UNIVERSIDAD CATÓLICA
SILVA HENRÍQUEZ

Facultad de Educación

Escuela de Pedagogía en Inglés

SEMINARIO DE TÍTULO

TECHNICAL EDUCATION IN CHILE: A QUANTITATIVE STUDY OF THE EFFECTS OF THE TASK-BASED METHODOLOGY, BASED ON THE PRINCIPLES OF "ENGLISH FOR SPECIFIC PURPOSES", ON INDUSTRIAL MECHANICS STUDENTS AT LICEO INDUSTRIAL Y DE MINAS IGNACIO DOMEYKO

Seminario para optar al Título de Profesor de Educación Media en Inglés y al Grado de Licenciado en Educación

Seminar Director: Fernando Garetto Loyola

Authors:

María José Donoso Suárez

Alejandro de Jesús López Lazo

José Miguel Quezada Vega

Constanza Andrea San Martín San Martín

Nicolás Antonio Villalonga Rojas

SANTIAGO DE CHILE

2014

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

Thanks to our university, especially to our professors, to whom we owe a great deal for providing us with the necessary means to become professionals.

We would also like to thank the whole school community at Liceo Industrial y de Minas Ignacio Domeyko for their understanding, material support and willingness to help our research group throughout this investigation. Our thanks to its director, Gustavo Sandoval Aguilera, for his disposition and kindness in facilitating the school for our research; to the chief of the Technical-Pedagogical Unit, Christian Tumba Martínez, for his contribution in pedagogical matters; and to Ms. Marjorie Contreras Benítez, for providing us with all the material necessary for this project.

Our deepest gratitude to Professor Mauricio Cataldo, whose assistance in a complex stage of our research was essential to complete this project.

We would like to extend our gratitude to Professors Juan Torres Ampuero and Patricia Pulgar Soto, whose comments and guidance were of vital importance to this investigation.

Finally, thanks to our Seminar director, Professor Fernando Garetto Loyola; without his invaluable encouragement, support, and advice, this thesis could not have been produced. We are forever grateful.

A mi familia, fuente de apoyo constante e incondicional en toda mi vida y más aún en mis duros años de carrera profesional. Y en especial, quiero expresar mi más grande agradecimiento a mi madre, Ana María Suárez, y a mi padre, José Donoso, por sus ejemplos de constancia y que sin su ayuda habría sido imposible culminar mi profesión.

María José

Agradezco principalmente a mi familia por darme el apoyo y el cariño infinito; sin su ayuda no estaría en este proceso de mi vida tan importante, y que me hace tener un sentido en este mundo. También agradecer a mis compañeros de tesis por la inquebrantable amistad que hemos tenido a lo largo de los años en nuestra querida universidad. ¡Gracias totales!

Alejandro

Mis más sinceros y afectuosos agradecimientos a mis amigos, novia y familia. Agradezco especialmente a mi madre, María Vega, y mi abuela, Inés Contreras, ya que sin su esfuerzo y apoyo incondicional, no me hubiese sido posible llegar hasta esta etapa de mi proceso de formación profesional. ¡Muchas gracias por el apoyo y cariño entregado!

José

Mis más sinceros y cariñosos agradecimientos a mi familia, de quienes recibí un apoyo permanente. Especialmente, agradezco a mi madre, Corina San Martín, quien jamás dejó de confiar en mis logros. A mi pareja y fiel compañero, por su apoyo y comprensión. Y por supuesto a mi gran grupo de amigos, mis compañeros de tesis, ya que sin ellos, esto no habría sido posible.

Constanza

A mis compañeros de tesis, por haber demostrado compromiso, dedicación y profesionalismo. A mi pareja, por ser mi fuente de consejo y apoyo permanente. A mi familia, a mi hermana Daniela, y especialmente a mis padres, José y Valeria, por creer en mí y por haberme dado la oportunidad de cumplir mis metas y objetivos. A todos ustedes: gracias por hacer de mí lo que soy ahora.

Nicolás

CHAPTER I:
INTRODUCTION

1.1. Technical Education in Chile

Nowadays, modern societies are strongly based on economy and its influences. This is one of the reasons why there are many ways of becoming a professional capable of facing the labour market and undertaking the constant challenges that have been established by the countries which have the purpose of becoming a developed nation.

