

UNIVERSIDAD CATOLICA DE LA SANTISIMA CONCEPCION
FACULTAD DE EDUCACIÓN
PEDAGOGÍA EN EDUCACIÓN MEDIA EN INGLÉS



“Availability and use of Information and Communication Technologies (ICT) resources in education, declared by Teachers of English and EFL Students from Public, Subsidized and Private Secondary Schools in the province of Concepción”

Seminario para obtener el grado académico de Licenciado en Educación

Profesor Supervisor: Héctor Vega Pinochet

Integrantes: Francisca Aravena Jarpa

Constanza Chandia Garrido

Camila Quevedo Castillo

Samuel Ramos Roa

Concepción, April 20, 2021

Acknowledgements

First of all, I would like to thank our guide teacher, Mr Hector Vega, for his constant support and patience throughout this long process of working on this thesis. Secondly, I am also grateful to my friends, parents, and other family members who have encouraged me even in my lowest point, and always had faith in me even when I did not believe in myself. Thirdly, thank you to my dear pets, Lucas, Deku and Leia, may she rest in peace, because they have also been an important support in my life as a student even if they do not know it. Last but not least, I want to show my gratitude to my classmates Constanza, Samuel and Camila for all the hard work and fun moments we have shared together. A special mention to BTS and Mitski, the artists who have defined my current stage in life. All of the exhaustion and frustration will pay off.

Francisca Macarena Aravena Jarpa

First and foremost, the completion of this research would not have been possible without the aid and guidance of our teacher, Hector Vega, who encouraged and supported us through the beginning of this research. I am also grateful to all my teachers, who gave their valuable guidance and feedback one way or another during all these years. I would also like to extend my gratitude to my caring, loving, and supportive family, who helped me through all the tough times during my academic education. Last but not least, my sincere thanks to my classmates Francisca, Samuel and Camila for the hard work and for all the fun we had in our meetings during the past years working in our research. This is the end of a journey and the beginning of another.

Constanza Trinidad Chandia Garrido

Firstly, I would like to thank my teammates, Francisca, Constanza and Samuel, we all worked together throughout this whole investigation, and I am really thankful for their commitment and responsibility. Also, I want to thank our guide teacher Mr Héctor Vega, especially for his constant support and great advice. Last but not least, I would like to thank my parents for joining me through my university journey. A special mention to the albums folklore and evermore by Taylor Swift which were my soundtrack while working on the writing process of this thesis project.

Camila Fernanda Quevedo Castillo



I would like to deeply thank our guide teacher, Hector Vega, for his constant patience in this process. Furthermore, thanks to my parents, who have motivated me to continue with my university studies. One of the main reasons that pushed me to continue my studies was the illusion that my family showed regarding seeing me as a trained and qualified professional, that is why reaching this stage is our achievement, not only mine.

Samuel Luis Ramos Roa

Index

Acknowledgements	2
Abstract	6
Introduction	7
I. Research Problem	9
1.1 Problem statement	9
1.2 Justification	9
II. Literature review	11
2.1 Definition of ICT	11
2.2 The importance of ICT in education	13
2.3 The characteristics of a good user of ICT	14
2.4 ICT in the Chilean context	15
2.4.1 Research related to the use of ICT in Chile	16
2.5 The Dimensions of ICT in the Chilean Educational context	17
III. Methodology	19
3.1 Research type and design	19
3.2 Objectives	20
3.2.1 General objective	20
3.2.2 Specific objectives	20
3.3 Construction of the instruments	20
3.3.1 Validation and piloting process	21
3.4 Sampling	22
3.5 Selection of participants	23
3.6 Data collection procedures	23
3.6.1 Plan	23
3.6.2 Survey data collection	24
IV. Data analysis	25
4.1 Summary of participants	25
4.2 Results	26
4.2.1 Availability of ICT resources	27
4.2.2 Frequency of use of ICT resources	28
4.2.3 Frequency of use for pedagogical purposes	29
4.2.4 Frequency of use for management purposes	30
4.2.5 Frequency of students' use of ICT	31
4.3 Novice and experienced teachers	32

4.3.1 Frequency of use of ICT resources	33
4.3.2 Frequency of use for pedagogical purposes	34
4.3.3 Frequency of use for management purposes	35
4.3.4 Frequency of students' use of ICT	36
V. Discussions and conclusions	37
5.1 Discussion	37
5.2 Conclusions	40
5.3 Limitations	42
5.4 Projections	43
VI. Bibliography	45
VII. Appendices.	50
7.1 Instrument used to establish purposes for the use of ICT resources by Russel, Bebell, O'Dawyer and O'Connor (2003)	50
7.2 Survey for Teachers about availability and use of technological resources in the English subject.	53
7.3 Survey for Students about availability and use of technological resources in the English subject.	58
7.4 Results from teachers' and students' surveys regarding availability of ICT resources per classroom.	63
7.5 Results from teachers' and students' surveys regarding Frequency of use of ICT resources.	68
7.6 Results from teachers' and students' survey regarding frequency of use of ICT resources for pedagogical purposes.	75
7.7 Results from teachers' and students' survey regarding frequency of use of ICT resources for management purposes.	80
7.8 Results from teachers' and students' survey regarding frequency of students' use of ICT resources for different purposes related to the class.	83
7.9 Results from teachers' survey regarding frequency of use of ICT resources according to experienced and novice teachers.	88
7.10 Results from teachers' and students' survey regarding frequency of use of ICT resources for pedagogical purposes according to experienced and novice teachers.	94
7.11 Results from teachers' and students' survey regarding frequency of use of ICT resources for management purposes according to experienced and novice teachers.	98
7.12 Results from teachers' and students' survey regarding frequency of students' use of ICT resources for different purposes related to the class according to experienced and novice teachers.	102

Abstract

Currently, the development and aid of technological resources has become crucial for teachers to improve their classes; for this reason, it is imperative to have the necessary tools available. This study seeks to obtain information about the availability and use of ICT resources from secondary school students and teachers of English from public, subsidised, and private schools in the province of Concepción. The focus of ICT resources will be directed towards an educational purpose so that a proper definition for this research instrument is set. The sample consists of 57 secondary school teachers of English and 182 secondary students, both from different types of schools. The information retrieved from two surveys created for both groups will be compared in order to see if there is any significant difference between what is stated by teachers and students, and by novice teachers and experienced teachers. The data to compare corresponds to the availability of ICT, the frequency of use of ICT, the use of these resources for pedagogical purposes, the use for management purposes, and the frequency in which teachers request students to use ICT for their lessons. The results of this research show that students and teachers, who have a similar view regarding the use of ICT given by teachers in the school context in private, subsidised, and public schools. Additionally, novice teachers and experienced teachers also do not show any significant differences when comparing their answers.

Introduction

The main topic of this study is ICT resources in education, meaning both technological gadgets or devices to store and recollect data (Hardwares), and online platforms or applications to enhance teaching and learning (Softwares) as stated by Ricardo-Barreto, Jabba Molinares, Llinás, Peña Santodomingo, Astorga Acevedo, Acevedo Rodríguez, Baloco Navarro & Villarreal Villa (2020).

To be more specific, it aims to investigate the use and availability of ICT resources in secondary schools in the province of Concepción as stated by teachers and students during the last months of 2019 and the beginning of 2020. Goodwin, Low, Ng, Yeung, and Cai (2015) stated that teaching and learning processes in today's world surely concerns the implementation of ICT in the classroom. Moreover, Tully (2003) mentioned that young people have grown in a world where the use of technology is common, and how technological gadgets have shaped the lives of the newest generations.

A quantitative approach was selected for this study, and the instruments used were two surveys adapted specifically for teachers and students. Moreover, the study is defined as descriptive and transactional.

The general objective of this study was to investigate the availability and use of ICT resources in education as declared by teachers of English and students from secondary school in public, subsidised, and private schools in the province of Concepción.

Throughout this document, the research problem and justification of the study will be mentioned. A literature review focused on providing general information of ICT resources and their use in education will also be seen. Then, a more detailed description of the methodology will be addressed. Finally, the results will be presented, and the discussion of every chapter mentioned previously will be stated by the end of this document.

Few studies have been made in the Chilean context, such as Brun and Hinojosa related to "the availability and use of ICT resources in the Initial Teacher Training (ITT) in Chile for international study" (2014, p. 2); whereas this study is focused mainly on the availability and use of ICT in public, subsidised and private schools in the province of Concepción.

Zare-ee (2011) states that the importance of having qualified teachers in the use of ICT is crucial for the development of education. Due to Zare-ee's statement, some questions are raised, such as do schools provide technological resources to implement them for educational purposes? Are teachers proficient



enough to use those resources properly in order to facilitate learning? Nevertheless, there is a fine line between opinions and facts, and the level of proficiency in the use of ICT could be the teacher's opinion rather than a fact.

I. Research Problem

1.1 Problem statement

As students and student-teachers, we have experienced different contexts where the availability and use of ICT is different. The most used resources (Hardware) have always been radios, projectors, and laptops. Big efforts have been made to implement new technologies, such as the internet, but usually, there are more resources that are not frequently used available in different institutions.

The availability of ICT resources may vary depending on the financial support that different schools receive. As defined by Ministerio de Educación (n.d), public schools are financed by the government, subsidised schools are private institutions partly financed by the government and the legal tutor of each student, and private schools are private institutions financed by the legal tutor of each student.

Two surveys were applied to investigate if there are any differences between the availability and use of ICT resources among the different types of institutions in the province of Concepcion. Both surveys aimed to collect data regarding the availability of ICT resources in the schools. Moreover, the pedagogical, management and professional development dimensions of the use of ICT in Education were considered for the construction of the survey, and to research about the purposes of use of ICT given by the participants.

1.2 Justification

This research will address the availability and use of ICT resources (software and hardware) in education declared by teachers of English and EFL students. The importance of knowing the availability of ICT resources relies on the fact that studies found in Chile are mainly related to access to computers. For instance, a survey implemented by Hinostroza, Labbé and Claro (2005) discovered that the availability of ICT resources in Chilean education is primarily related to computer labs due to the ICT policies in the country. Furthermore, we also wanted to discover how many teachers were using the available ICT resources in their schools. Teachers state that ICT resources are mainly used as a complementary tool for teaching classes, classroom management and introducing content (Hinostroza, Ibieta, Claro and Labbé, 2016).

According to our personal experiences, most of us were in different types of schools that had ICT resources available; however, the use of those resources was very limited. Most schools are equipped with computer labs, projectors and audio equipment; nevertheless, in our experience teachers do not use those resources frequently since most of them are accustomed to the traditional methodology.

The relevance of this study is that it provides evidence about the current availability and use of ICT resources in public, subsidised and private schools; therefore, knowing the perspective of students and teachers could initiate discussion about how lessons are being prepared, and which materials are being used to facilitate the learning as well as the teaching process. Furthermore, the availability of ICT resources can provide different opportunities to make teaching more entertaining and motivating.

II. Literature review

2.1 Definition of ICT

According to UNESCO (n.d), ICT refers to social interaction, whereas the term technology is focused on all the digital devices that can enhance communication and the sharing of information to improve educational practices. It is a term that is primarily associated with the role of communication, sending, and receiving information worldwide. As reported by UNESCO, high-tech has many approaches to facilitate teaching and create new learning strategies, while also supporting future teachers and strengthening the educational field (Unesco, n.d). Information and communication technologies are the key to developing and to enhance education in different educational stages.

As cited in United Nations (2003), different authors provide definitions to the concept of ICT, each with different approaches. For example, Rodriguez and Wilson (2000) mentioned in United Nations' text define ICT as activities which, due to the support of processing devices, monitoring, and transmission of information are much simpler. Another example is the cited definition of ESCAP (2001) in the United Nations (2003), which focuses on ICT as the different technologies that allow people to communicate, distribute, find and share information. A more specific definition is provided by Marcelle (2000) cited in the text from the United Nations, who defines ICT as a set of complex goods (e.g, radio broadcasts, television, software.), which are intended to produce, transform, process, and distribute information. To conclude this list of definitions, the United Nations (2003) define ICT as a group of technologies, which are associated with each other. They are classified according to their functional use when accessing the information. The clearest example of this is the internet.

According to Sarkar (2012) ICT can be classified as two elements. Firstly, Information and Communication Infrastructure (ICI), which refers to the use of visible systems and digital devices, such as cellphones, transmissions, or podcasts; thus, the resources that can use them, for instance voice recorder, visual or audio entertainment. Secondly, Information Technology (IT) which indicates the delivery, collection and gathering of information.

Tamilselvan, Sivakumar and Sevukan (2012), state that Information and Communication Technology (ICT) "is concerned with the storage, retrieval,

manipulation, transmission or receipt of digital data.” Additionally, the authors mention the matter of how these technologies can work with each other.

In his same writing, Selvan et al. (2012) refers to the fact that the low understanding of ICT is linked to the confusion of people with the meaning of Technology. On the one hand, Selvan et al. define technology as a process in which different resources, such as scientific, human, and material resources are used, to satisfy human needs. On the other hand, they give a simple description of Information, which can be understood as an abstract concept which other subjects can communicate and understand. After proposing these two definitions, a third one is given, which corresponds to a union of both. The new concept presented is Information Technology, which is defined as “the use of information to meet human need or purpose.” (Selvan et al. 2012, p. 18), thus ending with the joint definition of these terms, which would correspond to ICT. Finally, ICT would be defined as “the use of information to meet human need or purpose, including reference to the use of contemporary devices such as the Internet. ” (Selvan et al. p. 18)

As reported by Nureni (2014), ICT are not limited to technological devices, but refers to the convergence of different networks, such as audiovisuals, telephone and computer linked by a system, which has as its main aim to support users in the work of achieving an established goal. As it can be inferred, these technologies, adapted to the needs of the present, should not be used without a purpose, since they not only present benefits but also difficulties. Similarly, it cannot be ignored that these technologies emphasise communication or transmission of information; therefore, technologies that only rely on keeping information without transmitting it would not be suitable for this concept.

Even though technology is assumed to be a meaning of recreation, Verduco (2016) states that the concept of ICT and technology as a tool for recreation should not be mixed. What can be taken from this is that the use of technologies can depend on and vary according to the purpose the user gives them. The definition of ICT has been evolving during the years since the development of electronic devices has accelerated; consequently, the complete outlook of ICT in education has changed. The hasty development of technology is the main reason why investigations before Verduco (2016) aim to define what ICT are, while Verduco’s research focuses on setting goals to control the misuse of new technologies in the classroom.

2.2 The importance of ICT in education

Hernandez (2017) stated that ICT has caused such a great impact on the knowledge-based society, that it has brought major changes to it. Moreover, technology has influenced nowadays' education, changing the way of interacting, communicating, studying, and investigating (Pescador, 2014, cited by Hernandez, 2017). Consequently, many studies evidence how the use of ICT has become successful in many educational contexts.

The use of ICT can improve new methods of teaching as well as learning since it's able to support both teacher and student. Consequently, Tinio (2003) explained that the evolution of ICT has improved daily tools or technologies, acquiring new uses to a more learning centred system, this means that new methodologies and approaches are appearing to promote the students' knowledge, motivation, and engagement for learning different subjects.

Furthermore, giving information regarding the use of ICT will provide more opportunities. As stated by Verduco (2016), ICT would allow students to be productive in their learning environment in which its reliance has increased towards technology for daily activities. In addition, educational systems should promote the use of ICT tools in their curriculum in order to provide students with knowledge and skills needed in this century (Hue and Ab Jalil, cited by Gebremedhin and Fenta, (2015). The teaching and learning processes in today's world inevitably involve the use of ICT as declared by Goodwin, Low, Ng, Yeung, and Cai (2015)

On the other hand, according to Bingimlas (2009) some barriers such as lack of time, accessibility and technical support make the implementation of ICT in some educational institutions difficult. Based on the obtained information, even though ICT has made an impact on education, this is the field with the least ICT implementation. According to Gebremedhin and Fenta (2015), the educational field has been less affected by ICT in comparison to other fields (i.e, engineering, medicine). It has been documented that ICT has not been fully accepted nor implemented in schools according to Goodwin, et al. (2015)

Linking this information with the investigation regarding the use of ICT, Parsania, Chavda and Kamani (2015) state that the use of technologies has shown tremendous potential when referring to the acquisition of a new language, thus, adding " ICT has been published as potentially powerful enabling tools for educational change and reform. " (p. 1). Similarly, Parsania,

et al. (2015) mention that teachers are greatly benefited by the use of the Internet, and with this network they have a means where they can obtain information and material for their classes. Also, teachers can subscribe to a great variety of magazines, newspapers, and international programs specialised in the teaching of English (IELTS / TOEFL). Furthermore, they can break distance barriers, to communicate with colleagues from different contexts (different places of the world in real time), with different points of view and methodologies that could help to form a method of teaching more beneficial to students.

2.3 The characteristics of a good user of ICT

Based on the information retrieved from the research of Parsania, Chavda and Kamani (2015) a good user of ICT could be defined as a user who, implementing different technologies effectively in the educational context, can achieve an increase in the productivity of their students. Another definition retrieved from the data collected by Jamil, Majoka and Sahibzada (2018) agrees that a good user of ICT is someone who is proficient when applying ICT resources in the context they are immersed in. As stated by Marrufo (2018) there are variables that could define the competence of an ICT user, which are the use of digital systems, the use of specialised resources, the use of data, digital communication, text use, and socialisation and collaboration.

A proficient user of ICT in the educational context would also be able to accomplish certain educational purposes. Retrieving the purposes stated by Grosbeck (2009) it can be classified in two categories that can be applied in the Chilean educational context, class management and pedagogical purposes.

The pedagogical purposes category consists of assessment instruments, searching and adapting materials online, providing feedback to students, asking for homework, sharing materials to strengthen the learning process, and delivering information to students regarding matters of the subject, in this case, English.

The purposes in the management category are delivering information to parents, registering students' marks, registering students' attendance, and participating in programs/ tutorials of professional development.

2.4 ICT in the Chilean context

According to Claro and Jara (2020), ICT in education policy in Chile was enacted in 1992 with the creation of Enlaces. The mission of this network was to train teachers and provide them with technical and pedagogical support, as well as to provide access to digital technologies and promote the use of ICT to improve learning skills. To accomplish this task, primary and secondary teachers specialising in educational technology were hired by the universities as trainers who kept in permanent touch with the schools to support the use of digital technologies.

In recent years Ministerio de Educación developed and implemented new methods oriented towards establishing a set of standards for the use of ICT in education. Firstly, “ICT standards for the Initial Teacher Training”, implemented in 2006, contains the five functional dimensions. This proposal was created to provide an opportunity for reflection and debate regarding the way in which teaching institutions are responding to today’s society demands. Finally, the “Functional Map of ICT skills for Teacher Education” was implemented in 2007 on the basis of the aforementioned dimensions. This document was aimed at guiding the decisions required to design and implement a modern, efficient, effective, and high-quality teacher education curriculum in order to provide future teachers with skills needed to practice in the education of the 21st century.

Nevertheless, in 2018, the Centre for Education and Technology (CET) and the Enlaces program were integrated into the Centre for Innovation in Education created by the administration that came to power that year for promoting educational innovation within the school system as stated by Claro and Jara (2020). There was only one project that was left from the CET-Enlaces’ agenda, it was the one which supported school infrastructure, in particular, the one related to improving school connectivity. This project has been enhanced based on an initiative called Connected Classrooms (Aulas Conectadas). According to Claro and Jara (2020) the new Centre for Innovation in Education also launched a technology-related initiative called National Plan for Digital Languages (PNLD), which seeks to promote the learning of computer thinking and programming in the school system.

The article named “ICT in Chilean schools: students’ and teachers’ access to and use of ICT” (2005) written by Hinostroza, Labbé and Claro, states the results given by the analysis of a national survey of the Chilean educational

infrastructure and its use in schools. This survey was carried out by the Centre for Technology and Education of the Chilean Ministry of Education in 2004. The results of this survey show that the ICT used by students can be divided into four categories: communication, productivity, recreation, and communication with teachers, whereas teachers' use of ICT can be categorised into three factors: communication, teaching and technical. The main question of this study, considering the Chilean context, is how to make this time most effective for improving students' learning. Another important question, since the results show that students spend more time in communication activities, is how to take advantage of these activities in order to meet teaching and learning aims. Besides, findings regarding teachers show the importance of developing courses by taking advantage of what they already do with ICT.

Moreover, Hinostroza et al. (2005) describes the situation regarding the facilities of educational institutions in his research, he stated that the majority of the computers in primary and secondary schools are located in the computer labs. Furthermore, this situation is given mainly due to the ICT in Education policy in Chile. The computer lab is the space at school which is meant to be used for technological purposes. Even if the school has a computer lab, there are not many Chilean schools that have computers in their classrooms, according to Hinostroza, and if they happen to have some, it is due to their own initiative.

2.4.1 Research related to the use of ICT in Chile

A study related to ICT in classrooms in Chile was conducted by Brun and Hinostroza in 2014, called "Learning to become a teacher in the 21st century: ICT integration in Initial Teacher Education in Chile". It claimed that most teachers have a limited and long-established usage of ICT, being computers and projection software the resources most needed and available.

This research had a mixed methodological approach, and its results were structured in seven subsections: (1) Institutional policies and practices for ICT integration; (2) Infrastructure, ICT resources and support; (3) Actors' confidence in the use of ICT; (4) Visions about the pedagogical use of ICT; (5) Use of ICT resources in teaching and learning activities; (6) Teaching and learning activities performed; (7) Main barriers and enablers for ICT integration. A focus on number 4, number 5, and number 6 will be set since those subsections are closest to this study.

In pedagogical activities, teachers tend to use ICT consistently when it comes to educational management-related activities and in most of their teaching activities. Nonetheless, ICT use in learning activities show a difference between roles in specific activities; for instance, “communicate with external actors”, “develop learning materials” among others. Most of these activities are more related to a “student-centred” pedagogy.

Furthermore, results show that teachers and students are not frequently using ICT in activities associated with students' assessment. According to the statements done in this research, only a minor percentage of teachers prepare students for using ICT resources appropriately since teachers aim mainly for the use of presentation software programs, such as PowerPoint presentations.

2.5 The Dimensions of ICT in the Chilean Educational context

The current dimensions of ICT were based according to the Centre for Education and Technology, Enlaces, which published in 2007 two books being “Competencias TIC en la profesión docente” and “Estandares de formación TIC” (Mineduc, 2011 p.6)

- A. Pedagogical (Pedagógica):** Based on what was stated by Ministerio de Educación (2011), the current educational challenges require teachers integrating ICT in their day-to-day tasks, due to the importance of ICT in development of knowledge, society, work and all the dimensions on the individual and collective life, as well as the importance of benefiting the enhancement of different skills of each individual involved in educational context. The purpose of this dimension points to the integration of ICT in the teaching and learning processes under the aim of adding value to the process itself and supporting the development of the students (Ministerio de Educación, 2011).
- B. Technical (Técnica):** ICT incorporation in education is a process that requires adequate equipment so that teachers have real opportunities to familiarise with technology, acquire security in the instrumental operation of the systems and build personal domain over those resources to allow them to implement and execute them with confidence during teaching-learning activities and support students in their ICT management. The emphasis of this dimension is to orientate



and facilitate induction processes regarding the use of systems and current technological tools (Ministerio de Educación, 2011).

- C. Management (De Gestión):** This concept involves all the decisions made by school agents in order to ensure the fulfilment of the national curriculum. Any action or decision which involves the management dimension should be done in accordance with “Proyecto Educativo Institucional” (PEI). It is also focused on the analysis and evaluation of academic performance and individual efficiency. (Ministerio de Educación, 2011).
- D. Social, ethical, legal and of responsibility (Social, ética y legal, y de Responsabilidad):** Teachers must make their students aware of their own social, ethical, and legal responsibilities when using ICT as well as their classmates' responsibilities. (Ministerio de Educación, 2011).
- E. Professional development (Desarrollo profesional):** Teachers must be trained and qualified in the use of ICT, since they have an influential impact on students' skill development. (Ministerio de Educación, 2011).

The importance of these dimensions is that they set a basis for teachers to integrate ICT resources into their teaching and professional development.

According to the study of Claro conducted through an ICT SIMCE (2014), Chilean students have minimal proficiency regarding the use of ICT, due to the poor availability and understanding of ICT resources.

III. Methodology

3.1 Research type and design

This research will be conducted using a quantitative approach, which according to Creswell (2003) is a type of research which explains a phenomenon by collecting numerical data which later will be analysed using mathematical based methods.

This research is defined as a descriptive study. According to Hernandez, Fernandez, and Baptista (2006), the main feature of a descriptive study is to define key properties, characteristics and features in any phenomenon that is analysed. In addition, it describes tendencies from a settled group or population. In this type of study, there is a data collection related to the information obtained through the research process; then, they are presented through a description. The value of this type of study is to precisely present different dimensions of a phenomenon, community, or situation. In descriptive studies it is necessary to define or at least visualise what will be analysed and from whom the data will be collected.

The type of research corresponding to this is transactional research. Based on what was stated by Hernandez et al. (2006) these designs collect the data in one moment at one unique time. The purpose of this research is to describe categories and dimensions and analyse their incidence and interrelationships. In addition, this research would be defined as descriptive transactional research since it is merely descriptive, and it is intended to make comparisons between groups and subgroups of the population aimed for this research.

Due to the characteristics of this type of study, Hernandez et al. (2006) mention that neither hypothesis nor variables are needed since they are classified as non-experimental. Moreover, Hernandez et al. (2006) state that hypotheses are needed in descriptive studies if the objectives aim to predict conclusions considering the data that will be measured, which is not the case in this study.

The information was collected by using two surveys, each of them designed specifically for teachers and students, as appropriate. The surveys were based on the analysis of the availability and use of Information and Communication Technologies (ICT) resources in education, where both teachers

and students were asked to indicate the availability and frequency of use of different technological resources in their schools.

3.2 Objectives

3.2.1 General objective

To investigate the availability and use of ICT resources in education, declared by teachers of English and secondary school students in public, subsidised and private schools in the province of Concepción.

3.2.2 Specific objectives

- To obtain information from EFL Teachers about their use of ICT resources in different types of schools and different years of experience.
- To obtain information from Secondary School students about the use of ICT resources in their English classes.
- To contrast data provided by both sample groups with respect to the use of ICT resources in different schools.

3.3 Construction of the instruments

To gather information about the use and availability of ICT resources in secondary schools, two surveys were designed for teachers and students from public, subsidised, and private schools. The teacher's and student's survey were created based on previous instruments by Russel, Bebell, O'Dawyer and O'Connor (2003) and it was organised according to the pedagogical, professional development and management purposes related to the uses of ICT, based on the elements recommended by Grosseck (2009). This can be seen in the appendix 1.

The teachers' survey was created before the students' survey, and it was divided into three sections, which consisted of the personal information of the participants, availability of technological and digital resources in the secondary schools, and the frequency of use of technological and digital resources.

The first section related to the personal information of the participants was designed to gather complete and accurate information about the teaching

experience, the location they were currently working at, their degree and the type of schools they were working in.

The second section describes the availability of technological and digital resources. The objective was to obtain information of the different resources available in the classrooms to make a contrast between the public, subsidised and private schools.

The third section details the frequency of use of technological and digital resources. The aim of this section is to analyse the authentic use of the resources based on pedagogical, management and professional development purposes.

The third section was divided into four main subsections. Firstly, the frequency of use of technological resources during the class. Secondly, the frequency of use of technological resources for purposes related to the class. Thirdly, the frequency of use of these resources for management purposes. Lastly, how frequently teachers ask students to use technology for purposes related to the class, for example, to develop presentations using PowerPoint or using software programs/websites to practice English. The teacher's survey can be seen in the appendix 2.

The students' survey is an adapted version of the teachers' survey where some changes can be observed. One of the main modifications was the language use since the teachers' survey was written in a formal language. Besides, the teachers' survey has thirteen questions while the survey for students has eleven. Students' survey can be seen in the appendix 3.

3.3.1 Validation and piloting process

To validate the surveys, the coherence of the items regarding the objectives of the research was checked, as well as the understanding of instructions and the use of the language of the instrument. To ensure a good revision, two Linguistics professors of English were requested to participate in this validation process. Moreover, to review the accuracy and understandability of the language used in the instrument, a petition to a Linguistics teacher of Spanish to participate in this validation process was made.

