tell you "Another "Know"?" Maybe they want to make a Prezy, they want to use, I know, another app. Same thing, no, because when systematically in all the workshops you do a "Know" of this or a "Know" of that, now we do another "Know" to present the information... Well, I totally agree that it offers many possibilities, but maybe they say, "That again?"*
>
> *TEACHER 2: What he said, we went from a system in which "You have to make a video. Wow, that's cool!" to "Another video?". It's the difference. In other words... "A video, yes, you have to go out, you have to record, you have to have a conversation, such... how cool! End-of-year project" to "Another video?" It's that we have to do one for this, we have to do one for that, we have to do one for this...". And, of course, maybe we have to find the balance, we have to find the balance between…*

Lines 1049-1065 from the May 2018 semi-structured interview

Teachers implied that students do demand a variety of tasks and the use of the iPad is not by itself what is motivating but also how it is assigned or directed to be used. Thus, we can also infer that the regular use of the iPad also pushes teachers to think of new and varied applications and uses of the iPad for language-learning tasks that are engaging and innovative. The iPads and their capabilities have raised the bar for teachers and students in terms of the quality, the variety, and the output that is expected out of assignments by both parties.

On the question of if the iPad helped them improve their work (Question 17.2), the majority mostly agreed, and there were some students who totally agreed and some that were neutral. The neutrality could be also due to the fact that students are aware of how the iPad gives them many possibilities that working on paper does not give them for example in making multimedia projects; however, they are also aware, as they expressed in the semi-structured interviews, that relying too much on the iPad can make their work worse in the sense that they feel it does not help them "make an effort" to progress in their writing skills to use automatic translators to do their writing assignments on the iPad or relying too heavily on the auto correcting features.

Students were also mostly on the "agree" side of the spectrum regarding if the iPad helps them catch up with class contents (Question 17.5). It could be due to the fact that, as teachers brought up in the semi-structured interviews, the iPad has improved teacher-teacher

and student-student communication so when a student is ill or absent, he or she can seek and receive feedback more easily and efficiently through the iPad by being in anytime/anywhere contact with the teacher and his/her classmates regarding assignments to be done or contents that were missed.

Students were also mostly on the "agree" side of the spectrum regarding if the iPad gave them content in English in a real context (Question 17.3). This is probably due to the fact that students mentioned and thus are aware of the assignments in which this was the case, such as when they had to search for and analyze real advertisements in English, which was an assignment mentioned repeatedly by students in response to the questionnaire questions: "Name a recent activity in English class in which you used the iPad.", "Which has been the best activity that you remember having done in English class in which you used the iPad?" and "For what type of activities do you use the iPad in English class?".

Additionally, student beliefs were gauged by asking them to express their degree of agreement, disagreement or neutrality on the following questions: Do you think that iPad use in the English language classroom: 6. makes you save time in your class activities? 7. gives you better competencies in English? 8. saves you time when you have to do your homework? 9. is easy? 10. makes learning English easier? And students expressed their degree of agreement on the following spectrum. See Figure 4.17 below.
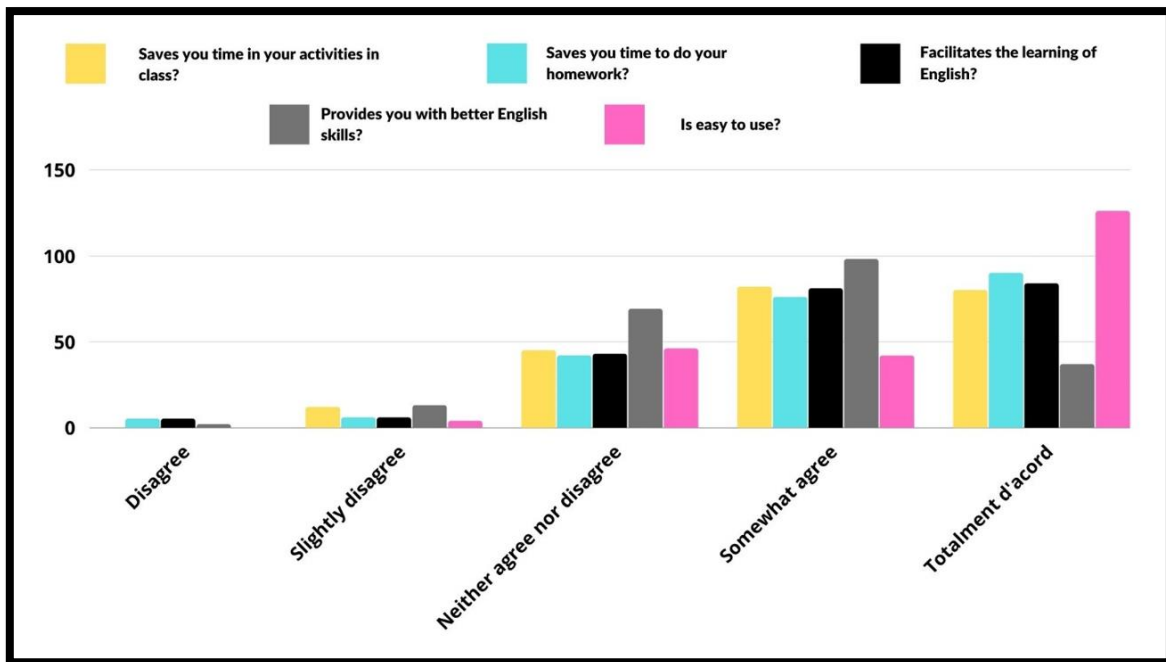
Figure 4.17. Degree of student agreement regarding each topic. The iPad (saves you time in your activities in class, provides you with better English skills, saves you time when doing homework, is easy to use, facilitates the learning of English).

We can see that all the questions were "positive" in the sense that they were all worded in a way that characterize iPad use as favorable and then asked students to show agreement with those positive qualities, disagreement, or neutrality. Immediately, one can see on the spectrum that the majority of responses fall under the "neutral", "mostly agree" and "agree" categories, which shows that a majority is either in agreement with those positive statements or they are neutral perhaps because those positive statements need to be qualified and specified because specific circumstances or conditions can have an effect on whether the students would position themselves in agreement or disagreement with those positive statements.

4.4.6 Conclusion on the Students' Questionnaire Results

To sum up, as it concerns the students' questionnaire results, we can see that students believe they have from intermediate (14.2 percent) to advanced (59.4 percent) to expert (25.6 percent) knowledge of the iPad even though more than half of them claim they did not receive training at school on how to use the iPad. Additionally, the majority believe they know how to use it better than their English teacher. More than half of the students surveyed report that

they use the iPad in class often and more than half of them believe that they should use the iPad often; thus, their practice is in line with their belief regarding frequency of use. More than 86 percent of students say they use the iPad in English class exclusively when their teacher tells them to, which shows there is a strong sense of direction provided by the teacher for the students during their English classes. Results demonstrate that students have highly positive ratings of their use of the iPad in class, because the majority (97.7 percent) agreed that they liked using the iPad and a large majority (83 percent at its lowest point and 97.3 percent at its highest point) agreed on its positive qualities, such as that it is interesting, useful, easy to access, necessary, easy, fun, motivating and not dangerous to one's health. More than half of students see the iPad as indispensable in the classroom.

Students showed an awareness of the dark side of the iPad such as it being a possible source of distraction (Question 17.1) and it not always being easy (Question 17.9) perhaps because there can be problems with it as it was also brought up in the semi-structured interviews (they said sometimes things get erased on the iPad, among some other smaller issues, for example). Even though they recognize both the positive and the negative aspects of iPad use in the English classroom, they are mostly in favor of it. They see themselves as capable users of it, can see its benefits, and are aware of what it allows them to do due to its capabilities.

In the following section, we analyzed the teachers' questionnaire responses to gauge their knowledge of the iPad, their practices regarding the use of the iPad in their classroom, and their attitudes and beliefs about the iPad.

4.4.7 Teachers' Questionnaire Responses

The questionnaire was answered by 6 teachers, which is almost 50% of all English teachers assigned to the 1st and 2nd year of secondary school in the Andorran school system.

4.4.8 Teachers' Knowledge of the iPad

Regarding the question of how they evaluate their own knowledge of how the iPad works (Question 5), teachers rated themselves pretty highly, 100% of them rated themselves a 4 on a 0-5 scale, 0 being a complete beginner and 5 being an expert. See Figure 4.18 below.

5- How do you evaluate your knowledge of how the iPad works?

(Novice)   (Expert)
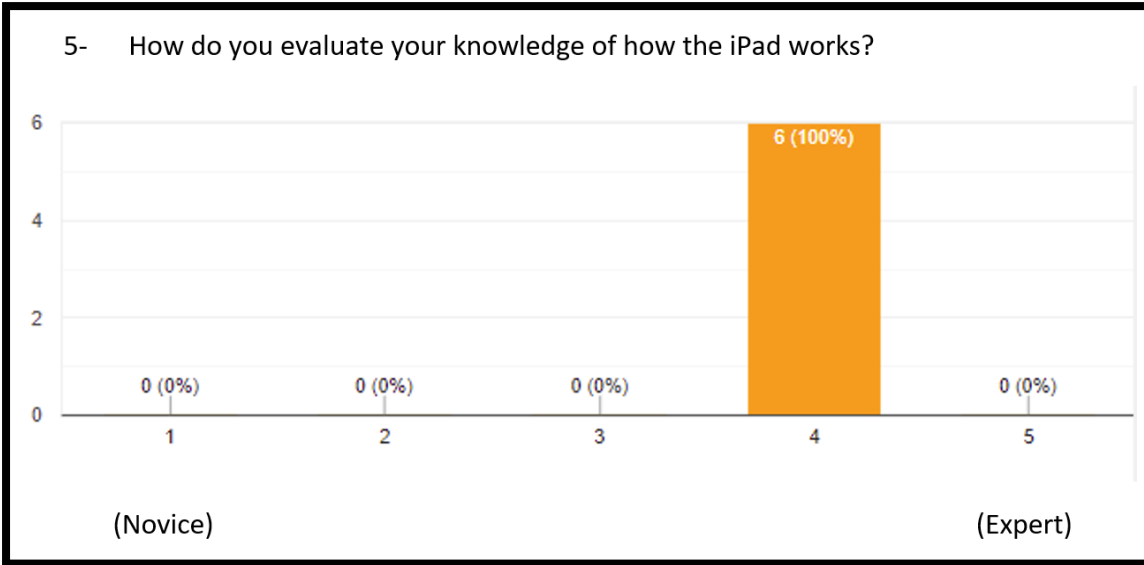
Figure 4.18. Teacher self-evaluation regarding their knowledge of the iPad

This is interesting considering that when they do not compare their own knowledge to that of the students' (as they did in the semi-structured interviews) they consider their knowledge to be quite high.

They also reported that they are fairly comfortable with the use of the iPad in the classroom (Question 6). See Figure 4.19 below.

6- Are you comfortable using the iPad in class?

Not at all comfortable   Completely comfortable
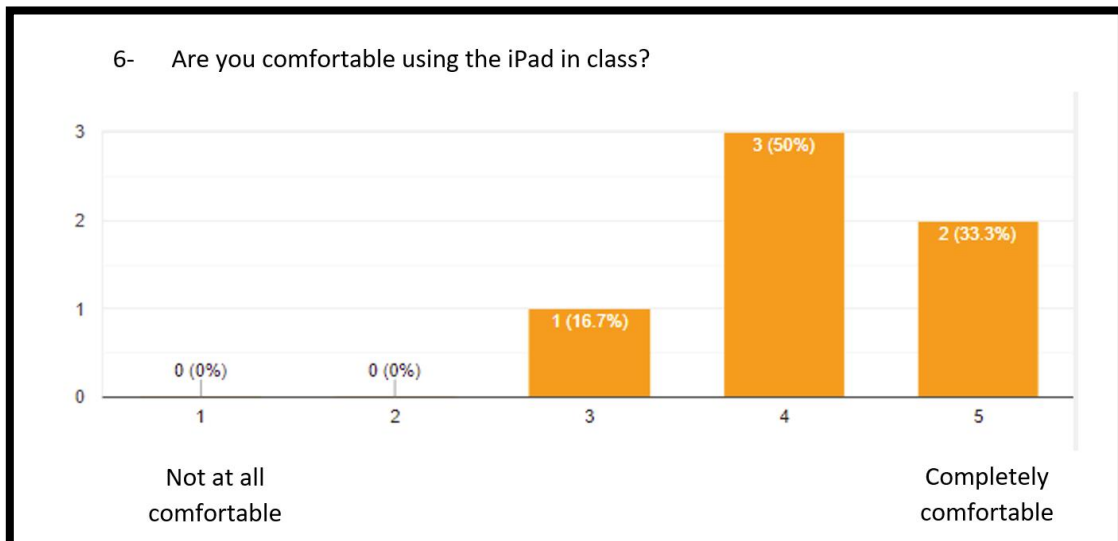
Figure 4.19. How comfortable teachers feel using the iPad in class

This could also be because they know they can rely on their own knowledge as well as the help of their students, of which they have a high opinion, regarding their ability and knowledge regarding how to use the iPad. Additionally, because they report to have received specific training related to this topic (Question 7), see Figure 4.20 below, in contrast to the students, who mostly reported that they did not receive specific training related to iPad use.
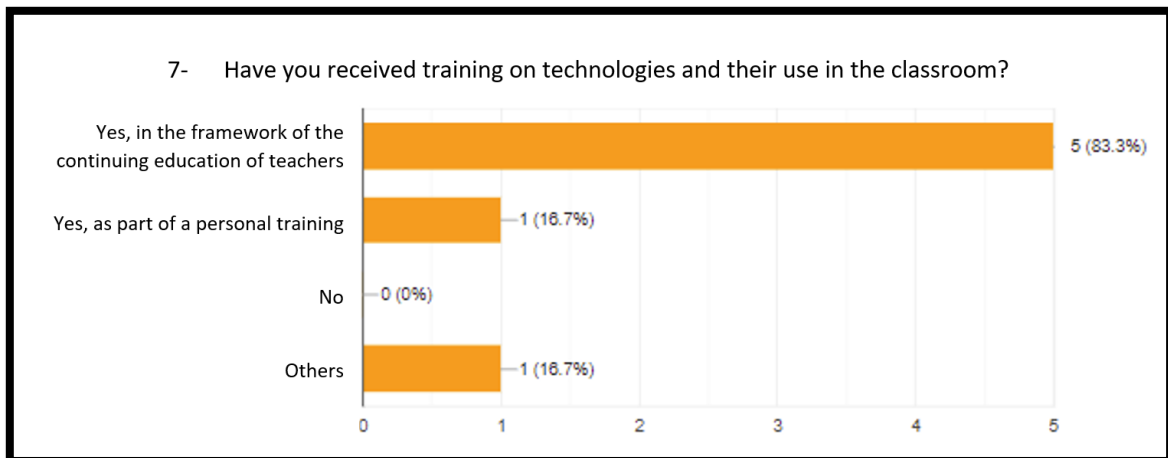
Figure 4.20. Teacher responses to the training they have received

The training reported by the teachers in the questionnaire seems to have been varied and teachers report that it has been 100% useful to them in the classroom (questions 8 and 9), see Figures 4.21 and 4.22 below.

Figure 4.21. What the teacher training on technologies included

9-   Were you able to apply in the classroom what you learned in the training?

● Yes
● No

100%
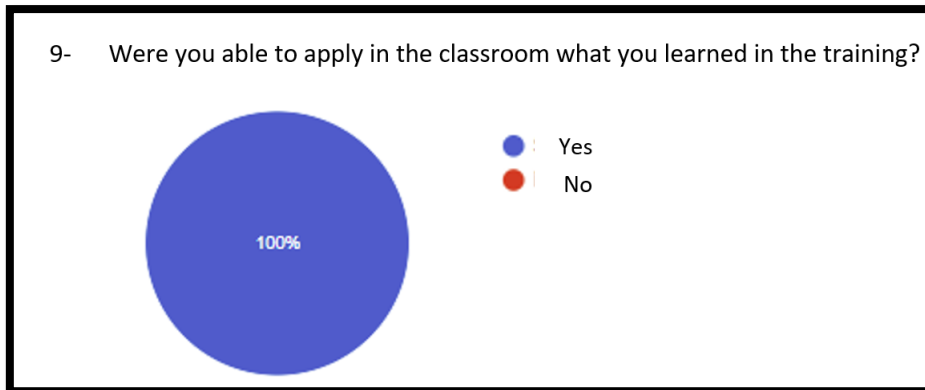
Figure 4.22. Teacher responses on whether they have been able to apply in the classroom what they learned in their training

4.4.9 Teachers' Use of the iPad

Regarding frequency of use (Question 14), the majority of teachers said they use it "daily", and 16.7 percent said "never". See Figure 4.23 below.

14. How often do you use the iPad in class?

● Daily
● Weekly
● Monthly
● Sometimes
● Never

16.7%

83.3%
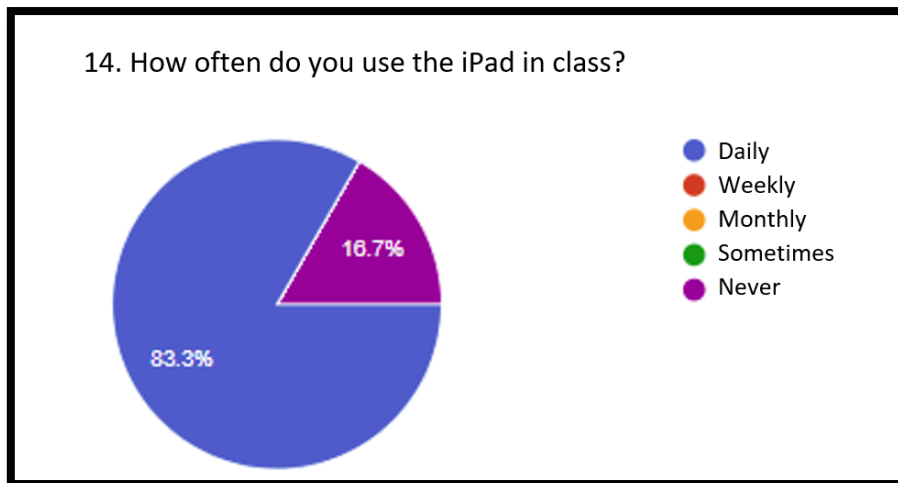
Figure 4.23. Teacher responses on how often they use the iPad in class

The majority of teachers said they use it "daily", and 16.7 percent said "never", which seems strange as no students reported "never" using the iPad in class, probably because the iPad is mandatory for the students; however, it is not for teachers who can also use the digital board, the computer, the phone, etc.