Each professor received a letter in order to request their participation in the validation process. The letter included a document with the objectives of

this research and statements that they had to agree to validate the instrument. To declare how agreed professors were with the statements a Likert scale was used.

The types of validity that correspond to this validation process are the face validity and the content validity. On the one hand, Hernandez, Fernandez and Baptista (2006) states that face validity can be understood as how trustable an instrument is according to experts. As previously mentioned, this survey was reviewed by three professors and each of them approved the validity of the instrument. On the other hand, Hernandez, et al. (2006) also declare that the content validity is related to how well the instrument reflects a specific domain of content about what is being measured, for example, if this research is about availability and frequency of use of technological resources, the survey would not have validity if the items were about how well teachers use ICT.

After receiving suggestions and comments by the three professors regarding the instrument, minor modifications related to the vocabulary and the organisation of the sections of the survey were made.

Regarding the students' survey, a piloting process was implemented. The main objective of this process was to check students' comprehension among the questions and items of the instrument. Three secondary students from different schools participated voluntarily. A meeting was held where the participants answered the students' survey on its digital format. While three members of this group were monitoring and clarifying doubts to the participants, the fourth member took notes of the clarifications that were made to the students.

As a result of the piloting process, minor changes were done to the instrument. These corrections were based on the comments made by the students on the piloting process and the small modifications on the teachers' survey as a result of its validation.

3.4 Sampling

The sampling strategy chosen for the investigation instrument is the non-probabilistic sampling since the group of participants had to fulfil a specific profile stated in the previous section and the participation of both students and teachers were completely voluntary. Each participant was selected with an

informal procedure based on the profile chosen to be suitable for the research process.

3.5 Selection of participants

The participants correspond to teachers and students from public, subsidised, and private schools in the province of Concepción. This decision was taken since the survey was supposed to be applied to the participants from the educational institutions in which our teaching practicum was done.

First, the profile of the teachers of this research are male and female teachers with a degree of secondary school teacher of English who were between 23 or more than 50 years old and who had at least 1 year of professional experience. Moreover, teachers had to be currently teaching in public, subsidised, or private schools in the province of Concepcion.

Second, the students that were surveyed were male and female students currently registered as secondary school students in public, subsidised, or private educational institutions of the province of Concepcion.

Finally, it was proposed to divide teachers in novice and experienced teachers to investigate if there is a relationship between the use of ICT resources and the years of professional experience. According to the OECD (2019) teachers who have less than 6 years of professional experience can be classified as novice teachers.

3.6 Data collection procedures

3.6.1 Plan

To collect the data, an online survey format on Google Forms was used. This format of the survey was suggested considering the benefits that it could bring us, such as an easier and better distribution of each survey, and an increment of motivation to answer it, especially with students. Additionally, this format allowed us to distribute it through social networks (checking that the participants match the survey criteria) to increase the number of data that could be collected.

3.6.2 Survey data collection

Both surveys were available from October 2019 until March 2020. The surveys were delivered through email and in private online messages. First, a letter was written for the teachers of English who were willing to cooperate with our research. They were previous practice guide teachers and teachers recommended by the students, who were also answering the survey. Secondly, the student's survey was spread among their peers, this was planned in order to corroborate that those volunteers were the same students of the province of Concepcion and were in the same schools. As stated before, the students who participated in the survey were asked to give their teacher's email addresses; therefore, we could send their own survey as well.

IV. Data analysis

4.1 Summary of participants

The participants of this research are divided into two main groups. The first group consists of teachers with the degree of secondary school teacher of English. This group is divided into three subgroups, teachers of English who work in public schools, teachers at private schools and teachers at subsidised schools. As defined by Ministerio de Educación (n.d.), public schools are financed by the government and administered by the local government, subsidised schools are private establishments partly financed by the government and the legal tutor of each student, and administered by the owner of the school, and private schools are private establishments, which are administered by the owner of the school and financed by the legal tutor of each student.

Table 1:

Teachers	Gender					
	Male		Female		Not specified	
Municipalizado	5	41.67%	12	27.91%	1	50.00%
Privado	2	16.67%	12	27.91%	0	0.00%
Subvencionado	5	41.67%	19	44.19%	1	50.00%

Source: Teachers' survey for this research.

A total of 58 participants answered the teachers' survey, most being female English teachers from subsidised schools in Concepción with between 1 and 10 years of experience teaching, most of them being 23 and 35 years old.

Table 2:

Students	Gender					
	Male		Female		Not specified	
Municipalizado	10	17.5%	23	18.5%	1	100.0%
Privado	6	10.5%	28	22.6%	0	0.0%
Subvencionado	41	71.9%	73	58.9%	0	0.0%

Source: Students' survey for this research.

The second group of participants consists of secondary school students from public, subsidised, and private schools.

On the other hand, the student's survey was answered by 182 students, most of them being female students from 4th year of secondary school who study at subsidised schools from Concepción.

4.2 Results

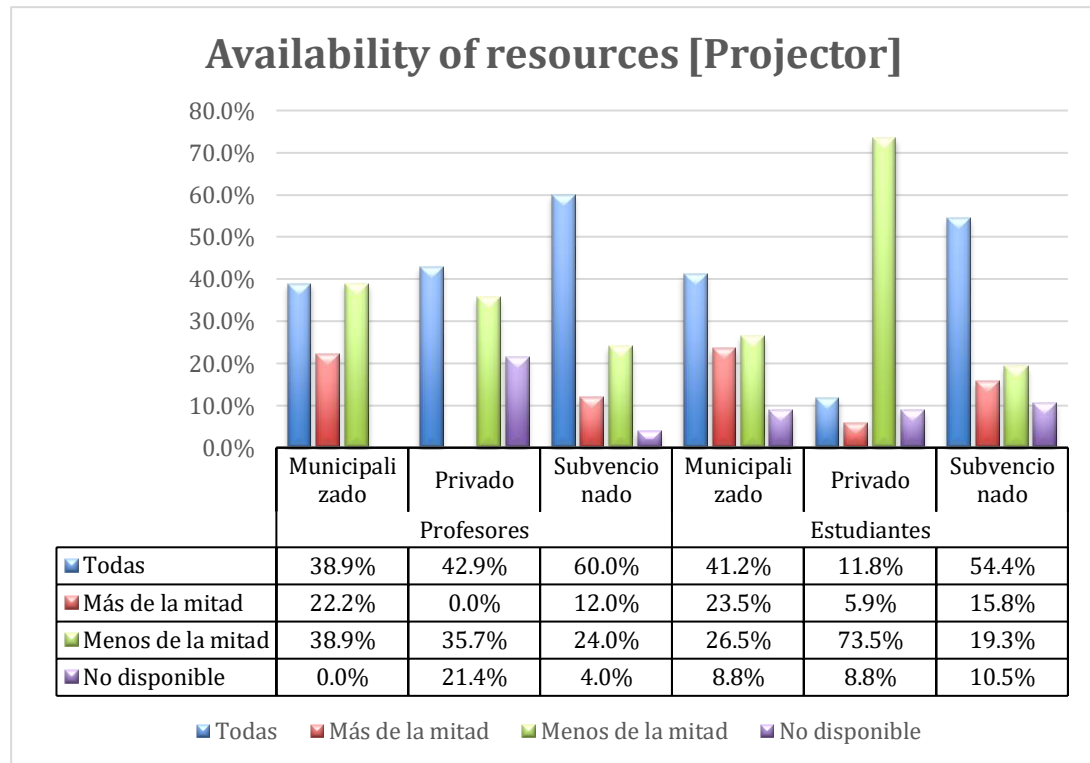
In the following section the results of the surveys will be presented. The graphs were chosen based on the possible relevancy of their results, and the possible comparison that could be made. The rest of the results of each section can be found in the appendix.

Different criteria were considered at the moment of analysing the data. First, all the dimensions of the survey were analysed considering the type of school of the participants; additionally, comparisons between the declarations of teachers and students were done. Second, data of novice and experienced was compared. The dimension of availability of resources was not analysed in this part since it has no connection with teachers' professional experience. Lastly, implications of each of the bar graphs presented were stated.

The results of this study will be presented with a graph that displays the percentages of each answer provided by the participants. Additionally, there will be a paragraph describing the statistics shown in each set of graphs to facilitate the understanding of the data. Each paragraph will include the biggest similarities and differences.

4.2.1 Availability of ICT resources

Chart 1:

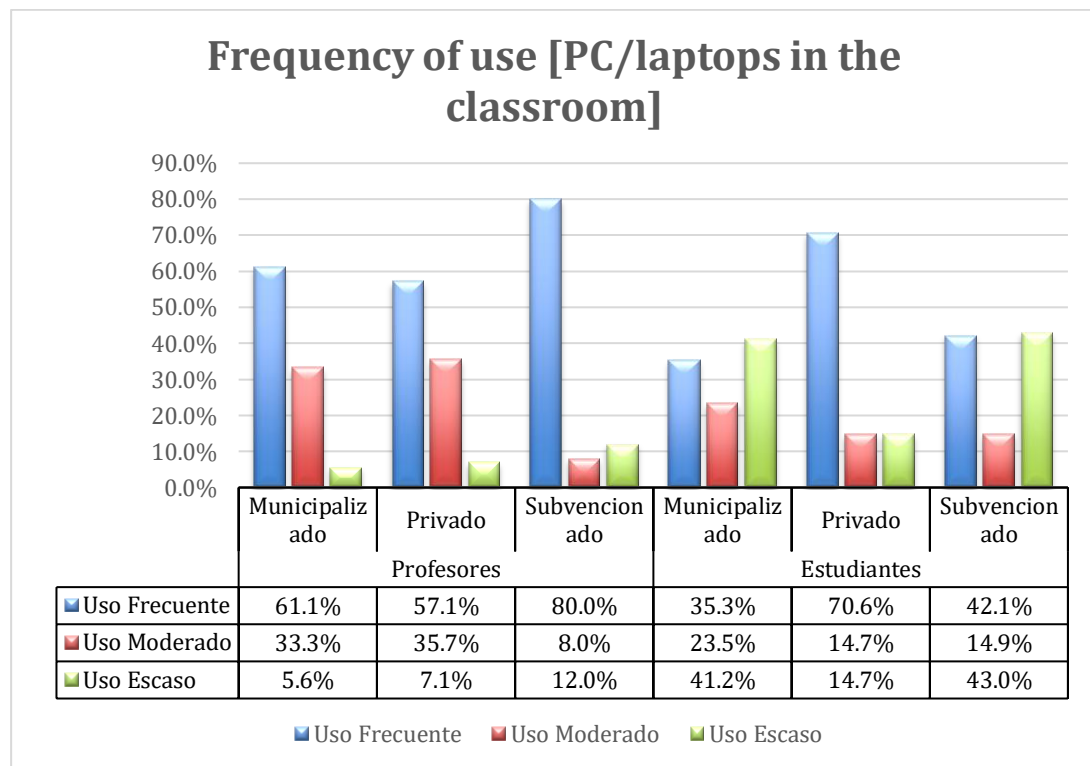


Source: Teachers' and students' survey for this research.

Regarding the results of the availability of ICT resources, one of the most available resources are the projectors. The bar graph presents mostly similarities, but there are specific cases where significant differences must be mentioned. These differences are focused on private schools, where the percentage of students who declared that this resource is available in all the classrooms is three times lower than teachers' percentage. Moreover, the ratio of students who mention that projectors are available in less than half of the rooms is two times higher than teachers' answers. Finally, while 21.4% of teachers from subsidised schools affirm that the resource is not available in their institutions, only 8.8% of students declare the same. There is no data from the survey that can be interpreted as if a particular type of school uses more ICT resources than the others.

4.2.2 Frequency of use of ICT resources

Chart 2:

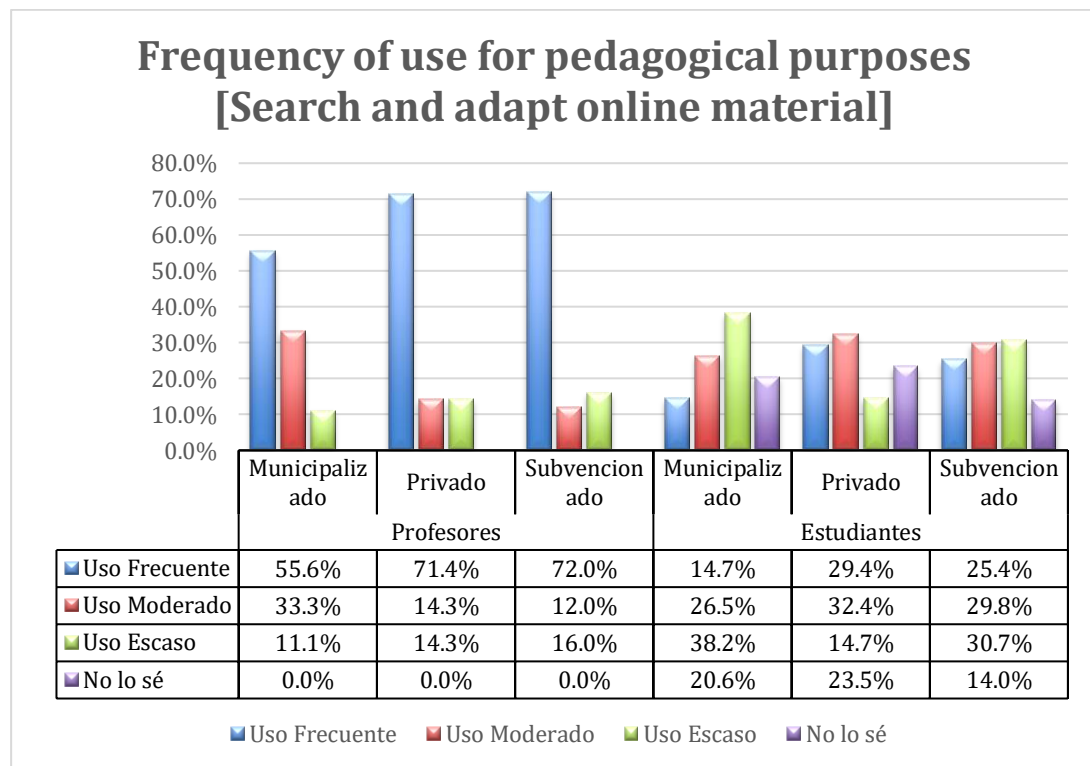


Source: Teachers' and students' survey for this research.

When analysing the results from the survey regarding the frequency of use of PC/laptops in the different types of schools, we can see a noticeable difference between each group of participants; however, only the biggest differences will be analysed. In the case of public schools, there is a big discrepancy between teachers and students, in which a vast majority of students affirmed there is a rare use of PCs and Laptops by their teachers, but a small minority of teachers stated they did not use that ICT resource that frequently. While 35.7% of teachers from private schools declared a moderate use of PC/Laptops, 14.7% of students shared the same vision. Finally, 80% of teachers from subsidised schools agreed on a frequent use of these resources; nevertheless, only half of students stated that their teachers used them frequently. From these results it can be inferred that the perception of frequent, moderate, or rare use of ICT is quite different between teachers and students, which could be based on their opinion about these frequencies.

4.2.3 Frequency of use for pedagogical purposes

Chart 3:

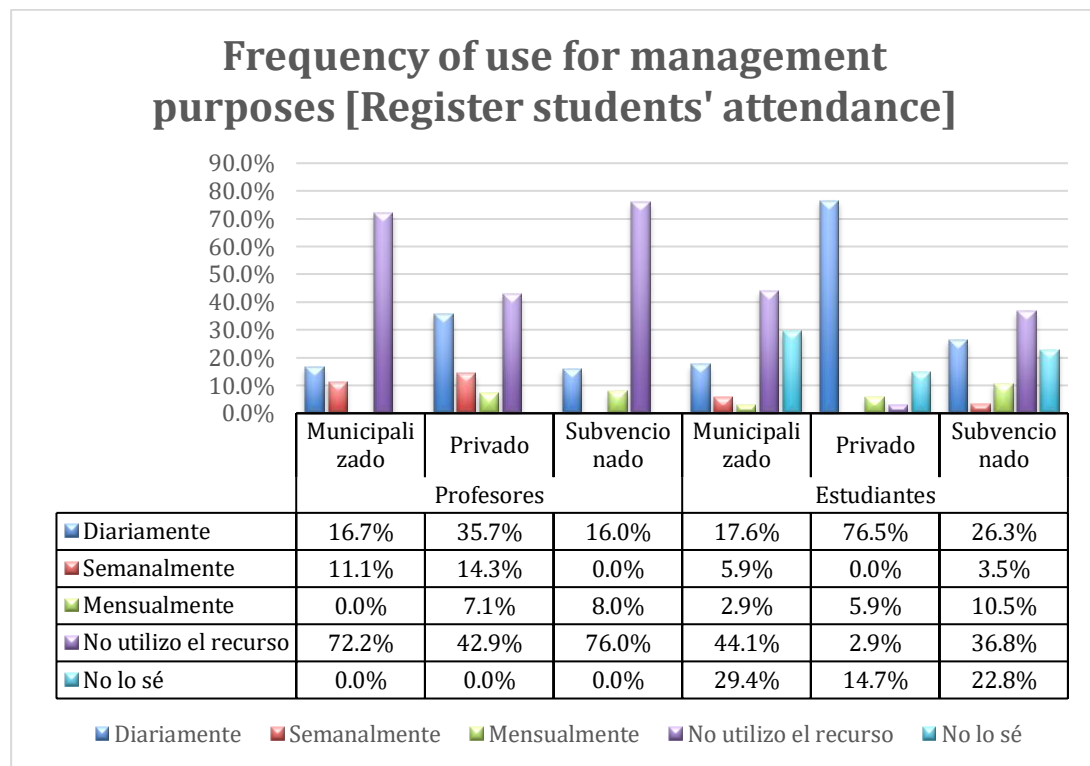


Source: Teachers' and students' survey for this research.

Regarding the information related to the frequency of use of ICT for pedagogical purposes, the graph presents a big discrepancy between teachers' and students' answers. Teachers from all different schools declare that they frequently use ICT to search and adapt materials for their classes, but students do not seem to be aware of this frequency. Most students from the three different types of schools answered that their teachers use ICT for this purpose moderately or scarcely. In this matter, it can be inferred that students are not aware of the work that teachers get done on their own to prepare their classes.

4.2.4 Frequency of use for management purposes

Chart 4:

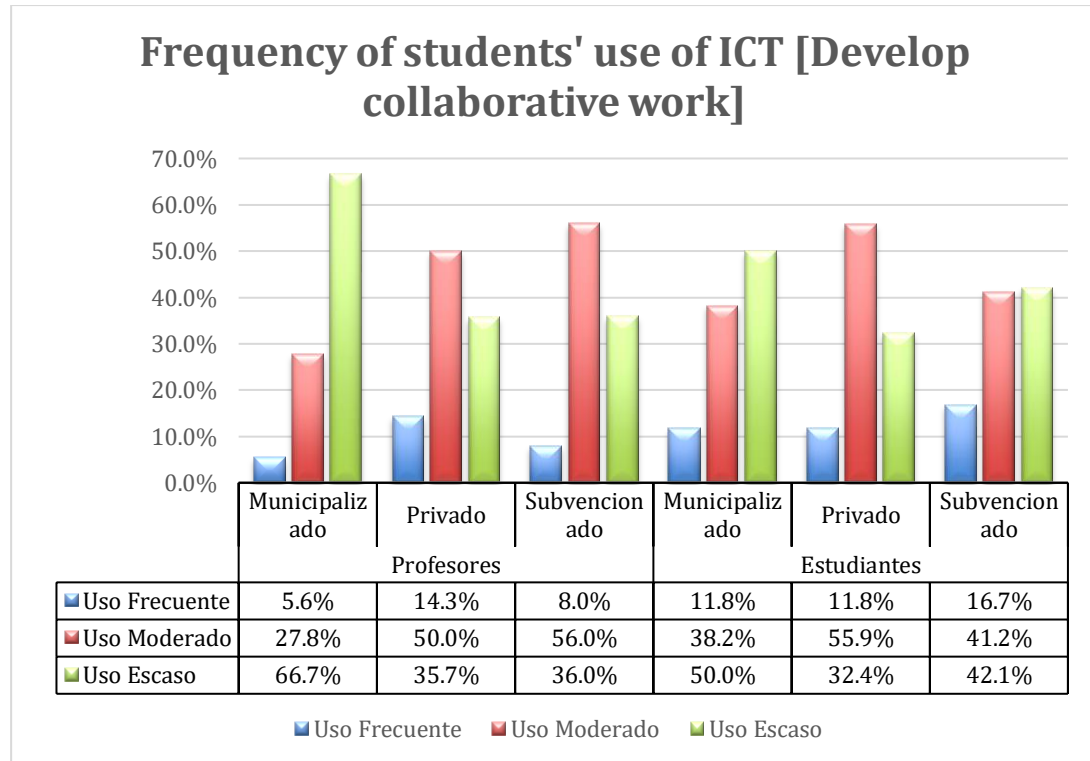


Source: Teachers' and students' survey for this research.

In relation to the results of the section named “Management Purposes” some contradictions were found, since students declared a higher use of ICT contrary to teacher’s statements. For example, in the bar graph “Registering students’ attendance”, a significantly high percentage of students declared that technological resources are used for this purpose daily, but most teachers declared that they do not use ICT for this purpose. Furthermore, more than 70% of teachers from both public and subsidised schools mention not using ICT resources for this purpose; in contrast, less than 50% of students from both types of schools declare the same. Finally, around a fifth of students from all different institutions do not know if ICT resources are used for this purpose. The overall results of ICT usage for management purposes demonstrate that teachers are not inclined to use technology for administrative aspects related to their classes; additionally, a high percentage of students are not aware of their teachers’ use of ICT regarding these purposes.

4.2.5 Frequency of students' use of ICT

Chart 5:



Source: Teachers' and students' survey for this research.

In the following bar chart, we can analyse the results of the frequency of student's use of ICT, in which there are some noticeable differences as well as similarities. Teachers from the three types of schools declare a moderate use of ICT to develop collaborative work, as well as students. Furthermore, another percentage of students from the different schools also stated that their teachers scarcely use the ICT resources. It can be interpreted that students acknowledge that their teacher uses ICT resources for collaborative work moderately and limited in all three types of schools.

4.3 Novice and experienced teachers

The information in the following section corresponds to the group of novice and experienced teachers. Firstly, the percentages that correspond to each group will be shown. Then, the results will be presented with a graph that corresponds to each question, and with a paragraph with the prioritised information, such as the biggest differences or similarities.

Table 3:

Teachers	Professional Trajectory					
	Male		Female		Not specified	
Experienced	3	25.0%	26	60.5%	0	0.0%
Novel	9	75.0%	17	39.5%	2	100.0%

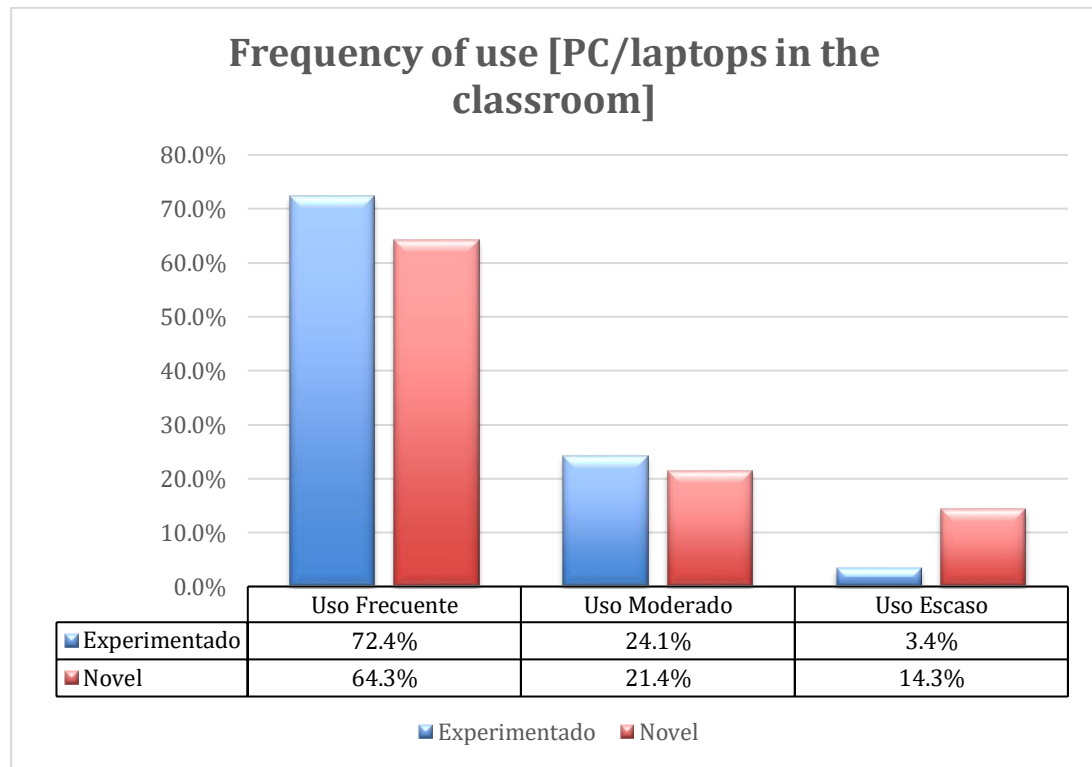
Source: Teachers' survey for this research.

This group of participants are divided into two groups, novice, and experienced teachers. First, 9 participants, which corresponds to 32.1% of the group of novice teachers, identified themselves as male. Also, 17 participants who belong to 60.7% of this group, are identified as female. Finally, two participants did not specify their gender.

Regarding experienced teachers, 3 participants, corresponding to a 10.3% of this group, are male teachers, while 26, belonging to 89.7% of experienced teachers, identified themselves as female.

4.3.1 Frequency of use of ICT resources

Chart 6:

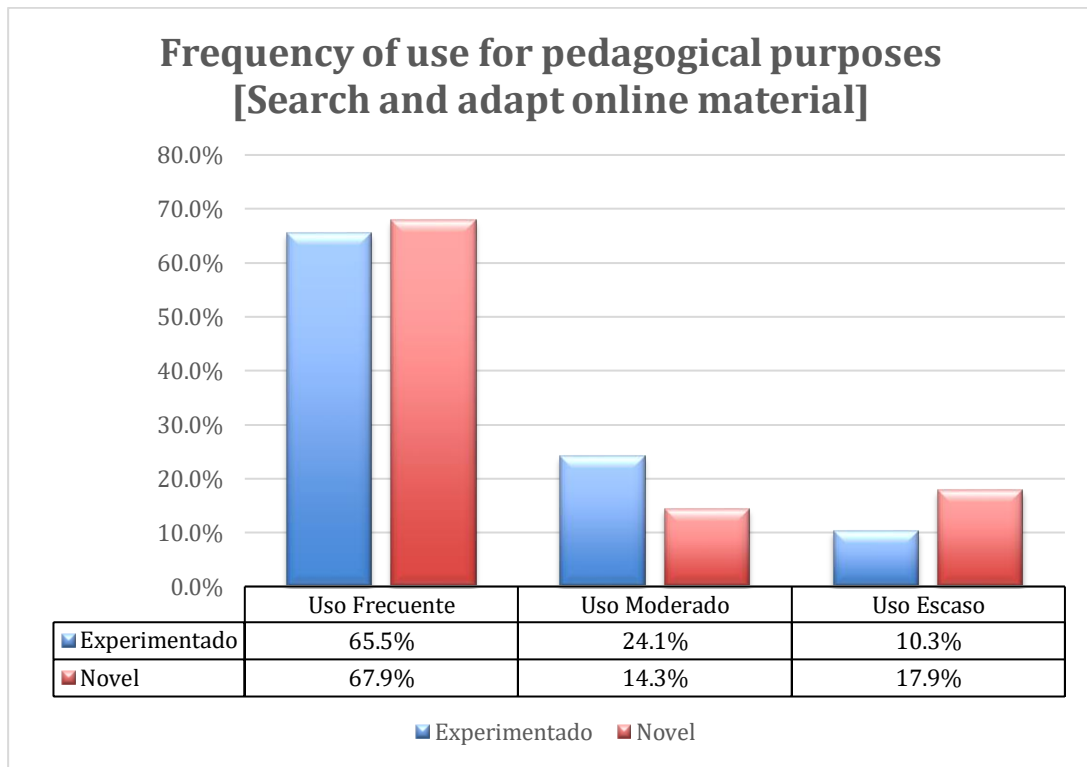


Source: Teachers' survey for this research.