Regarding how often they think the iPad "should be" used, among their answers, teachers mentioned (Question 18), similarly to the students that it should be used either "often"

and "regularly" to varying degrees, but none of the teachers said neither "always" nor "never", whereas 17.8 percent of students (Question 9) did say "always" and less than 2% of students said "never". See Figure 4.24 regarding teacher responses below.
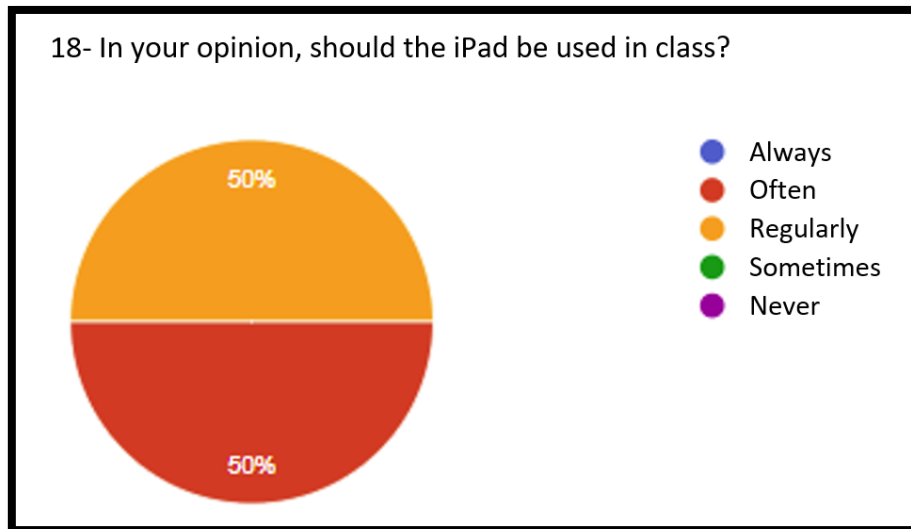
Figure 4.24. Teacher opinions regarding how often the iPad should be used in English class

Teachers showed more enthusiasm than the students toward the positive qualities of the iPad in the binary-type questions because they showed 100 percent consensus on those positive qualities mentioned (Question 15): interesting, useful, easy access, necessary, easy, fun and motivating. See Figure 4.25 below.
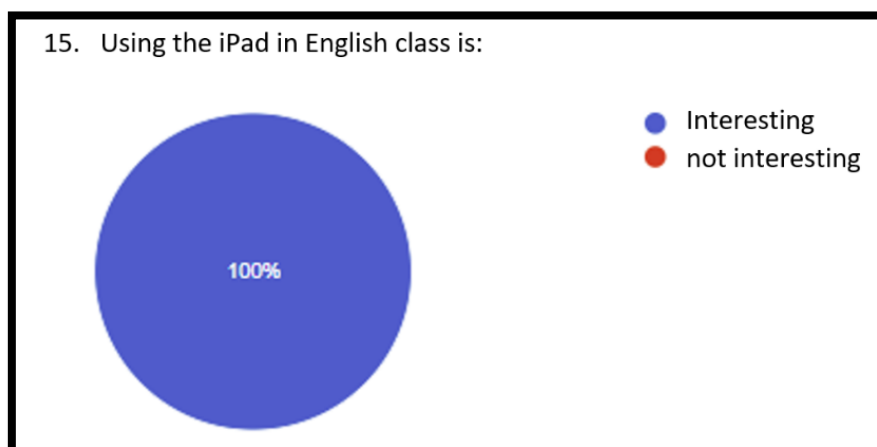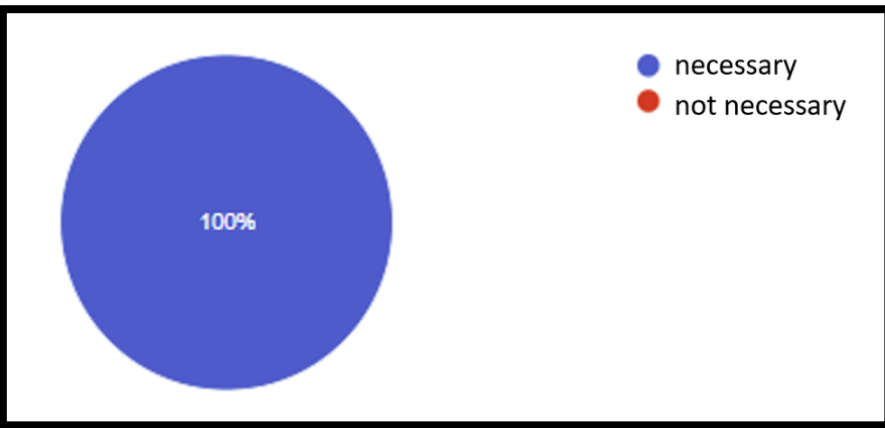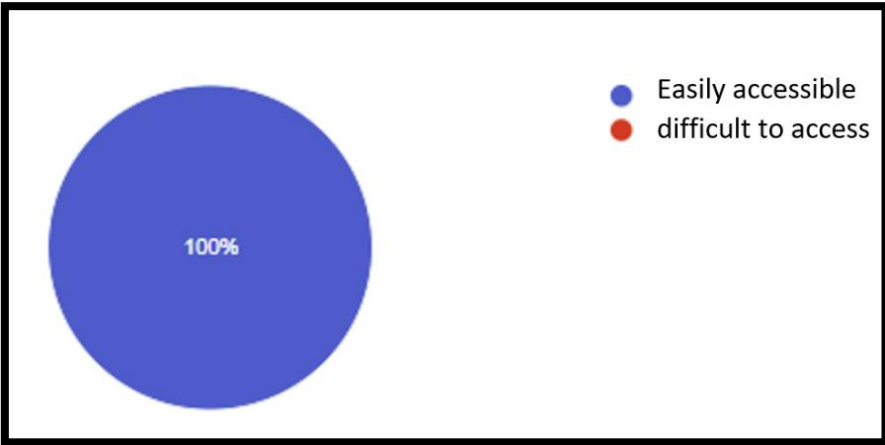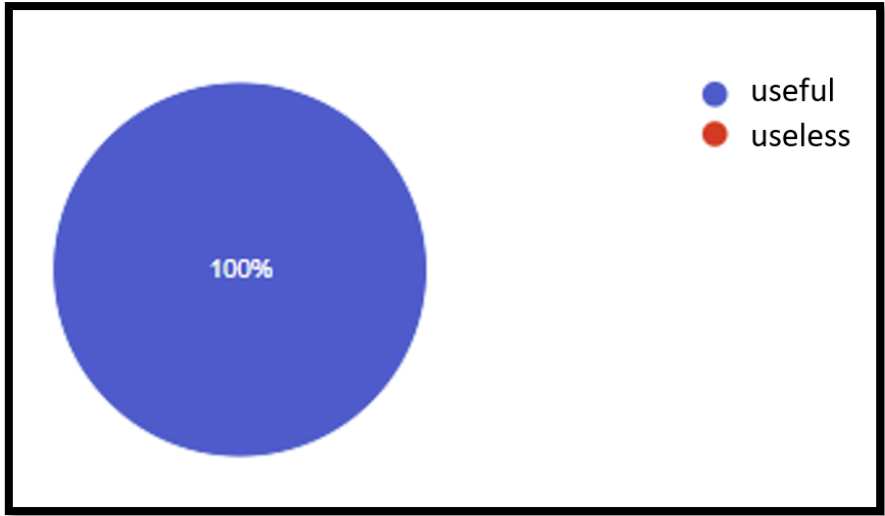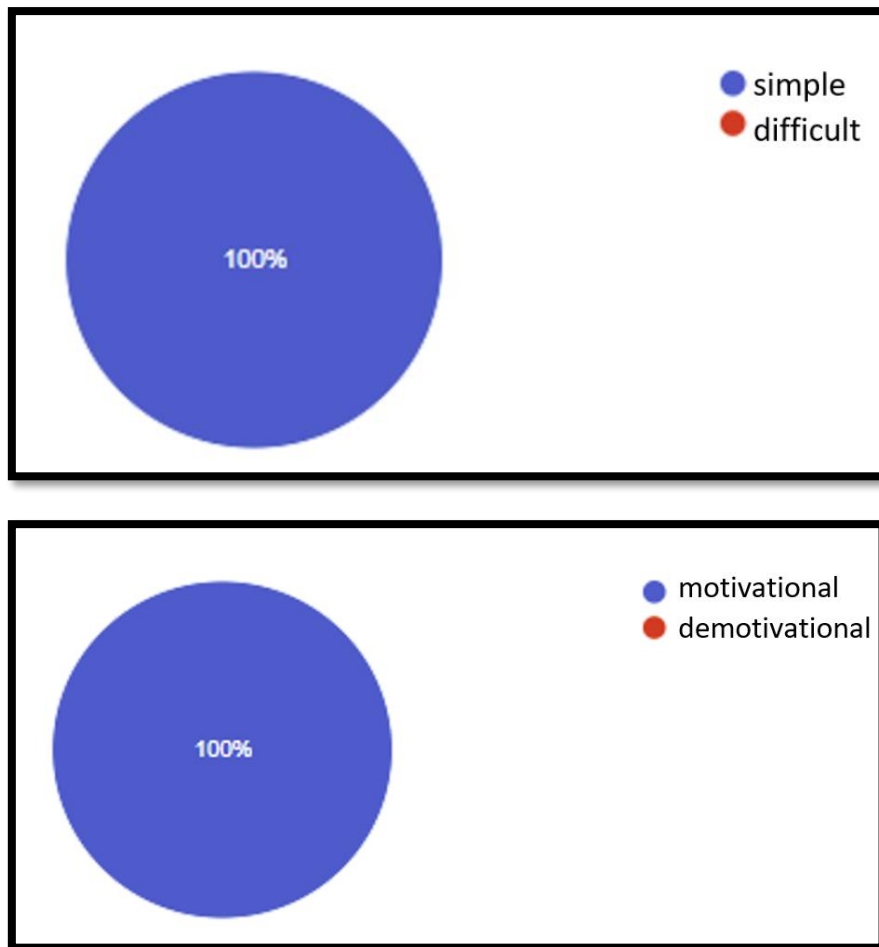
Figure 4.25. Teachers' beliefs regarding the use of the iPad

Perhaps it was easier to reach consensus since the teachers surveyed were fewer than the students, even though, percentagewise, 6 teachers make up a large percentage (46%) of the total number of surveyable teachers (13) at the time the study was carried out. Additionally, as educators, they are probably more likely to perceive the overall benefits since they see not only the classroom and home advantages, but also have a longer memory about what the classroom was like prior to having iPads to work with. However, like the students, the figures showed that some teachers do believe there are dangers to health related to using the iPad to almost the exact same degree percentage wise (83.1 percent of students think it is not dangerous and 16.9 percent of students think it is dangerous; 83.3 percent of teachers think it is not dangerous and 16.7 percent of teachers think it is dangerous to health). See Figure 4.26 below.
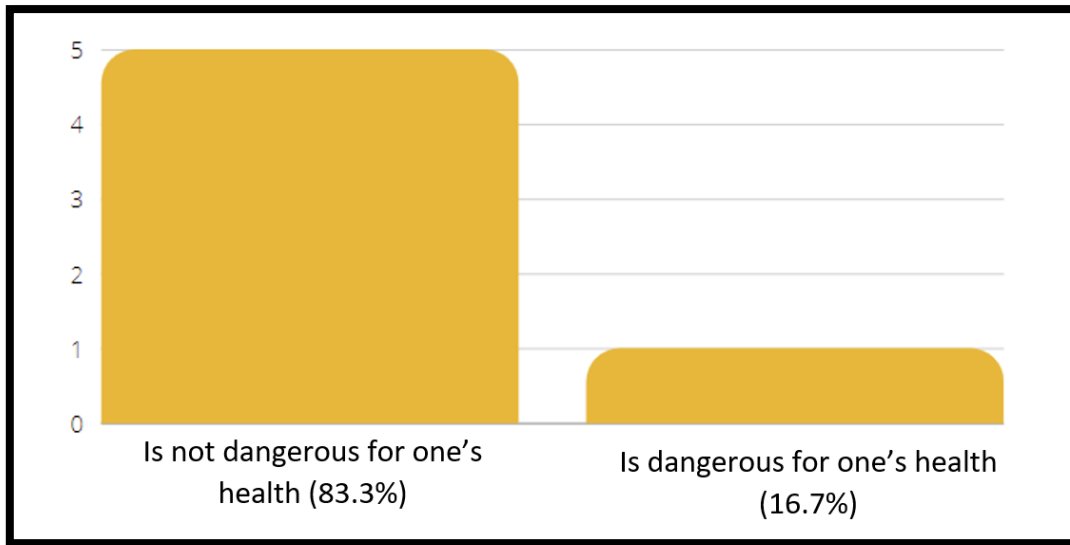
Figure 4.26. Using the iPad in English class is (dangerous for one's health / not dangerous for one's health)

Teachers differed from students in that a larger percentage of them think the iPad is complementary rather than indispensable, see Figure 4.27 below. (Students 53.9 percent complementary, 46.1 percent indispensable; teachers 66.7 percent complementary and 33.3 percent indispensable).
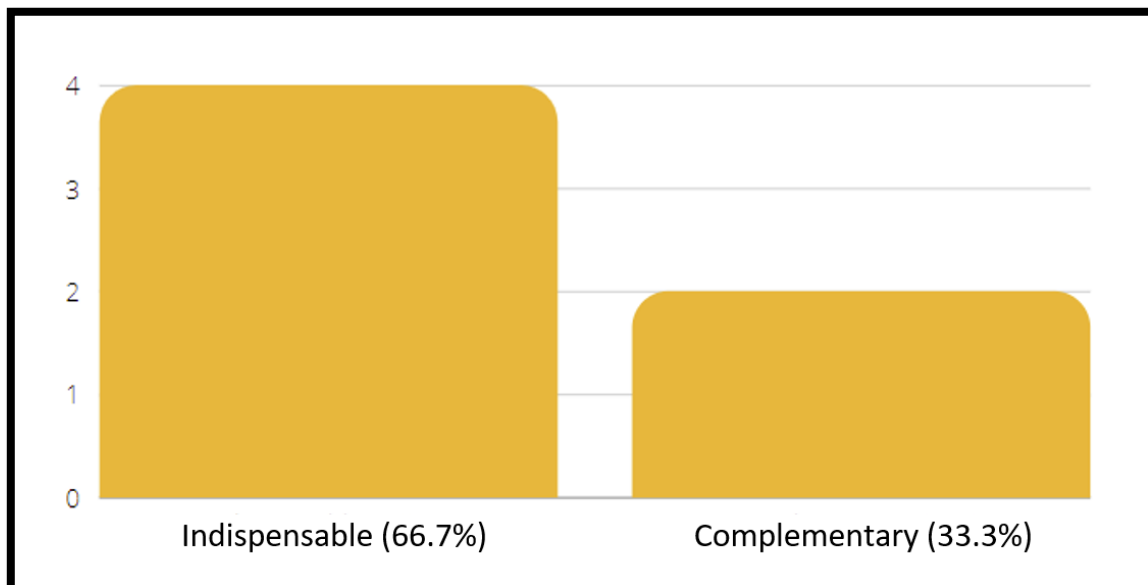
Figure 4.27. Teachers' point of view regarding whether using the iPad in English class is indispensable or complementary

This is likely due to the fact that teachers, as educators with more experience, are aware of the variety of resources they have in the classroom and know more fully that it is possible to work with other tools and resources apart from the iPad.

Regarding what specific tasks teachers think the iPad should be used for in class (Question 26), given a list of options that included: have fun (games), search for information, watch videos, learn vocabulary, read texts, do personalized exercises, chat, do homework, do projects, and others, the teachers responded as follows, see Figure 4.28 below.

26 - In your opinion, it is necessary to use the iPad in English to secondary school classes to:

Have fun (games) — 3 (50%)
Search for information — 6 (100%)
Watch videos — 6 (100%)
Learn vocabulary — 6 (100%)
Read texts — 5 (83.3%)
Do personalized exercises — 6 (100%)
Communicate (Chat) — 1 (16.7%)
Do homework — 4 (66.7%)
Do projects — 6 (100%)
Others — 1 (16.7%)
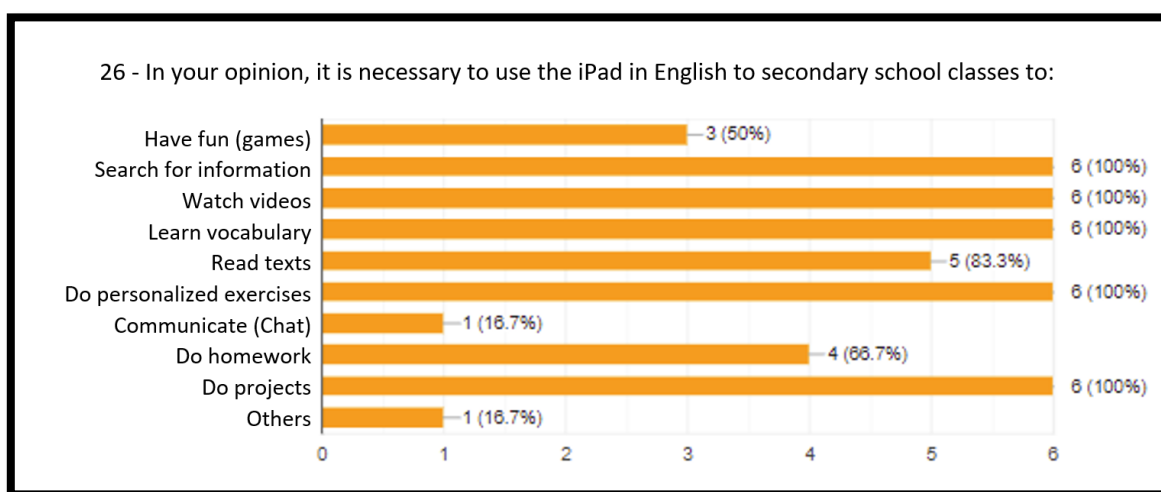
Figure 4.28. Teacher opinions on what the iPad in secondary school English class should be used for

Similar to the students, they expressed strong agreement that the iPad should be used to search for information, read texts, do personalized exercises and to carry out projects. A minority, like in the case of the students, named "having a conversation (chatting)". This could mean that they have a strong preference for having conversations via speaking to each other in class.

As in the case of the students, the teachers were asked to express their degree of agreement on a spectrum, thereby gauging their beliefs on 14 different statements regarding the use of the iPad and they answered as follows, see Figure 4.29 below.
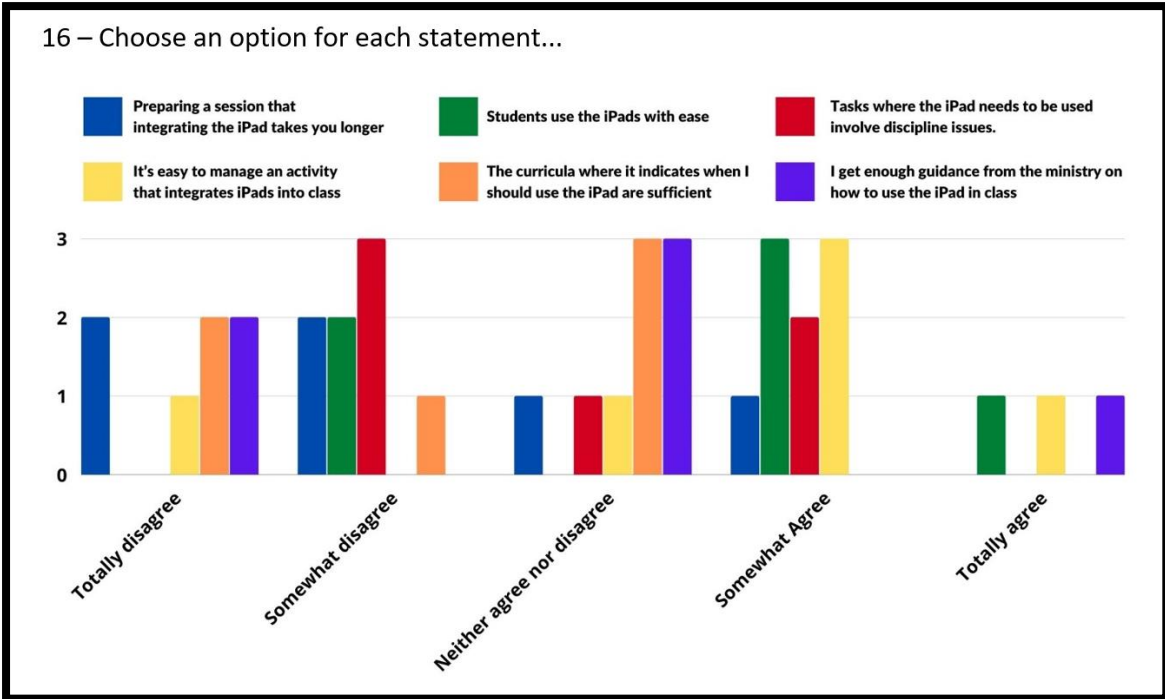
Figure 4.29. Teachers' degree of agreement on a variety of statements

On the first statement 16.1 which said "the preparation of a session that integrates the iPad takes you longer" 4 out of 6 teachers were not in agreement, 1 teacher was neutral, and 1 teacher was in agreement. This means that the majority perceive that the iPad does not make them take more time to prepare a session that integrates it. One teacher may have been neutral due to the need to qualify the type of preparation and the details of the session to be prepared. That one teacher agreed that it took more time could either mean that the integration of the iPad for them requires more thought and preparation than when it is not used to prepare a session.

Regarding the statement 16.2 which put forth that "it is easy to manage an activity that integrates iPads in class", 4 out of 6 teachers were in agreement, 1 teacher was neutral and 1 teacher was totally in disagreement. Largely, teachers believe this iPad activity management is easy, the one teacher who does not agree could be thinking about the difficulty for 1 teacher to monitor a large group of 20 or more students to make sure they are each on task at all times in the classroom. However, the majority do not see iPad activity management in the classroom as a difficulty.

In relation to statement 16.3 "students use the iPad with ease" 4 out of 6 teachers agree and 2 teachers disagree. This shows that the teachers have a mostly positive perception of how easily students can use the iPad and that a few consider that there are difficulties that would make them disagree with that statement.

Related to that, in question 21 when teachers were asked "21- Can you name some of the problems that students have had using the iPad in class?" teachers responded citing difficulties that varied in type: some were technical, others were related to use, others were related to distraction, and others were related to the WIFI network:

- *Sometimes they run into the fact that their iPads become obsolete or their battery "dies" and they can't run them all day without charging them.*

- *They usually have a hard time finding the right information, find it difficult to organize folders and also often prefer to send messages or play.*

- *Have fun with personal things on the iPad.*

- *Wi-fi connection problems.*

- *Take pictures with classmates without permission.*

- *I'm not sure.*

In question 22, when teachers were asked "22- Can you briefly explain the biggest problem that students have had when using the iPad?" similar points were echoed:

- *When students play with the iPad.*

- *Distraction and games.*

- *Unable to use iPad due to connection errors.*

- *Work on the documents in the classroom and send them.*

- *I'm not sure... they get confused, lose the class thread and don't follow. Consequently, they do not learn all they could.*

Considering statement 16.4 "the curricula where it indicates when I should use the iPad are sufficient", half of the teachers were neutral (3 out of 6) which could mean that they would need to qualify that statement to agree or disagree with it, 1 teacher did not agree and 2 teachers were totally in disagreement. Since 3 out of 6 teachers showed disagreement, it

would be worth looking at more details as to why they do not think that the curricula are sufficient on this point.

On statement 16.5 "tasks where the iPad needs to be used involve discipline issues" half of the teachers were not in agreement; 1 teacher was neutral and 2 teachers were in agreement. That teachers were somewhat split on this issue could show that the discipline issue has not been completely resolved and that perhaps more reinforcement in this area would be beneficial.

Furthermore, in question 19 where teachers were asked "19- Can you name some of the problems you have had using the iPad in class?" Some teachers mentioned issues related to discipline:

- *My difficulties: problems with Wi-Fi and storage capacity. Problems with students: misuse.*
- *Mainly connection problems.*
- *Distraction.*
- *Technical problems at school: wi-fi, poor Apple TV connection, etc.*
- *Digital games.*
- *Distractions, visiting online sites that should not be visited.*

And in question 20, where teachers were asked "20- Can you explain briefly what has been the biggest problem you have had?" some teachers also echoed issues related to discipline:

- *Management in the classroom to control the misuse that some students make of it. An unpleasant situation in the classroom that is often repeated is when you detect that a student is being misused but he refuses to give you the iPad because for them it is a very precious and personal possession.*
- *Connection and also that students misuse.*
- *iPad games.*
- *Wanting to use the iPad in class and not being able to project to the apple tv, broken VGA connection and speakers not working either.*
- *Students playing during class.*

- *Basically, the one described above (previous question). (distractions)*

In question 30, the issue of discipline also came up: "30- What challenges and limitations has this integration entailed?"

- *From use to abuse. In some cases, it is difficult to make them understand that the iPad is not essential.*

- *The challenge is always to know a lot more than the students.*

- *Little control.*

- *In terms of challenges, it has involved the continuous training of teachers. At the level of limitations, it should be noted that not all teachers incorporate them as a learning tool due to the resistance they may involve.*

- *Discipline in the classroom.*

- *The challenge is to make students understand that the iPad is a great tool, which must be used appropriately.*

Regarding statement 16.6 "I get enough guidance from the Ministry on how to use the iPad in class" half of the teachers were neutral (3/6) perhaps due to a need to further qualify that statement to agree or disagree with it, 1 teacher was in complete agreement and 2 teachers completely disagreed with that statement. Since 2 out of 6 of the teachers showed complete disagreement, it shows that some believe more guidance could be provided by the Ministry on how to use the iPad in class.

Regarding statement 17.1, iPad use "helps your students concentrate in class", teachers were mostly neutral (4 out of 6 were neutral), and 2 were in disagreement. The neutrality could come from the fact that it is not the iPad but rather the teacher that helps them concentrate in relation to their use of the iPad. That 2 were in disagreement could point to the fact that some believe it can be a strong temptation not to concentrate in class.

For example, in question 29, when teachers were asked "29- What are the disadvantages of integrating iPads in the English class?" one of the most frequent elements mentioned was distraction:

- *Students' dependence on it.*

- *The problem is the maturity of the students. It would be wonderful if they were much more serious with the work.*

- *Distraction in the classroom.*

- *Misuse of the iPad.*

- *Distraction of some students.*

- *Distractions, lack of self-control, addiction.*

Regarding statement 17.2, iPad use "saves students time in their class activities", the majority of teachers were neutral (4 out of 6). Again, this neutrality could stem from the fact that it depends on how they use it and their circumstances, and not simply using it saves them time in all circumstances. 1 teacher was not in agreement and 1 teacher was in complete disagreement. Those teachers in disagreement could be thinking about those moments in which hardware, software or network difficulties or problems cause the students to spend more time than usual on their class activities.

Vis-à-vis statement 17.3, iPad use "helps students improve their work in class", 3 teachers agreed, 1 teacher was in complete agreement and 2 teachers were neutral. That 4 teachers show agreement is not surprising considering that in the semi-structured interviews teachers mentioned what nice and high-tech presentations their students were able to produce while using the iPad. The 2 teachers who were neutral perhaps needed further qualification in that statement to show agreement or disagreement with it.

Apropos statement 17.4, iPad use "saves students time when they do their homework", 1 teacher was in complete disagreement, 2 teachers were neutral, 2 teachers agreed and 1 teacher was in complete agreement. That half of the teachers showed agreement with that statement demonstrates their awareness, perhaps through student comments to them, that the students save time, perhaps because they can look up unfamiliar words or structures easily when doing their homework with the help of the iPad in online dictionaries, for example. Teachers also commented how quickly students were able to put together high-quality projects on the iPad. These are points that were echoed in the semi-structured interviews with the teachers.

Regarding statement 17.5, iPad use "provides students English materials in a real context", 1 teacher was in total disagreement, 1 teacher was not in agreement, 1 teacher was

neutral, 2 teachers agreed and 1 teacher was in total agreement. That teachers were so split across the degrees of agreement could show that they have varying opinions of what "a real context" could mean. However, since 3 teachers showed a type of agreement and 1 was neutral, one could say they were mostly favorable vis-à-vis this statement.

In relation to statement 17.6, iPad use "helps in the learning of English" 3 teachers were in agreement, 2 teachers were in total agreement, and only 1 teacher was in complete disagreement. This shows that the majority agree, and one perhaps considers the temptation to distract and the dependence that can arise from iPad use or misuse may not always be helpful in the learning of English.

For example, in question 28, when teachers were asked: "28- What are the advantages of integrating iPads in the English class?" they mentioned factors that help students in the learning of English (statement 17.6) and that provide students with English materials in a real context (statement 17.5):

- *Learning through real materials and close to them.*

- *I think listening to the language more easily and also being able to take care of content, even though this learning is being very slow.*

- *More personalized teaching.*

- *Improvement in attention to diversity.*

- *The use of the dictionary, improvement in hearing different accents, etc.*

- *Autonomy, immediacy, precision, possibilities.*

Regarding statement 17.7, iPad use "motivates students", 2 teachers disagreed, 1 was neutral, 2 teachers agreed and 1 teacher was in complete agreement. Half of the teachers do believe that it motivates their students, the teacher that was neutral perhaps needed more qualification in that statement, and the 2 that disagreed could be in disagreement because they might consider some of the challenges of iPad use to be demotivating in cases.

For example, in question 31, when teachers were asked: "31- Do you think that the introduction of the iPad in the classroom means any improvement towards learning? Why?" their answers included the motivation aspect:

- *Yes, whenever its use is managed as it makes learning more dynamic and closer.*

- *It is always an improvement if it is used well.*

- *Yes, learning in a more fun and motivating way.*

- *Totally. There is motivation when it comes to incorporating technology into the classroom. Ergo, learning.*

- *Yes.*

- *Yes, because it offers possibilities to work on the different skills that were previously unthinkable.*

Moreover, in question 32, the motivation aspect also came up in that using the iPad in class changed the way teachers are teaching English. Teachers mentioned ways in which it has enhanced their teaching in a way that is more motivating for students: "32- Has using iPads in the classroom changed your way of teaching English? If so, specify how."

- *Yes, as it has provided students with the option to have access to knowledge in a more autonomous way.*

- *Yes, sure. Ways always change when you use a tool you didn't have before.*

- *Grammar activities seem more fun.*

- *Yes. More focused on the needs of students and personalizing learning.*

- *Yes. We would have more contact with language.*

- *The essence is the same, but it changes specific aspects: motivation, contextualization, metacognition.*

Finally, regarding statement 17.8, iPad use "provides better English skills", 2 teachers were neutral, 3 teachers were in agreement and 1 teacher was in complete agreement. Teachers responded quite positively to this, perhaps due to the fact that as educators they can see the contributions of the iPad insofar as its potential to develop the linguistic skills of their students due to what they can do with it as a learning tool.

For example, in question 25 when teachers were asked: "25- Which type of English classroom learning activities improve when students use the iPad?" they mentioned English skills such as:

- *The use of real material.*

- *I think any: grammar, listening, vocabulary, reading. Including Writing.*

- *The texts.*

- *The exercise of grammatical resources.*

- *Audios and videos.*

- *Probably all: grammar self-correction, pronunciation, vocabulary acquisition.*

Additionally, in question 33, when teachers were asked: "33- Do you think that students have changed their way of learning English by using iPads in class? If so, specify how" teachers mentioned improvements in specific English language skills:

- *Yes, as they have improved their oral competence, specifically comprehension.*

- *Yes. They have changed in the sense that they write less and speak more.*

- *Playing and learning at the same time is favorable.*

- *Significant shortcomings are noted at certain times. But I think iPads are not the problem.*

- *Yes.*

- *Yes, but they are not aware of how they learned neither before nor now. They do not contemplate all the possibilities it offers.*

In the last question of the teachers' questionnaire, the teachers weighed in on their overall evaluation of the integration of the iPad in English class and this is what they had to say: "34- In general, what is your assessment of the integration of the iPad in the English class?"

- *Positive although not with regard to all students.*

- *I think it is positive, despite the problems that may be encountered. However, I do miss books. It should be a balanced combination of the two.*

- *Favorable.*

- *Very good and necessary. We need to teach by incorporating all the potential that technologies offer us.*

- *Pretty good.*

- *Despite everything, positive. The advantages outweigh the disadvantages. Of course, the main drawback is important.*

4.4.10 Teachers' Beliefs Regarding the iPad

In the section of the questionnaire entitled "Beliefs", teachers were asked "What are the advantages of integrating iPads in English class?". Teachers answered:

- *Learning through real materials and close to them.*

- *I think listening to the language more easily and also being able to take care of content, even though this learning is being very slow.*

- *More personalized teaching.*

- *Improvement in attention to diversity.*

- *The use of the dictionary, improvement in hearing different accents, etc.*

- *Autonomy, immediacy, precision, possibilities.*

We can understand that these aspects were facilitated by the use and integration of the iPad in English class because through the old method of using a desktop computer in a computer lab while the students could achieve some of these tasks, it was a time-consuming process to go to the computer lab (which involved leaving the classroom, re-taking attendance, etc.) The mobile phone also due to its small screen does not allow for easy reading of language and ease of navigation and viewing. Therefore, the iPad achieved a middle ground that due to its size, it is small enough to be at each desk, portable, and accessible to each student so it allowed them to learn through realia, with audio capabilities to listen to linguistic content. The iPad is the size of a textbook yet better in that students can search for more personalized content that is not as rigid as a textbook. Due to students being able to navigate through a variety of English-language content on the palm of their hand, they gain an awareness of the diversity in language and cultures in anglophone countries. As was stated by teachers and students in the semi-structured interviews and echoed in the questionnaires, the iPad made it easier for students to search through online dictionaries and because the iPad is with them at all times in the classroom and at home, it provides an autonomy, immediacy and range of possibilities that are simply not there either with a textbook, a computer in a computer lab, or a small mobile phone.

The opposite question was also asked to the teachers: "What are the disadvantages of integrating iPads in the English class?". Teachers responded:

- *Students' dependence on it.*

- *The problem is the maturity of the students. It would be wonderful if they were much more serious with the work.*

- *Distraction in the classroom.*

- *Misuse of the iPad.*

- *Distraction of some students.*

- *Distractions, lack of self-control, addiction.*

The biggest problems detected by the teachers were the distraction factor of it, within which "misuse" could also be identified, as well as the issue of dependence or addiction to the iPad.

4.4.11 Conclusion on the Teachers' Questionnaire Responses

As can be seen by the results, teachers largely have positive attitudes and beliefs regarding the iPad. Both drawbacks cited by teachers regarding the iPad, the distraction and the addiction that can be caused using the iPad, apart from being mentioned in this study, have been seen in other studies involving technology use by students. This will be discussed further in Chapter 5.

CHAPTER 5: DISCUSSION

5.1 Introduction

This chapter provides a synthesis of all the data gathered and presented in Chapter 4 using the various instruments detailed in Chapter 3. All the discussion of findings are organized in the following way: first, those from classroom observations were detailed at subsection 5.2 according to the specific aspects as identified with the help of the Classroom Observation Guide; second, under subsection 5.3, I present the advantages and disadvantages of the usage of iPad in the EFL classroom according to the teachers and students who participated in the semi-structured interviews; then a synthesis of the results garnered from the questionnaire responses can be found in subsection 5.4. All these key findings are consolidated into a summary in subsection 5.5 based on the triangulation of data from the three research instruments.

5.2 Findings from the Class Observations

I carried out classroom observations during three classroom sessions in which there were 22 students present, 23 students present, and 22 students present, respectively. Since I was not allowed to record video or audio footage, I came to the observations with a Classroom Observation Guide (see Appendix D) which helped me to focus on six specific aspects to analyze in detail and write notes on the task type, the way the participants were organized, the content that was covered, the skills that were being used by the students, the materials that were being used, and the use of the target language.