In this set of graphs, we can see the percentage of frequency of use of PC/laptops as stated by novice and experienced teachers. In the case of frequent and moderate use, the percentages of novice and experienced teachers are similar. The biggest gap is seen in rare use of PC/laptops, in which 14.3% of novice teachers confirm their rare use of this resource, while only 3.4% of experienced teachers stated they rarely use this ICT resource. From these results we can conclude that the frequency of use of ICT resources does not differ significantly regarding years of experience.

4.3.2 Frequency of use for pedagogical purposes

Chart 7:

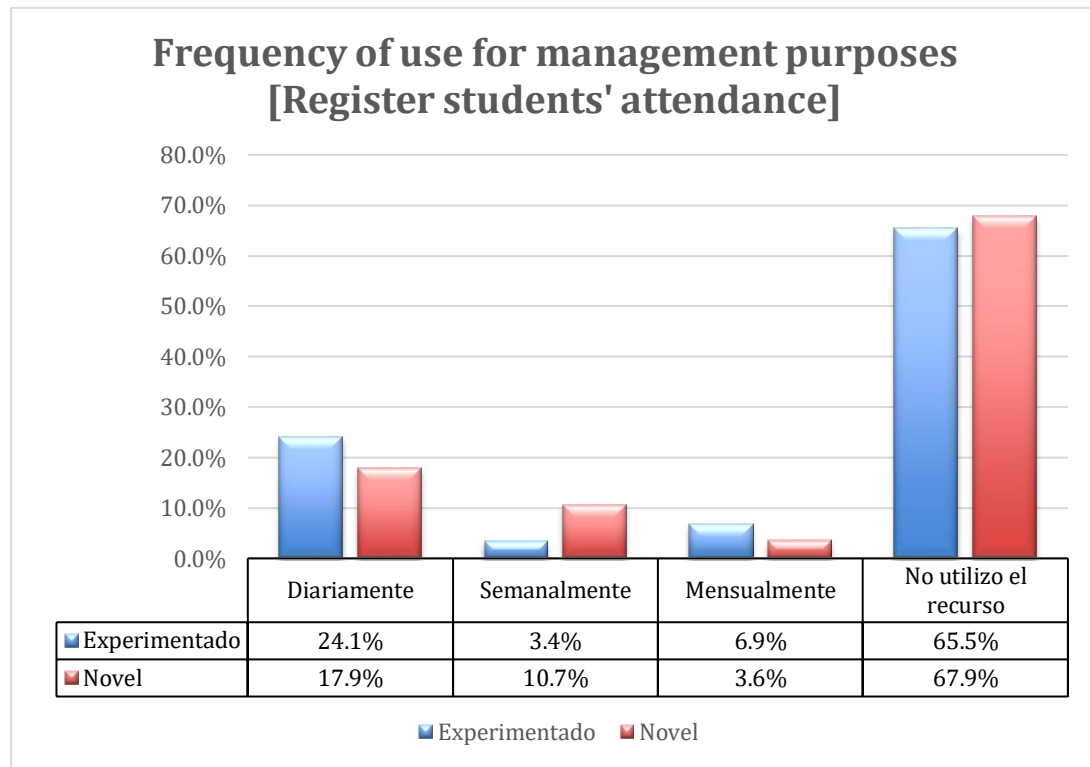


Source: Teachers' survey for this research.

When asking teachers if they used ICT to search and adapt material for their classes, both experts and novice teachers agreed on using them frequently. The other purposes on this section were mostly answered as scarcely used. Furthermore, this data can be easily interpreted since teachers need to constantly look for new materials for their classes, and the internet is full of different types of information and examples that are useful for all kinds of teachers.

4.3.3 Frequency of use for management purposes

Chart 8:

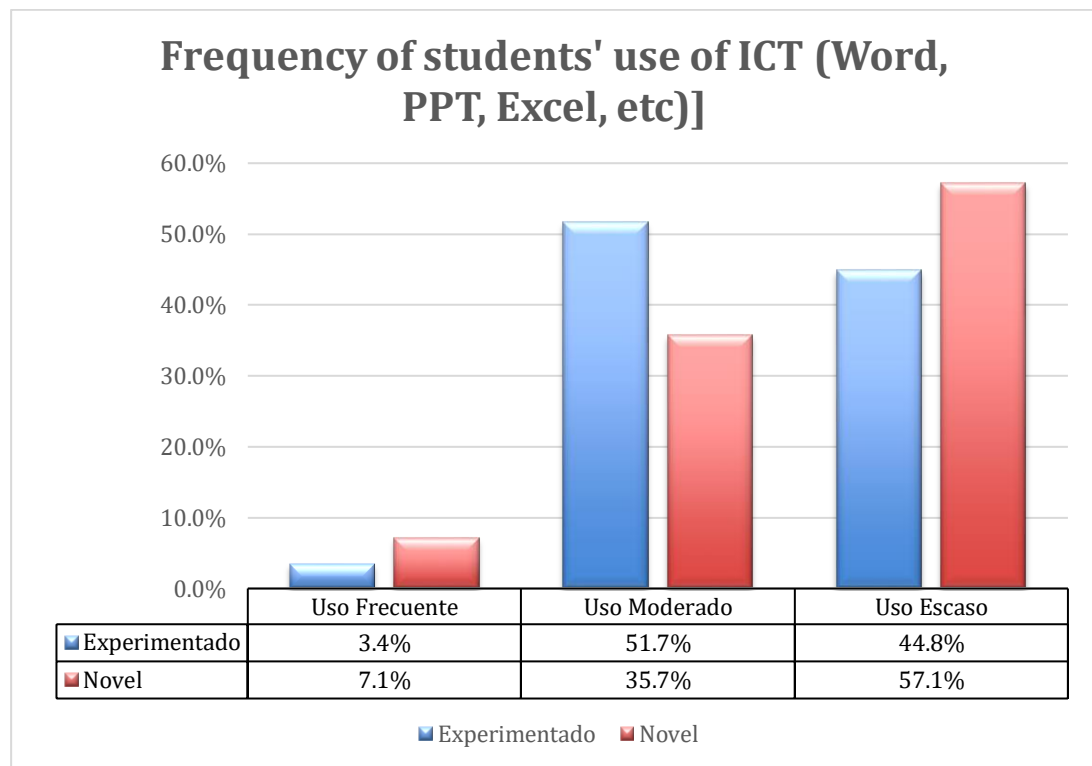


Source: Teachers' survey for this research.

The bar graph displays the results of novice and experienced teachers' answers regarding how frequently teachers use ICT to register students' attendance. Experienced teachers declared a slightly higher usage of technological resources than novice teachers for this purpose. Besides, 35.7% of novice teachers affirmed not using ICT in this situation, while 20.7% of experienced teachers stated the same. Lastly, even though none of the experienced teachers mentioned using technology to register the attendance daily, a minor percentage of novice teachers asserted that in their case, this is a daily activity. Even though in this bar graph as mentioned before experienced teachers present a more frequent use of ICT, as can be seen in the appendixes, there are no clear patterns to state that one of the groups use more ICT than the other concerning management purposes.

4.3.4 Frequency of students' use of ICT

Chart 9:



Source: Teachers' survey for this research.

This bar graphic represents the answers provided by experienced and novice teachers of English regarding the frequency of students' use of Microsoft Office tools. Both experienced and novice teachers agreed that they moderately and scarcely use Word, PPT, and Excel tools in their classes, whereas a low percentage of both groups of teachers use the ICT tools frequently. Based on these results, we can conclude that teachers, experienced and novice, are both accustomed and adapted to use these supportive as well as common tools to enhance their students' teaching.

V. Discussions and conclusions

5.1 Discussion

Four questions were proposed to conduct the discussion of this research:

1. Are there relevant differences in the availability of resources of the different types of schools?
2. Are there relevant differences in the frequency of use of resources, and for what purpose are those resources used?
3. Are there relevant differences between novice and experienced teachers regarding the use of ICT resources?
4. What assumptions can be made after the data analysis?

According to the information collected from the three types of schools (public, subsidised, and private) the main findings are that both private and subsidised schools are the institutions with the highest percentage of availability of resources. For instance, the availability of audio systems, projection screens, and internet access is higher in private and subsidised schools, whereas public schools are the educational institutions with the lowest percentage of availability of resources. For further information revise the appendix 4 to 9.

Studies show that schools which have access to a variety of ICT resources can influence their academic performance for the better, on the contrary to schools with less resources (Adegoun, 2001). Similarly, Kurian and Ramanathan (2016) mentioned that private and public schools have a considerable difference regarding the availability of resources; private schools are equipped with more resources than public schools.

When reviewing the results obtained from the analysis of the teacher's and student's surveys, it is concluded that there is no relationship between the frequency of use of ICT resources and the type of school. Similarly, there is no available literature to prove that any significant similarity exists between the frequency of use of ICT in the English lessons and the type of schools.

Furthermore, this review is also concerned with the frequency of use of ICT for different purposes. Any meaningful relation between the type of school

and the frequency of use of ICT resources for pedagogical, management or management purposes was found in the surveys. Furthermore, studies that affirm that the mentioned relation exists were not found. Thus, it can be concluded that the type of educational institution has no meaningful influence in the frequency of use of ICT nor in their purposes.

Researchers have exposed a noticeable difference between the use of ICT of novice teachers and experienced teachers. In the experiment led by Dela Rosa (2016) the novice teacher that participated used ICT more in her lessons, although she had less exposure to ICT. In contrast, the experienced teacher had more training, but he preferred using the traditional methods.

Kalra (2018) asserts that teacher's acceptance or rejection towards ICT has pedagogical implications. Novice teachers use ICT with a focus on audio and visual elements because it makes the learning process easier for students. However, experienced teachers use ICT only for PPT presentations since they declare they don't understand how certain software programs or programs work.

A key point to understand the use of ICT from teachers is that their acceptance or rejection towards ICT has pedagogical implications (Kalra, 2018), which could explain this general difference between novice and experienced teachers; however, the comparison of the statistics retrieved from the surveys do not show any noticeable difference between the use of ICT given by novice teachers and experienced teachers, though the information provided by the previous studies could give a different expectation for the results. A similar outcome can be seen in the study led by Mahdi & Al-Dera (2013), which investigates if there is any difference in the usage of ICT from teachers depending on many factors, one of those being their age. The authors concluded that there was not a visible difference between their two groups of teachers separated by age.

Dronkers and Roberts (2003) declare that private schools tend to be the ones with the least material resources in comparison to other types of schools. This statement is not proved in this research since the answers of the survey do not present any patterns which lead us to conclude if a type of school has more resources than others, actually some teachers from different schools that declared not having a big number of specific resources, also affirmed using those resources frequently. Moreover, Dronkers and Roberts stated that subsidised schools are the ones with a lower number of computers, which

agrees with the results of this investigation since 52% of teachers and 52.6% of students from this type of schools declared that computers are not available in their classrooms.

According to Treve (2019), projectors and computers are some of the most common resources used by teachers of English. In the same study, Treve also states that these resources open possibilities to effectively teach both writing and speaking skills in English. The results of our investigation agreed with Treve's statement, since these resources are some of the most used ICT resources by teachers of English according to the participants of this research.

Lindberg, Olofsson, and Fransson (2017) mention the use of social networks, for example, Facebook, which teachers use both as a teacher improvement tool, communicating with other teachers or watching different talks and discussions, as to find convenient material for their classes. This statement partially agrees with the results of this research. On the one hand, most teachers declared that they use ICT to search and adapt material with a high frequency. On the other hand, even though a significant percentage of teachers from all types of institutions declared to improve their teaching work through talks or seminars using ICT monthly, another high percentage of these participants affirmed that they do not use technological resources for this purpose.

Moreover, Lindberg, et al. (2017) express that teachers tend to use ICT resources for different administrative purposes, for example, recording attendance and communicating with parents to give them information regarding students' progress in academics. This research presents a different reality in both cases; first, a large majority of both public and subsidised teachers stated that they do not use ICT for these purposes; however, despite not being a large majority, a high percentage of private school teachers mentioned using ICT to register attendance with a high frequency. In general terms, students answered the same, with a majority of private school students stating that their teachers record their attendance using technology resources daily. Concerning giving information to parents, teachers from public schools mainly stated that they do not use ICT for this, but teachers from private and subsidised schools affirmed usually doing it weekly or monthly.

Finally, Treve (2019) mentions that the use of websites to learn and practice English is beneficial. The results of this research demonstrate that despite the benefits of using websites, teachers have decided to not use them

too often in their classes. A majority of teachers declared using ICT to develop exercises and practice English between once a month and one or two times per semester. This could be a consequence of preferring more traditional methodologies.

5.2 Conclusions

The purpose of this study was to investigate the relationship between the availability of ICT resources and the frequency of use of ICT resources declared by secondary school students and teachers of English, both from private, subsidised, and public schools. First, the theoretical framework is focused on what ICT are, their importance in the education, benefits of implementing them and a definition of what is a good user of ICT; also, it included how ICT are implemented in the Chilean context and its use on education in both, global and Chilean education.

Second, the methodological framework contains the process of construction of the instrument used to survey the participants of this research, the general and specific objectives of the investigation, in addition to the justification and questions that lead to this study. Moreover, it presents the profile of the participants, the sampling method used in this research and the process of data collection.

Third, the data analysis section involved the results that were considered more relevant for the purposes of the investigation regarding the five categories that were stated on the survey. Furthermore, each of those categories is explained in the data analysis. The first part of this section presents the results of teachers' and students' perspectives, the second part displays the answers of novice and experienced teachers.

Finally, the conclusions, findings, projections, and limitations of the study are presented in the last section.

According to the chart of availability of resources, the majority of data collected shows that private schools and subsidised schools are endowed with more ICT resources, for example, notebooks and projectors as declared by teachers and students. Additionally, other resources such as systems of audio and internet have a similar percentage of availability in private and subsidised schools also stated by teachers. Hence, the results of the survey proved private

and subsidised schools are better equipped with ICT resources, whereas the public schools have a lower percentage of availability of ICT resources.

Regarding the use of ICT in the English classes, the results of the survey showed no significant relationship between the frequency of the use of technology and the type of school. Nevertheless, the survey showed a little representation that private and subsidised schools are the ones most likely to use ICT tools every class for most asked purposes.

Concerning the section of the use of ICT for pedagogical purposes it would also be concluded that there are not noticeable differences that could be attributed to a specific type of schools. Also, in this section students had the opportunity to select that they did not know if teachers use ICT for the purposes mentioned on the survey, that is why in some graphics teachers' answers are focused on one option, while students' answers are divided into the same option and the option related to not knowing.

A similar situation can be noticed in the section of use of ICT for management purposes, where a high percentage of students answered that they did not know if their teachers use ICT for these purposes.

Finally, it can be stated that the results of the survey present patterns that can lead to conclude that significant differences exist between the different types of schools.

From these sections where students had the chance to select an option related to lack of information regarding teachers' use of ICT, it would be concluded that there are some practices associated to the use of ICT that teachers implement without telling their students that those practices are being done; for example, to deliver information to parents or to attend to seminars.

In the section corresponding to the frequency in which teachers request students to use ICT for their classes, more discrepancies can be seen in comparison to the others. An example of this is the frequency of use of Word, PPT, and Excel, in which 48% of teachers from subsidised schools declared that they ask their students to use those software programs once a month, but only 12.3% of students declared they use these software programs once a month. Even though this section had more differences between percentages, it also has similarities. For instance, 55.6% of teachers from public schools declared that they ask their students to use their email to send homework or tasks once or

twice per semester; likewise, 50% of students from public schools stated they were asked to do this once or twice per semester.

The last section of the data analysis presents declarations from novice and experienced teachers. Teachers were divided into two groups according to their years of experience working in schools. Teachers with less than five years of professional experience were considered as novice teachers, while the experienced teachers ranged from more than five years of experience. The results proved there is not a significant difference between both groups of participants, since novice and experienced teachers declared using ICT resources to a similar extent for the different purposes established on the survey.

It could also be concluded that a longer study where specific schools were analysed could reveal more precise results. Even though this study presents concordances and differences, in some cases the students' answers are not related to the teacher of English of their specific course as a consequence of the sampling method implemented on this research. A general overview of ICT in the province of Concepcion has been presented, but more in-depth studies, analysing specific schools individually would reveal much more significant information.

To summarise, it could be concluded that:

- A pattern of availability and use of resources between the different types of schools was not found. Consequently, it cannot be deduced neither that a type of school has more resources than the other, nor that a school with more ICT resources is more advanced than others in their usage.
- The professional trajectory is not a conclusive factor to determine if a teacher is more proficient regarding the use of ICT.

5.3 Limitations

During the development of the study and the application of each survey, different difficulties were faced which delayed the process mentioned before. These difficulties could not be handled since they affected the country, which also affected the schooling in 2019 and 2020.

Firstly, enormous protests occurred in Chile from October 2019 to January 2020. Since these protests took place in the whole national territory, the government decided to suspend lessons in schools and universities for at least 1 month. Our research was affected negatively, because applying the surveys in printed format at the schools of the province was not possible, as well as going to schools to ask for participation.

Secondly, the COVID-19 pandemic reached the country by the beginning of March 2020. In the third week of this month, the government decided to suspend in-classroom lessons in schools and universities, applying an online lessons system to continue the school year. Consequently, the printed surveys could not be applied again, and it was difficult to get in contact with any teachers in order to send them the digital format.

5.4 Projections

1. In the analysis of the data process, it was noticed teachers' and students' results may vary significantly. The main reason is that students were asked about the use of ICT in the English class, which is usually one or two per week, while teachers have different English classes with different groups of students. Consequently, at the moment of answering the frequency of use of ICT resources, teachers would consider all their lessons. Further research considering this context must be conducted since it was not considered in this investigation due to the anonymity of the answers.
2. It is recommended to investigate individually the three different educational institutions, public, private, and subsidised in the future to achieve better results in each type of school. Further investigations could show the reality of each institution in terms of resources if they are equipped with them or not and most importantly if they are being used.
3. During the year 2020, the use of ICT in teaching has become worldwide due to the pandemic, hence, working online might become imperative for teachers in the future. Since new technologies are advancing each year teachers should keep updating their knowledge and their teaching strategies. The current English teaching methodologies have improved considerably these past three years with the implementation of ICT

resources for online classes. However, investigations should consider the process of teachers training for the new use ICT during the pandemic.

4. In order to understand better how ICT resources could increase the motivation of students regarding English, studies related to students' interests respecting ICT must be conducted. Apparently, students have minimal control of their learning process, that is why their opinion should be studied to enhance learning, to discover a balance between practical and interesting activities for students.
5. There are certain methodologies of teaching that promote or facilitate the use of ICT resources in the classroom. Further research about those methodologies could be made in order to understand if they are being more or less effective at the moment of teaching, and in which situations they should be applied.

VI. Bibliography

1. Adeogun, A. (2001) Instructional Resources and School Effectiveness in Private and Public Secondary Schools in Lagos State. *Journal of Educational Administration and Planning*, 1(1), 74-81.
2. Bingimlas, K. (2009). Barriers to the successful integration of ICT in teaching and learning environments: A review of the literature. *Eurasia Journal of Mathematics, Science and Technology Education*, 5(3), 235–245. <https://doi.org/10.12973/ejmste/75275>
3. Brun, M., & Hinostrroza, J. (2014). Learning to become a teacher in the 21st century: ICT integration in Initial Teacher Education in Chile. *Journal of Educational Technology & Society*, 17(3), 222-238.
4. Claro, M. (2014). *UNDERSTANDING CHILEAN STUDENTS' DIGITAL SKILLS* (No. 370). Pontificia Universidad Católica de Chile. Escuela de Ingeniería. <https://repositorio.uc.cl/handle/11534/16581>
5. Claro, M., & Jara, I. (2020). The end of Enlaces: 25 years of an ICT education policy in Chile. *Digital Education Review*, 37, 96–108. <https://doi.org/10.1344/der.2020.37.96-108>
6. Creswell, J. (2003). *Research Design Qualitative, Quantitative and Mixed Methods Approaches* (3rd ed.). SAGE Publications. <https://bit.ly/39d2Ejl>
7. Dronkers, J., & Robert, P. (2003). *The Effectiveness of Public and Private Schools from a Comparative Perspective* (No. 2003). European University Institute.
8. Gebremedhin, M., & Fenta, A. (2015). Assessing Teachers' Perception on Integrating ICT in Teaching-Learning Process: The Case of Adwa College. *Journal of Education and Practice*, 6(4), 114–124. <https://eric.ed.gov/?id=EJ1083759>



9. Goodwin, A. L., Low, E., Ng, P., Yeung, A. S., & Cai, L. (2015). Enhancing Playful Teachers' Perception of The Importance of ICT Use In The Classroom: The Role of Risk Taking As A Mediator. *Australian Journal of Teacher Education*, 40(4), 132–150. <https://doi.org/10.14221/ajte.2015v40n4.8>
10. Grosseck, G. (2009). To use or not to use web 2.0 in higher education? *Procedia-Social and Behavioral Sciences*, 1(1), 478–482. <https://doi.org/10.1016/j.sbspro.2009.01.087>
11. Hernandez, R. (2017). Impacto de las TIC en la educación: Retos y Perspectivas. *Revista de Psicología Educativa de La Universidad San Ignacio de Loyola*, 5(1), 325–347. <https://doi.org/10.20511/pyr2017.v5n1>
12. Hernández, R., Fernández, C., & Baptista, P. (2006). *METODOLOGÍA DE LA INVESTIGACIÓN* (4th ed.). McGraw-Hill Interamericana. <https://bit.ly/3Mi3GsH>
13. Hinostroza, J., Labbé, C., & Claro, M. (2005). ICT IN CHILEAN SCHOOLS: STUDENTS' AND TEACHERS' ACCESS TO AND USE OF ICT. *Human Technology: An Interdisciplinary Journal on Humans in ICT Environments*, 1(2), 246–264. <https://bit.ly/3rhsXuT>
14. Hinostroza, J., Ibieta, A., Claro, M., & Labbé, C. (2016). Characterisation of teachers' use of computers and Internet inside and outside the classroom: The need to focus on the quality. *Educ Inf Technol*, 21(6), 1595–1610. <https://doi.org/10.1007/s10639-015-9404-6>
15. Jamil, S., Majoka, M., & Sahibzada, H. (2018). Investigation of Information and Communication Technology (ICTs) related resources and Prospective Teachers' Competencies in ICTs at University Level. *FWU Journal of Social Sciences*, 12(2), 99–111. <https://bit.ly/38Cwhdr>

16. Kalra, R. (2018). Experienced and Novice Teachers' Awareness and Attitudes towards ICT in Language Classroom: A study conducted in a Thai context. *Arab World English Journal*, 4, 125–131. <https://doi.org/10.24093/awej/call4.9>
17. Kurian, S., & Ramanathan, H. (2016). ICT integration in schools: The invincible role of school leadership. *International Journal on Leadership*, 4(2), 16–24. <https://bit.ly/3Jz6UG6>
18. Lindberg, O., Olofsson, A., & Fransson, G. (2017). Same but different? An examination of Swedish upper secondary school teachers' and students' views and use of ICT in education. *International Journal of Information and Learning Technology*, 34(2), 122–132. <https://doi.org/10.1108/IJILT-09-2016-0043>
19. Mahdi, H., & Al-Dera, A. (2013). The Impact of Teachers' Age, Gender and Experience on the Use of Information and Communication Technology in EFL Teaching. *English Language Teaching.*, 6(6), 57–67. <https://doi.org/10.5539/elt.v6n6p57>
20. Marrufo, Y., & Alarcón, D. (2018). *Las competencias en TIC y el servicio al usuario en el Instituto de Educación Superior Pedagógico "José Santos Chocano" de Bagua Grande*. (Master in Public Management). Universidad César Vallejo.
21. Ministerio de Educación. (n.d.). SUBVENCIÓN SEGÚN TIPO DE ESTABLECIMIENTO. Ayudameduc.Cl. <https://bit.ly/3E9vAnR>
22. Ministerio De Educación de Chile. (2011). Competencias y Estándares TIC para la profesión docente.
23. Nureni, Y. (2014). INFORMATION COMMUNICATION TECHNOLOGY (ICT) [Concepts and Application] (Vol. 1). Hasfem Publication Center. <https://doi.org/10.13140/RG.2.1.1802.7289>



24. OECD. (2019), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, TALIS, OECD Publishing, Paris. <https://doi.org/10.1787/1d0bc92a-en>
25. Parsania, P. Chavda, N. & Kamani, K. (2015). Information and Communication Technology & Its Impact in Improving the Teaching and Learning of English Language. *International Journal of Computer Science Engineering and Information Technology Research (IJCSEITR)*, 5(3), 1-6. <https://bit.ly/3JGIJXA>
26. De la Rosa, J. P. O. (2016). Experiences, perceptions and attitudes on ICT integration: A case study among novice and experienced language teachers in the Philippines. *International Journal of Education and Development Using Information and Communication Technology; Bridgetown*, 12(3), 37–57. <https://bit.ly/3jBchu5>
27. Russell, M., Bebell, D., O’Dwyer, L., & O’Connor, K. (2003). Examining Teacher Technology Use. *Journal of Teacher Education*, 54(4), 297–310. <https://doi.org/10.1177/0022487103255985>
28. Sarkar, S. (2012) The Role of Information and Communication Technology (ICT) in Higher Education for the 21st Century. *The Science Probe*. 1(1), 30-40.
29. Tamilselvan, N., Sivakumar, N., & Sevukan, R. (2012). Information and communication technologies (ICT). *International Journal of Library and Information Science (IJLIS)*, 1(1), 15–28. <https://bit.ly/38j2VA>
30. Tinio, V. (2003). *ICT IN EDUCATION*. New York, United States. United Nations Development Programme.



31. Treve, M. (2019) The relevance of integrating ICT tools in English language teaching. *JOURNAL FOR INNOVATE DEVELOPMENT IN PHARMACEUTICAL AND TECHNICAL SCIENCE*. 2, 22-28.

32. Ricardo-Barreto, C., Jabba, D., Llinás, H., Peña, J., Astorga, C., Acevedo, P., Baloco, C., & Villarreal, S. (2020). Trends in Using ICT Resources by Professors in HEIs (Higher Education Institutions). *Journal of Information Technology Education: Research*, 19, 395–425.
<https://doi.org/10.28945/4601>

33. Tully, C. (2003). Growing Up in Technological Worlds: How Modern Technologies Shape the Everyday Lives of Young People. *Bulletin of Science, Technology and Society*. 23(6), 444-456.

34. Unesco. (n.d.). ICT in education. <https://en.unesco.org/themes/ict-education>

35. United Nations (2003). INFORMATION AND COMMUNICATION TECHNOLOGIES DEVELOPMENT INDICES.
https://unctad.org/en/Docs/iteipc20031_en.pdf

36. Verducco, L. (2016). Information and communication technology (ICT) literacy: Refining a construct for assessment.

37. Zare-EE, A. (2011). University teachers' views on the use of information communication technologies in teaching and research. *TOJET: The Turkish Online Journal of Educational Technology*. 10(3)
<https://bit.ly/3v6OjJA>



7.2 Survey for Teachers about availability and use of technological resources in the English subject.

Appendix 2

Encuesta sobre disponibilidad y uso de recursos tecnológicos en educación para Profesores de Inglés.

Estimado profesor/a:

Le pedimos responder esta encuesta que tiene como propósito "Analizar la disponibilidad y uso de los recursos tecnológicos y digitales en la educación, declarados por profesores de inglés y estudiantes de enseñanza media de establecimientos municipales, subvencionados y privados de la provincia de Concepción." Su participación como informante es de carácter voluntaria y toda la información recogida será de carácter confidencial. Los datos obtenidos serán utilizados solo para los propósitos de esta investigación.

Desde ya agradecemos su participación.