5.2.1 Task Type

I observed that the task type was outlined by the curriculum guidelines (UPs) that the teachers follow during each lesson. The teachers followed the directions given in the guidelines and made minor adaptations when appropriate or necessary. The students needed to use the iPad in parts to carry out the tasks, but not entirely or exclusively. The students were allowed to start using technology on their own initiative for the purposes of the task. There were no instructions given by the teachers about technology use at the beginning of the class session. This provides positive evidence regarding learner autonomy, as discussed in Chapter 2. The literature suggests that including technology as a tool helps to develop learner

"individual agency to enhance their learning in and out of class" and can be an effective means of boosting not only learner autonomy, but also motivation and self-investment (Hafner and Miller, 2019). The fact that there were no instructions given by the teachers about technology use at the beginning of the class session also points to a high degree of normalization, as Bax states it ¨the stage when a technology is invisible, hardly even recognized as a technology, taken for granted in everyday life¨ (Bax 2003, p. 23).

5.2.2 Participant Organization

The seating arrangement was appropriate and conducive for pair and group work. Students had ample space to discuss their work with their partners or group mates sitting beside and opposite them.

5.2.3 Content

The focus of the class sessions was on creating a project. The topic was selected neither by the teacher nor by the students, it was given by the curriculum guidelines that the teachers must follow.

5.2.4 Skills

During all the class sessions, students were involved in listening, speaking, reading and writing skills. The iPad was used for the reading of information that they needed to search for to carry out their project and it was also used to write. The listening and speaking took place in real time among them and with the teacher who was present. The importance of digital literacies acquired by the students through the integration of technology can be highlighted here. As Thompson 2013 and Pegrum 2016 highlight in the literature, digital literacies will need to become a core consideration. Both students and teachers should delve into such deep questions as choosing appropriate representational modes or mixtures of modes to communicate a message by asking "When is text the best way to make a point? A moving image? Photos? Data visualizations?" (Pegrum 2016 cites Thompson 2013) and decide how to communicate their message most effectively through the use of the technology.

5.2.5 Materials

The iPad was the main material used. The purpose of it is to provide the students with a means through which they can search for information online to accomplish the task. They can do individual searches and then discuss their findings with their small group. It also enabled them to put together their project through the features that the iPad offers. Furthermore, it also served as the medium through which they would share their finished project with their peers and with their teacher for evaluation. Regarding how controlled the use of this material was, it was both teacher-directed and student-directed.

5.2.6 Use of Target Language

The target language (English) was used in class as well as a combination of Catalan and Spanish. The use of the tablet did not interfere in the use of the target language. It helped them for two main reasons: the first reason is that it being a technological device that students feel very comfortable using, it allows them to show and exemplify meaning when it is difficult to express it in complex language structures. Furthermore, since it allows each student (according to individual needs, purposes and skill levels) to instantly search for words in a digital (as opposed to paper) dictionary. Thus, it is a quick and handy tool that they are able to use to search for vocabulary or simple structures in English, which in turn helps them in their use and practice of the target language as necessary for the task and at the request of the teacher.

5.2.7 Additional Observations

I also observed that one of the classes had the assistance of a TA (Teaching Assistant) from the American Fulbright Program. This allowed for more control and additional help for the regular teacher to monitor student progress and to see if they were remaining on task with the iPad. Given that the teacher to student ratio is typically around 1:20, the teachers welcomed the support to monitor students more closely and offer assistance and input to them as well, if required, as they carried out the different steps of the task. Effective and close monitoring of student use of the iPad, as highlighted by the literature in Chapter 2, is one of the important aspects that must be in place in order to prevent a wide variety of drawbacks reported by studies of technology integration in education, such as: the mere adoption of technology does not guarantee learning (Dunleavy, Dexter and Heinecke, 2007), distraction,

cyberbullying, cheating, the potential for unethical behavior, and data privacy issues (Metruk 2020), to name a few. In the semi-structured interview, the teachers did mention that at one point they had support with regard to student monitoring through a surveillance program called Casper Focus which allowed them to monitor student use of the iPads, however due to data protection laws, this program had to be removed from the iPads and there was no mention of an alternative program that could be used as a substitute to continue this surveillance.

In one of the class sessions a problem with the projector emerged, and a student was quickly able to solve it without the need for any verbal communication whatsoever. The slow Wi-Fi connection was notable during the class observations. This is another issue that was addressed in the literature as a hindrance to technology integration, and it was also raised by the teachers in the semi-structured interview because without efficient and reliable Wi-Fi, most of the tools they have cannot be used, uploading and downloading by the class cannot happen, apps are not functional, etc. Technical hindrances that are related to hardware and software were mentioned in the literature as important drawbacks to address because the technology implemented can present drawbacks such as: limited audio-visual contact, a limited length of messages and data storage issues (Tafazoli, Parra, Huertos-Abril, 2018).

Many of the students were engaged with the task. However, some students were occasionally getting distracted and using the iPad off task.

The iPad was omnipresent in the classroom. It was the main material used and was always visible in the sense that even when it was not in use, it could be seen on all the students' desks. Although the students have individual lockers assigned to them within the classrooms and despite the fact that they all have their backpacks next to them, the iPad was never fully put away in either a locker or a backpack when not in use.

5.3 Findings from the Semi-Structured Interviews

5.3.1 Advantages According to the Teachers

Among the categories and themes that could be classified as advantageous were the following:

1. Devices guaranteed by the school: All schools had a repository of devices available for those students who forgot theirs at home or for teachers who might need more than a device at once. Full time teachers were asked to purchase their own iPad, but they explained that using that personal iPad is better because the repository iPads do not have

the codes ready to access a variety of apps or other personalized features. In any case, there are iPads available at the school so no one would be left without one.

2. Direct access to real, up-to-date materials: Textbooks offered an extremely limited number of topics and many times these were outdated. The iPad provided instant access to all topics imaginable and completely up to date.

3. Instantly available information: If a piece of information was needed in any task it could be obtained precisely in a timely manner, which expedites the accomplishment of tasks and activities.

4. More materials available in English than in any other language: The Internet offered more information and webpages in English than in any other language. All information required in a classroom could be obtained from the Internet in English easily. This was an obvious advantage for the English teachers.

5. Using the iPad stimulated students' creativity: The wide array of applications available made it easier for the student to create elaborated, fancier productions than they would do otherwise. When teachers compared students' productions nowadays to the ones produced in the past, they emphasized the clear increase in quality of students' outputs.

6. Reputation of the English as a Foreign Language classroom: The English subject was better perceived by students because lessons had become more dynamic, interesting and fun, and better adapted to students' individual needs. Classroom management has become easier to handle.

7. Ordinary "boring" drills could be executed excitingly: Technology and applications allowed for incorporating new dynamics into the classroom. Both teachers and students mentioned Kahoot as an example of an application used in class with the potential of turning dull content into fun. For instance, students mentioned practicing irregular verbs. They mostly appreciated the interactivity, the competitiveness, and the fun this type of application brought into the classroom.

8. Students were more motivated: Both teachers and students perceived the increase of dynamism into the lessons that technology brings. Teachers compared present lessons with technology to the traditional ones in which a textbook was followed. The biggest outstanding difference was the dynamism of nowadays lessons. This turned into an increased student motivation as topics chosen are more related to their interests and daily lives.

9. Inclusivity: Teachers put a strong emphasis on the fact that all students took better advantage of the flexibility technology allowed. In the past, the rigidity of a textbook, with little room for personal adaptations, made it harder for weaker students to follow the pace of a lesson. Technology and group work allowed for personal adaptation. Students' specific needs could be better catered for than in the past, thus enhancing the possibilities that all students without exception can grasp the contents taught better. Nonetheless, this aspect was never brought up by students.

10. Added countless possibilities: According to teachers, technology provided added possibilities that could be contemplated in order to exemplify and portray how crucial it

was to learn the language in today's globalized world. In this respect, they praised the possibility of interchanging experiences and putting programs and projects together with other schools abroad, to show students the real role English plays as a *lingua franca*.

11. Andorra's specific context: Teachers also emphasized the increased, unique opportunities the Andorran school ecosystem provided. The interchange of ideas and best practices could be easily shared with the whole community of English teachers in the Andorran school system through the regular seminar sessions and meetings held regularly at the Ministry of Education.

12. Gaining instruction time in the classroom: it was brought up by a teacher that before having the iPads, they spent a lot of time walking over to a computer lab, taking attendance again, and making sure the equipment in the computer lab was in good working order. Thus, having the iPad handy within the classroom did not make them lose valuable time.

13. Improved teacher-student and student-student communication and sharing: the advantage was also raised that since communication between students and teachers is immediate through the iPad, when a teacher asks for a homework assignment it is often immediately shared by the students and the teacher can check it efficiently, without the need to carry 20 student notebooks home, and with the ability to quickly provide feedback to the student, whether present in class that day or not, via the same channel. Additionally, through this immediacy, the teacher can see if a writing assignment was turned in too quickly, that the student may have used a translation application to put it together and the teacher can further see if that was the case. Additionally, students can communicate quickly with each other for group projects and collaborations thanks to this tool. Thanks to this improved teacher-student and student-student communication, there is more continuity in the studies of each student and in their progress on group projects because they can catch up on work at home if they are absent or ill. (This constant ability to communicate can also have its disadvantages which will be addressed in the disadvantages section.)

14. Flexibility in terms of what topics to discuss and use to teach: teachers brought up that the iPad allows them more flexibility on teaching topics, particularly regarding current events. They mentioned that they can raise topics in class regarding what is happening in the world to engage students and ask them real-world questions about current events in English-speaking countries that they can find answers to using the iPad and the target language.

15. A teacher said that he felt students value when teachers use technology in a fun way to give an interactive and different spin to a traditional way of learning grammar.

16. It was expressed by one of the teachers that the use of the iPad has increased student engagement with class content outside of class because when they put together projects, they usually involve multimedia such as videos, and they use the iPad to film outside of the classroom and they work on high-quality productions outside of class.

5.3.2 Disadvantages According to the Teachers

Teachers also mentioned several potential drawbacks of the use of technology in the classroom. The following were potential themes for the data analysis that emerged from this preliminary systematization of data, which could be interpreted as disadvantageous:

1. Although there is a repository of iPads available for anyone's use at the school, teachers mentioned that as full-time instructors they needed to buy their own personal iPad with their own funds without any subsidy. Additionally, it was brought up that it is not ideal to use the repository iPads because all the personalized codes must be entered for each app and because the battery runs out quite quickly due to wear. Thus, a teacher expressed that the cost of iPads is high and that a subsidy would be helpful in order to upgrade the technology every 2 or 3 years due to the fact that it is used a lot and it incurs wear and can become obsolete.

2. There can be technological (hardware/software) problems related to using the iPad that can be difficult to resolve and teachers need to have a plan B in case one of the pieces of hardware or software do not permit the realization of the activity on that day at that time. This can result in more prep-work for teachers, or the need for them to adapt quickly to a piece of equipment malfunctioning. Teachers can face pressure to somehow still be able to carry out the activity in a different way or change it all together to reach the learning objective. To help minimize this, a teacher who also has the role of TICE (t*ècnic d'innovació de la comunitat educativa*) is in place to serve as a link between the Ministry of Education's technology department and the school in the case tech-related problems need to be solved or reported.

3. The teachers mentioned that everything relies on the network and the network sometimes does not function. Therefore, there are times in which it is neither their fault nor the fault of Apple TV, but if the network does not function it influences other important factors such as their ability to make software updates to then be able to properly upload and download the digital material they are working with. They also sometimes rely on the functioning of a downloadable app to carry out an assignment, for example, Comic Maker; if it does not work properly, it is not really an option for the students to draw comics by hand. Regarding network issues, one teacher mentioned that the Santa Coloma school has the oldest infrastructure which could be a determining factor in that he cannot project some digital content. The same teacher compared Andorra to Japan and to Silicon Valley to imply that there is still some way to go to reach a seamless and 100% reliable network.

4. A teacher reported a lack of uniformity in what technological equipment is present in every classroom. She mentioned that to some classes it is necessary to bring a special cable or adapter, some only have a projector, some have Apple TV (which helps to project what is on the iPad) and some do not, and specific hardware is necessary to do certain activities.

5. Technology can be distracting sometimes: For these reasons, they have installed applications to oversee and track what students are doing. Furthermore, access to social networks has been disabled from students' tablets. However, teachers mentioned that the app which allowed them to monitor student activity on iPads, Casper Focus, was eliminated as a Ministry of Education decision and that the teachers did not know the reason. The teachers mentioned that this has made classroom management more difficult

since the teacher to student ratio is around 20 students per teacher and with two clicks students can close a game that they were playing before the teacher can see it happening. They mentioned that a program like Casper focus was "an important help".

6. Technology produces tasks automatically: For example, the use of translating, proofreading and self-correcting tools hinders the production of writing pieces autonomously.

7. Technology is ubiquitous and means anytime / anywhere. Students contact teachers anytime beyond school hours.

8. Restricted memory capacity of devices: The types of tasks, especially when it comes to speaking and listening skills, require the storage of large files from many students, which can become troublesome due to the restricted memory capacity of the devices.

9. Technology is becoming obsolete. Intensive iPad use leads to decreased battery lifespan, which diminishes the capacities of the device. For teachers this is an issue as all students' work and projects are supervised on teachers' devices.

10. Limited grammar exposure: The type of tasks prepared leave little room to focus strictly on grammar in the more traditional sense, which might be a disadvantage as some students struggle to understand the intricacies of the English language.

11. Heavy use of the iPad and technology puts more demands on the teachers to vary technological activities and tasks as well as to constantly be learning about newly released ed-tech: a teacher reported that part of the problem is that students complain about having to do things repeatedly such as using the same app (Know) or the same task (a video). So, there can be a point of saturation of tech tool use among the students, which puts pressure on teachers to think of novel approaches, different apps, and different assignments, especially across disciplines, and thus, teachers also feel that they must constantly be learning about what is being launched in the tech world and that it moves too fast.

12. Use of a mobile technological device such as the iPad requires a certain degree of maturity: teachers reported that in some cases students are lacking in maturity and thus use the iPad to be off task even though they know the rules and regulations regarding "wrong use" of the iPad.

13. There is a gray area between the iPad as a tool for personal use and for academic/school use: a teacher reported that because the iPad, a mobile technological device, goes home with the students each day, they don't see it as something that is only for academic/school use, they see it as being for personal *and* school/academic use. Thus, for this reason they also see it as "private" and "personal" especially when teachers ask for it.

14. The iPad needs to be accompanied by other teaching tools: Some teachers think that the iPad should be complementary and not completely replace other tools such as paper notebooks for tasks, such as writing tasks, due to the fact that the auto correction tools do too much of the work for students. Teachers mentioned the importance of finding a balance and harnessing the best the iPad has to offer and put limits on the drawbacks. Teachers

do not think that students have 100% of the maturity and responsibility needed to only use an iPad at all times.

15. Teachers mentioned observing in some cases behavior of dependence and even addiction to the iPad as a drawback. They said that some students demonstrate resistance to putting the iPad away in their backpacks when asked by the teacher and that they want to have it in plain sight on their desks (not put away, even if it is off). Additionally, it was reported by a teacher that at 8:30am when they started the school day, the teacher walked into a silent classroom in which students were each on their own iPad and were not communicating with each other.

5.3.3 Advantages According to the Students

For the most part, students were generally happy with the use of their devices in the classroom. Nonetheless, they were clearly not as enthusiastic as teachers were. Among the advantages, the following themes were identified:

1. Simple technology: Managing the iPad and its applications is inherent in them. None of them manifested or showed any concern regarding the use of technology. They perceive technology as a normal part of their daily lives and do not expect any specific training in it as they always manage to find out how a concrete application might work.

2. Attractiveness and speediness: Producing tasks with their tablets results in faster and more attractive productions. Students appreciate the wide array of instant resources available and the possibility to put them together in an attractive visual way in no time.

3. Better outcomes: Students are convinced that using a tablet and with the same level of effort they produce better productions than otherwise.

4. Positive features: Students point out that working with an iPad is comfortable, easy, practical, interactive, innovative, different, and modern.

5. Class is more democratic and inclusive thanks to the iPad: students expressed that it enabled them to participate more and to help each other and the teacher. Thus, we can understand that students (as well as teachers, based on their comments about students teaching them how to use certain apps and making corrections on certain content the teacher said) perceive that the iPad influenced the traditional power relationships in the classroom.

6. It was brought up that it was easier to receive a link with assignments to do directly on the iPad than having to receive the information in dictated form from the teacher.

7. The iPad is indispensable regarding presentations: When asked if the following year they would choose to have or not have an iPad, a student spoke up and said "we must make presentations" so it would be good to have the iPad. This shows that once the students have seen the range of possibilities that the iPad gives them for presenting, they cannot conceive of making presentations without it.

5.3.4 Disadvantages According to the Students

Students also showed some skepticism regarding the use of the iPad for their schoolwork. Below are listed some of the themes resulting from a preliminary systematization of data:

1. iPad as a distraction: Many of them, when not directly supervised by their teacher, manifest being tempted to deviate from the task and do other things (e.g., playing games), despite being fully aware that their activity on their tables can be fully monitored. A student also said that receiving notifications and messages on the iPad was distracting, even though another student said the notifications are supposed to be turned off.

2. Indifference: A few students would not care if the tablets were removed from the classrooms. These students recognize the advantages of using tablets but also believe the tasks assigned could be accomplished without iPads.

3. Less effort: Some students recognize that having an iPad available facilitates tasks too much in some instances. They feel that they would put more effort into completing tasks without the support of a tablet and this might hinder their learning. For example, they referred to how some students produce writing productions with the help and assistance of automated translators.

4. Use at home: Students do not perceive the tablet as an educational tool while at home. It is used seldom for homework, generally if class assignments have not been completed at school. Nonetheless, most students acknowledge that they listen to a lot of music in English and watch many YouTube videos in English while at home.

5. Technological issues: Some students complained that some information might get lost or deleted from the tablet accidentally.

6. Printed books are sometimes preferred by the students over the iPad: when students were asked if they preferred to read with the iPad or to read from a real book, some of them said they preferred a printed book because "it makes you want to read it when you see it" and because the brightness of the iPad display made their eyes feel tired. This was an interesting characterization of a book because while teachers characterized books as rigid and difficult in the sense that students who were not at the level of the book would have difficulty playing an active role in the lesson whereas iPad assignments could be adapted to more levels, students did not mention this at all and made a case pro-books due to their physical appearance giving them motivation and that reading paper pages would not tire their eyes as much as the iPad screen.

5.4 Findings from the Questionnaires

Student answers reflected that they have self-confidence regarding their knowledge of the iPad. The majority believe they have advanced knowledge, a quarter believe they are experts and the rest believe they are at least intermediate users of it. Students reported that they did not receive specific training on how to use the iPad at school, so it means that they

gained this knowledge at home or during their leisure time. This generation of students belongs to the born-digital generation, meaning they grew up surrounded by more technological devices at home and with their friends, thus facilitating the intuitive learning process of how devices like the iPad work. For the students the level of normalization, as Bax defines it (2003), seems to be high.

More than half of the students said that they use the iPad in class often in order to learn and to carry out assignments and more than half believe that they should make this frequent use, which means they are mostly in agreement with their use of the iPad at the time of the study. The results showed that the use of the iPad within the classroom is largely directed by the teacher even though students also have opportunities and moments within this guided use to search for words independently, for example. The students did not express opposition to this and seemed to consider it quite expected and normal.

A large majority (97.7 percent) said they liked using the iPad in class and they showed awareness of what it allowed them to do such as do interesting, useful assignments that were not beyond their reach, that the tool is easy to access, necessary, motivating and the majority did not think it was dangerous to their health. More than 50 percent of students consider the iPad indispensable in the classroom, although they also acknowledge the complementary role of notebooks and other classroom tools. This confirms the studies on learner autonomy, as explained in the Chapter 2 literature review, that the integration of technology boosts learner autonomy, motivation and self-investment (Hafner and Miller, 2019).

Students do not see only the good side of the iPad. They know it can also be a major temptation and source of distraction and that its use is not always easy in the sense that there can be minor hardware or software problems. In general, however, the positive aspects that the iPad brings to the classroom and to the students outweigh the negative ones. They see it as a powerful tool and are aware of the need to curb its drawbacks. They mentioned some, but not all, of the drawbacks raised in the literature, probably due to the fact that they are not aware of the administrative drawbacks of the integration of technology, but rather are more directly aware of what they experience themselves, such as distraction (Dunleavy, Dexter and Heinecke, 2007; Metruk 2020) and slight health concerns such as some awareness of tired eyes when the iPad is used excessively (Metruk 2020).

Teachers also reflected an awareness of both the positive and the negative aspects that surround the iPad. They provided more detailed and in-depth answers regarding both

sides as it can be expected, since they are educators and their perspective is wider and more reflection-oriented in relation to the past, the present and the future use of technology, and more specifically, in relation to the iPad. The teachers mentioned most of the benefits that were found in the literature review regarding the integration of technology in the classroom, such as: enhanced quality of input, greater authenticity of sources, relevant and useful feedback, a connection between students and remote audiences, as well as providing useful skills that go beyond the language classroom (Brett and González-Lloret, 2009; Lintunen, Mutta and Pelttari, 2017). Despite their overall enthusiasm, the teachers also mentioned a majority of the drawbacks to technology integration in the classroom found in the literature review, such as: challenges with the use of technology, selection of correct software (Dunleavy, Dexter and Heinecke 2007) and technical hindrances related to hardware and software (Tafazoli, Parra, Huertas-Abril 2018). However, as it is the Andorran government who incurs the costs of this technology implementation, they did not mention other drawbacks mentioned in the literature such as the cost of implementation (Dunleavy, Dexter and Heinecke, 2007) and perhaps because they do feel a good degree of support from the government, they did not mention other drawbacks found in the literature such as lack of policy support or lack of government investment (Metruk 2020).

Teachers reflected more confidence in the questionnaire regarding how they rate themselves as users of the iPad (as opposed to what they said in the semi-structured interviews which showed less confidence when compared to their students). In the questionnaire, all of them rated themselves a 4 on a scale from 4 to 5 (5 being expert), which shows a stronger confidence than one might think from reading only the semi-structured interviews. They also showed that they are rather comfortable using the iPad in class since none of them rated themselves a 1 (not at all comfortable) or a 2. This shows that in their view, one of the major drawbacks raised in the literature review: lack of qualifications of teachers (Aygul 2019) or teacher readiness (Metruk 2020), is not a major issue they are facing. They expressed confidence in the training they take part in as well as in their pedagogical knowledge regarding technology implementation in their class. However, the teachers' awareness of how much their students know regarding mobile (iPad) technology reflects an aspect brought up in the literature review which is that mobile technology can change power dynamics between student-teacher in the education sector as it in the health sector between doctor-patient, since information has been made available anytime anywhere, the relationship

of expert-novice is not as impermeable as it was before since novices can come to the experts with a wide array of information they have gathered on any given subject (Hafner and Pun 2020).

Unlike the students, they did report to have received training at school on use of technology in the classroom and at least 50 percent of them reported that the training included the use of computer tools (computer, projector, interactive whiteboards, etc.) and the use of mobile technologies (touch tablets and smartphones). This, as mentioned before, is likely due to the generational gap between the students and the teachers, for this reason, normalization as Bax (2003) defines it is seen to a higher degree among the students than among the teachers. The teachers are of a generation and of a context in which they were not surrounded by ubiquitous mobile or technological devices. All the teachers said they applied in the classroom what they learned in their training sessions. In the literature review, we see that even the early studies highlight the fact that in technology rich environments the need for constant teacher education and learner training are of utmost importance in order to ensure an effective and continuous integration of technology in the classroom (Levy 2009). Even when emerging technology is not involved, but rather, already existing technology, Levy argued that it is important to know how to use existing tools like ¨Word¨ specifically for language-learning objectives, which involves training in pedagogy and technology walking forward hand in hand (Levy 2009). The majority of the teachers reported that they use the iPad daily in class (83 percent) which means that their training empowered them to make this frequent use in their course. Additionally, half of the teachers believe the iPad should be used in class often and the other half regularly.

Teachers showed 100 percent consensus on the positive aspects of the iPad, which means they embrace this new technology as they can clearly see its contribution to what can be accomplished both inside and outside of the classroom thanks to this device. Some of them do think it is dangerous for one's health (16.7 percent) and some students also thought this to a similar degree (16.9 percent). This shared degree of awareness could be due to the fact that they have been exposed to critical literature or information regarding that using the iPad too much can fatigue the eyes, create addiction, or other commonly talked about ailments in popular culture regarding misuse or excessive use of the iPad.

The teachers did show similar results to the students in the sense that they expressed similar concerns regarding the distraction factor of the iPad and that it is a complementary tool

rather than an indispensable one. Such shared awareness of both the positive and negative aspects of the iPad could be a result of very good and frequent communication between the teachers and the students on these matters. It is highly likely that they have both experienced and discussed as part of an educational community and in the classroom context the bright side and the dark side of the iPad.

5.5 Summary of Findings through Data Triangulation

The data gathering tools designed were refined to gather the data used in my research work through three different research instruments: class observations, semi-structured interviews and then questionnaires. Once this information was collected, Cohen et al.'s principle of triangulation became important and useful to analyze through three different tools and methods of data gathering what could be deduced for the purpose of this study.

Several themes have emerged from the analysis of data. An outstanding theme is the high acceptance of technology by teachers. For the most part, teachers seemed to be more enthusiastic regarding the use of the tablet in the classroom and the opportunities it brought along than students. This might be the case because all teachers were exposed in the past to traditional ways to approach the EFL (English as a Foreign Language) classroom, whether as teachers or students themselves. In this respect, they can compare present and past experiences and take a clear stance regarding the affordances technology holds. Students can have a harder time comparing previous educational settings without any technology because this has very rarely been the case in their experience. In the classroom observations, teachers demonstrated enthusiasm and excitement toward the assignment they were leading in their classroom. Students were engaged, but sometimes were doing something off task with the iPad. In the semi-structured interviews teachers mentioned that while video-making and using "Know" and other apps was still exciting, some students had already reached a saturation point in which they did not feel motivated by continuing to make videos or repetitive assignments involving the use of the iPad. Finally, in the questionnaires, regarding the question of how often they think the iPad should be used, teachers were split in half between "regularly" and "often", whereas students were split across more categories such as "often" (56.6%), "sometimes" (22.8%), "always" (17.8%), rarely (1.4%) and never (1.4%).

Another theme that emerged is the inclusivity aspect teachers mentioned. They argued in the semi-structured interviews that technology provides enhanced possibilities to better

cater to students' individual needs compared to the rigidity of textbooks and their inflexible contents. During class observations students were engaged all the time and very little disruption was detected due to students' misbehavior. Technology might facilitate classroom management by offering opportunities to students with different needs. In the questionnaires, 95.5% of students said using the iPad was "easy", the majority (125 out of 220) said they were quite in agreement that it helped them improve their work in class, the majority were mostly to largely in agreement with the fact that the iPad gave them better English skills and that it made the learning of English easier.

Both students and teachers emphasized the fact that technology facilitates better production outcomes and saves time in most of the tasks. They brought up in the focus group interviews that iPads save them time and outputs were produced more efficiently which positively affects language learning. In the classroom observation, it was observed how quickly students were able to put together high-quality digital material for a comic with English content. In the questionnaire, the majority of students rated themselves mostly in agreement to completely in agreement that the iPad helps them save time in the activities they carry out in the classroom and in their homework, as well as improving the quality of their work.

Also, students seemed to be more exposed to the English language both within and outside of the classroom thanks to the ownership of the iPad, despite the fact that in most cases they are not aware of it and/or they do not value this contact with the English language outside of the classroom as a language learning affordance. In the classroom observations, one could perceive how easy it was for students to search for, access, and read English-language content independently and as a group. In the semi-structured interviews, students mentioned that at home they searched for English-language blogs as well as music in English and this, in turn, led them to search for words they did not understand in online dictionaries and consequently, they ended up learning English outside of class, enriching their vocabulary, and widening their range of English knowledge. In the questionnaire, in response to the question "Does the iPad provide you with materials in English in a real context?", the majority of students were either largely in agreement or completely in agreement.

Finally, both teachers and students are aware that some tools available facilitate or even do the work for the students when technology is involved. The issue of writing production activities was raised as troublesome when technology is not used appropriately and might hinder the acquisition of this skill. In the classroom observations, one could see that students

were searching for information and may resort to translating which may have its drawbacks in terms of language acquisition due to code switching between the L1 and the L2, thus the issue of monitoring that only monolingual dictionaries are used exclusively could be a topic to be raised. In the semi-structured interviews both teachers and students admitted that the iPad sometimes does too much of the work due to the auto-correct functions it has and the simultaneous access to full-text translators that it has, thus it could be counter-productive in the case of writing tasks. In the questionnaire, writing was not brought up as a particularly important task to do with the iPad by either party.

Overall, there seems to be a wide acceptance of the use of the iPad in the English as a Foreign Language classroom in the Andorran school system. The iPad has provided new affordances to enhance the language learning process (relevant, updated materials; fun lessons; speedier completion of tasks; more sophisticated production, etc.).

Also, both teachers and students pointed out some disadvantages, which were also detected during our non-participant observation of the lessons in the classroom (file-sharing problems due to iPads memory capacity, students getting distracted while looking up information and excessive dependence on the device). Nonetheless, the balance between pros and cons seems to clearly favor the advantages and the renewed affordances the iPad brings into the English classroom.

That the balance tips toward the advantages is particularly the case because the drawbacks can find acceptable solutions with time and also with economic resources. The issues related to hardware, software, infrastructure, and the network could arguably be solved with funding, training and development (time). Additionally, the big drawbacks of distraction and addiction that can be caused by the iPad can also be tackled strategically and pedagogically. For example, in *Extending Digital Literacies: Proposing an Agentive Literacy to Tackle the Problems of Distractive Technologies in Language Learning* (2020)*,* Liam Murray, Marta Giralt and Silvia Benini expand upon why the use of technology can be "a double-edged sword" (p. 16). While the participants in their study stated that the use of technology "promotes effective time management and concentration and overall fosters a more efficient learning process that leads to effective Second Language Acquisition … Equally, the data shows how the use of technology can become a distraction that results in some lack of concentration by the learner." (p. 16).

It seems however that the real problem is not the technology itself, but specific behaviors enabled by a lack of awareness and a lack of direction in unmonitored environments outside of class (or off task behaviors that occur in monitored class environments) such as: "excessive and unmonitored time spent online", "lack of purpose when surfing the web", "being 'lost in hyperspace'", "browsing where certain hyperlinks may distract students more than others", and "notifications" (p. 17). Murray, Giralt and Benini argue that each learner should

> "Be aware of the impact that technology can have on their study engagement and performance and decide what action can be taken. Gaining this awareness as part of an agentive literacy, is a crucial issue that emerges from being continually connected and this may well mean certain students will need to acquire a new type of learning strategy." (p. 17).

Teachers can take on a crucial role in helping students develop this awareness. Two key factors are important here, that the awareness has to be rooted in the student himself/herself and it is perhaps because they are "continually connected", with the iPad, for example.

The iPad, as mentioned before, is not a device that is left behind such as the large desktop computers of the past. In the Andorran case, the iPad is ubiquitous and present on the student desks (as seen in the class observations) and can easily be carried on the palm of the hand. The iPad can and does go everywhere with the student, including outside of the monitored space that is the English language classroom at a school. When the student goes home, there isn't a teacher present to tell him or her what the best use of the iPad is. That is why a deep-rooted awareness must be instilled in the students so that they can make better choices both inside and outside of the classroom.

Furthermore, as brought up by the teachers in the semi-structured interviews, and as seen in the class observations, when there is one teacher for every 20-25 students, it is not possible for the teacher to monitor 100% of what students do on the iPad during the entire duration of the class. Teachers echoed in the interviews that the "Casper Focus" monitoring app was a big help to them for classroom management and monitoring behavior on the iPad, but this app was taken away (for some reason the teachers do not know). In the class observations, one class counted with the help of a Teaching Assistant, who helped monitor student activity on the iPads during the class. Ideally, however, the students would reach a

point of self-awareness and self-monitoring that would lead them to better choices of how they use their time on the iPad in the absence of their teachers and in the absence of monitoring apps.

The difficulty of avoiding the temptation to "get distracted" with technology is neither a new challenge nor one that is limited to what emerged in this study as can be seen by the rise of apps that help motivate people not to get distracted by their phones or iPads when doing work tasks, such as the app "Forest".

As of January 2022, "Forest" ranked third in the most popular productivity applications in Apple's App store. It was designed specifically for the iPhone and the iPad. As described on their product page "Use Forest and be present in your daily life while working, studying and with friends." It is an app that blocks the screen of the iPad, for example, and grows a virtual tree; if the person navigates away from the blocked screen while the "deep focus mode is on" to access sites, the tree will wither. In settings, the user can set an "allow list" which will let the user select sites that are allowed to be accessed without the tree withering. This is an example of a fun and self-monitoring app that can help students increase their awareness of how much time they spend on which sites, and it can help train them to monitor their own activity and online habits. The existence and popularity of this app shows that this is a widespread problem and that creative solutions and approaches to it are in use.

Approaches to remedy these problems that were mentioned by Murray, Giralt and Benini (2020) were for example, "redefining Social Media as a reward". They explained that,

> "In order to overcome the negative impacts social media may have on academic experience and performance, many students reportedly put a limit on their use of Facebook, Snapchat and Twitter accounts for "a time" when academic deadlines are approaching. This is the first strategy they come up with: recognizing the risks and potential negative impacts, then taking control of their use of technology and exposure to social media platforms by allocating particular times to them. This initial strategy then moved a step forward redefining the role that these platforms can assume during study time. Many participants stated that they allowed themselves to spend a specific amount of time on social media once they had completed an academic task." (p. 18)

Whether it is social media, games, being lost in browsing the internet or whatever the source of distraction on the iPad may be, what is implied is that first there must be an awareness of distraction existing in relation to technology use, which many of the participants in our Andorran study showed in both the semi-structured interviews and the questionnaires. Then, a strategy should be developed by the students themselves, with some teacher initiative and guidance, in order for it to be deeply rooted and imply a commitment that will accompany them to their homes and even throughout activities carried out in a tightly monitored classroom when the teacher is helping another student on the other side of the room, as well as in the absence of monitoring apps like "Casper Focus".

Murray, Giralt and Benini (2020) put forth though that "in some cases, intervention may be recommended as we have a certain responsibility as educators to make students aware of the harmful influence that technology may have on their performance when it is not used consciously and mindfully." The "strategic deictic agentive literacy" that Murray, Giralt and Benini propose aims to "give students the capacity to effectively manage their own learning experience in this *Age of Distraction*." (p. 19)

Furthermore, it would be difficult to disagree with them that "emerging technologies require emerging pedagogies" (Hauck, 2018), that awareness of the double-edged sword aspect of technology should be part of the teaching process, and that proposing creative solutions should come from all sides: the administration, the teachers, and the students, but most importantly from the students since they are the ones that are connected all the time in both monitored and unmonitored environments with the goal of completing tasks and assignments, have emerging degrees of maturity due to their young age, and these factors imply that their commitment to the self-monitoring strategies must be strong and clear in purpose and benefit to them.

When analyzing the three data-gathering methods, class observations, semi-structured interviews and questionnaires in this Andorran study, as well as reflecting on the previously published literature on the topic of technology integration in the classroom, we can see that many of the benefits and drawbacks outlined in the literature review are reflected in the findings. This study involving iPads, a mobile technology, helps us to see an extent to which, as Bubules, Fan, and Repp state in their 2020 study, education is being transformed in both formal and informal learning contexts by new digital technologies, the challenges and

opportunities these technologies provide and how the digital transformation has boosted both complexity and speed of change (p. 93).

We have yet to address a major problem raised by Escuetaet al. (2017) which is that the speed at which new technologies reach the market is faster than the ability of policy researchers to keep up with evaluating them. We do know that solutions to current challenges with the integration of technology in education will require a cooperation and collaboration among a variety of stakeholders including the government, the school administration, the teachers, the students and the parents. In view of the complexity of the context, the technology, and the stakeholders, we cannot disagree with what Thomas, Reinders and Warschauer foresaw in 2013:

> "Successful implementation of educational technology in which technology and learning move forward hand in hand would imply a process that would be incremental, uneven, and complex, given the wide variety of stakeholders involved and the multiple factors to consider." (p. 2-3)

That being said, the findings are encouraging in that both students and teachers' perceptions are mostly positive and the benefits of iPad integration in the language classroom seem to be thus far outweighing the drawbacks in the Andorran case, even though solutions to the weighty and important though not numerous drawbacks highlighted in this study are still underway and will require further study, attention, and collaboration among stakeholders.