Grupo de investigación 4° Año, Pedagogía en Educación Media en Inglés, UCSC

*Obligatorio

Identificación del participante

1. Género *

Marca solo un óvalo.

- Hombre
 Mujer
 No específica

2. Indique su título profesional *

Marca solo un óvalo.

- Profesor de Enseñanza Media en Inglés
 Profesor de Enseñanza Básica con mención en Inglés
 Traductor en Inglés
 Otro: _____

3. Indique su rango etario *

Marca solo un óvalo.

- 23 - 29 años
 30 - 35 años
 36 - 40 años
 41 - 45 años
 46 - 50 años
 Más de 50 años



4. Indique años de experiencia como Profesor/a de Inglés en Enseñanza Media *

Marca solo un óvalo.

- 1 - 5 años
- 6 - 10 años
- 11 - 15 años
- 16 - 20 años
- 21 - 25 años
- Más de 25 años

5. Indique el tipo de establecimiento educacional donde imparte clases*

Marca solo un óvalo.

- Subvencionado
- Municipalizado
- Privado

6. Comuna de la provincia de Concepción donde ejerce su labor docente *

Marca solo un óvalo.

- Chiguayante
- Concepción
- Coronel
- Florida
- Hualqui
- Hualpen
- Lota
- Penco
- San Pedro de la Paz
- Santa Juana
- Talcahuano
- Tome



Disponibilidad de recursos tecnológicos y digitales en el establecimiento educacional

7. Indique los recursos tecnológicos y digitales disponibles en su establecimiento *

Marque más de una alternativa si fuera necesario.
Selecciona todos los que correspondan.

- PC/Notebooks en la sala de clases
- Sistema de audio (parlantes, radio)
- Pantalla LED/TV
- Telón de proyección.
- Proyector
- Pizarra digital
- Acceso a Internet
- Plataforma virtual de aprendizaje (entregar y recibir tareas, compartir materiales e información con estudiantes)
- Plataforma de gestión docente (enviar comunicaciones, registrar asistencia y calificaciones)
- Laboratorio de computación para trabajo con estudiantes
- Otro: _____

8. En el caso de que el establecimiento cuente con laboratorio de computación, indique el número aproximado de computadores disponibles para uso de estudiantes *

Indique solo número. Por ejemplo: 25.

9. Indique la disponibilidad de los siguientes recursos tecnológicos en las salas de clases de su establecimiento *

Marca solo un óvalo por fila.

	No disponible	Disponible en menos de la mitad de las salas del establecimiento	Disponible en más de la mitad de las salas del establecimiento	Disponible en todas las salas
PC/Notebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sistema de audio (parlantes, radio)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pantalla LED/TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telón de proyección	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Proyector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pizarra digital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Utilización de recursos tecnológicos

10. Indique la frecuencia aproximada con la que utiliza los siguientes recursos tecnológicos en su labor docente.*

Marca solo un óvalo por fila.

	No utilizo el recurso	1 o 2 veces por semestre	1 vez al mes	Entre 2 y 4 veces al mes	Cada 2 o 3 clases	Todas las clases
PC/Notebook en la sala de clases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sistema de audio (parlantes, radio)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pantalla LED/TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telón de proyección	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Proyector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Laboratorio de computación	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Indique la frecuencia aproximada con la que utiliza recursos tecnológicos y digitales para los siguientes propósitos docentes.*

Marca solo un óvalo por fila.

	No utilizo el recurso	1 o 2 veces por semestre	1 vez al mes	Entre 2 y 4 veces al mes	Cada 2 o 3 clases	Todas las clases
Aplicar instrumentos de evaluación	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Realizar búsqueda y adaptación de materiales en línea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entregar retroalimentación a los alumnos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Solicitar entrega de tareas, trabajos o informes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compartir materiales de fortalecimiento del aprendizaje	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entregar información a los estudiantes sobre aspectos relacionados con la asignatura	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



12. Indique la frecuencia con la que utiliza recursos tecnológicos y digitales para los siguientes propósitos relacionados con la gestión escolar.*

Marca solo un óvalo por fila.

	No utilizo el recurso	Diariamente	Semanalmente	Mensualmente
Entregar información a apoderados	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Registrar calificaciones de los alumnos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Registrar asistencia de los alumnos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participar en programas/talleres de perfeccionamiento docente	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Indique la frecuencia aproximada con la que sus estudiantes realizan las siguientes actividades, utilizando recursos tecnológicos y digitales*

Marca solo un óvalo por fila.

	No utilizan el recurso	1 o 2 veces por semestre	1 vez al mes	Entre 2 y 4 veces al mes	Cada 2 o 3 clases	Todas las clases
Elaborar informes/trabajos con el uso de aplicaciones (Word, PPT, Excel, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Desarrollar trabajo colaborativo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Elaborar audios o videos que evidencien el uso de la lengua inglesa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Utilizar plataforma virtual para entregar trabajos/tareas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Utilizar correo electrónico para enviar trabajo/tareas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Desarrollar ejercicios acerca del uso de la lengua inglesa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7.3 Survey for Students about availability and use of technological resources in the English subject.

Appendix 3

Encuesta para estudiantes sobre disponibilidad y uso de recursos tecnológicos en la asignatura de Inglés.

Estimado estudiante:

Te pedimos responder esta encuesta que tiene como propósito "Analizar la disponibilidad y uso de los recursos tecnológicos y digitales en la educación, declarados por profesores de inglés y estudiantes de enseñanza media de establecimientos municipales, subvencionados y privados de la provincia de Concepción." Tu participación como informante es de carácter voluntaria y toda la información recogida será de carácter confidencial. Los datos obtenidos serán utilizados solo para los propósitos de esta investigación.

Desde ya agradecemos tu participación.

Grupo de investigación 4° Año, Pedagogía en Educación Media en Inglés, UCSC

*Obligatorio

Identificación del participante

1. **Género ***

Marca solo un óvalo.

- Hombre
 Mujer
 No específica

2. **Indica en qué curso estás ***

Marca solo un óvalo.

- Primero Medio
 Segundo Medio
 Tercero Medio
 Cuarto Medio

3. **Indica el tipo de establecimiento educacional donde estudias ***

Marca solo un óvalo.

- Subvencionado
 Municipalizado
 Privado



4. Indica la comuna de la provincia de Concepción en la que está tu colegio *

Marca solo un óvalo.

- Chiguayante
- Concepción
- Coronel
- Florida
- Hualqui
- Hualpen
- Lota
- Penco
- San Pedro de la Paz
- Santa Juana
- Talcahuano
- Tomé

Disponibilidad de recursos tecnológicos y digitales en el establecimiento educacional

5. Indica los recursos tecnológicos y digitales disponibles en tu establecimiento *

Marque más de una alternativa si fuera necesario.

Selecciona todos los que correspondan.

- PC/Notebooks en la sala de clases
- Sistema de audio (parlantes, radio)
- Pantalla LED/TV
- Telón de proyección
- Proyector
- Pizarra digital
- Acceso a Internet
- Plataforma virtual de aprendizaje (entregar y recibir tareas, compartir materiales e información con estudiantes)
- Plataforma de gestión docente (enviar comunicaciones, registrar asistencia y calificaciones)
- Laboratorio de computación para trabajo con estudiantes
- Otro: _____

6. En el caso de que el establecimiento cuente con laboratorio de computación, indica el número aproximado de computadores disponibles para uso de estudiantes. *

Escribe solo el número. Por ejemplo: 25.



7. Indica la disponibilidad de los siguientes recursos tecnológicos en las salas de clases de tu establecimiento *

Marca solo un óvalo por fila.

	No disponible	Disponible en menos de la mitad de las salas del establecimiento	Disponible en más de la mitad de las salas del establecimiento	Disponible en todas las salas
PC/Notebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sistema de audio (parlantes, radio)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pantalla LED/TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telón de proyección	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Proyector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pizarra digital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Utilización de recursos tecnológicos

8. Indica la frecuencia aproximada con la que tu Profesor de Inglés utiliza los siguientes recursos tecnológicos en su labor docente *

Marca solo un óvalo por fila.

	No utiliza el recurso	1 o 2 veces por semestre	1 vez al mes	Entre 2 y 4 veces al mes	Cada 2 o 3 clases	Todas las clases
PC/Notebook en la sala de clases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sistema de audio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pantalla LED/TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telón de proyección	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Proyector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Laboratorio de computación	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



9. Indica la frecuencia aproximada con la que tu Profesor de Inglés utiliza recursos tecnológicos y digitales para los siguientes propósitos: *

Marca solo un óvalo por fila.

	No lo sé	No utiliza el recurso	1 o 2 veces por semestre	1 vez al mes	Entre 2 y 4 veces al mes	Cada 2 o 3 clases	Todas las clases
Aplicar evaluaciones	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Realizar búsqueda y adaptación de materiales en línea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entregar retroalimentación a los alumnos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Solicitar entrega de tareas, trabajos o informes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compartir materiales de fortalecimiento del aprendizaje	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entregar información a los estudiantes sobre aspectos relacionados con la asignatura	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. Indica la frecuencia con la que tu Profesor de Inglés utiliza recursos tecnológicos y digitales para los siguientes propósitos: *

Marca solo un óvalo por fila.

	No lo sé	No utiliza el recurso	Diariamente	Semanalmente	Mensualmente
Entregar información a apoderados	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Registrar calificaciones de los alumnos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Registrar asistencia de los alumnos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participar en programas/talleres de perfeccionamiento docente	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



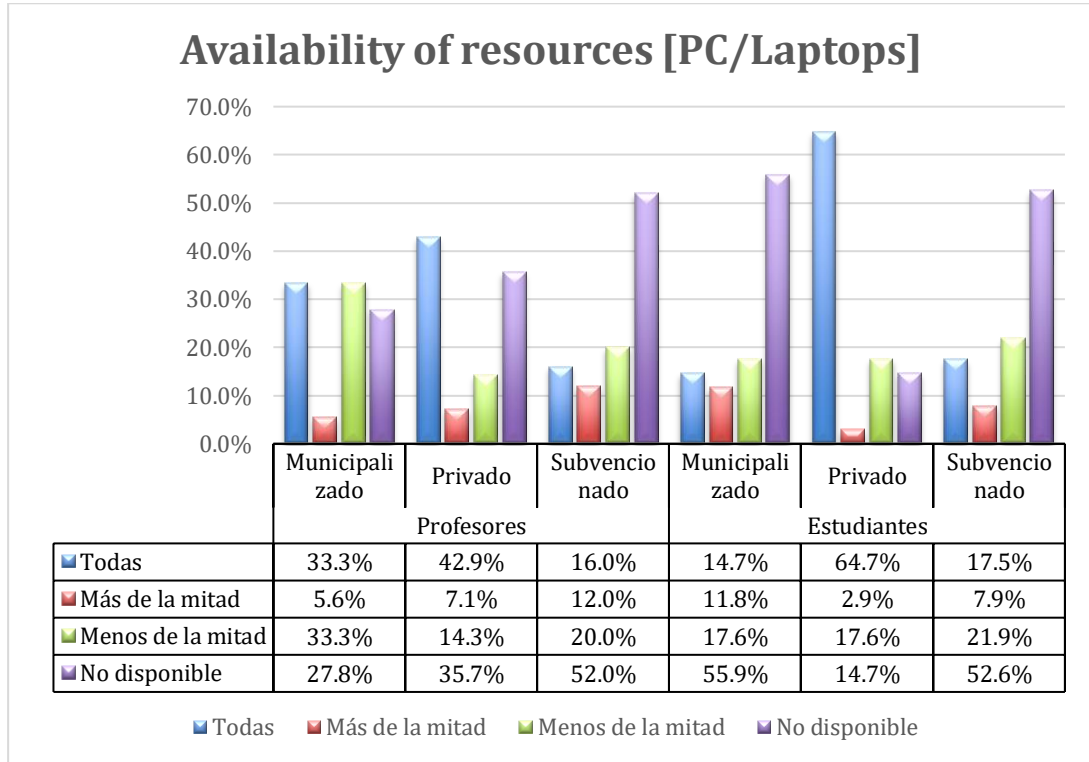
11. Indica la frecuencia aproximada con la que TÚ realizas las siguientes actividades, utilizando recursos tecnológicos y digitales*

Marca solo un óvalo por fila.

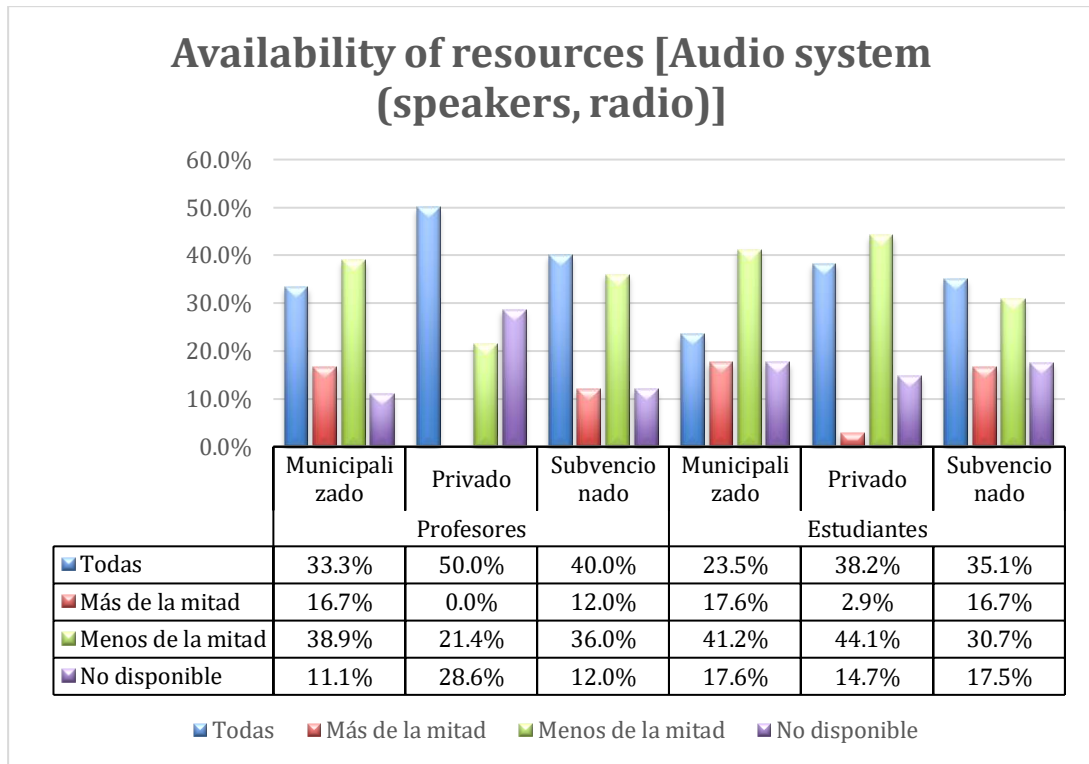
	No utilizo el recurso	1 o 2 veces por semestre	1 vez al mes	Entre 2 y 4 veces al mes	Cada 2 o 3 clases	Todas las clases
Elaborar informes/trabajos de Inglés con el uso de aplicaciones (Word, PPT, Excel, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Desarrollar trabajo colaborativo (en grupos, en pares)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Elaborar audios o videos que demuestren el uso del Inglés	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Utilizar plataforma virtual para entregar trabajos/tareas de Inglés	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Utilizar correo electrónico para enviar trabajo/tareas de Inglés	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Desarrollar ejercicios acerca del uso del Inglés	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7.4 Results from teachers' and students' surveys regarding availability of ICT resources per classroom.

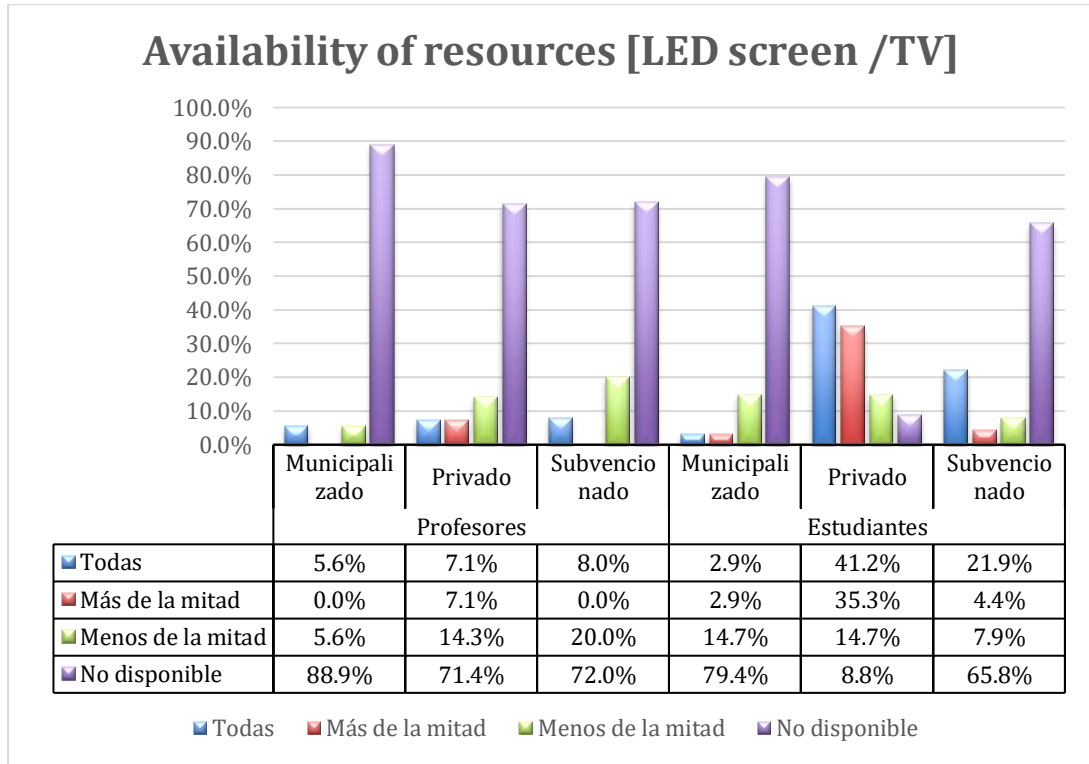
Appendix 4: Availability of PC/Notebooks.



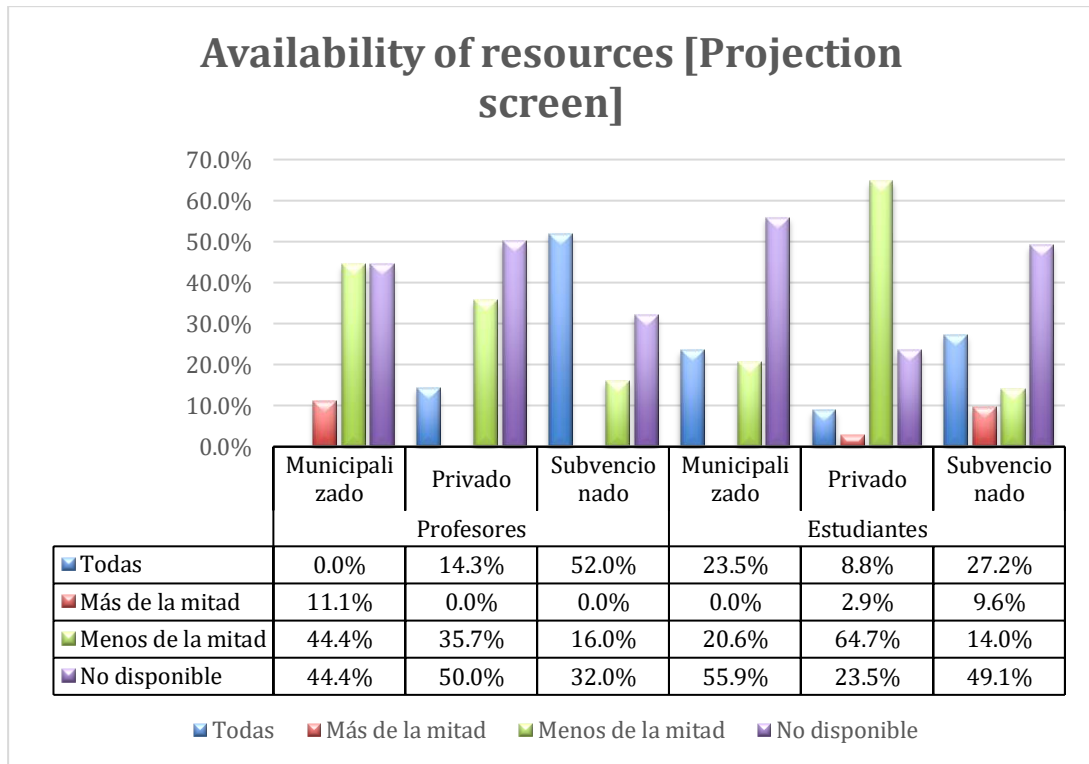
Appendix 5: Availability of audio systems.



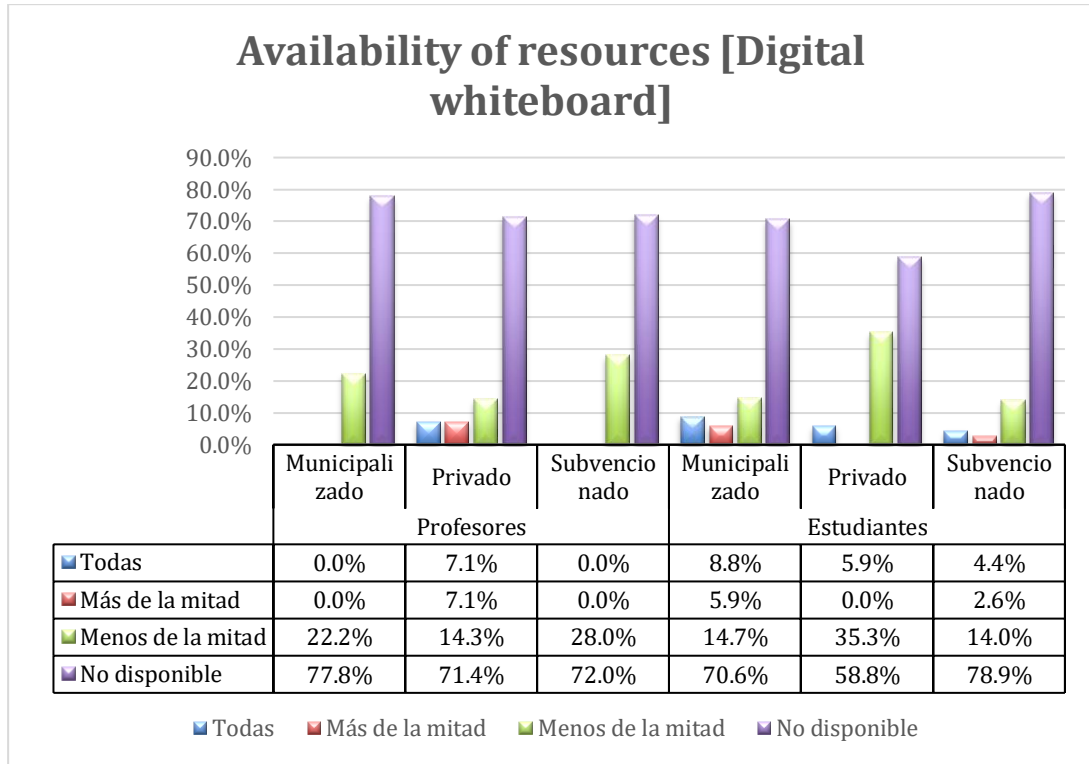
Appendix 6: Availability of LED screen/TV.



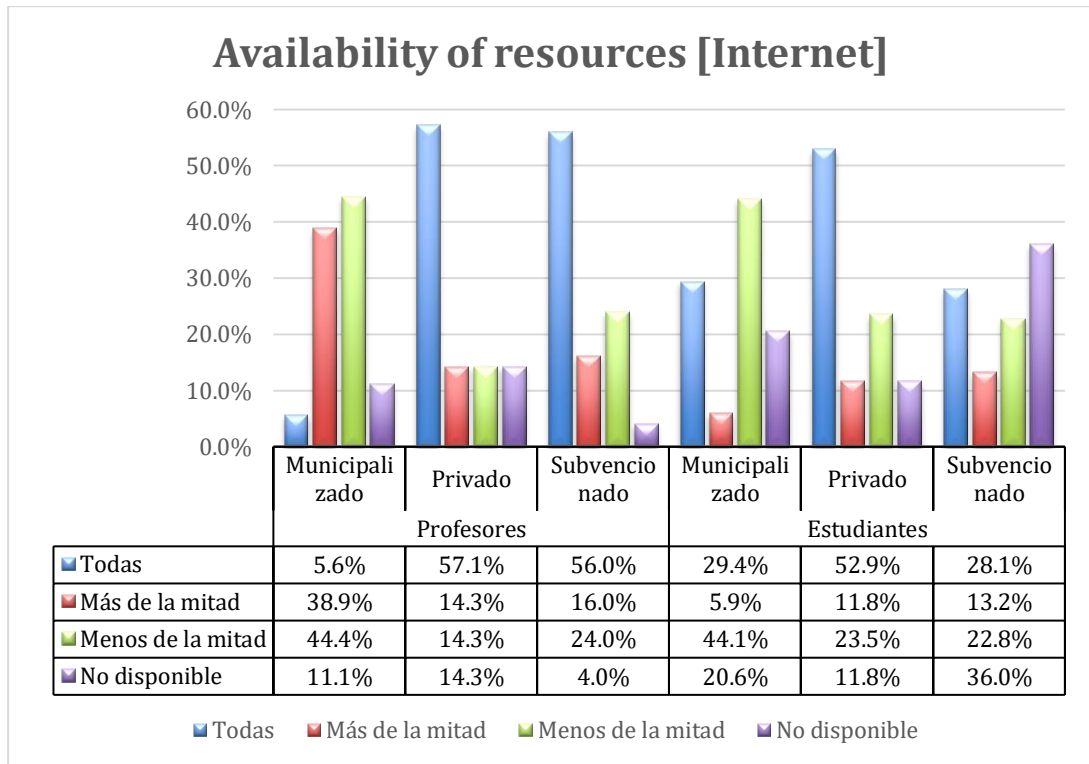
Appendix 7: Availability of projection screen.



Appendix 8: Availability of digital whiteboards.

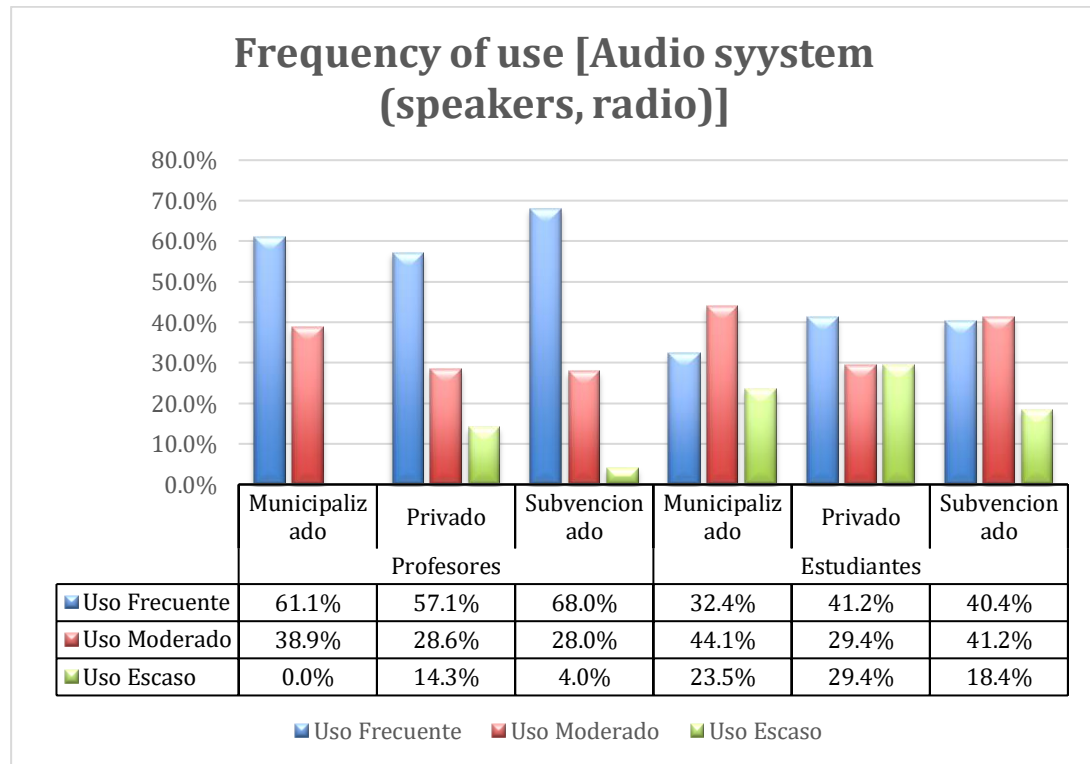


Appendix 9: Availability of internet.