CHAPTER 6: CONCLUSION

This final chapter summarizes the discussions of findings that were presented in the previous chapter. These findings are organized to answer the study's four specific research questions. Furthermore, the potential benefits of the results identified in this research are discussed. These benefits affect the different stakeholders of the educational system of Andorra. However, to obtain these results, the limitations experienced while conducting the study need to be explained, as what was done in this chapter. Finally, I provided recommendations for future studies that could be explored in the realm of mobile-assisted language learning. To expand the literature and understand in depth the advantages, disadvantages, risks, and opportunities related to MALL, subsequent studies on more advanced topics in educational technology must be developed. It is with this intention that I conclude this paper and hope that this study has shed greater light on the effectiveness of iPads in the Andorran secondary schools' English language classroom.

6.1 Overview of the Study

This research aimed to identify the perceptions, practices, and attitudes of EFL classroom teachers and students of the first and second years of the secondary school level at the Andorran school system. It is within the realm of the interpretive/constructivist paradigm and followed a qualitative research design. I employed ethnography as my research methodology as it allowed me to delve deeper into the phenomenon in question and understand in clearer detail the culture and behavior of students and teachers within the classroom setting. To obtain rich qualitative data, I utilized three different data gathering tools namely classroom observation, semi-structured focus group interviews, and questionnaires. The data gathered on the observations and interviews were processed using qualitative data analysis and the help of a digital tool called ATLAS.ti while the results of the questionnaire were analyzed using descriptive statistics. Data triangulation was achieved through these different tools and the convergences and divergences in the various aspects and themes of the study were obtained. Below is the summary of the findings for each research question as well as some other insights I have gained from the study.

1. **How do the students and teachers perceive the use of tablets in the classroom?**

The findings revealed that in general, students and teachers perceive the iPad positively as it plays its current role in the EFL classroom. There is wide acceptance, especially on the part of the teachers. The excitement and enthusiasm from them were evident during the focus group interviews. The students, on the other hand, reported ease and familiarity with the device. Both groups believed that there are numerous positive effects and benefits that arose from the usage of iPad in the classroom. Teachers perceived the iPads to be inclusive, meaning that they cater to all types of learners' needs and observed that students who seemed to lag behind the others in some skills are able to catch up with their peers when they work with the tablets. Both the teachers and the students perceive the productive benefits of the iPad in the classroom. They reported a more efficient turn-out and better quality of the projects. They also believed that communication between the students and the teachers became better using the communication channels in the learning management system. The follow-ups regarding homework were easier thanks to the device. Both groups feel that the classes have become more engaging and motivating because of the interactivity opportunities offered by the iPad.

While the users' perceptions are mostly positive, there are, of course, several negative points highlighted. First, they perceive the dependency, which could lead to addiction, that users may get from being exposed too much on the device on a day-to-day basis and not having the right monitoring or control tools. Second, both groups reported how the device spoon-feeds the students especially with regards to writing outputs (i.e., translations are easily searchable and provided) and language acquisition may be hindered because of this. Finally, the teachers and the students view the iPad as a support tool and not an end-all-be-all solution to language education, and other analog/offline tools are still necessary and/or preferred such as printed books and notebooks, especially since there must be consideration of screen time break for better eye health.

2. What are the specific practices of teachers and students regarding the use of iPads?

Teachers and students use the iPad primarily in the accomplishment of assigned tasks in the EFL classroom as dictated in the curriculum guidelines (see Appendix F). Students use the tablets to search for information on topics assigned or to locate definitions of words unfamiliar to them. The devices are used not only to produce multimedia outputs such as

graphics in the form of images and videos, audios, and texts, they are also used in many ways to accomplish multiple types of tasks falling under the different faculties of English listening, reading, speaking, writing, grammar and vocabulary. The content for the lesson to be discussed or output to be produced is specified in the guidelines, hence, students do not have the liberty to select their preferred topics. The teacher, on the other hand, may choose to vary some but not all sections, or he or she may adapt parts of the instructions to better suit the student groups. They are, however, still strictly mandated to follow the course curriculum guidelines.

Students use the iPad to complete their homework, access the learning management system (LMS) which is Google Classroom, and communicate with the teachers. The task outputs are submitted and shared through the LMS and this also serves as the students' portfolio for the school year. The teachers provide evaluation and feedback on the outputs through the LMS and the students check this feedback through their iPads.

Outside the classroom, it was revealed that students make use of the iPad for personal entertainment as well. They use the device to search for blogs or YouTube videos in English and this is proof of the device's benefit in supporting language acquisition even outside the four corners of the classroom. It was also observed and reported by the students that they use iPads for many other personal tasks such as taking photographs, storing their personal documents and data, and so on. This thus blurs the line between the official/scholastic use of the school-issued tablet to what becomes their personal mobile device. Therefore, students sometimes hesitate to present their tablets to the teachers because they feel that these are already their personal belongings and there is confidential information that they feel is too sensitive for sharing.

There were also other undesirable practices observed and reported, such as students getting distracted and wandering aimlessly on the digital pages while they were supposed to be working on the task at hand. This distraction was evident during the classroom observations and was confirmed through the focus group interviews and the questionnaires. Finally, since there is constantly a need to refer to the Internet for needed information, the students never really stow the iPads away to their bags or lockers. The devices are constantly by their sides, ever-present and ubiquitous throughout the class duration. So, there are instances observed that even when students are off the task or in their down time, they still use the tablets to browse the applications installed. These practices of dependency and addiction were

observed through the non-participant classroom observation and confirmed through the focus group interviews and the questionnaires.

3. What are the attitudes of teachers and students regarding the use of iPads?

The teachers show a predominantly favorable attitude towards the use of tablets in the EFL classrooms due to the perceived benefits mentioned in the findings for research question 1 above.

The educators in the EFL classroom in the Andorran secondary school system work positively with the iPads since they find that these devices contribute to a more efficient and effective production during the classes. They view the presence of iPads as helpful in encouraging the creativity and motivation of their students and that there are endless opportunities and flexibility now afforded by this device through the multitudes of applications and online tools. Apart from this, the teachers have a reassuring attitude, and they react favorably because the communication between them and their students has been improved by the iPads and they have gained extra classroom time since the tool made some steps or processes faster.

However, there are certain unfavorable attitudes from the teachers, too. Their behavior is negatively affected by the following factors: the cost of acquiring their own tablets, the technical difficulties they encounter as they use these devices in class, and the added pressure of integrating fun, interactive tools to reduce the students' feeling of saturation from using the same applications every class time. Nevertheless, the positive attitudes still outweigh the negatives by a heavy margin and the teachers remain open and enthusiastic about the iPad use in the classroom.

The same as the teachers, EFL students from the first and second years of the Andorra secondary school present a generally favorable disposition towards the use of tablets in their English classes.

Students show interest and engagement in using iPads to accomplish the assigned tasks. This is highly evident in their expression of strong agreement regarding the iPad as indispensable in creating and sharing presentations. Students also tend to be more inclusive of and cooperative with their peers when working in group tasks. Due to their inherent familiarity and innate technical know-how in operating electronic devices, the students work with the iPads in a more relaxed and comfortable manner than their teachers from older

generations. Given this fact, students are more helpful to their teachers in troubleshooting or addressing technical difficulties since they deem themselves more knowledgeable in handling technology than their teachers.

But much the same with the teachers, there are also unfavorable attitudes identified on the students' side. Because of the lack of monitoring, they tend to work off-task and be distracted during the class. The students also feel that the iPad tends to lessen the effort that they exert into the writing tasks since the search results at times provide automatic translations. Some students feel that this negatively affects their attitudes towards a more effective language production.

4. Why is the tablet used in the manner it is used in the English classroom?

The practices mentioned above showed not only how the education ministry intended the iPad to be used but also the realities and new cultures brought by its deployment to the classrooms.

The use of the iPads as an educational support tool in language acquisition inside the EFL classrooms is mandated by the Andorran school system's Guidelines for the Use of iPads (UPs; refer to Appendix F). The processes and outputs are carried out because of the directive of the education ministry as part of its implementation of PERMSEA.

The secondary practice observed, which is the usage of the iPads outside the classroom and its subsequent benefits towards English language learning, was completely unintentional, as even the users noted that they were unaware that they were also learning English through their iPads outside their language classes.

The negative practices of being distracted or getting addicted to the screen are, in part, due to the insufficient monitoring and control towards the students' usage of the devices. Teachers monitor the students as the latter perform the tasks but due to the 20 or more students to one teacher classroom ratio, it gets difficult for teachers to completely guide each student while working with the tablet. The teachers are also not very strict regarding stowing away the devices and this allows students to be by their tablets most of the time. Accordingly, students may also be better aware and educated about the harmful effects of screen addiction or device dependency. They must develop a more mature and responsible attitude towards using the deployed tablets.

6.2 Potential Benefits

This study may be beneficial to the stakeholders in the Andorran educational system - policymakers, school administrators, teachers, and students. As my background is in Applied Linguistics, it is very important for me that the knowledge generated in this study about the EFL classrooms in Andorran school system be transferred and implemented in the local context.

This inquiry on the deployment of iPads at schools and the perceptions and attitudes of its users is the first of its kind in Andorra. Therefore, I will be sharing the outcomes of this study not only with the Ministry of Education but also with the curriculum developers across the country so they may suit it to the current realities of the educational system. It provides policymakers with evidence on how iPads should be used throughout the curriculum. It will also assist them in setting up guidelines for more effective training on the readiness and competence of teachers and students towards using the technology. In relation to knowledge transfer, the outcomes of this study are intended to be shared to a wider audience outside the Principality of Andorra. The insights generated from this research may be disseminated through international conferences or published in scholarly journals on Language Learning or Educational Technology. In fact, this paper was presented at Istanbul Technical University's two-day conference on the 12th to 13th of July 2021, with the theme "Teaching English for Professional Purposes in VR Environment: Theory into Practice". There was a positive reception towards the study and the audience was interested in the potential future studies regarding the topic.

Additionally, there has recently been a boost in the usage of technological devices at schools and an increased demand towards more liable and faster Internet connection, so the government was made aware of these needs and had taken measures to address them. It has allotted a budget for the improvements of the telecommunications infrastructures and the newest 5G technology is in the works within the Principality. With these new technological deployments that may have direct impacts on the educational sector, the school administration must keep a keen eye and be ready to jump in and take advantage of such developments. The results of this study may assist these administrators in detecting specific areas that require improvement related to access to technology (i.e., Wi-Fi connection hotspots).

Furthermore, the study may help the teachers come up with strategies to decrease the distracting component of technology use as well as to adopt techniques and habits that will

decrease technological dependency on the device. This may also allow the administrators and teachers to take better advantage of opportunities that the iPad may provide to language teaching and that are not explored enough (or at all), such as language exchange encounters with students abroad.

All these benefits, in turn, have direct benefits to the students at the Andorran school system as this study explores their needs and demands and how the teachers and other educational actors may help them adapt to the schooling in the New Normal.

6.3 Limitations of the Study

This study has been limited by several factors, the biggest being the coronavirus disease 2019 (COVID-19). The pandemic has greatly disrupted the pace of my data gathering. Additional classroom observations were scheduled and prepared for April 2020 and these were all canceled to follow the health restrictions mandated by the government, when total national lockdown was called on the 13th of March 2020 in Andorra. I was not allowed to go back again to the classrooms as precautionary measures to combat the disease tightened. This therefore limited the data gathered for classroom observations to only those generated from the Andorra schools in Encamp and Ordino during the piloting.

Additionally, there were 220 student responses to the questionnaire collected but the majority of these responses came from the students of the Andorran school in Santa Coloma. While there is a curriculum guide that teachers follow in the integration of the iPad in their English classes, there may be variations in some other aspects of their teaching as well as the interactions of the students towards the device and their peers. These factors contribute to the attitudes of the users regarding the technology.

My pre-set assumptions on the usage and impacts of technology may not be discounted as well. Being an English teacher for over thirty years, I have witnessed first-hand the introduction of computer-aided language learning to English language acquisition, including the subsequent evolutions of the technological device that appeared through the years, from the use of VHS tapes to overhead projectors to desktop computers all the way to the current hand-held gadgets. However, while I may already have preconceived notions regarding technology use in the EFL classrooms, the literature is moving very rapidly as it is attached with technological developments, hence I kept an open mind and ensured that the

study was carried out in the most objective way possible through non-participant observation and the use of data triangulation.

Another limitation that hindered the generation of more in-depth data was the fact that I was not permitted to record the classroom observations. To follow the stringent Data Privacy laws in the country, only photographs were taken, and no videos or audios were recorded in the process. However, Peter Loizos justifies the necessary use of video recording for "whenever any set of human actions is complex and difficult to be comprehensively described by one observer as it unfolds" (2008, cited in Garcez et al., 201, p. 250). An example he gave for one of these interactions was an hour of classroom teaching. Indeed, there are intricacies in the actions and behavior of humans, especially with children, that may be too minute and quick to note in field journals but may be observable through careful scrutiny and repetition of recorded audiovisual (AV) materials. Capturing audiovisual recordings is a rich source of information and is particularly vital when researching children. As Garcez, Duarte, and Eisenberg put it, "sound and moving images integrated may help unravel the complex network of production of meanings and senses expressed in words, gestures and relationships, understand the children's cultures and capture the essence of the narratives at stake" (p. 251). But since AV recordings were not permitted for his study, I was limited to the data available through the field notes written during the observation period.

Finally, the reality of me being a politician and a known individual in Andorra may have, in a way, affected the responses and behavior of the teachers and students during the interviews and classroom observations. It is an already established idea that classroom observation and interview data may be inconsistent with the "natural" manners of the participants, as detailed in section 3.5.3. The observations were, however, carried out as naturalistic as it can be, and for the group interviews, I tried to build rapport and a comfortable atmosphere to put the participants at ease and be as participative as possible.

6.4 Recommendations for Future Research

Numerous other fields of study may be explored in the goal of understanding the technology, specifically the iPad, used in the English as a Foreign Language classroom and its effects in language learning and teaching. As this study was driven with PERMSEA within its framework but was extremely narrowed down and focused only on the first and second

years of the secondary school levels, other researchers may facilitate studies covering the other levels such as the primary schools or the high schools (*batxillerat*).

6.4.1 Virtual Exchange and Students' 21st Century Skills

One of these fields may be virtual exchange (VE), which offers second language students to learn and collaborate with native speakers from different schools and institutions all over the world. The Evidence-Validated Online Learning through Virtual Exchange Project a.k.a. EVOLVE Project, funded by the Erasmus+ Program of the European Commission, defines VE as:

> "a practice, supported by research, that consists of sustained, technology-enabled, people-to-people education programs or activities in which constructive communication and interaction take place between individuals or groups who are geographically separated and/or from different cultural backgrounds, with the support of educators or facilitators. Virtual exchange combines the deep impact of intercultural dialogue and exchange with the broad reach of digital technology." (EVOLVE, n.d.)

O'Dowd (2017), on the other hand, calls VE as telecollaboration, and defines it as the use of online ICT tools to connect geographically distant learners to develop their "foreign language skills, digital competence, and intercultural competence through online collaborative tasks and project work."

In this regard, several other learner competencies can be honed during virtual exchanges as technology allows students to be global citizens. These skills include digital competency, intercultural competency, and digital citizenship. The advancement of classroom technology has opened the opportunities of approaching various remote cultures that were not readily possible decades ago.

Digital competencies are the technical skills that students must have to perform online tasks. School Education Gateway (2020) talks about digital competence that refers to the "confident and critical usage of the full range of digital technologies for information, communication and basic problem-solving in all aspects of life." Intercultural competence is the proper conduct during intercultural social interactions and defined clearly by Sabine McKinnon (n.d.) as the ability to "develop targeted knowledge, skills and attitudes that lead to

visible behavior and communication that are both effective and appropriate in intercultural interactions." And finally, digital citizenship is the ethical use of technology when interacting online. Chris Zook, writing for Applied Education Systems, mentions that:

> "Digital citizenship refers to the responsible use of technology by anyone who uses computers, the Internet, and digital devices to engage with society on any level." (Zook, 2019)

These abilities are some of the necessary 21st-century skills that students must acquire to be able to catch up in this Age of the Internet, with its hyper-paced modern global market. It may be beneficial to conduct further studies on how the iPads and other technological devices provided to students can be maximized in the implementation of Virtual Exchange programs and the development of the learners' 21st-century competencies.

6.4.2 Learner Agency

Learner Agency, according to the ELT Expert Panel from the University of Oxford, is "the feeling of ownership and sense of control that students have over their learning" (Larsen-Freeman et al., 2021, p. 6). Students who take responsibility and control over their learning process are considered agentive learners and will be able to engage more and be more effective and efficient in their language learning journey. Learner agency is not only beneficial inside the classroom but also beyond it, as it is a skill that develops confidence and aids in the success of lifelong learners.

The contribution to the learner agency of the iPads currently distributed to students may be investigated further, putting particular focus on the students' digital portfolios and how their outputs provide a sense of ownership, control, and responsibility, and how they may be linked to the exploration of their passions and artistic expressions.

6.4.3 Teacher Agency and Continuing Professional Development on Digital Literacy

If there is one thing that the COVID-19 pandemic has impressed upon the educational world, it is that teachers must now be IT competent enough to adapt to the technological demands of the changing times. In relation to the learner agency mentioned above, teacher agency must also be cultivated. Teacher agency is not the full relinquishing of control to the students, but rather "the teacher's actions [that] can create enabling conditions for the

enactment of high learner agency through intentional practice" (Larsen-Freeman et al., 2021, p. 13). Part of the language teacher agency is the fact that teachers not just teach the language to the learners but also how to learn, essentially both the content and the methodology, so that the students may establish the sense of commitment and perseverance to learn the language. With the deployment of technological devices to students, there are also the added questions of how teacher agency is affected and how the teachers teach the students to effectively manage these devices to boost their learner agency.

Future studies may dive in closer to how teachers not only implement the technological addition to the language classroom, but also on their confidence, readiness, competence, and the fostering of teacher agency vis-a-vis the devices to get a full view of their experience with the technology.

6.4.4 Educational Technology: Blended Learning and Gamification

While Educational Technology has already been around for many decades, Blended Learning, which combines online instruction and tools with in-person teaching, has become front and center during this time riddled with school closures, virus outbreaks, quarantines, and city- or nation-wide lockdowns. Blended learning, according to David Kapuler, is "a smorgasbord of teaching strategies that uses analog and digital technologies to teach and learn" (2020).

When total lockdowns have been called by governments all over the world, students went from in-person classes to virtual overnight. But when the restrictions have eased, schools have started shifting to hybrid models and slowly to in-person classes again but with the aid of digital learning management systems such as Google Classroom or Moodle. More than a year later since the pandemic started, this continues to be the norm in many schools globally to adapt to various situations it caused, situations such as when students become contacts of positive COVID-19 cases, or they tested positive themselves, or the teachers were the ones who caught the virus and other possible permutations of these conditions. Integrating the asynchronous blended learning model allowed both the students and the teachers to manage learning continuity amidst the inconsistencies in student attendances.

However, blended learning alone is not enough to address the challenges that the pandemic brought to the global educational systems. Shifting the learning to online means has had numerous drawbacks for both the educators and the students. Park & Kim (2021)

indicates heightened stress as one of the problems experienced in the times of COVID-19. Students have also been suffering from a decrease in motivation and engagement, and general learning fatigue. Experts from the Canadian Commission for UNESCO states that:

> "The paramount need that has emerged is to preserve students' motivation, engagement and interest as well as their connection with school, particularly when schools are closed for long periods of time. This requires varied, flexible and authentic learning activities." (Deslandes-Martineau et al., 2020)

Hence, there is a need to adjust the curriculum to make learning interactive to sustain student engagement. This is where gamification stands. According to Park & Kim, the use of gamified instruction "has begun to attract attention as one of the ways to solve educational problems caused by COVID-19" (2021, p. 1). Gamification is the use of game elements and mechanics in non-gaming contexts. They also add that:

> "The application of gamification in education enhances learner motivation and participation and also improves the learner's attitude. Applying gamification to online learning programs encourages knowledge sharing activities by promoting learner-to-learner interactions." (Park & Kim, 2021, p. 2)

It may be of interest to future educational technology researchers to find the impacts of iPads and other distributed technological devices to students in the application of the blended learning model and gamification in the classroom.

6.4.5 Device Dependency, Screen Addiction, and Study Burn-out

While it is true that the pandemic has unearthed the reality of the modern world's dire need for and dependence on technology, it is also true that the sudden shift and excessive usage of these technologies have affected everyone mentally, physically, and socially. Cases of Zoom Fatigue have been noted all over the world, especially in places where students have to attend successive classes via teleconferencing platforms, Zoom being the most common of them. Zoom Fatigue is defined as the "feeling of exhaustion from participating in video conference calls" (Fauville et al., 2021, p. 2) and may manifest symptoms of the different types

of fatigue, ranging from general physical and mental exhaustion, visual (e.g. blurry vision, irritated or painful eyes), social (e.g. feeling of social anxiety or need for isolation), motivational (e.g. feeling of dread of doing something), to emotional fatigue (e.g. feeling emotionally drained or moody) (Fauville et al., 2021).

With the introduction of the iPad to the classroom, especially in the 1:1 model (i.e., one iPad is to one student), future research is encouraged to understand more deeply the causes of online and hybrid class exhaustion as well as to identify the best practices in the usage of the tool to minimize its negative effects.

These practices may be incorporated within the new curriculum adapted for post-pandemic schooling. Careful consideration must be inserted in planning the activities that involve the iPad and other technologies. The International Commission on the Futures of Education (ICFE) under the United Nations Educational, Scientific and Cultural Organization (UNESCO) highlights the need to prioritize well-being while using digital technology. It states:

> "In the renewal of education, human interaction and well-being must be given priority. Technology—particularly digital technology that enables communication, collaboration and learning across distance—is a formidable tool, not a panacea but a source of innovation and expanded potential." (ICFE, 2020)

Educational management researchers and proponents may focus on how the distributed classroom technology attains these goals set by international bodies aimed towards optimal human development.

6.4.6 Post Pandemic Curriculum Redesign and Schooling in the New Normal

With all the above-mentioned points, one thing remains clear, there have been and there will be more changes that will come into effect within the school systems and curriculum design in this New Normal. One of these is the adaptability of classroom tasks for production using a variety of applications available in all tablets' operating software and not just one specific type.

In this study's context, every student at the Andorran school was issued with an Apple iPad and for those who had left them at home or for some reason had a malfunctioning device, there were some extra units of the same model available at the school for their use. However,

there are situations in other settings or locations when students may bring their own devices which may not be of the same model and brand as the ones distributed to them, especially if the device is not government- or school-issued but rather purchased and acquired individually by the students. If the classroom tasks are very specific regarding which application to use in the production, and these applications are only available or installable on select tablet software, this could pose compatibility and accessibility issues. Therefore, it is necessary that the task guidelines are designed to support cross-device compatibility. Researchers may gear future studies towards non-device-specific curriculum design.

Another aspect for curriculum integration is the educational applications that could be maximized for more effective and efficient language acquisition. Currently, there are a plethora of apps available to support every aspect of English skills development. For example, Duolingo is one of the most popular apps in the free and paid app market that strengthens a learner's vocabulary and grammar skills through achievement tiers and challenges. It is the perfect example of gamified ESL learning. There are also those dedicated solely to honing reading skills such as the Gutenberg Project app which offers users access to thousands of electronic versions of copyright-free literature from the US. Scribd and Blinkist, on the other hand, offer both e-books and audiobooks that help enhance both reading and listening abilities. Even the common entertainment subscription programs now used by most households such as Spotify and Netflix provide opportunities to improve one's English faculties. Spotify has thousands of educational podcasts by experts and amateurs alike while Netflix offers subtitles and dubbing from the original to a target language. Studies focused on identifying the effectiveness of these applications as compared to their offline counterparts may prove interesting for curriculum designers.

6.5 Conclusion

It was a unique challenge to carry out all the procedures involved in the studies that became this PhD thesis, particularly as the world entered a pandemic and went through its different phases. However, one of the main driving forces behind this study, as well as one of its main accomplishments and contributions, is the shedding of new light about iPad integration in the English language classroom in the Andorran school system, especially in the context of the Principality of Andorra, where the integration of technology in the English language classroom lacked parameters and in-depth analysis.

My research took into consideration a wide range of factors such as the knowledge and perceptions, the practices, and the attitudes of both: 32% of the total surveyable first- and second-year students from the secondary school and 46% of the total surveyable ESL teachers in the day-to-day context of all the Andorran schools in the Andorran school system at the time of this study. The size of the Principality of Andorra, which has a total population of about 78,000 inhabitants in the year 2021, allowed us to reach such high percentages of relevant people that we were able to include in our research, thus giving us a wider scope and a clearer image on the matter. Additionally, this qualitative study was also successful in uniting three types of data-gathering methods: class observations, semi-structured interviews with focus groups, and questionnaires to give a strong basis to its validity based on these three pillars and to foster an interpretation of data that considered three different perspectives.

The findings show that the iPad can be exploited further, at least in the Andorran context. Despite the fact that it was difficult to carry out the study under the various restrictions and limitations imposed by the pandemic, at the same time, the situation that the pandemic caused -- which involved a total lockdown in which all inhabitants, school children being no exception, were forced by the situation to adopt 100% telework and 100% online learning from one day to another without much warning -- allowed us to see that the iPad made possible the uninterrupted schooling of children in the Andorran school system without any difficulties or a major process of adaptation to the use of the iPad or of technology. This proved to be a great advantage for the education of these children as well as for the educators and the parents involved. Both teachers and students were equipped, regarding hardware, software, and sufficient digital literacy to be able to successfully continue their academic progress based on their curriculum without the stress and lack of resources that other school systems, and everyone involved in them, suffered. While not without drawbacks and demerits, the iPad proved to be a powerful ally in dire circumstances and the fullness of the opportunities as well as the challenges that it can present to the teachers and students in the ESL classroom will continue to unfold rapidly, thus the urgency of our continued research, vigilance, and preparedness in this field.

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Enquesta Alumnes: *L'ús de l'iPad a les classes d'anglès*

Benvolgut/uda alumne/a,

Aquest qüestionari s'emmarca dins d'un estudi sobre la utilització de l'iPad a les classes d'anglès al teu centre de l'escola andorrana.

A fi d'obtenir un resultat significatiu, cal la teva opinió i t'agrairia que responguis seriosament a les preguntes plantejades. A tot estirar, hi hauràs de dedicar uns cinc minuts.

Les informacions recollides en aquest qüestionari seran tractades de manera anònima i confidencial.

Moltes gràcies per la teva participació!

Entenc i accepto les condicions d'aquesta enquesta.

Sí / No

Informacions generals

      1-   A quin centre de segona ensenyança de l'escola andorrana estudies?
         a. Encamp
         b. Ordino
         c. Santa Coloma

      2-   A quin curs pertanys?
         a. 1r
         b. 2n

Coneixements

      3-   Com avalues el teu coneixement sobre el funcionament de l'iPad?

1	2	3	4	5
(Principiant)				(Expert)

4- Has rebut cap formació per saber usar l'iPad?
   a. Sí
   b. No

5- Qui sap fer anar millor l'iPad, el/la professor/a d'anglès o tu?
   a. Professor/a
   b. Jo

Ús de l'iPad

6- Amb quina freqüència utilitzes l'iPad a les classes d'anglès?
   a. Sempre
   b. Sovint
   c. De vegades
   d. Rarament
   e. Mai

7- Utilitzes l'iPad a l'aula d'anglès exclusivament quan ho diu el/la professor/a?
   a. Sí
   b. No

8- En cas negatiu, en quins altres casos utilitzes l'iPad a l'aula d'anglès?

9- Segons la teva opinió, caldria utilitzar l'iPad a la classe d'anglès:
   a. Sempre
   b. Sovint
   c. De vegades
   d. Rarament
   e. Mai

10- Fas servir l'iPad per fer activitats relacionades amb l'assignatura, fora de la classe d'anglès?
   a. Sí
   b. No

   En Cas afirmatiu, quines?

Tasques

11- Digues una activitat recent de la classe d'anglès en què hagis utilitzat l'iPad?

12- Quina ha estat la millor activitat que recordes de la classe d'anglès on has fet servir l'iPad?

13- Per a quin tipus d'activitats utilitzes l'iPad a la classe d'anglès?

14- Segons la teva opinió, per a què caldria utilitzar l'iPad a classe d'anglès?

    a. Passar-s'ho bé (jocs)
    b. Cercar informació
    c. Mirar vídeos
    d. Aprendre vocabulari
    e. Llegir textos
    f. Fer exercicis personalitzats
    g. Conversar (xat)
    h. Fer els deures
    i. Realitzar projectes
    j. Altres

Creences

15- T'agrada utilitzar l'iPad a les classes d'anglès?
    a. Sí
    b. No

16- Usar l'Ipad a la classe d'anglès és:
    a. interessant
    b. gens interessant

Usar l'Ipad a la classe d'anglès és:

    a. útil
    b. inútil

Usar l'Ipad a la classe d'anglès és:

    a. de fàcil accés
    b. de difícil accés

Usar l'Ipad a la classe d'anglès és:

    a. necessari
    b. poc necessari

Usar l'Ipad a la classe d'anglès és:

    a. senzill
    b. difícil

Usar l'Ipad a la classe d'anglès és:

a. divertit
b. avorrit

Usar l'Ipad a la classe d'anglès és:

a. motivador
b. desmotivador

Usar l'Ipad a la classe d'anglès és:

a. no és perillós per a la salut
b. és perillós per a la salut

Usar l'Ipad a la classe d'anglès és:

a. indispensable
b. complementari

Usar l'Ipad a la classe d'anglès:

a. ajuda a concentrar-se
b. distreu

17- Per a cadascuna de les categories, penses que l'ús de l'iPad:

	Gens d'acord	No gaire d'acord	Ni d'acord ni en desacord	Bastant d'acord	Totalment d'acord
1- Et fa distreure a classe?					
2- T'ajuda a millorar el teu treball a classe?					
3- Et proporciona materials en anglès en un context real?					
4- Et motiva?					

5-	T'ajuda a posar-te al dia dels continguts de classe?					
6-	Et fa estalviar temps en les teves activitats a classe?					
7-	Et fa estalviar temps a l'hora de fer els deures?					
8-	Facilita l'aprenentatge de l'anglès?					
9-	Et proporciona unes millors competències en anglès?					
10-	És fàcil?					

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Student Survey: *Using the iPad in English classes*

Dear student,

This questionnaire is part of a study on the use of the iPad in English classes at your Andorran school.

In order to get a meaningful result, we need your opinion and we would appreciate it if you could seriously answer the questions raised. All in all, you will spend approximately five minutes on the survey.

The information collected in this questionnaire will be treated anonymously and with confidentiality.

Thank you very much for your participation!

I understand and accept the terms of this survey.

Yes / No

General Information

    1-   Which secondary school in the Andorran system do you study at?
        a. Encamp
        b. Ordino
        c. Santa Coloma

    2-   To which course do you belong?
        a. 1r
        b. 2n

Knowledge

    3-   How do you evaluate your knowledge of how the iPad works?

1   2   3   4   5

(Novice)   (Expert)

4- Have you received any training on how to use the iPad?
   a. Yes
   b. No

5- Who knows how to use the iPad better, the English teacher or you?
   a. Teacher
   b. Me

Using the iPad

6- How often do you use the iPad in English classes?
   a. Always
   b. Often
   c. Sometimes
   d. Rarely
   e. Never

7- Do you use the iPad in the English classroom only when the teacher says so?
   a. Yes
   b. No

8- If not, in which other cases do you use the iPad in the English classroom?

9- In your opinion, the iPad should be used in the English class:
   a. Always
   b. Often
   c. Sometimes
   d. Rarely
   e. Never

10- Do you use the iPad to do activities related to the subject, outside of English class?
   a. Yes
   b. No

   If so, which activities?

Duties

11- Name a recent activity in English class in which you used the iPad?

12- What was the best activity you remember from the English class where you used the iPad?

13- What kind of activities do you use the iPad for in English class?

14- In your opinion, why should the iPad be used in English class?

  a. Have fun (games)
  b. Search for information
  c. Watch videos
  d. Learn vocabulary
  e. Read texts
  f. Do personalized exercises
  g. Communicate (Chat)
  h. Do homework
  i. Carry out projects
  j. Others

Beliefs

15- Do you like to use the iPad in English classes?
  a. Yes
  b. No

16- Using the iPad in English class is:
  a. interesting
  b. not interesting

Using the iPad in English class is:

  a. useful
  b. useless

Using the iPad in English class is:

  a. easily accessible
  b. difficult to access

Using the iPad in English class is:

  a. necessary
  b. not necessary

Using the iPad in English class is:

  a. simple
  b. difficult

Using the iPad in English class is:

  a. fun
  b. boring

Using the iPad in English class is:

      a. motivational
      b. demotivational

Using the iPad in English class is:

      a. it is not dangerous to health
      b. it is dangerous to health

Using the iPad in English class is:

      a. indispensable
      b. complementary

Using the iPad in English class is:

      a. helps to concentrate
      b. distracts

17- For each of the categories, do you think that the use of the iPad:

	Disagree	Slightly disagree	Neither agree nor disagree	Rather agree	Totally agree
1- Distracts you in class?					
2- Helps you to improve your work in class?					
3- Provides you with materials in English in a real context?					
4- Motivates you?					

5-	Helps you to catch up on class content?					
6-	Saves you time in your activities in class?					
7-	Saves you time to do your homework?					
8-	Facilitates the learning of English?					
9-	Provides you with better English skills?					
10-	Is easy to use?					

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Enquesta Professorat: *Les tecnologies mòbils a les classes d'anglès*

Benvolguts professors,

Aquest qüestionari s'emmarca dins d'un estudi sobre la utilització de l'iPad a les classes d'anglès.

A fi d'obtenir un resultat significatiu, cal la teva opinió i t'agrairia que responguis seriosament a les preguntes plantejades. A tot estirar, hi hauràs de dedicar uns 15 minuts. Les informacions lliurades seran tractades de manera confidencial.

Gràcies per la vostra participació!

Entenc i accepto les condicions d'aquesta enquesta.

Sí / No

Informacions generals

1- Quina edat tens?
   a. Fins a 30
   b. 31-35
   c. 36-40
   d. 41-45
   e. 46-50
   f. 51-55
   g. 56-60
   h. Més de 61

2- Quants anys fa que ensenyes anglès, independentment d'on?
   a. Menys de 5 anys
   b. De 5 a 10 anys
   c. D'11 a 15 anys
   d. De 16 a 20 anys
   e. De 21 a 25 anys
   f. Més de 25 anys

3- Quants anys fa que treballes al sistema d'ensenyament andorrà?

4- A quin centre escolar de l'escola andorrana de segona ensenyança treballes?

a. Santa Coloma
b. Ordino
c. Encamp

Coneixements

5- Com avalues el teu coneixement sobre el funcionament de l'iPad?

1 2 3 4 5

(Principiant) (Expert)

6- Et sents còmode amb la utilització de l'iPad a classe?

1 2 3 4 5

(Gens còmode) (Completament còmode)

7- Has rebut formació sobre les tecnologies i el seu ús a l'aula?
a. Sí, en el marc de la formació continuada de Mestres
b. Sí, en el marc d'una formació personal
c. No
d. Altres

8- La formació o formacions incloïen:
a. L'ús d'eines informàtiques (ordinador, projector, pissarres interactives, etc.)
b. L'ús de tecnologies mòbils (tauletes tàctils i smartphones)
c. Altres

9- Has pogut aplicar a l'aula allò que has après a la formació?
a. Sí
b. No

En cas negatiu, per què no?

10- Posa un exemple d'allò après en alguna formació i que has pogut utilitzar a classe.

Creus que els alumnes tenen suficients competències per usar l'iPad de manera correcta?

11- Has de dedicar part del teu temps a ensenyar als alumnes a utilitzar l'iPad?

Ús de l'iPad

12- Quin iPad fas servir com a professor a les classes d'anglès?
   a. El meu personal
   b. Els de l'escola
   c. El dels alumnes
   d. No el faig servir

13- Utilitzes cap altra tecnologia a classe més enllà de l'iPad?