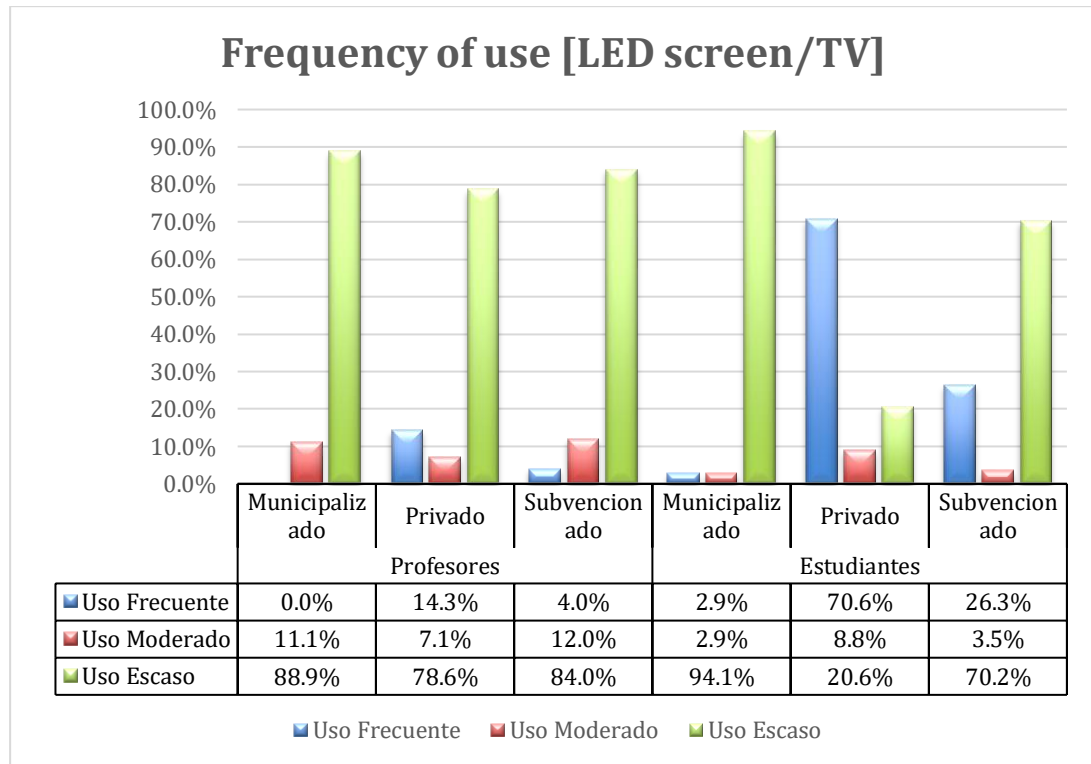


7.5 Results from teachers' and students' surveys regarding Frequency of use of ICT resources.

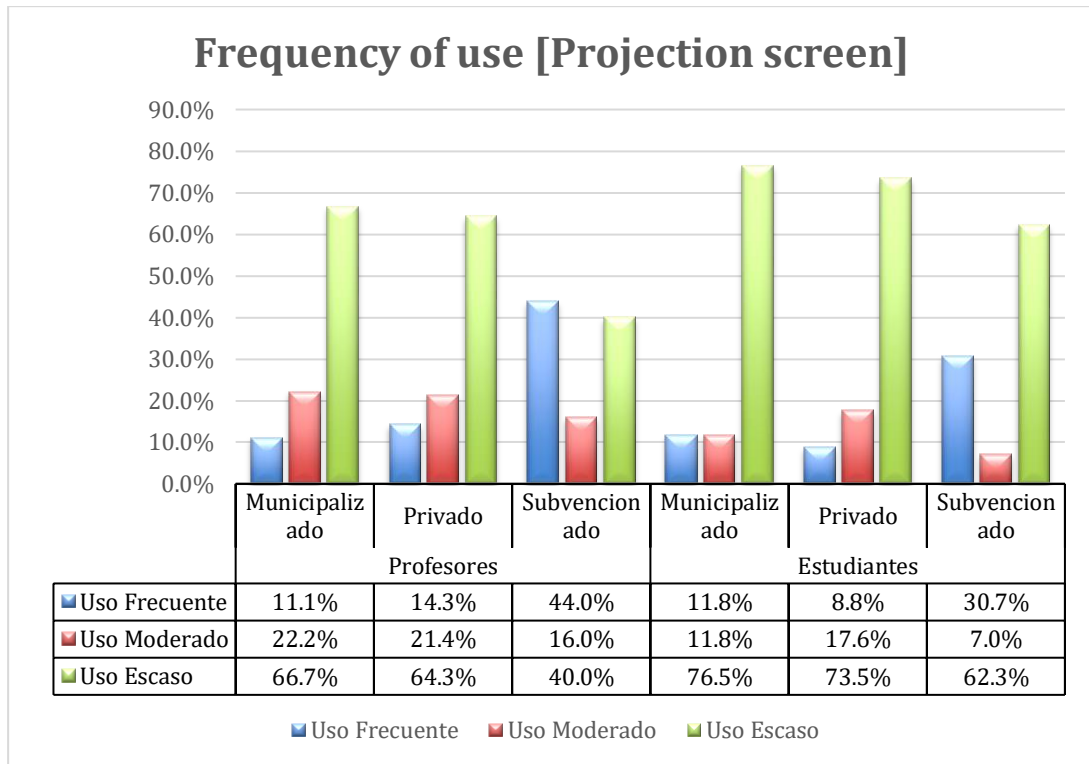
Appendix 10: Frequency of use of audio systems.



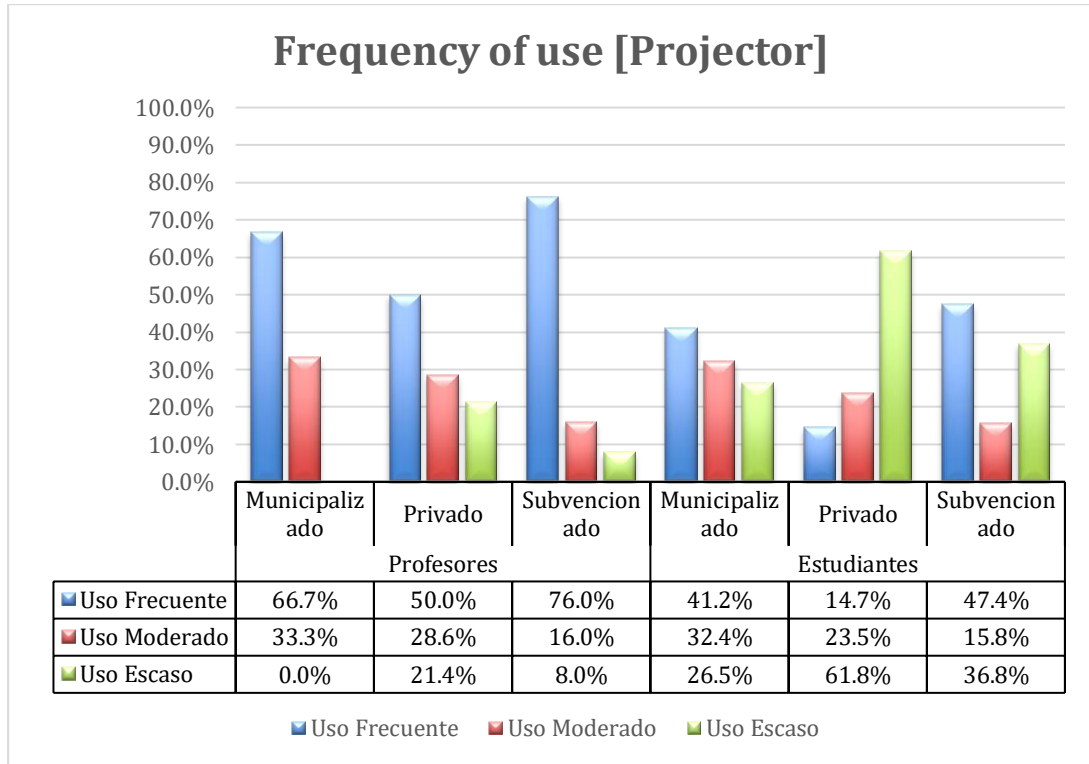
Appendix 11: Frequency of use of LED screen/TV.



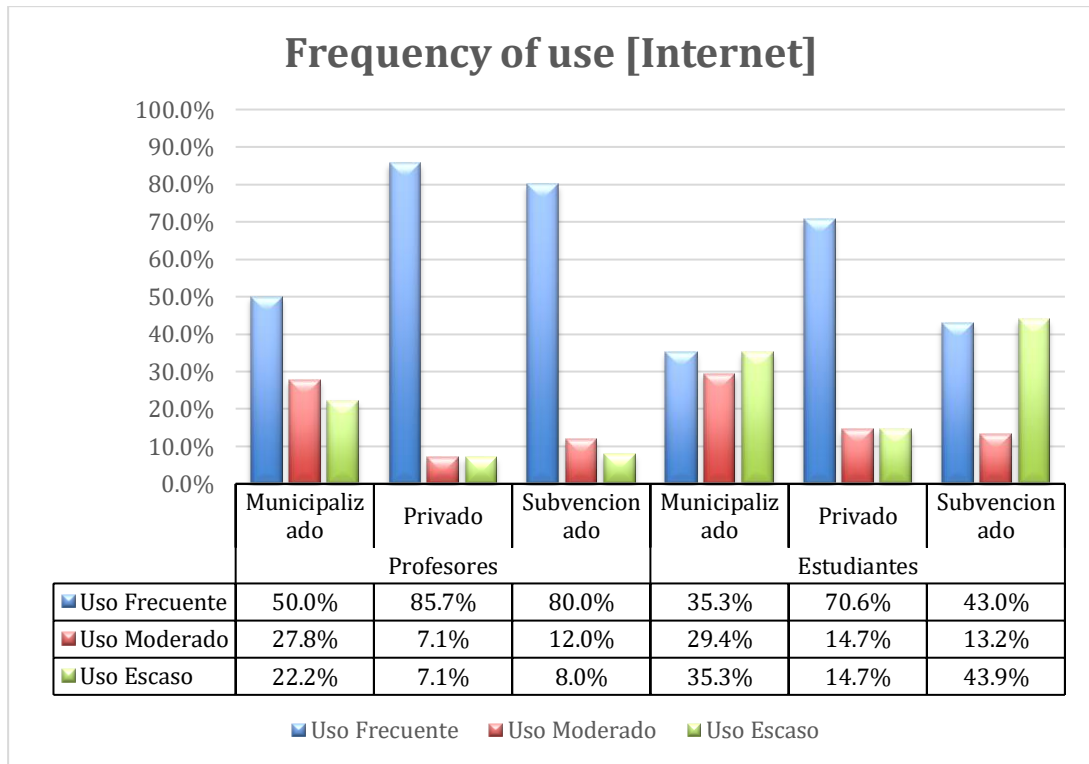
Appendix 12: Frequency of use of projection screen.



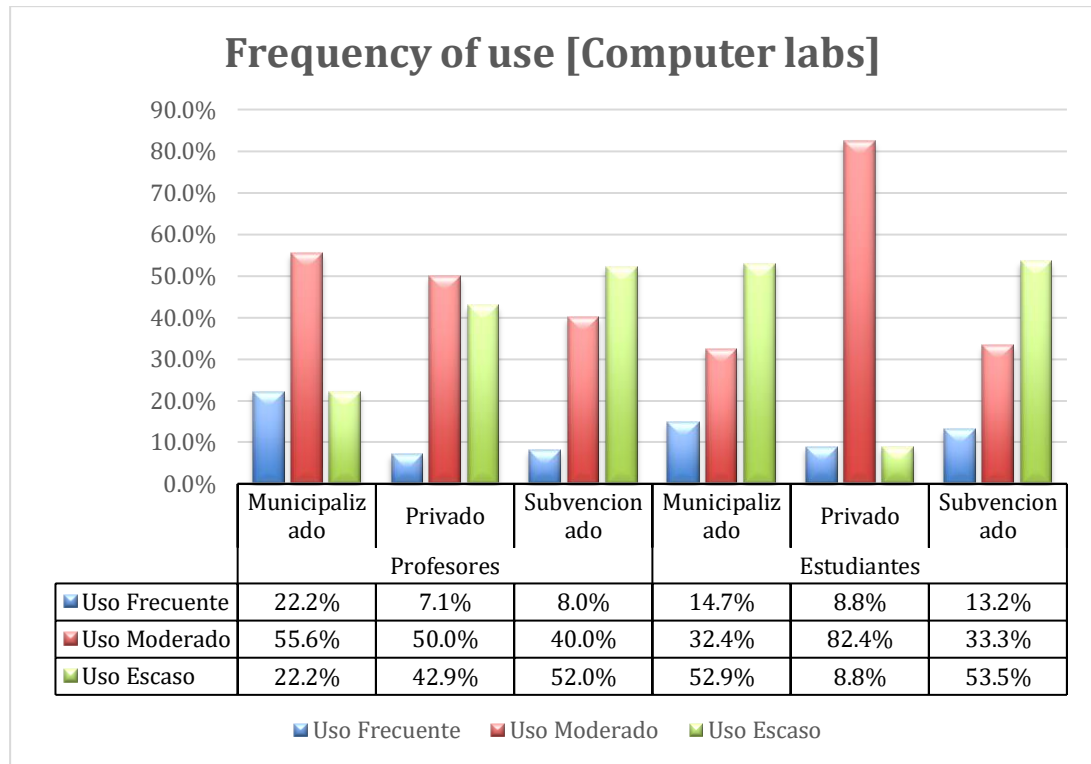
Appendix 13: Frequency of use of projectors.



Appendix 14: Frequency of use of internet.

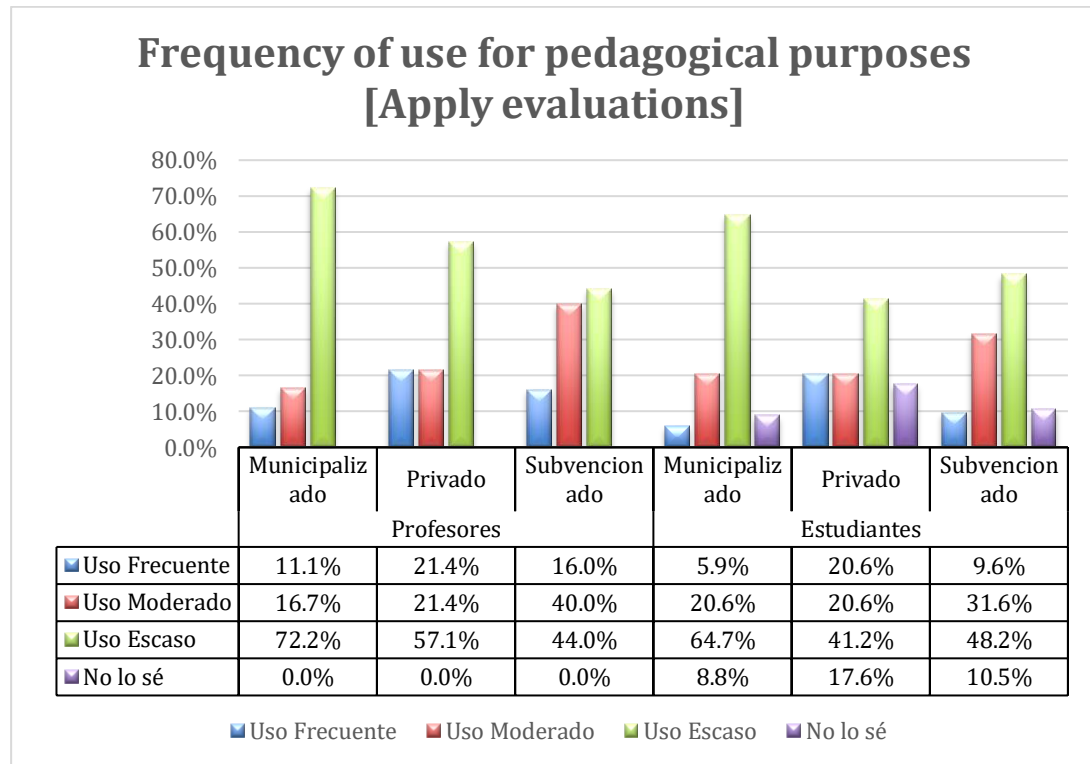


Appendix 15: Frequency of use of computer labs.

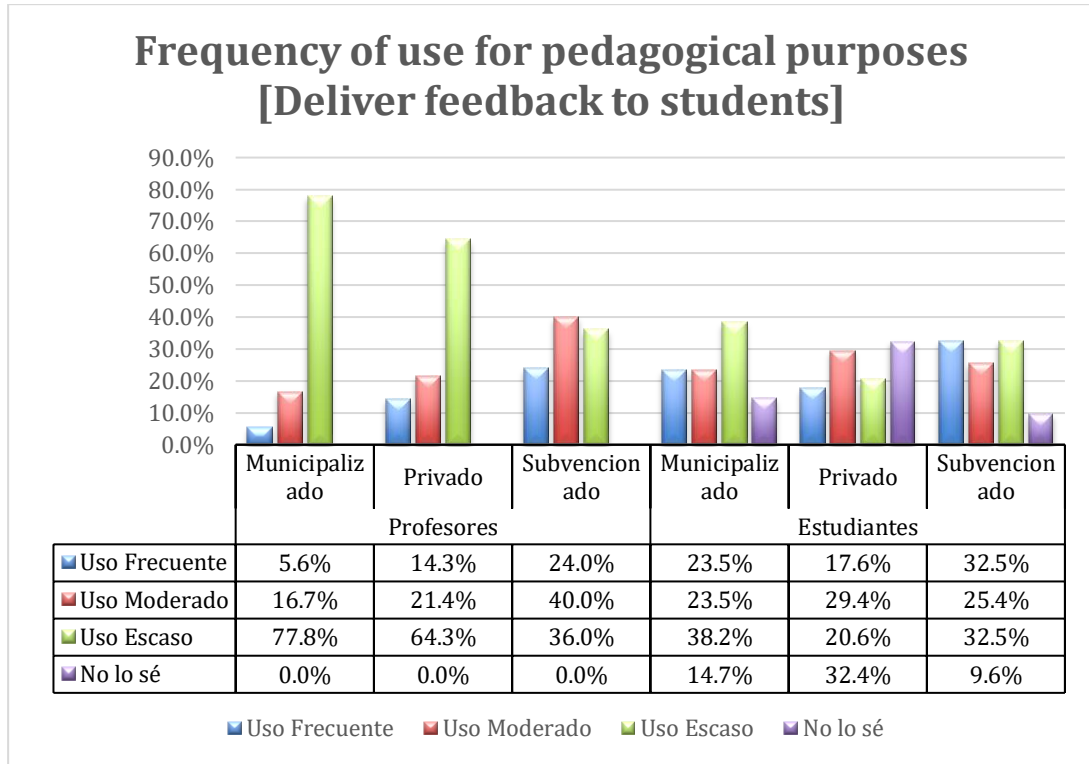


7.6 Results from teachers' and students' survey regarding frequency of use of ICT resources for pedagogical purposes.

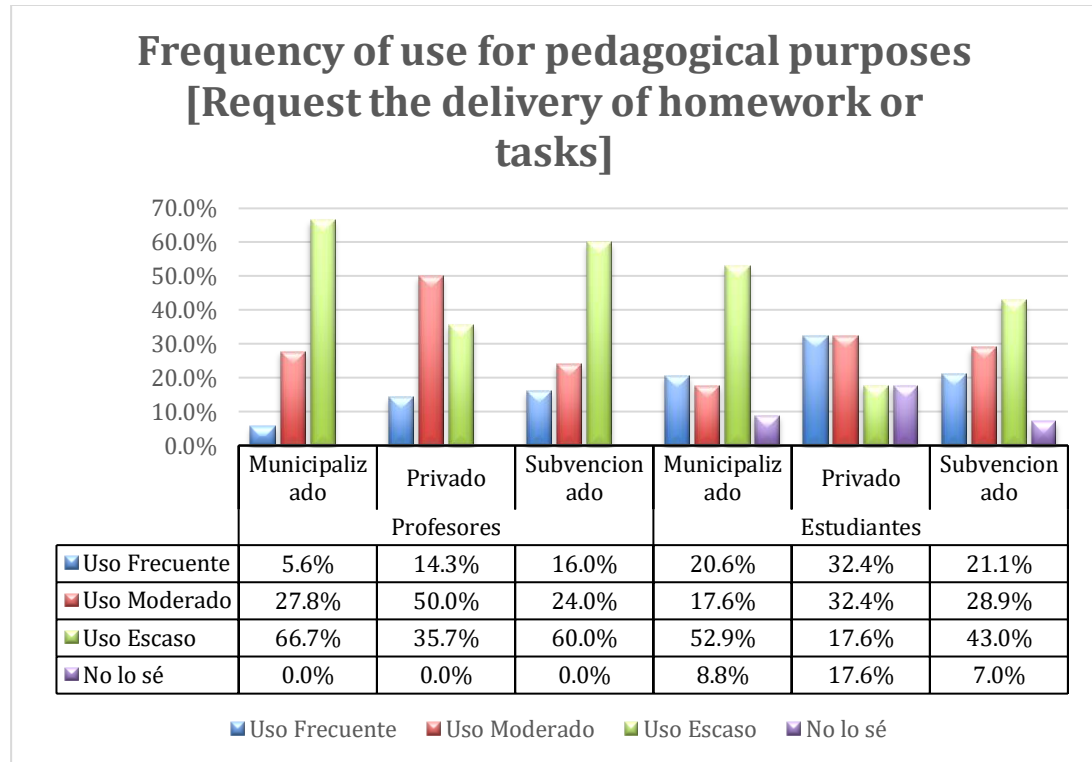
Appendix 16: Frequency of use of ICT resources to apply evaluations.



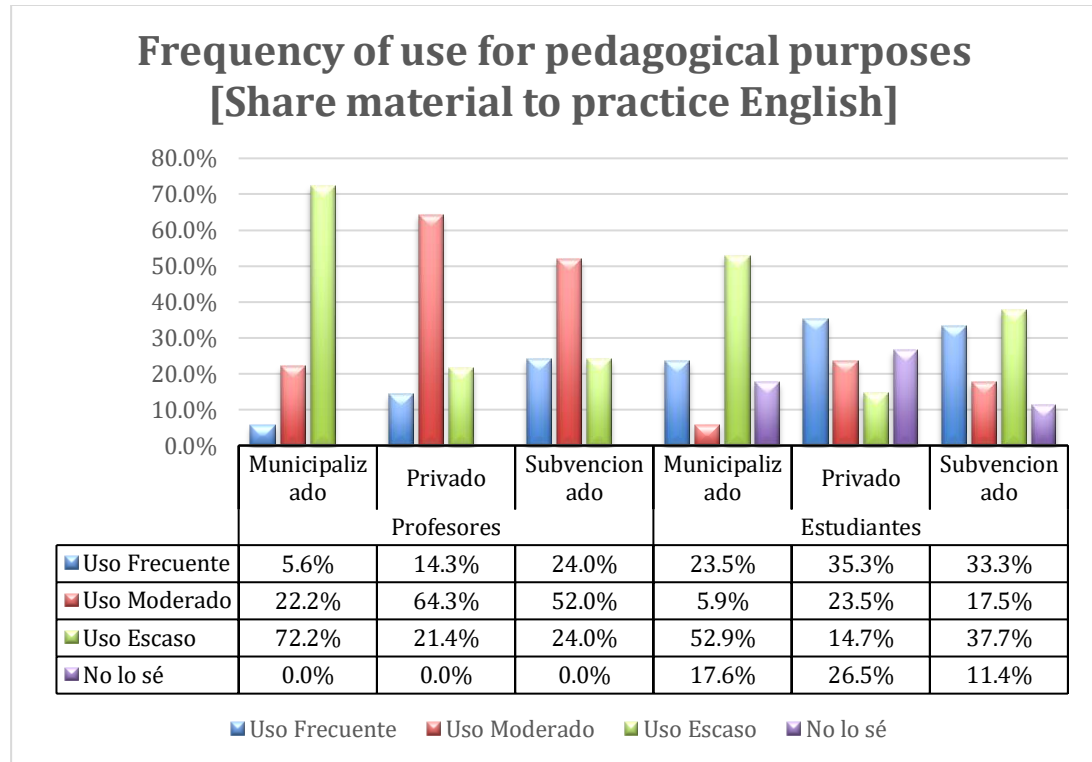
Appendix 17: Frequency of use of ICT resources provide feedback to students.



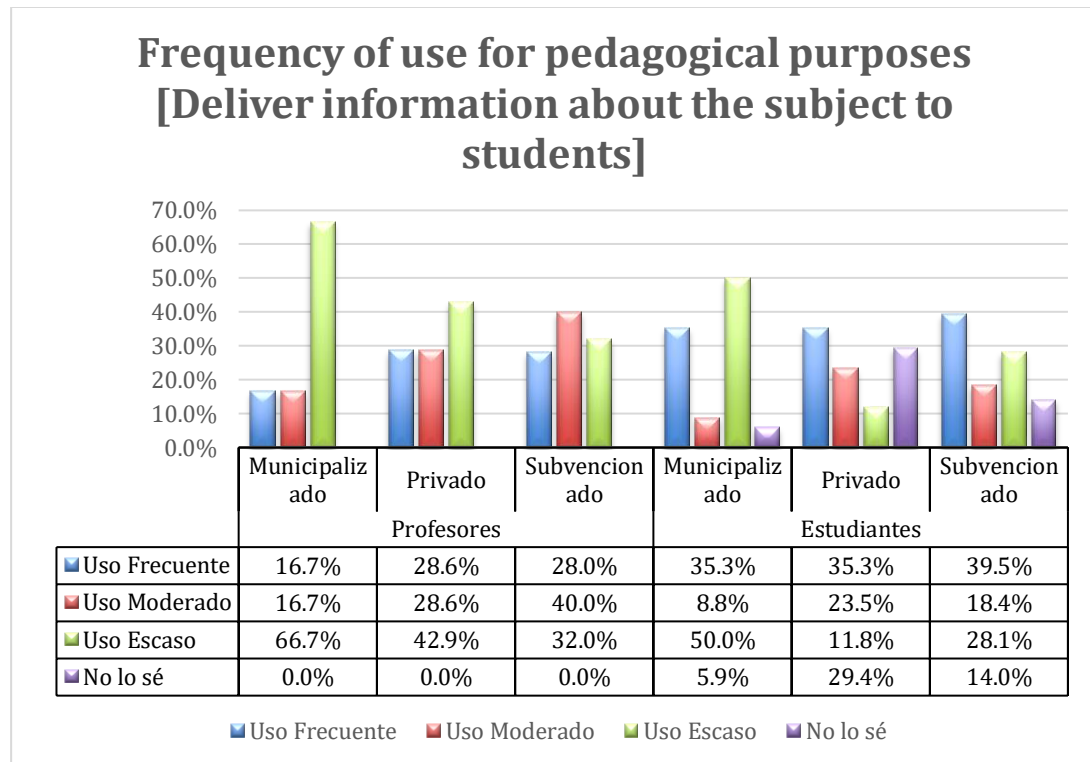
Appendix 18: Frequency of use of ICT resources to request the delivery of homework or tasks.



Appendix 19: Frequency of use of ICT resources to share material to practice English.

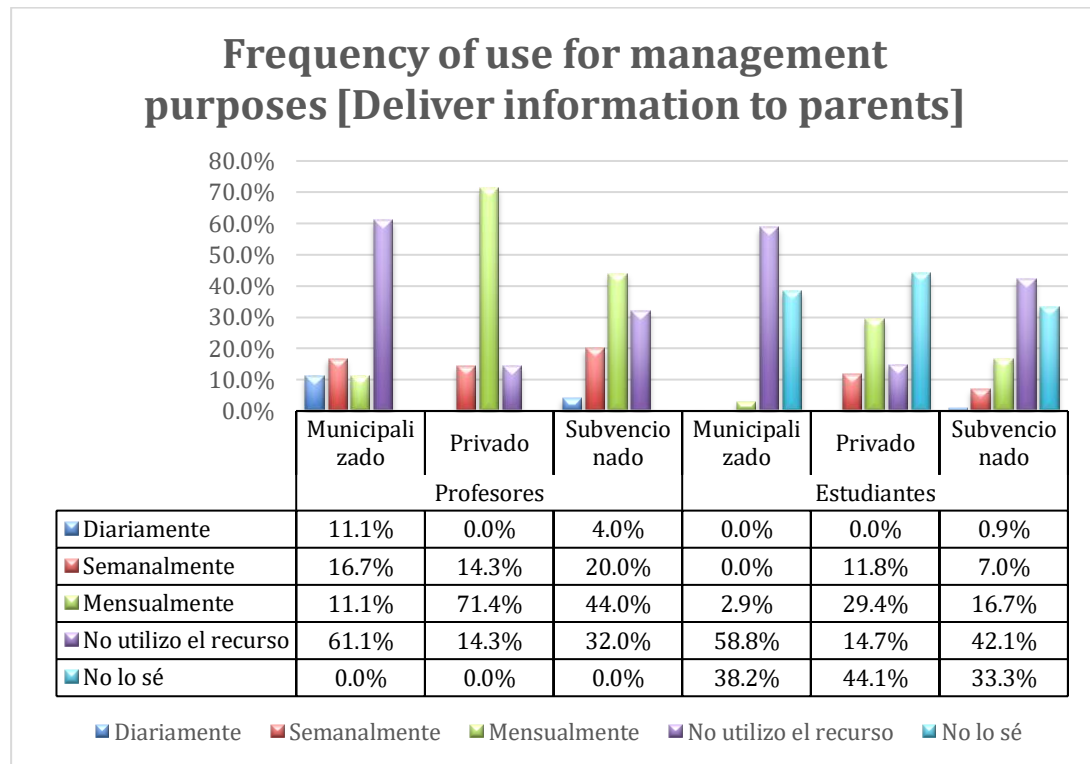


Appendix 20: Frequency of use of ICT resources to deliver information about the subject to students.

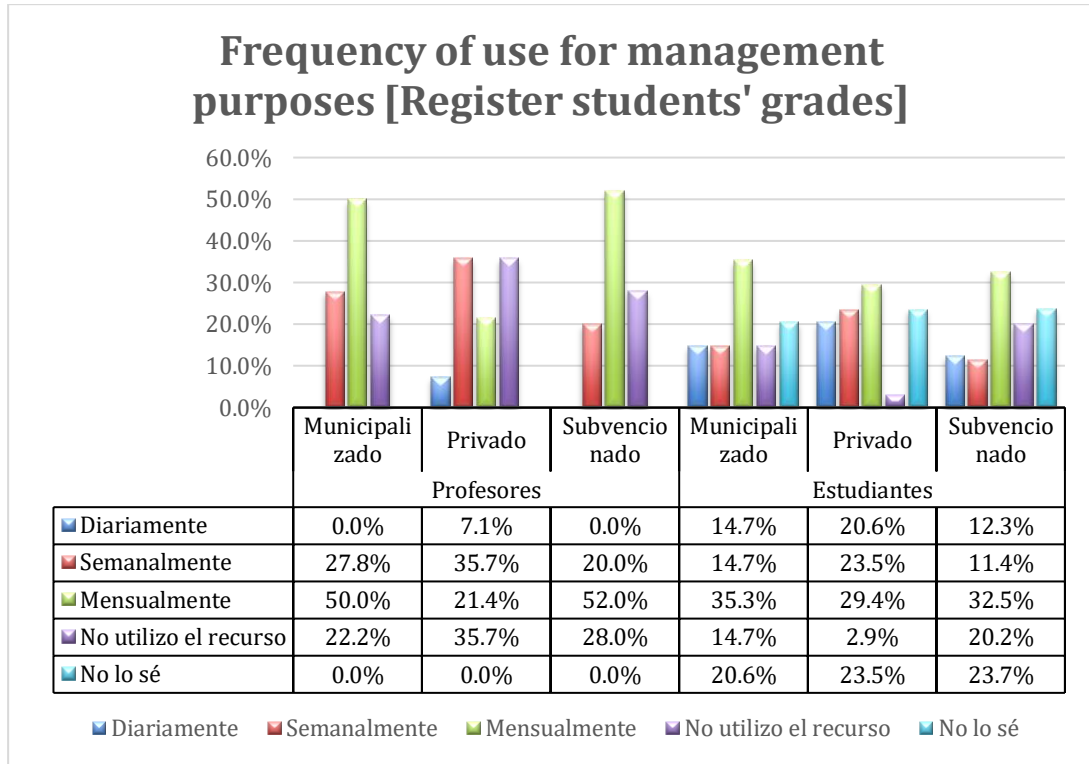


7.7 Results from teachers' and students' survey regarding frequency of use of ICT resources for management purposes.

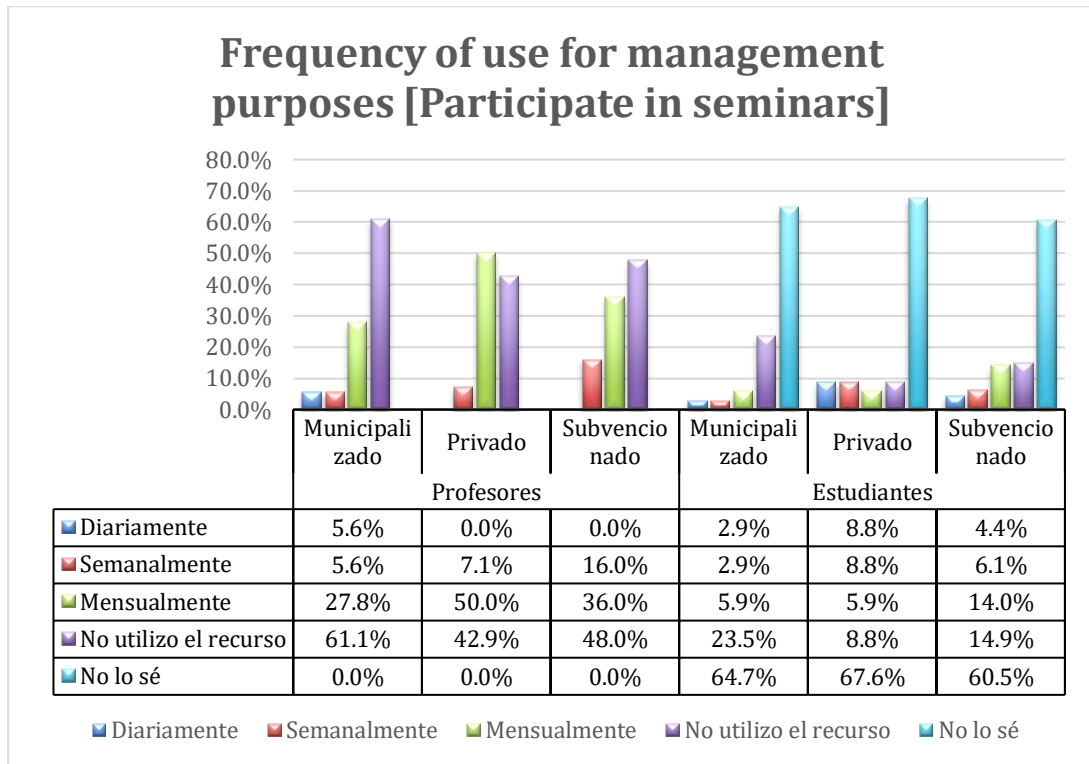
Appendix 21: Frequency of use of ICT resources to deliver information to parents.



Appendix 22: Frequency of use of ICT resources to register students' grades.

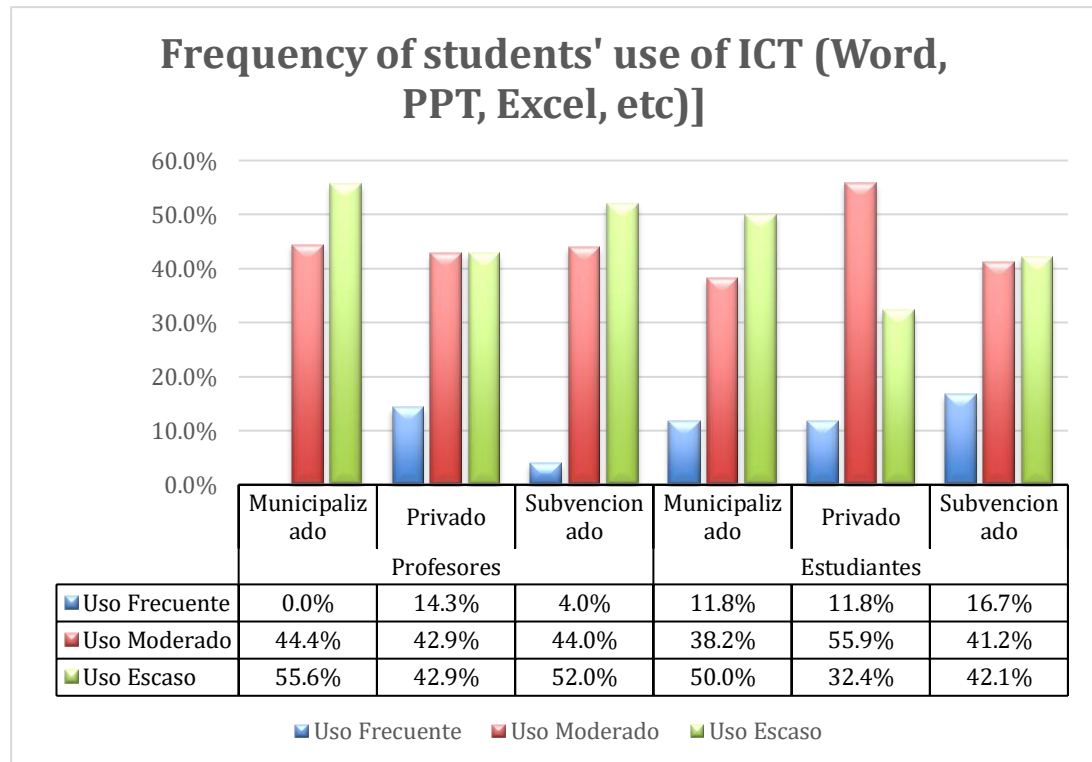


Appendix 23: Frequency of use of ICT resources to participate in seminars.

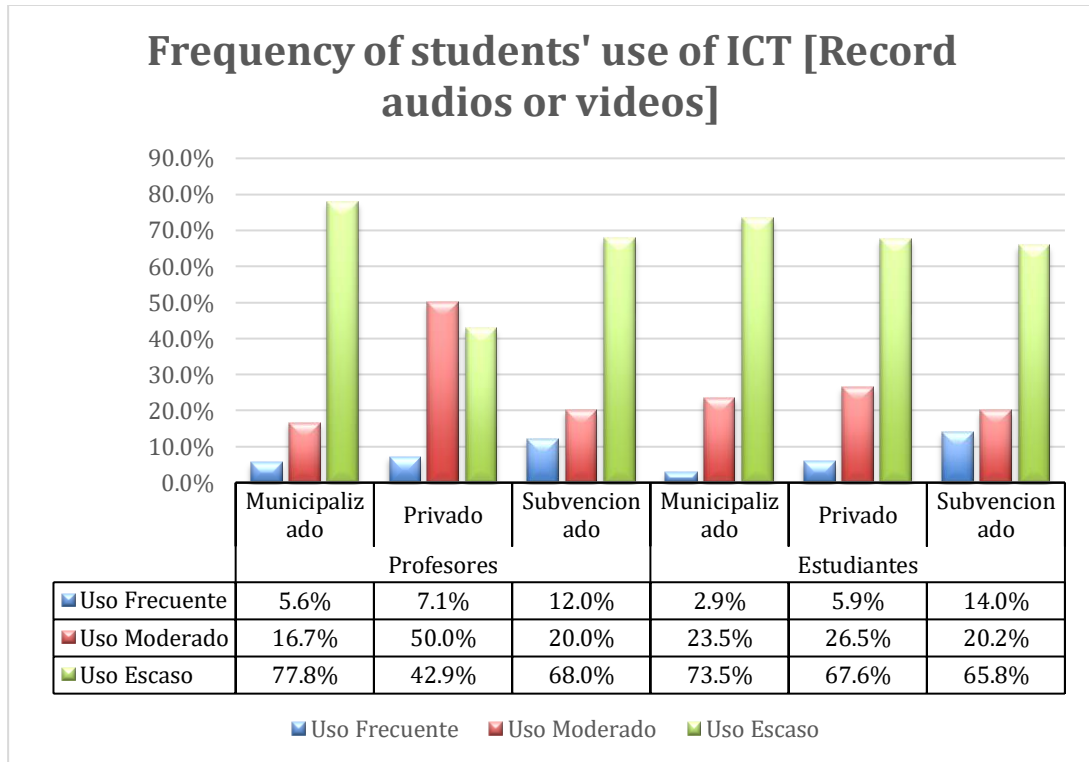


7.8 Results from teachers' and students' survey regarding frequency of students' use of ICT resources for different purposes related to the class.

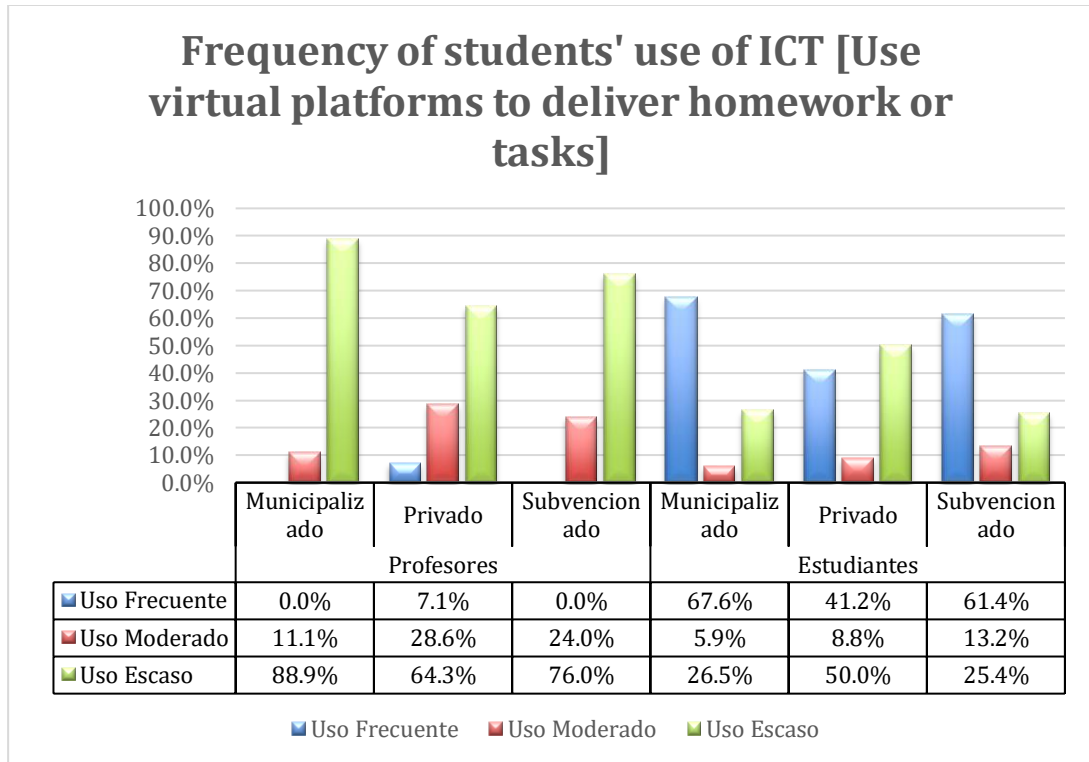
Appendix 24: Frequency of students' use of Microsoft Office tools.



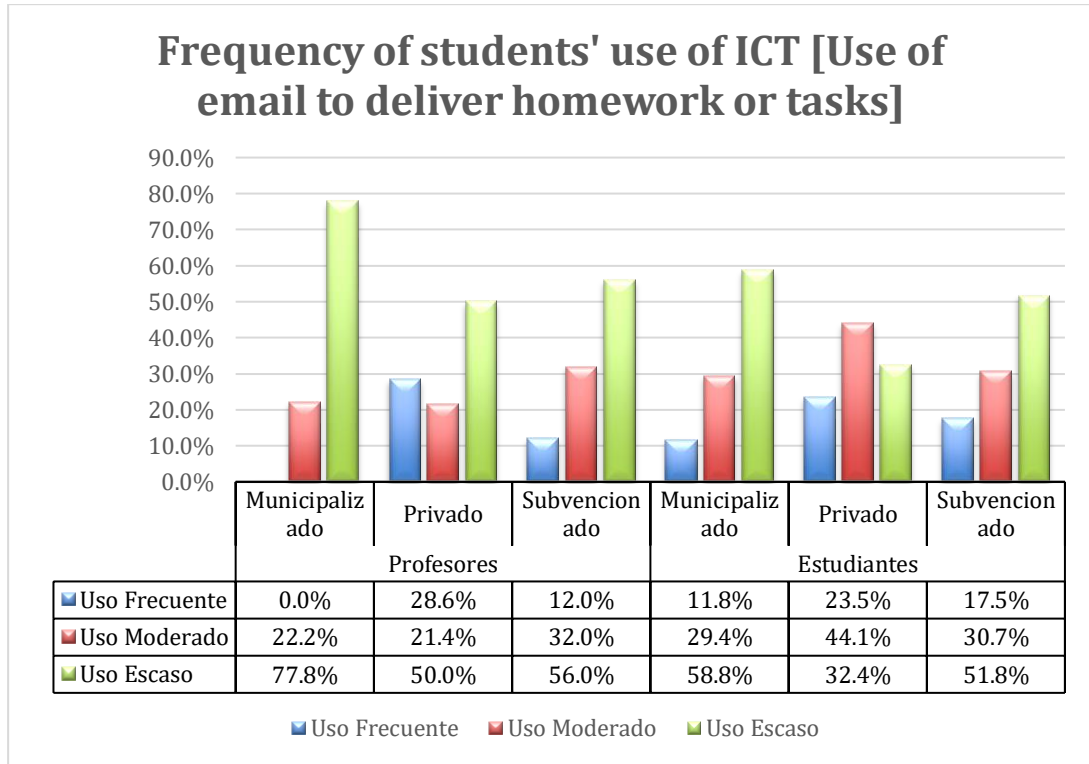
Appendix 25: Frequency of students' use of ICT resources to record audios or videos.



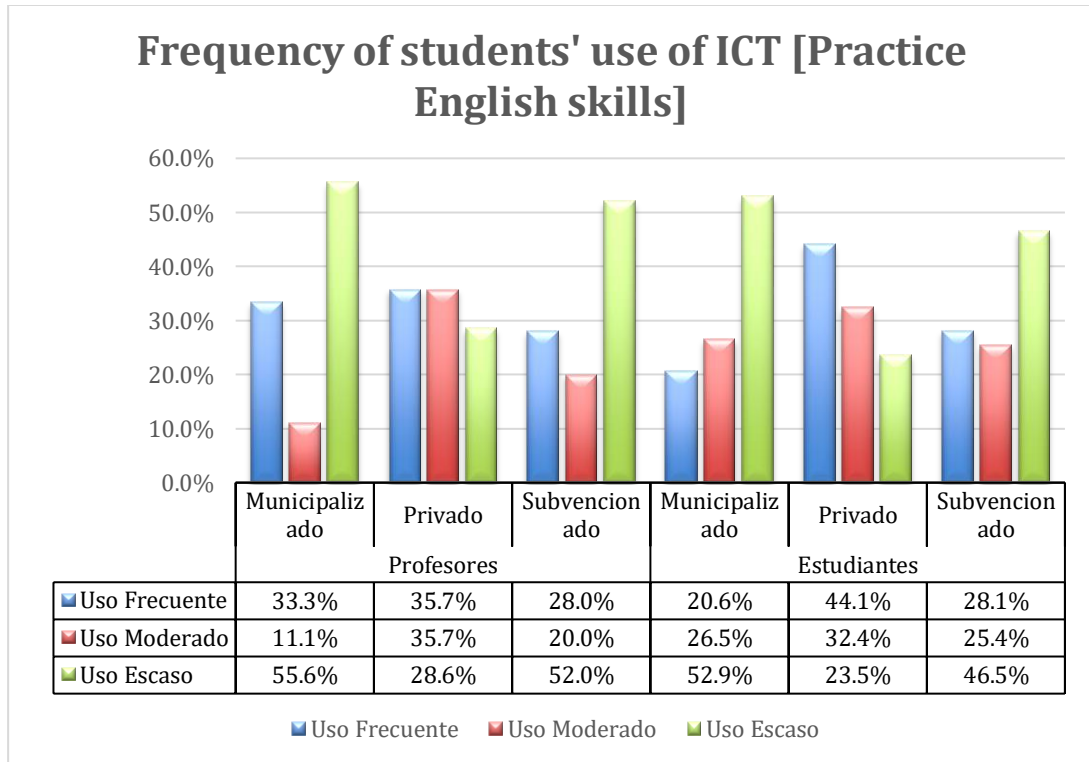
Appendix 26: Frequency of students' use of virtual platforms to deliver homework or tasks.



Appendix 27: Frequency of students' use of emails to deliver homework or tasks.

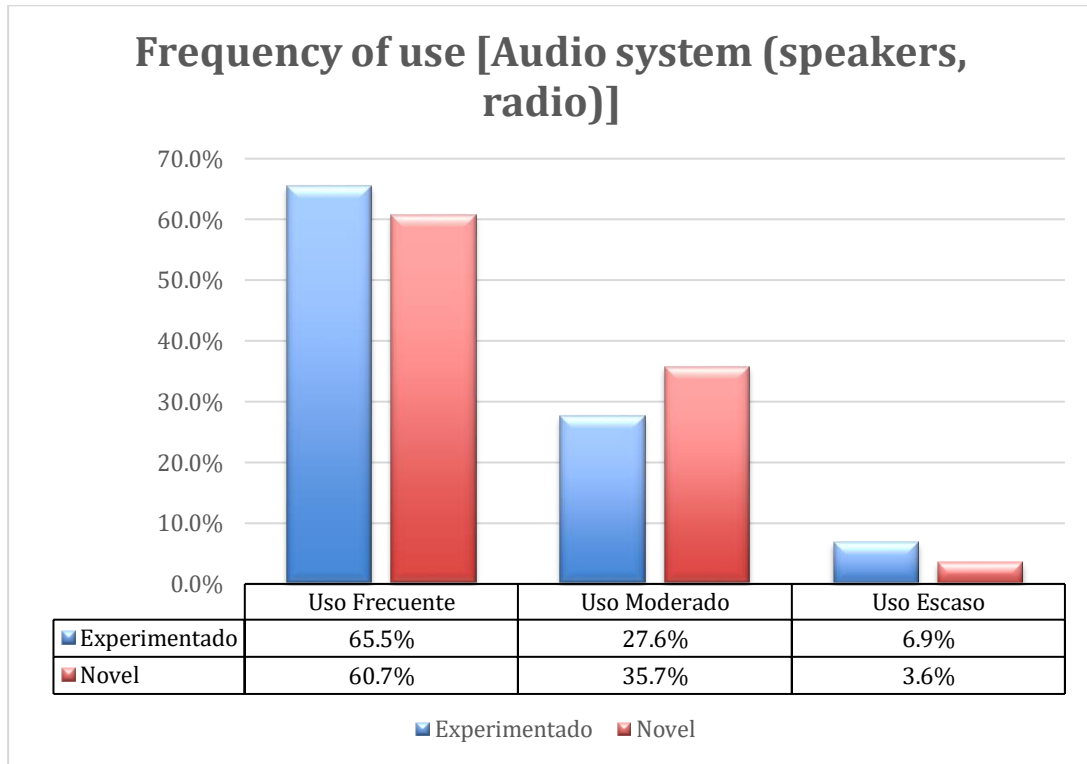


Appendix 28: Frequency of students' use of ICT resources to practice English skills.

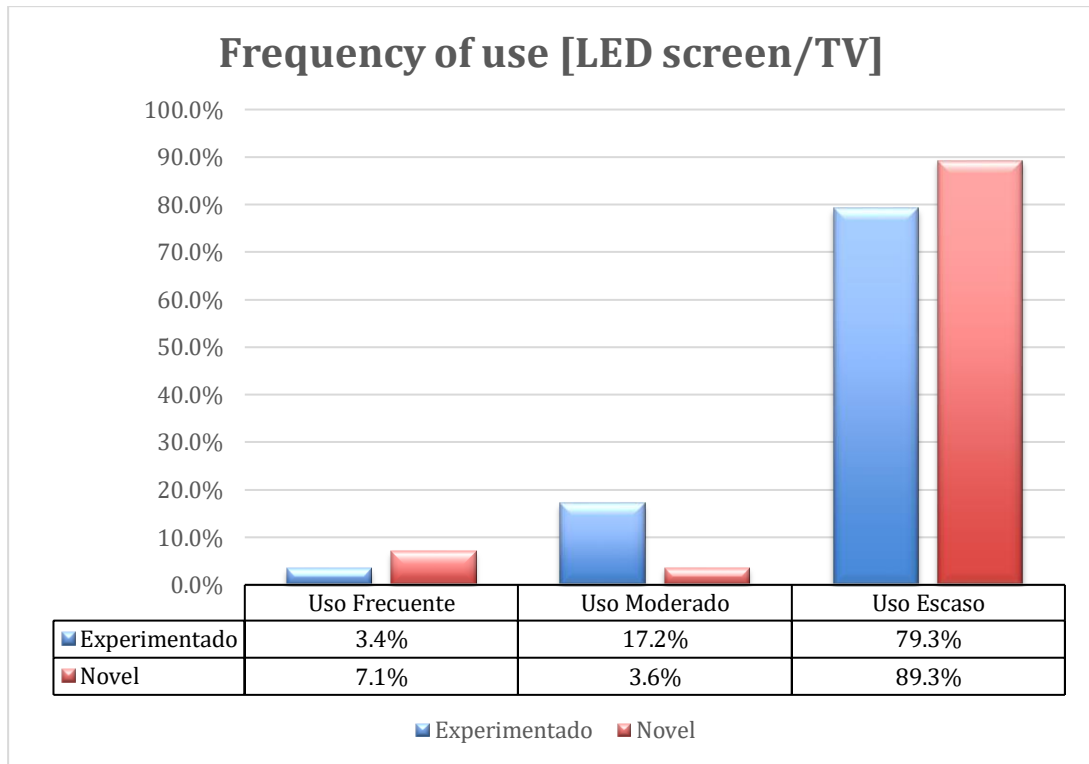


7.9 Results from teachers' survey regarding frequency of use of ICT resources according to experienced and novice teachers.