14- Amb quina freqüència utilitzes l'iPad a classe?
   a. Diàriament
   b. Setmanalment
   c. Mensualment
   d. De vegades
   e. Mai

15- Usar l'Ipad a la classe d'anglès és:
   a. interessant
   b. gens interessant

Usar l'Ipad a la classe d'anglès és:

   a. útil
   b. inútil

Usar l'Ipad a la classe d'anglès és:

   a. de fàcil accés
   b. de difícil accés

Usar l'Ipad a la classe d'anglès és:

   a. necessari
   b. poc necessari

Usar l'Ipad a la classe d'anglès és:

   a. senzill
   b. difícil

Usar l'Ipad a la classe d'anglès és:

   a. divertit
   b. avorrit

Usar l'Ipad a la classe d'anglès és:

   a. motivador
   b. desmotivador

Usar l'Ipad a la classe d'anglès és:

    a. no és perillós per a la salut
    b. és perillós per a la salut

Usar l'Ipad a la classe d'anglès és:

    a. indispensable
    b. complementari

Usar l'Ipad a la classe d'anglès:

    a. ajuda a concentrar-se
    b. distreu

17 - Penses que la utilització de l'iPad...

	Totalment en desacord	No gaire d'acord	Ni d'acord ni en desacord	Bastant d'acord	Totalment d'acord
1- Ajuda a la concentració dels teus alumnes a classe?					
2- Ajuda els alumnes a millorar el treball a classe?					
3- Proporciona als alumnes materials en anglès en un context real?					
4- Motiva els alumnes?					
5- Fa estalviar temps als alumnes en les seves activitats a classe?					

6- Fa estalviar temps als alumnes pel que fa als deures?					
7- Ajuda a l'aprenentatge de l'anglès?					
8- Proporciona millors competències en anglès?					

18- Segons la teva opinió, caldria utilitzar l'iPad a les classes?

   a. Sempre
   b. Sovint
   c. Regularment
   d. De vegades
   e. Mai

19- Pots citar alguns dels problemes que hagis tingut usant l'iPad a classe?

20- Pots explicar breument quin ha estat el problema més gran que has tingut?

21- Pots citar alguns dels problemes que han tingut els alumnes usant l'iPad a classe?

22- Pots explicar breument quin ha estat el problema més gran que han tingut els alumnes a l'usar l'iPad?

Tasques

23- Posa un exemple de tasca que l'alumne ha de realitzar amb l'ajuda de l'iPad.

24- Si poguessis crear una tasca, una activitat, un projecte o un exercici amb iPad, quina proposaries?

25- Quin tipus d'activitats d'aprenentatge d'anglès fetes a classe milloren quan els estudiants utilitzen l'iPad?

26 - Segons la teva opinió, cal utilitzar l'iPad a les classes d'anglès a secundària per:

   a. Divertir-se (jocs)
   b. Cercar informació
   c. Mirar vídeos
   d. Aprendre vocabulari
   e. Llegir textos

f. Fer exercicis personalitzats
g. Conversar (xat)
h. Fer els deures
i. Fer projectes
j. Altres

27- Els estudiants han utilitzat l'iPad a classe per a altres tasques més enllà de les estrictament necessàries en les activitats?

Creences

28- Quins avantatges ha suposat la integració dels iPads a la classe d'anglès?

29- Quins desavantatges ha suposat la integració dels iPads a la classe d'anglès?

30- Quins reptes i limitacions ha suposat aquesta integració?

31- Creus que la introducció de l'iPad a la classe suposa alguna millora envers l'aprenentatge? Per què?

32- El fet d'utilitzar iPads a classe ha fet canviar la teva manera d'ensenyar anglès? En cas afirmatiu, especifica com.

33- Creus que els estudiants han variat la seva forma d'aprendre anglès pel fet d'utilitzar iPads a classe? En cas afirmatiu, especifica com.

34- En general, quina valoració fas de la integració de l'iPad a la classe d'anglès?

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Teacher Survey: *Mobile technologies in English classes*

Dear teachers,

This questionnaire is part of a study on the use of the iPad in English classes.

In order to get a meaningful result, you need your opinion and I would appreciate it if you could seriously answer the questions raised. You will have to spend about 15 minutes stretching. The information provided will be treated confidentially.

Thanks for your participation!

I understand and accept the terms of this survey.

Yes / No

General Information

1- How old are you?
   a. Up to 30
   b. 31-35
   c. 36-40
   d. 41-45
   e. 46-50
   f. 51-55
   g. 56-60
   h. More than 61

2- How many years have you been teaching English? (Doesn't matter where)
   a. Less than 5 years
   b. From 5 to 10 years
   c. From 11 to 15 years
   d. From 16 to 20 years
   e. From 21 to 25 years
   f. More than 25 years

3- How many years have you been working in the Andorran education system?

4- At which school in the Andorran secondary school system do you work at?
   a. Santa Coloma
   b. Ordino
   c. Encamp

Knowledge

5- How do you evaluate your knowledge of how the iPad works?

| 1 | 2 | 3 | 4 | 5 |

(Novice)   (Expert)

6- Are you comfortable using the iPad in class?

| 1 | 2 | 3 | 4 | 5 |

(Not at all comfortable)   (Completely comfortable)

7- Have you received training on technologies and their use in the classroom?
   a. Yes, in the framework of the continuing education of Teachers
   b. Yes, as part of a personal training
   c. No
   d. Others

8- The training or trainings included:
   a. The use of computer tools (computer, projector, interactive whiteboards, etc.
   b. The use of mobile technologies (touch tablets and smartphones)
   c. Others

9- Were you able to apply in the classroom what you learned in the training?
   a. Yes
   b. No

   If not, why?

10- Give an example of what you learned in some training and that you were able to use in class.

Do you think that students have enough skills to use the iPad correctly?

11- Do you have to spend part of your time teaching students how to use the iPad?

Using the iPad

12- Which iPad do you use as a teacher in English classes?
   a. My own
   b. The school's iPad
   c. The student's iPad
   d. I don't use it

13- Do you use any other technology in the classroom beyond the iPad?

14- How often do you use the iPad in class?
   a. Daily
   b. Weekly
   c. Monthly
   d. Sometimes
   e. Never

15- Using the iPad in English class is:
   a. interesting
   b. not interesting

Using the iPad in English class is:

   a. useful
   b. useless

Using the iPad in English class is:

   a. easily accessible
   b. difficult to access

Using the iPad in English class is:

   a. necessary
   b. not necessary

Using the iPad in English class is:

   a. simple
   b. difficult

Using the iPad in English class is:

   a. fun
   b. boring

Using the iPad in English class is:

      a. motivational
      b. demotivational

Using the iPad in English class is:

      a. it is not dangerous to health
      b. it is dangerous to health

Using the iPad in English class is:

      a. indispensable
      b. complementary

Using the iPad in English class is:

      a. helps to concentrate
      b. distracts

17 - Do you think that using the iPad...

	Strongly Disagree	Slightly disagree	Neither Agree nor Disagree	Rather Agree	Totally Agree
1- Helps your students to concentrate in class?					
2- Helps students to improve their work in class?					
3- Provides students with materials in English in a real context?					
4- Motivates students?					

5- **Saves students time in their activities in class?**					
6- **Saves students time in terms of homework?**					
7- **Helps you learn English?**					
8- **Helps you provide better English skills?**					

18- In your opinion, should the iPad be used in class?

   a. Always
   b. Often
   c. Regularly
   d. Sometimes
   e. Never

19-Can you name some of the problems you have had using the iPad in class?

20- Can you explain briefly what has been the biggest problem you have had?

21- Can you name some of the problems that students have had using the iPad in class?

22- Can you briefly explain the biggest problem that students have had when using the iPad?

Duties

23- Give an example of a task that the student has to do with the help of the iPad.

24- If you could create a task, an activity, a project or an exercise with an iPad, what would you propose?

25- Which type of English classroom learning activities improve when students use the iPad?

26 - In your opinion, it is necessary to use the iPad in English to secondary school classes to:

        a. Have fun (games)
        b. Search for information
        c. Watch videos
        d. Learn vocabulary
        e. Read texts
        f. Do personalized exercises
        g. Communicate (Chat)
        h. Do homework
        i. Do projects
        j. Others

27- Have students used the iPad in class for other tasks beyond those strictly necessary in the activities?

Beliefs

28- What are the advantages of integrating iPads in the English class?

29- What are the disadvantages of integrating iPads in the English class?

30- What challenges and limitations has this integration entailed?

31- Do you think that the introduction of the iPad in the classroom means any improvement towards learning? Why?

32- Has using iPads in the classroom changed your way of teaching English? If so, specify how.

33- Do you think that students have changed their way of learning English by using iPads in class? If so, specify how?

34- In general, what is your assessment of the integration of the iPad in the English class?

<u>Focus group with teachers</u>

Section A: Pedagogical considerations

1. What is your general opinion concerning the use of the iPad in the English class?

2. Which are some of the advantages of using the iPad in teaching English?

3. Which are some of the disadvantages of using the iPad in teaching English?

4. In which ways do you use the iPad in class? In what kind of activities?

5. Do you feel a need to include digital resources in your teaching? Why or why not? If so, which are the most effective tools?

6. In your opinion, does the current English language curriculum support the use of the iPad in the classroom?

Section B: Availability and adequacy

1. Does the school provide an iPad to all teachers?

2. Are students' iPads readily available?

3. Is connectivity and access to the Internet always provided?

Section C: Perceptions of institutional / administrative support

1. Does your school provide enough technical support?

2. Does the Andorran school support the use of technology in the English classroom?

3. If you could, what aspects would you change with respect to the use of technology in the classroom?

Section D: Beliefs concerning your own skills and knowledge with respect to integrating digital resources

1. How comfortable do you feel using the iPad in your teaching?

2. What kind of training have you undergone with respect to using digital technology in the English classroom?

3. Do you feel that there are sufficient training opportunities available and accessible?

4. Do you think you have the necessary digital skills to support language learners in the use of the iPad during class?

Section E: Perceived efficiency

1. Do you believe the English lessons are more effective with the use of the iPad?

2. Do you think that lessons that involve the use of the iPad are more enjoyable by students?

3. Do you require more class preparation time if an iPad during the lesson is involved?

4. Which are your favorite lessons, those in which the iPad is or is not used?

5. Do you believe students learn more English when digital resources are introduced in a lesson?

Focus group with students

Section A: Pedagogical considerations

1. What is your general opinion concerning the use of the iPad in the English class?

2. Which are some of the advantages of using the iPad in teaching English?

3. Which are some of the disadvantages of using the iPad in teaching English?

4. Which tasks do you enjoy the most in the English class?

5. Of the above-mentioned tasks, which one(s) involves using an iPad?

Section B: Availability and adequacy

1. Are your iPads readily available?

2. Is connectivity and access to the Internet always provided?

3. Does your school provide enough technical support?

Section C: Beliefs concerning your own skills and knowledge with respect to using digital resources

1. How comfortable do you feel using the iPad in class?

2. What kind of training have you undergone with respect to using digital technology in the English classroom?

3. Do you feel that there are sufficient training opportunities available and accessible?

4. Do you think you have the necessary digital skills to successfully complete tasks which involve the use of the iPad during class?

Section D: Perceived efficiency

1. Do you think using the iPad is a convenient way to learn English?

2. Do you think that lessons that involve the use of the iPad are more enjoyable?

3. Do you think using your iPad to access the Internet in class makes the lessons feel more realistic?

4. Do you believe you learn more when digital resources are introduced in a lesson?

5. Would you like to continue using your iPads in class in the future to support your language learning?

Section E: Personal use

1. How often do you use your iPad or mobile device at home?

When using your iPad at home, are you exposed to English? If so, how?

Feature	Questions
1. Task type	What is the task type?
	Do students need to use the tablet for this task?
	Can students start using technology by their own initiative?
	Are there any instructions about technology use at the beginning of the course?
2. Participant organization	Is the teacher working with the whole class or not?
	Are students working in groups or individually?
	If group work, how is it organized?
3. Content	Is the focus on classroom management, language (form, function, discourse…), or other?
	Who selects the topic –teacher, students or both?
4. Skills	Are students involved in listening, speaking, reading, writing, or combinations of these?
	If they occur, what are these combinations?
	How are tablets used in each instance?
5. Materials	What types of materials are used?
	What is the source / purpose of the materials?
	When are iPads used (e.g. purposes, types of resources, in what activities, whose initiative, etc.)?
	How controlled is their use? Are students directed by the teacher or students work on the tablet of their own initiative?
6. Use of target language	To what extent is the target language used?
	Does the use of the tablet interfere in the use of the target language?

Consent for Participation in a Research Interview

Project: Perceptions, practices, and attitudes on the use of technology in the English as a Foreign Language classroom: The iPad in the Andorran school system

I agree to participate in a research project led by Ferran Costa corresponding to his Doctoral Thesis project at the *Universitat d'Andorra*. The purpose of this document is to specify the terms of my participation in the project through being interviewed.

1. I have been given sufficient information about this research project. The purpose of my participation as an interviewee in this project has been explained to me and is clear.

2. My participation as an interviewee in this project is voluntary. There is no explicit or implicit coercion whatsoever to participate.

3. Participation involves being interviewed by a researcher. The interview will last approximately 45 minutes. I allow the researcher to take written notes and audio recordings during the interview for the purposes of transcription but not video recordings.

4. I have the right not to answer any of the questions. If I feel uncomfortable in any way during the interview session, I have the right to withdraw from the interview.

5. I have been given the explicit guarantees that the researcher will not identify me by name or function in any reports using information obtained from this interview, and that my confidentiality as a participant in this study will remain secure. In all cases subsequent uses of records and data will be subject to standard data use policies at the *Universitat d'Andorra*.

6. I have read and understood the points and statements of this form. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

7. I have been given a copy of this consent form co-signed by the interviewer.

_____ _____

Participant's Signature   Date

_____ _____

Researcher's Signature   Date

For further information, please contact: Ferran Costa at fcosta@uda.ad

Curs 2018-2019

ESCOLA ANDORRANA

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SEQÜÈNCIA D'ENSENYAMENT / APRENENTATGE

Taller de a llengua Anglesa

INFORMACIÓ GENERAL

Understanding and Creating Comics: Comic CAND Convention.

Situació complexa:

Independentment del pas del temps, el còmic continua sent un dels gèneres de lectura i entreteniment favorits entre diferents segments de la població, ja sigui en la seva versió "online" o en format paper. Partint de l'exemple del ComicCON de San Diego com esdeveniment cultural i creatiu de referència, es preten organitzar la nostra versió andorrana a l'escola (ComicAND), amb la participació del nostre alumnat creant i , prèviament a l' aula explicant els seus còmics davant d'un públic concret.

1. Què és la San Diego ComicCon? Com podríem recrear-la dins de la nostra escola? Què és el Cosplay?

2. Quins són els elements i característiques principals d'un còmic? Quins tipus de còmics hi ha? Quines són les seves similituds i diferències?

Proposta de producció/producte, si escau:

1. Elaboració de còmics de gèneres variats (Manga, Súper-herois de Marvel, Tintín, Asterix, amb personatges de creació pròpia...) en format paper i digital.

2. Presentació oral recreant la convenció internacional del San Diego ComicCon.

Llengua de vehiculació: Llengua Anglesa

COMPETÈNCIA	APRENENTATGE ESPERAT	CRITERI D'AVALUACIÓ	INDICADOR D'AVALUACIÓ
C1	**AE** Presentació dels còmics creats imitant la convenció del ComicCon de San Diego formulant i responent preguntes d' una roda de premsa i demostrant un domini del lèxic específic així com fent servir un volum, to i ritme que permetin al públic poder seguir les explicacions amb facilitat.	C1CA1	**ANG 1** Respon de manera clara i entenedora a preguntes obertes i tancades preparades amb antel·lació sobre el procés de creació del seu còmic (setting, characters, plot, elements característics del còmic...etc) en la entrevista en format de roda de premsa. **ANG 2** Ajusta la resposta a preguntes obertes i tancades no preparades demostrant comprensió i adaptant-se a la situació comunicativa de la roda de premsa.

	C1CA2	**ANG 3** Expressa un domini del lèxic específic del còmic i de l'estructura *There is/There are* en les respostes així com en l'elaboració de les preguntes sobre el procés de creació del còmic. **ANG 4** Demostra un domini de les estructures per formular les preguntes obertes i tancades en l'entrevista de la roda de premsa (*wh- question words* i estructura de la pregunta oberta i tancada)
	C1CA3	**ANG 5** Intervé amb claredat utilitzant una pronunciació prou correcta que permet seguir les explicacions amb facilitat. **ANG 6** Utilitza elements del llenguatge no verbal com ara les pauses, la velocitat i el volum de veu per reforçar la comprensió de la seva intervenció oral en la roda de premsa.
	C2CA2	**ANG 7-** Identifica el sentit global de la història, així com les idees secundàries (estratègies de comprensió, paraules clau, etc.). **ANG 8-** Realitza un resum/síntesi adient del còmic triat.
C2	**C2CA3**	**ANG 9-** Identifica els elements i característiques principals de diferents tipus de còmics (forma). **ANG 10-** Identifica i analitza el contingut i la intencionalitat de diferents tipus de còmics.

AE Comprensió lectora de diferents tipus de còmics a partir de la selecció d'informacions pertinents i de la interpretació de les seves característiques principals.

	AE		
C3	**AE** Creació de textos retòrics multimodals - còmics - d' un manera cohesionada i coherent utilitzant aquells recursos que més encaixen amb la situació comunicativa plantejada i ajustant els aspectes de presentació del text interrelacionant tots els llenguatges (verbal, visual, gràfic...) que hi són presents.	**C3CA1**	**ANG11-** Redacta un còmic estructurat que respecti les convencions bàsiques d'aquest gènere. **ANG12-** Aplica els elements característics propis del còmic: símbols efectes sonors i diferents tipus de bafarades.
		C3CA2	**ANG13-** Revisa la seva producció assegurant la correcció ortogràfica, lèxica i sintàctica. **ANG14-** Utilitza amb precisió temps verbals variats - Imperatives, Present Simple, Present Continuous, Past Simple, per narrar la seva història amb un sentit global i coherent.
		C3CA3	**ANG 15-** Utilitza recursos lingüístics com a connectors temporals i lògics per cohesionar el còmic creat. **ANG 16** Utilitza recursos com els signes de puntuació per dotar de choesió el text.
C4	**AE** Extracció a partir de la lectura d'una obra literària, dels elements bàsics d'aquesta tipologia textual (els personatges principals i secundaris, la trama i l'ambientació).	**C4CA2**	**ANG 17-** Dóna l'opinió sobre els aspectes més rellevants de l'obra a partir d'una pauta guiada (qüestionari). **ANG 18-** Identifica els elements bàsics del text narratiu: personatges principals, trama i ambientació.