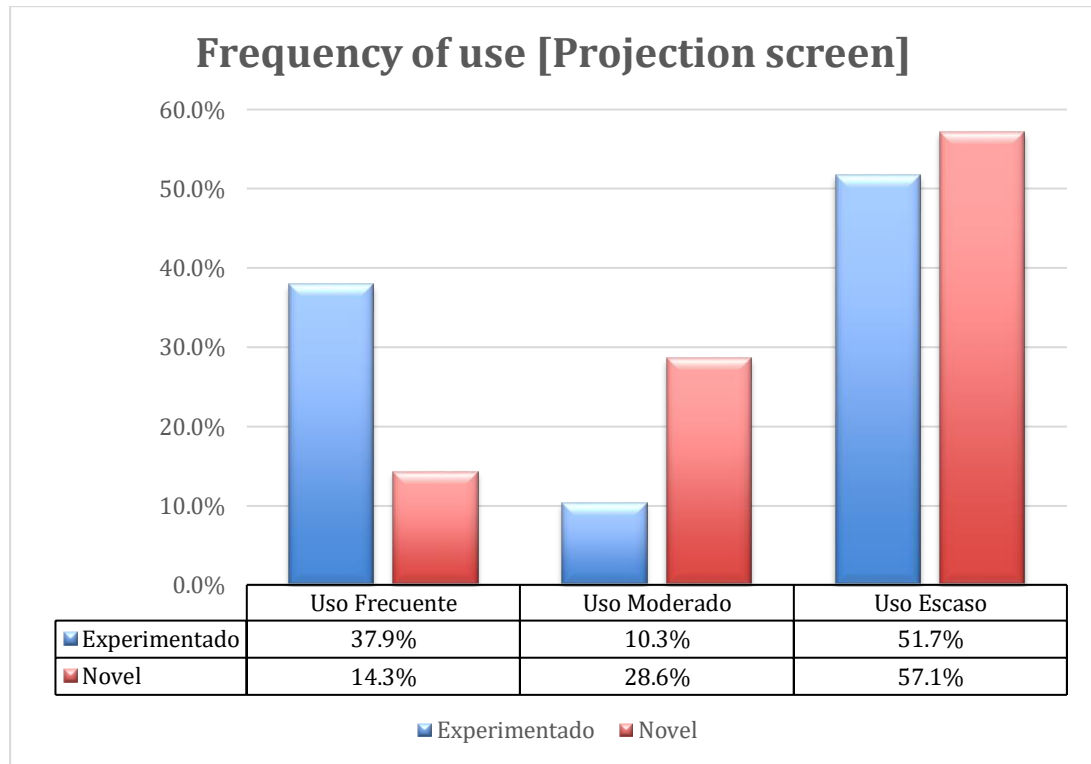
Appendix 29: Frequency of use of audio systems.



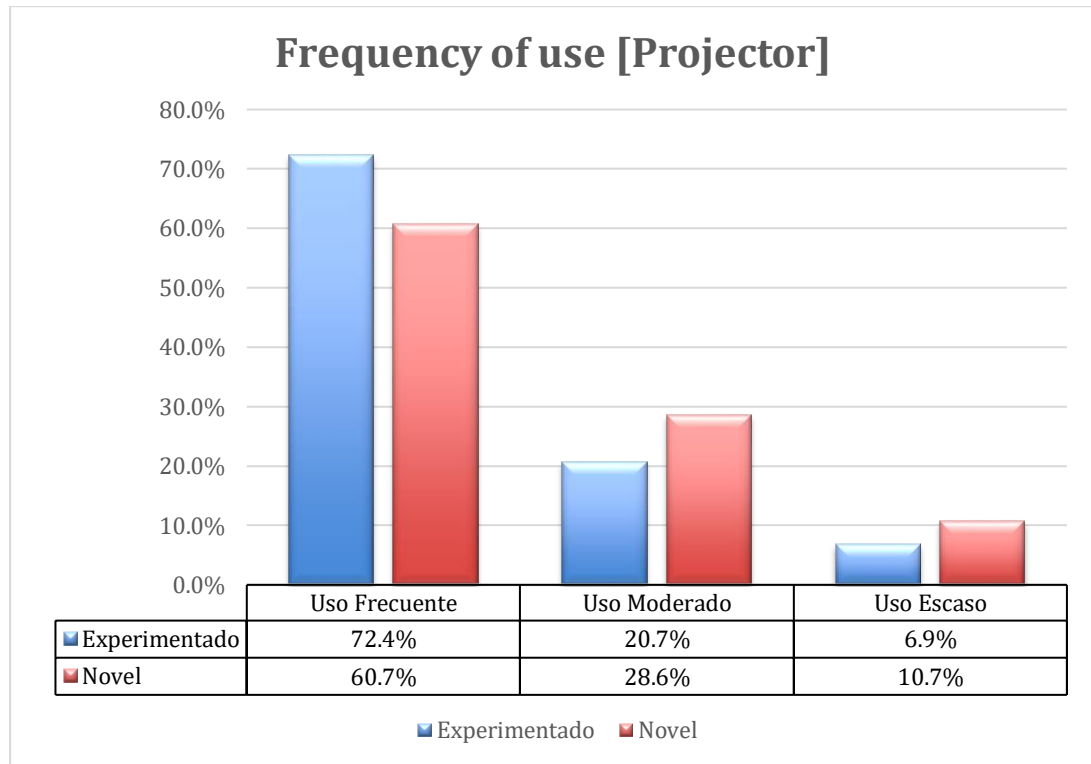
Appendix 30: Frequency of use of LED screens/TV.



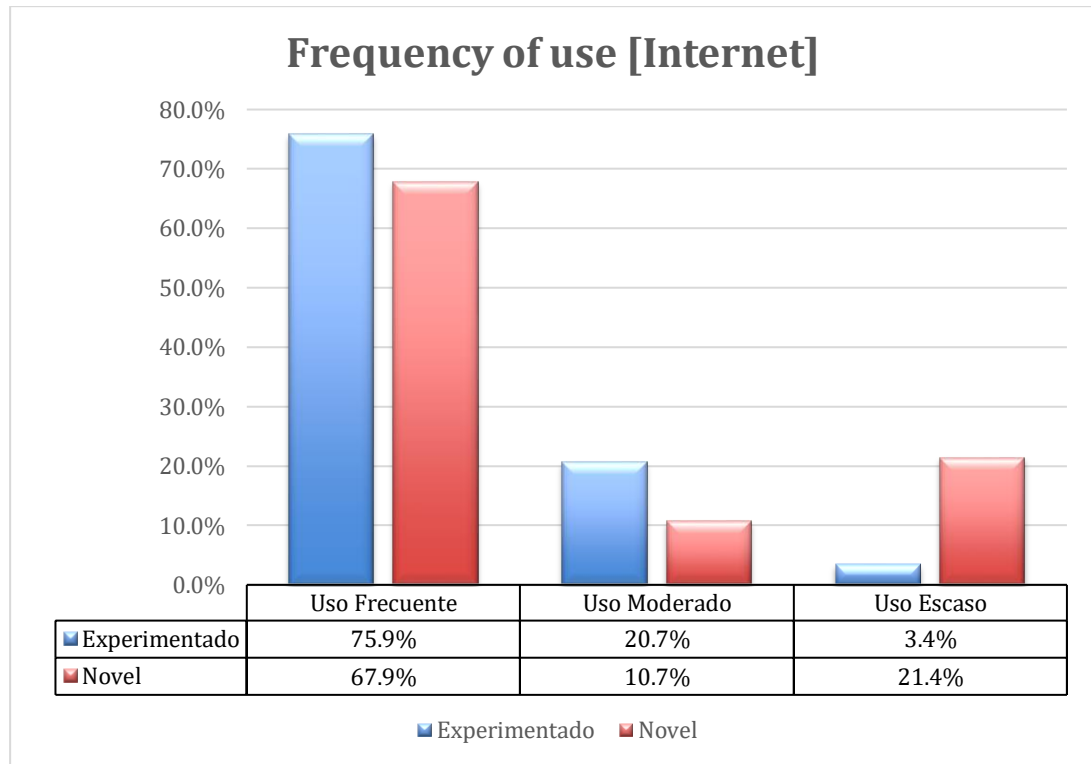
Appendix 31: Frequency of use of projection screens.



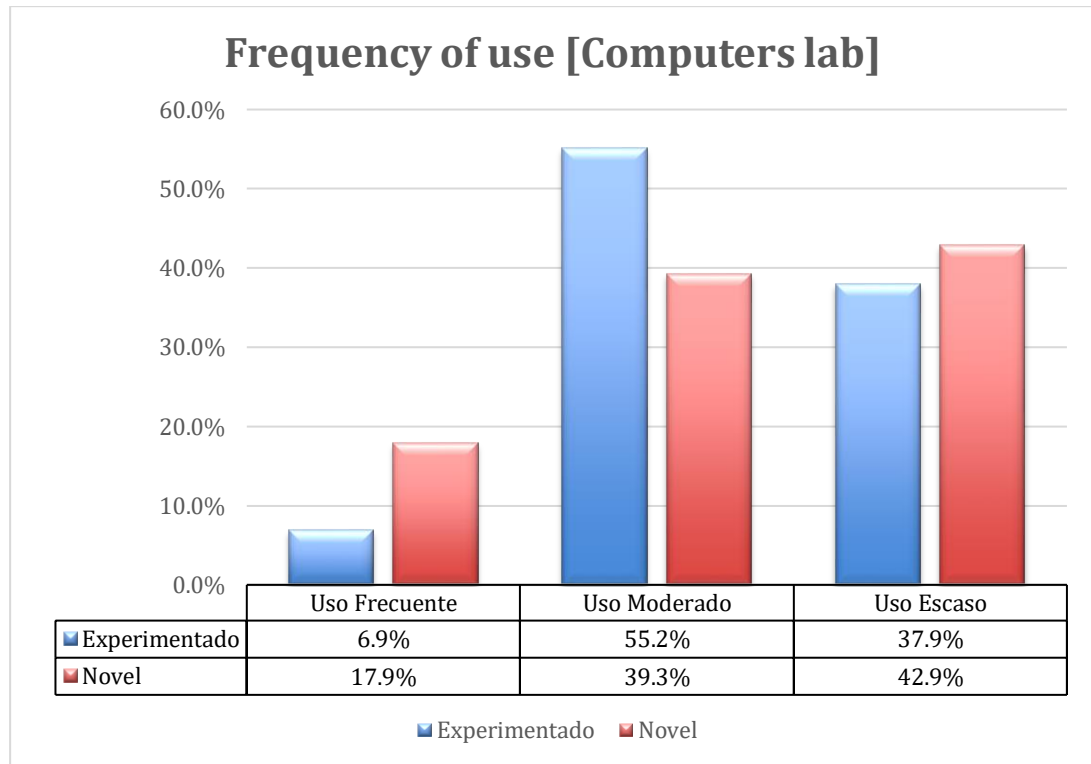
Appendix 32: Frequency of use of projectors.



Appendix 33: Frequency of use of internet.

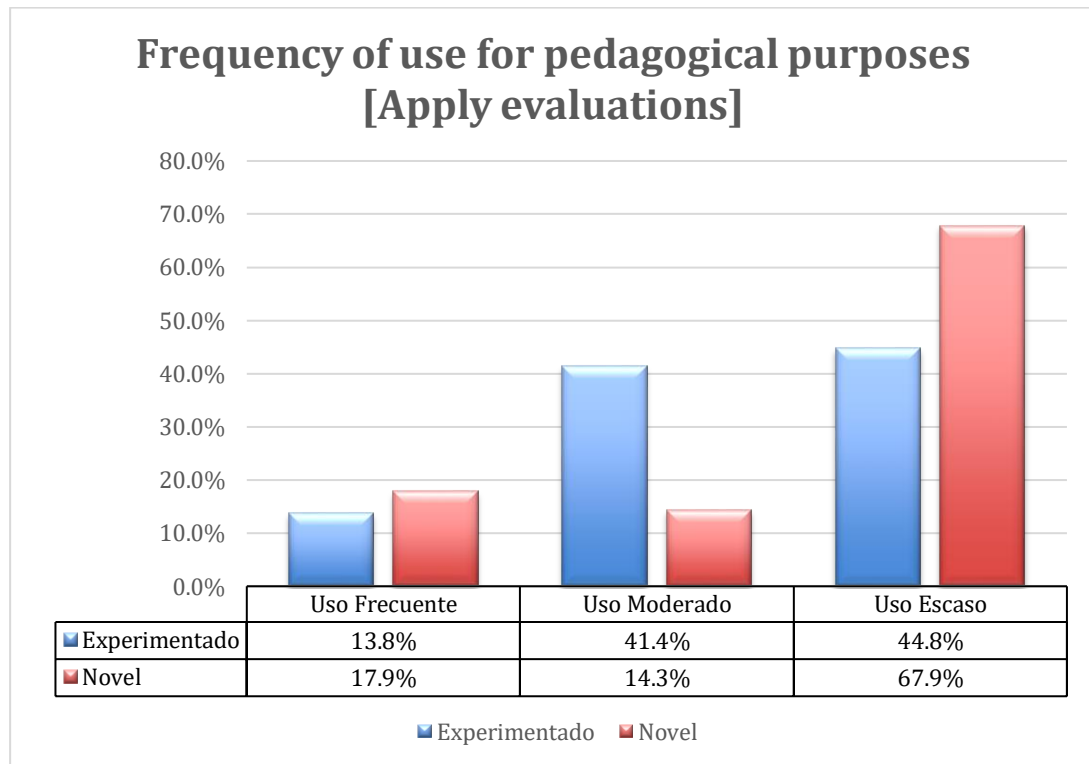


Appendix 34: Frequency of use of computers lab.

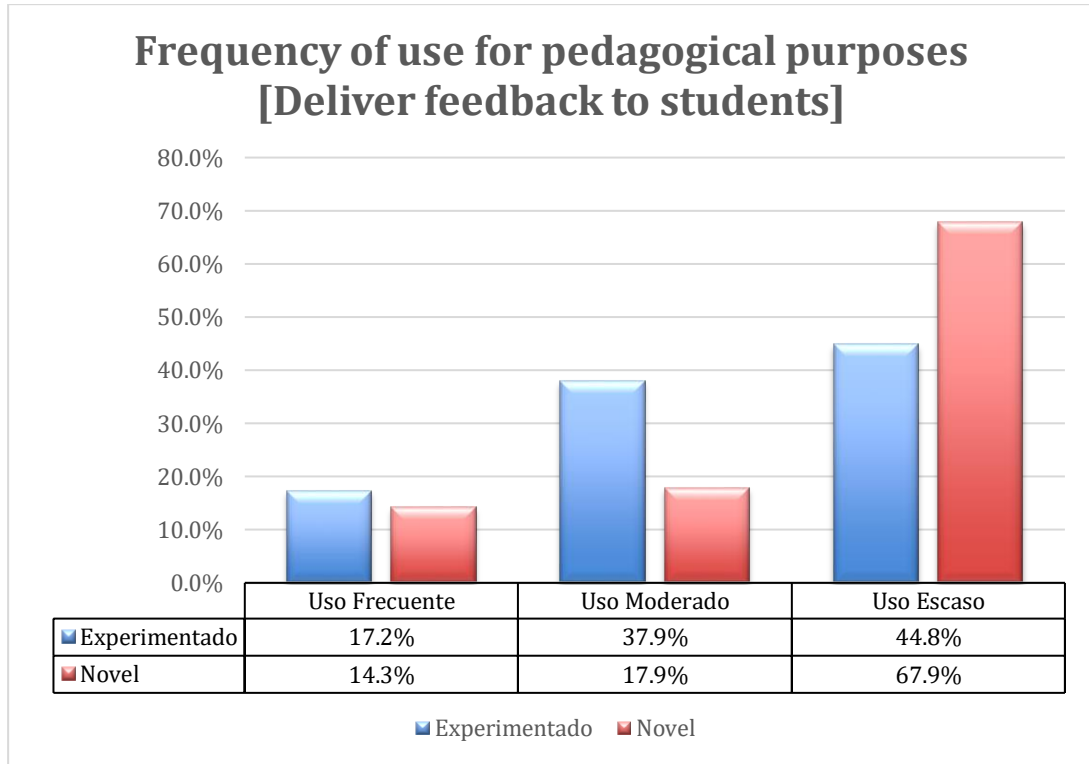


7.10 Results from teachers' and students' survey regarding frequency of use of ICT resources for pedagogical purposes according to experienced and novice teachers.

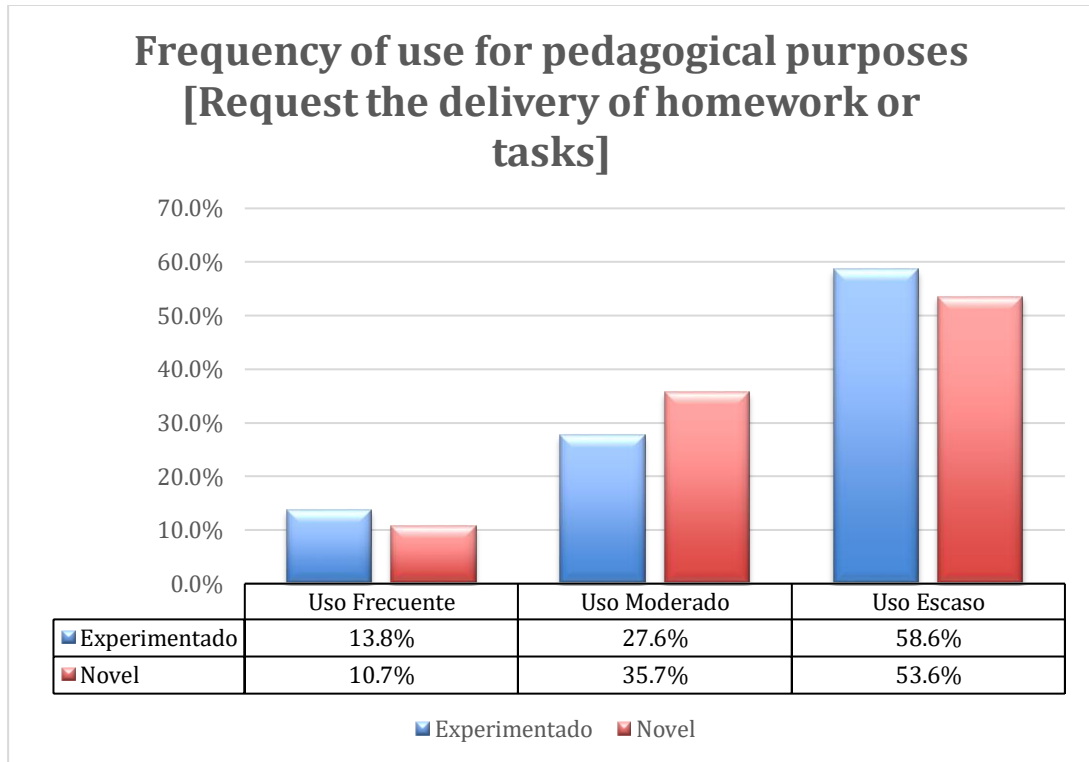
Appendix 35: Frequency of use of ICT resources to apply evaluations.



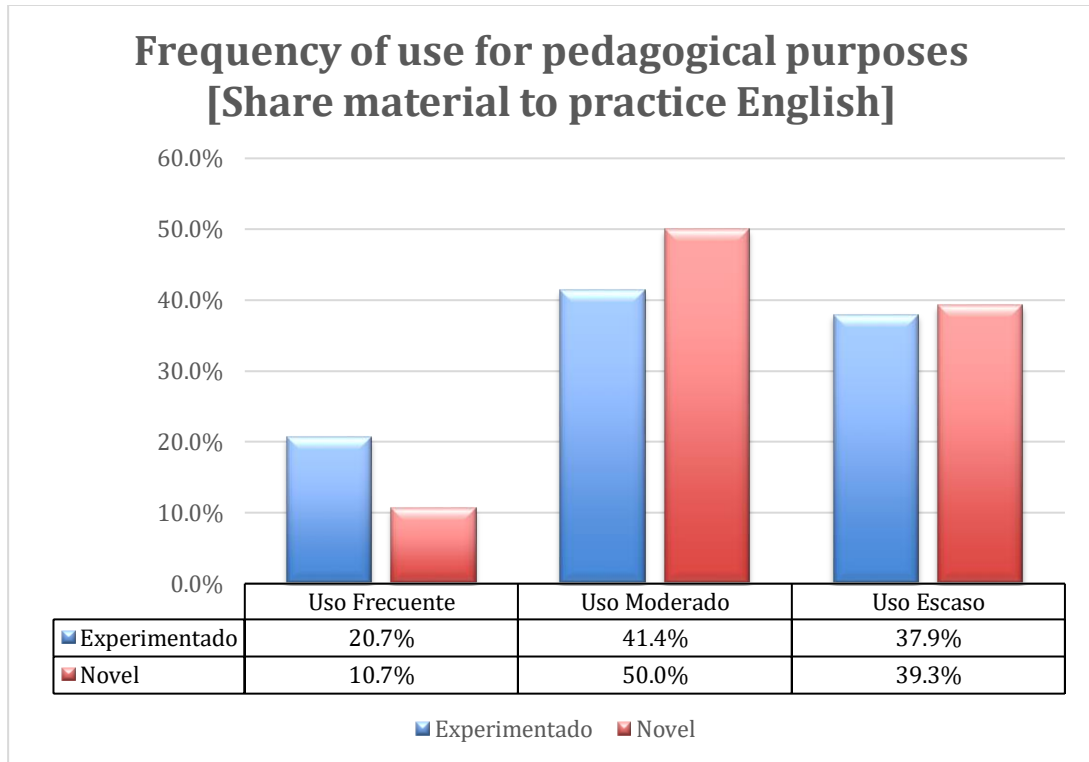
Appendix 36: Frequency of use ICT resources provide feedback to students.



Appendix 37: Frequency of use of ICT resources to request the delivery homework or tasks.

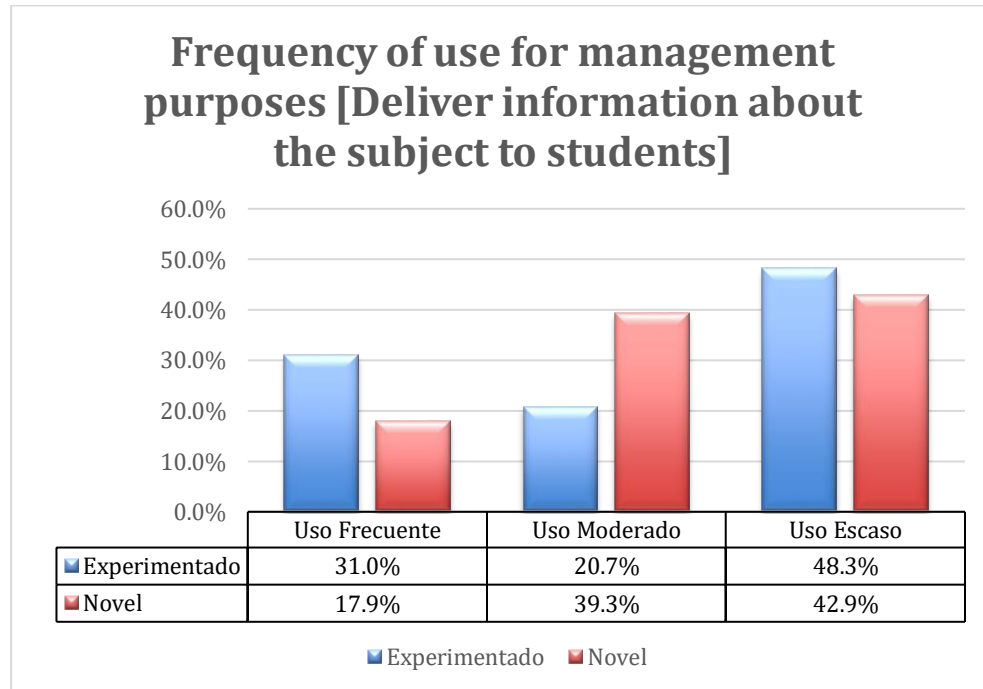


Appendix 38: Frequency of use of ICT resources to share material to practice English.

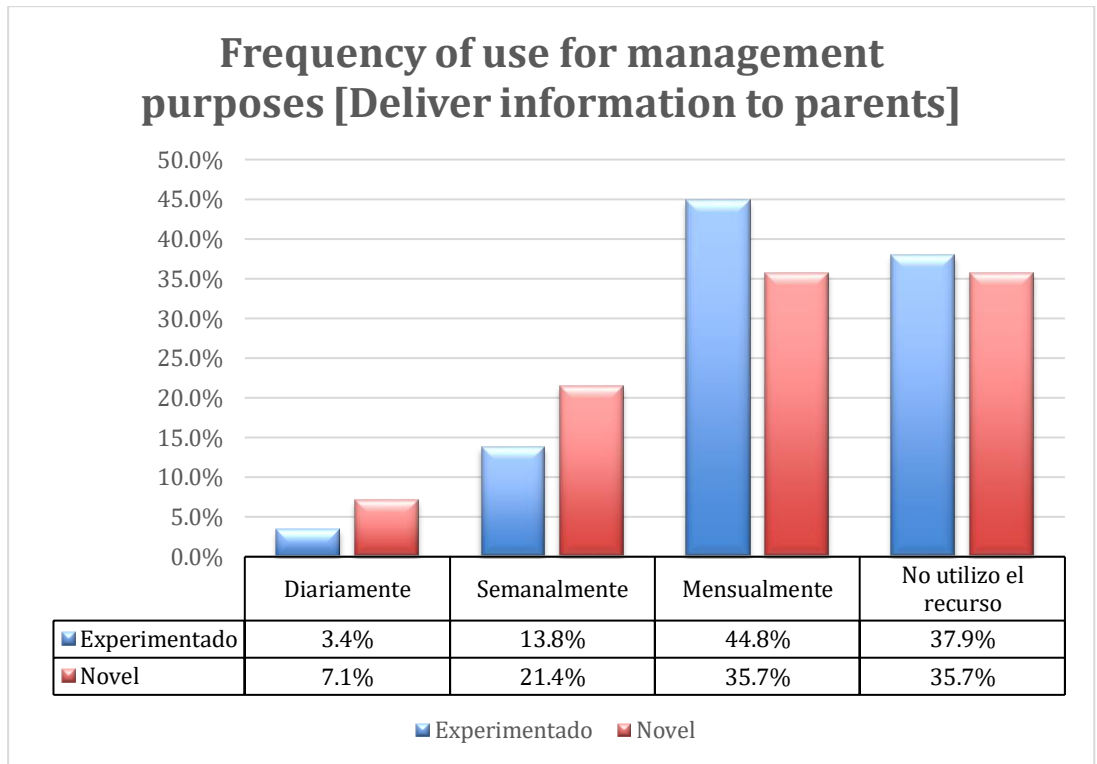


7.11 Results from teachers' and students' survey regarding frequency of use of ICT resources for management purposes according to experienced and novice teachers.

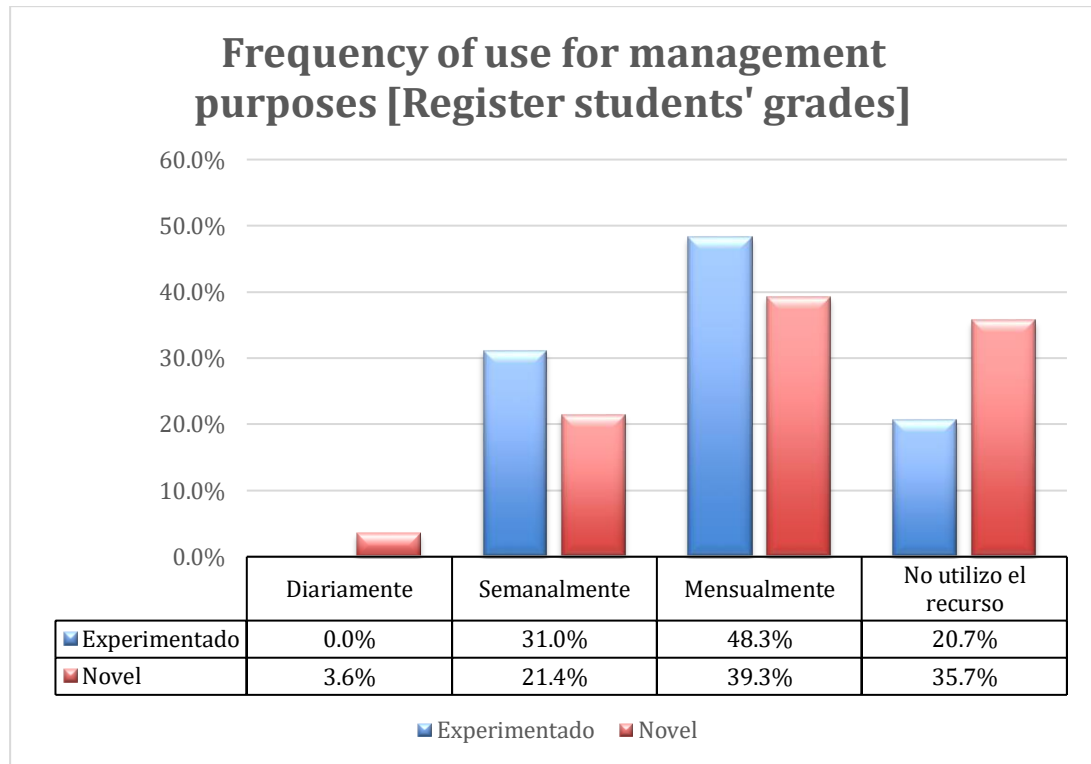
Appendix 39: Frequency of use ICT resources to deliver information about the subject to students.



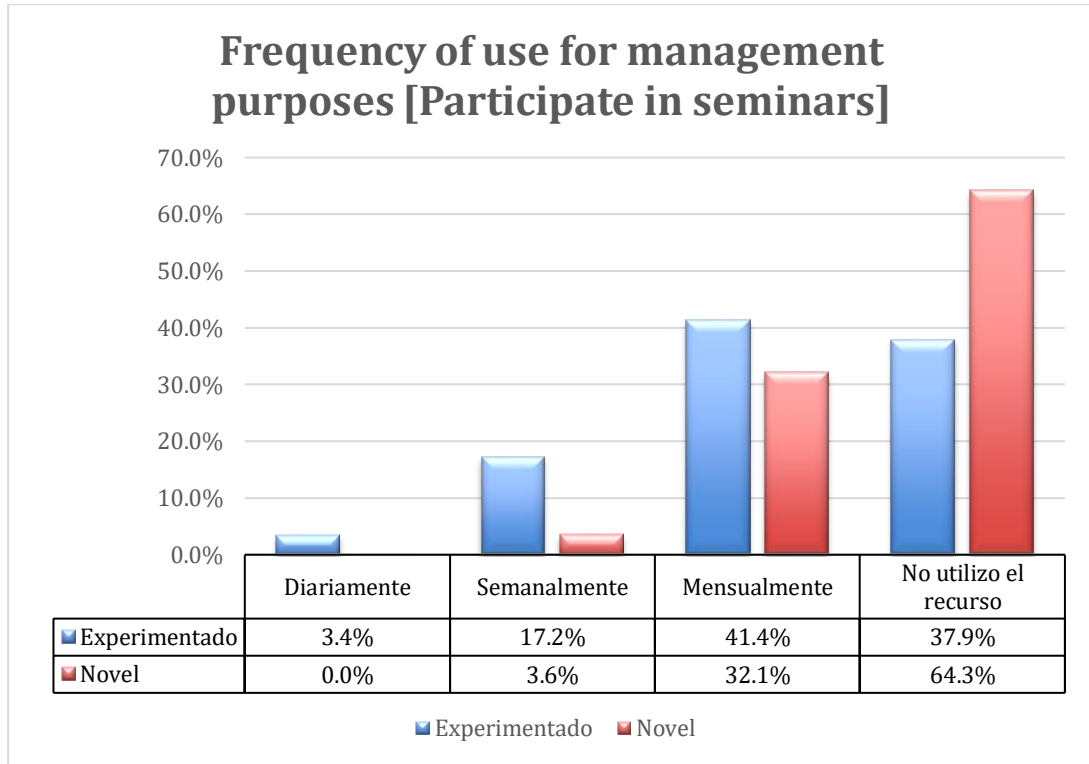
Appendix 40: Frequency of use ICT resources to deliver information to parents.



Appendix 41: Frequency of use ICT resources to register students' grades.

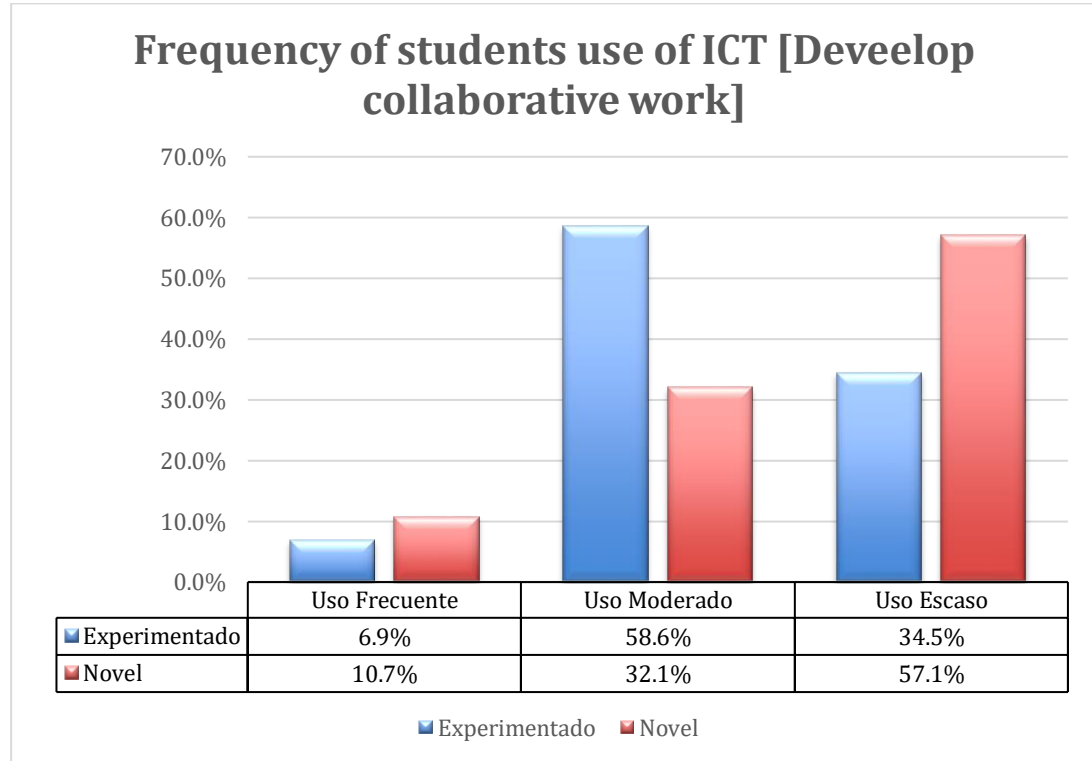


Appendix 42: Frequency of use ICT resources to participate in seminars.

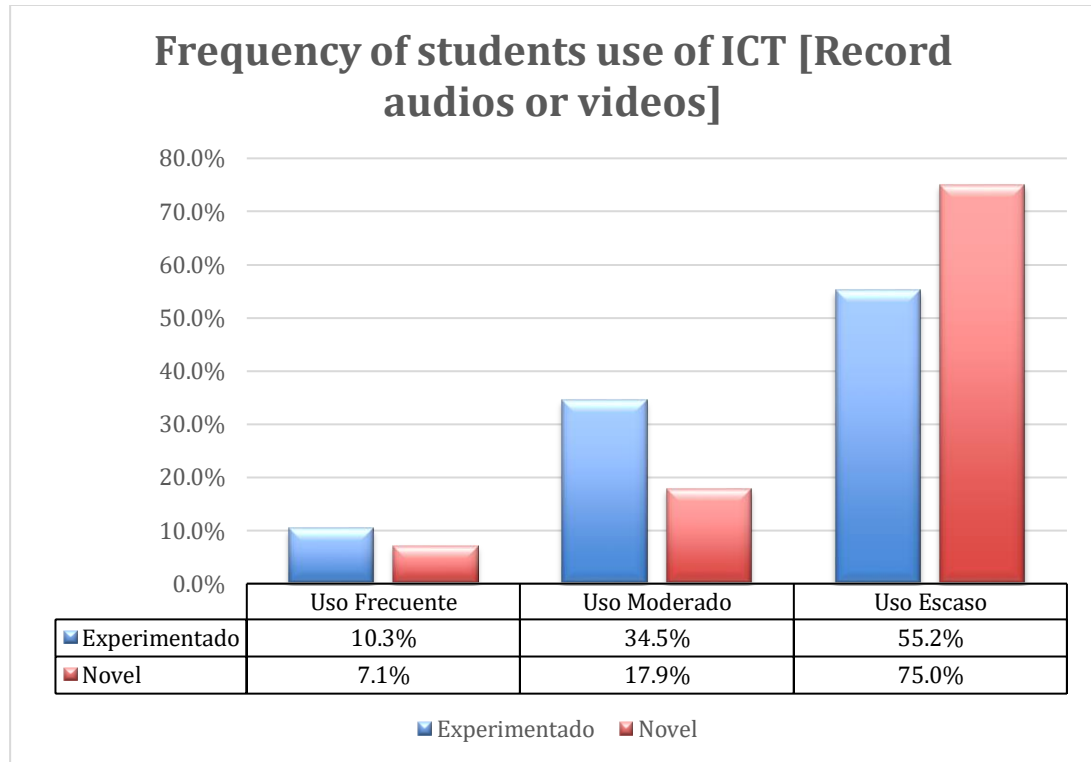


7.12 Results from teachers' and students' survey regarding frequency of students' use of ICT resources for different purposes related to the class according to experienced and novice teachers.

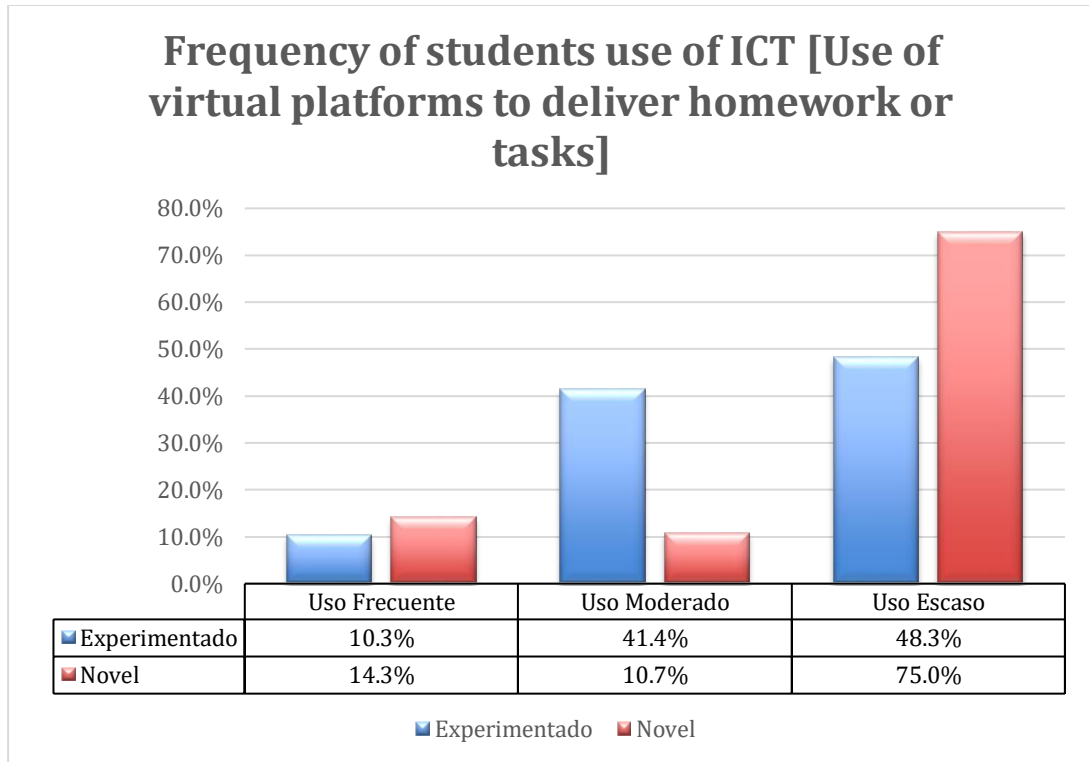
Appendix 43: Frequency of students' use of ICT resources to develop collaborative work.



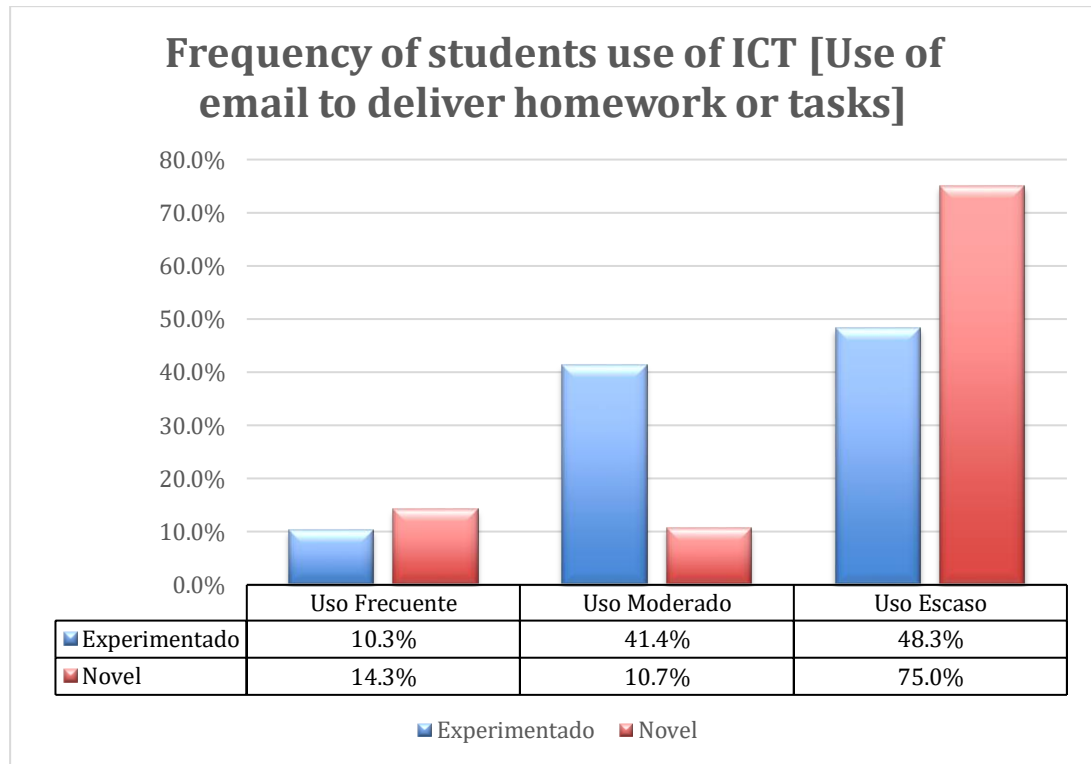
Appendix 44: Frequency of students' use of ICT resources to record audios or videos.



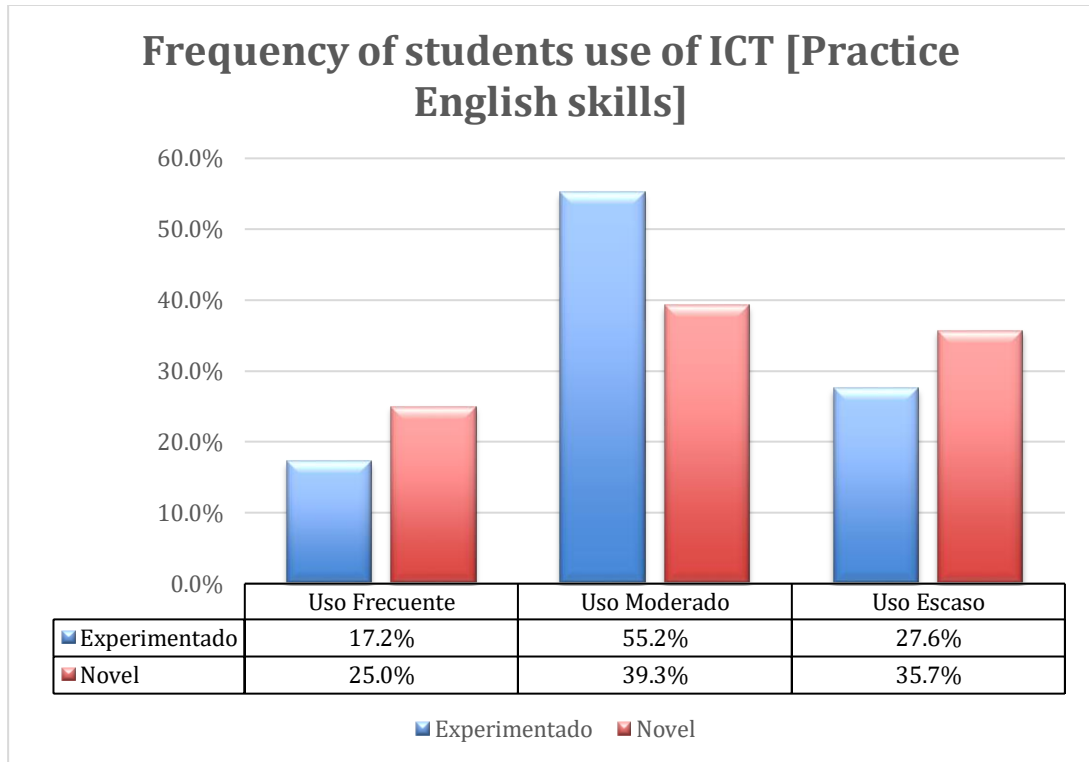
Appendix 45: Frequency of students' use of virtual platforms to deliver homework or tasks.



Appendix 46: Frequency of students' use of emails to deliver homework or tasks.



Appendix 47: Frequency of students' use of ICT resources to practice English skills.



PAUTA PARA EVALUAR SEMINARIO DE INVESTIGACIÓN

NOMBRE DEL EVALUADOR	JUAN MOLINA FARFÁN
TÍTULO DEL SEMINARIO EVALUADO:	Availability and use of information and Communication Technologies (ICT) resources in education, declared by Teachers of English and EFL Students from Public, Subsidized and Private Secondary Schools in the province of Concepción.
ESTUDIANTE (S) AUTOR (ES) DEL SEMINARIO	Francisca Aravena Jarpa, Constanza Chandia Garrido, Camila Quevedo Castillo y Samuel Ramos Roa.
CARRERA	PEDAGOGÍA EN EDUCACIÓN MEDIA EN INGLÉS
PROFESOR GUÍA	HÉCTOR VEGA PINOCHET

Nota: Evalúe de 1.0 a 7.0 cada uno de los indicadores que se presentan esta pauta.

A. De La Formulación del Problema (25%)

INDICADORES	Nota
1. Construcción del objeto de estudio a partir de la presentación de antecedentes empíricos, contextuales y teóricos.	6.2
2. Supuestos o hipótesis de trabajo en correspondencia con el objeto de estudio.	6.0
3. Objetivos formulados con claridad y coherentes con el problema y el objeto de estudio.	6.2
4. Relevancia del problema de investigación en el contexto de las disciplinas pedagógicas.	6.4
5. Adecuada identificación y/o definición operacional de variables y/o categorías de análisis.	4.0
6. Fundamentación y justificación del problema basado en antecedentes bibliográficos y de trabajos de investigación relevantes en el campo de estudio.	6.2
Promedio	5.8

B. DEL MARCO TEÓRICO REFERENCIAL (20%)

INDICADORES	Nota
1. Pertinencia y relevancia de la bibliografía (si corresponde a las disciplinas pedagógicas, actualizadas).	6.2
2. Uso del lenguaje técnico coherente con la temática estudiada.	6.2
3. Calidad y precisión del marco teórico/ Conceptual.	6.2
Promedio	6.2

C. Del Diseño Metodológico del Problema (20%)

INDICADORES	Nota
1. Precisión del enfoque o modelo de investigación.	5.8
2. Presentación del método de investigación y su diseño.	5.6
3. Coherencia entre el enfoque investigativo, las fuentes de recogida de datos y el problema estudiado.	5.5
4. Precisión en la descripción de la población objetivo o de los participantes, su rol y función que cumplen en la investigación.	5.8
5. Precisión de las estrategias y técnicas de recogida de datos.	5.8
6 Descripción del procedimiento investigativo y/o escenarios donde se realiza la investigación.	5.5
7. Control de validez y confiabilidad y/o de credibilidad y consistencia interna de la información.	5.0
8 Consistencia entre unidad de análisis, fuentes y técnicas de análisis de la información.	5.5
Promedio	5.6

INDICADORES	Nota
1. Procesamiento, análisis e interpretación pertinentes de los resultados o hallazgos de investigación.	6.2
2. Presentación de los hallazgos o resultados de forma clara y sintética.	6.2
3. Discusión de los resultados de la investigación.	6.4
4. Conclusiones sustentadas en los resultados o hallazgos.	6.2
5. Explicitación de las proyecciones y de las limitaciones del estudio.	6.5
6. Congruencia entre conclusiones, discusión y sugerencias que se realiza a partir de los resultados o hallazgos de la investigación.	6.3
Promedio	6.3

D. DEL CONTENIDO TEMÁTICO Y LOS RESULTADOS DE LA INVESTIGACIÓN (25%)

E. DE LOS ASPECTOS FORMALES (10%)

INDICADORES	Nota
1. Títulos pertinentes y sintéticos.	6.4
2. Estructura organizada de los contenidos atendiendo al enfoque y método investigativo.	6.2
3. Correcto uso de ortografía.	6.4
4. Coherencia en la redacción.	6.4
5. Sistematización en la formulación de citas y referencias bibliográficas.	6.2
6. Uso del sistema de citas bibliográficas, de acuerdo a normas APA.	6.0
Promedio	6.3

2. RESUMEN DE LA EVALUACIÓN

Aspectos	Ponderación	Nota	Puntaje porcentual
A. De la Formulación del problema	25%	5.8	1.45
B. Del Marco Teórico referencial	20%	6.2	1.24
C. Del Diseño Metodológico de la investigación	20%	5.6	1.12
D. Del Contenido Temático y los Resultados	25%	6.3	1.575
E. De los aspectos formales	10%	6.3	0.63
Nota promedio final			6.0

3. OBSERVACIONES O COMENTARIO DE SÍNTESIS.

Resuma su opinión global en un comentario, que a su juicio, revele los aspectos más sobresalientes, tanto en lo referido a las fortalezas, como a las debilidades de este Seminario de Investigación, o indique las modificaciones que a su juicio deben realizarse a este trabajo para proceder a su calificación final.

En general, el estudio cumple con los aspectos formales de un trabajo de investigación requeridos en la Facultad de Educación. La temática es relevante, sobretudo en tiempos de crisis sanitaria y en pandemia, donde los recursos TIC se transformaron en un apoyo muy importante en la educación en línea. Es necesario revisar aspectos metodológicos del estudio y de formato para mejorar la presentación y claridad del texto. Estos aspectos han sido indicados en el texto y en documento adjunto.

Aprobada en Consejo de Facultad / abril de 2011



JUAN MOLINA FARFÁN PROF. EVALUADOR

Fecha: 07 de marzo de 2022



PAUTA PARA EVALUAR SEMINARIO DE INVESTIGACIÓN

NOMBRE DEL EVALUADOR	Astrid Guerra Azócar
TÍTULO DEL SEMINARIO EVALUADO:	“Availability and use of Information and Communication Technologies (ICT) resources in education, declared by Teachers of English and EFL Students from Public, Subsidized and Private Secondary Schools in the province of Concepción”
ESTUDIANTE (S) AUTOR (ES) DEL SEMINARIO	Francisca Aravena Jarpa, Constanza Chandía Garrido, Camila Quevedo Castillo y Samuel Ramos
CARRERA	Pedagogía en Educación Media Inglés
PROFESOR GUÍA	Héctor Vega Pinochet

Nota: Evalúe de 1.0 a 7.0 cada uno de los indicadores que se presentan esta pauta.

A. De La Formulación del Problema (25%)

INDICADORES	Nota
1. Construcción del objeto de estudio a partir de la presentación de antecedentes empíricos, contextuales y teóricos.	7.0
2. Supuestos o hipótesis de trabajo en correspondencia con el objeto de estudio.	7.0
3. Objetivos formulados con claridad y coherentes con el problema y el objeto de estudio.	7.0
4. Relevancia del problema de investigación en el contexto de las disciplinas pedagógicas.	7.0
5. Adecuada identificación y/o definición operacional de variables y/o categorías de análisis.	7.0
6. Fundamentación y justificación del problema basado en antecedentes bibliográficos y de trabajos de investigación relevantes en el campo de estudio.	7.0
Promedio	7,0

B. DEL MARCO TEÓRICO REFERENCIAL (20%)

INDICADORES	Nota
1. Pertinencia y relevancia de la bibliografía (si corresponde a las disciplinas pedagógicas, actualizadas).	6,5
2. Uso del lenguaje técnico coherente con la temática estudiada.	7,0
3. Calidad y precisión del marco teórico/ Conceptual.	7,0
Promedio	6,8

C. Del Diseño Metodológico del Problema (20%)

INDICADORES	Nota
1. Precisión del enfoque o modelo de investigación.	7,0
2. Presentación del método de investigación y su diseño.	7.0
3. Coherencia entre el enfoque investigativo, las fuentes de recogida de datos y el problema estudiado.	6,0



4. Precisión en la descripción de la población objetivo o de los participantes, su rol y función que cumplen en la investigación.	7,0
5. Precisión de las estrategias y técnicas de recogida de datos.	6,5
6 Descripción del procedimiento investigativo y/o escenarios donde se realiza la investigación.	7,0
7. Control de validez y confiabilidad y/o de credibilidad y consistencia interna de la información.	7.0
8 Consistencia entre unidad de análisis, fuentes y técnicas de análisis de la información.	7.0
Promedio	6,8

D. DEL CONTENIDO TEMÁTICO Y LOS RESULTADOS DE LA INVESTIGACIÓN (25%)

INDICADORES	Nota
1. Procesamiento, análisis e interpretación pertinentes de los resultados o hallazgos de investigación.	6,0
2. Presentación de los hallazgos o resultados de forma clara y sintética.	6,5
3. Discusión de los resultados de la investigación.	6,0
4. Conclusiones sustentadas en los resultados o hallazgos.	6,5
5. Explicitación de las proyecciones y de las limitaciones del estudio.	5,0
6. Congruencia entre conclusiones, discusión y sugerencias que se realiza a partir de los resultados o hallazgos de la investigación.	6,5
Promedio	6,1

E. DE LOS ASPECTOS FORMALES (10%)

INDICADORES	Nota
1. Títulos pertinentes y sintéticos.	7,0
2. Estructura organizada de los contenidos atendiendo al enfoque y método investigativo.	7,0
3. Correcto uso de ortografía.	7,0
4. Coherencia en la redacción.	7.0
5. Sistematización en la formulación de citas y referencias bibliográficas.	7,0
6. Uso del sistema de citas bibliográficas, de acuerdo a normas APA.	7,0
Promedio	7,0

2. RESUMEN DE LA EVALUACIÓN

Aspectos	Ponderación	Nota	Puntaje porcentual
A. De la Formulación del problema	25%		1,8
B. Del Marco Teórico referencial	20%		1,4
C. Del Diseño Metodológico de la investigación	20%		1,4
D. Del Contenido Temático y los Resultados	25%		1,5
E. De los aspectos formales	10%		0,7
Nota promedio final			6,8

3. OBSERVACIONES O COMENTARIO DE SÍNTESIS.

Resuma su opinión global en un comentario, que a su juicio, revele los aspectos más sobresalientes, tanto en lo referido a las fortalezas, como a las debilidades de este Seminario de Investigación, o indique las modificaciones que a su juicio deben realizarse a este trabajo para proceder a su calificación final.



Me parece un tema muy relevante y útil para tener en consideración, especialmente pensando en el retorno a la "normalidad". Ilustrar tan claramente las diferencias y similitudes entre los tres contextos es muy enriquecedor. Es interesante también observar las diferentes percepciones de los profesores y estudiantes respecto a una misma situación.

Se sugiere revisar las limitaciones ya que sólo se centran en problemas de contexto, ajenos a la voluntad de los/as estudiantes.

Las proyecciones también pueden ser incrementadas debido a la cantidad de información con la que se cuenta o se contará en el futuro cercano.

Aprobada en Consejo de Facultad / abril de 2011

FIRMA PROF. EVALUADOR

Fecha: 13 enero, 2022