One of the ways of becoming a professional is through Technical-Professional Education (TPE), imparted in High Schools. In Chile, as in other countries in Latin America, TPE has become a relevant topic for discussion in the school agenda, because of the meaningful role that it plays in the preparation of human resources (workers) who are trained in order to fulfil the countries' economic needs so as to stay in a highly competitive international market.

According to the 2010 data base of *Mineduc*, TPE accounts for the 44.7 per cent of school enrolment. Many of the students who are part of this type of education belong to the least economically favoured families. This is the reason why educational authorities have developed a series of strategies in various areas; some of those strategies are:

- Overcoming the traditional thought of TPE as a *lower class* option for people who are not able to enter the university.
- Strengthening links with business sectors to which TPE's graduates are going to be part of at the end of their professional formation process.
- Increasing the amount of technological equipment in order to upgrade the students' professional formation process.
- Renewing TPE's methodological approaches in a meaningful way by incorporating innovations in the curricular program, in terms of itinerary (school schedule) and formative competences (content).
- Promoting the training and professional development of teachers in their subject area, which combined with the changes in the curricular programme for students, accomplishes "Dual Formation" through the entire process.

All of the strategies stated above have been carried out with the purpose of providing students with high-quality education, which today is considered to be a human right that is in line with the development of a society which is based on justice and solidarity.

Due to the fact that the aim of Technical Education is to prepare students for the labour market, it can be considered as the relationship between theoretical and practical knowledge of a specific subject area. The

purpose of TPE is to promote successful transitions from school to work by developing skills that may prepare people to play an active and competent role in different sectors of the economic activity.

1.2. English Language Teaching at the School

English is also included in the school curricular programme, where students from 9th and 10th grade (1° and 2° Medio) have four hours of Foreign Language (English) per week, and students from 11th and 12th grade (3° and 4° Medio) only have two hours per week.

English as a foreign language is necessary in technical education to achieve working competence because of it is considered to be a global language; almost every machinery and tool that students use and work with during their professional formation process are imported from other countries and come with their respective manuals written in English, so students would have to make use of the English language to understand instructions and directions given in said manuals.

Teachers of the Industrial Mechanics field at the school have agreed with the purpose and the objectives of this particular investigation. One of them is Mr. Arturo Jofré Flores, Industrial Mining Production Engineer. Mr. Jofré believes that this research will truly serve students in their own field, since most of the pieces of machinery they use on a daily basis are named in

English in various technical manuals. Moreover, knowing a second language, especially one as useful as English, will also help them to develop in their area of expertise and after finishing school, in their line of work.

1.3. Ignacio Domeyko Industrial and Mining School

The current research is going to be focused on students of Liceo Industrial y de Minas Ignacio Domeyko, who come from the lowest socio-cultural sector of Santiago, where there are various social problematic issues such as alcoholism and drug addiction, among others. The school tries to put aside all those problems in order to educate people who may be able to become the professionals that the society demands by following a previously structured model of students' profile. This profile describes the three major areas in which the students need to be trained. Those areas are: "learning to be", which refers to the personal formation of students according to the list of moral values established by the school; "learning to know", which refers to theoretical contents regarding the students' area of expertise; and "learning to do", which makes reference to the implementation of all the students' theoretical contents acquired during their professional formation process at school.

The school offers three different technical fields which are: Electricity, Industrial Mechanics and Geology. The students work through a common plan in the first two years of technical formation, and afterwards, they have to

choose to enrol at one of the fields offered by the school, all of which follow a specialized and focused curricular programme, designed to develop the skills mentioned in the student profile of the school.

1.4. Aim of the Research

The aim of this research is to investigate the effects of the Task-based learning methodology, based on the principles of “English for specific purposes” (ESP), on the students of one technical field (Industrial Mechanics) at Liceo Industrial y de Minas Ignacio Domeyko.

The *Task-based* methodology is a way of teaching focusing on the completion of common tasks using the English language. As a group, we think it is appropriate to work with this methodology, since it relates to what the students are required to do in their specialty courses, which is performing tasks and operations in the field of industrial mechanics such as equipment and machinery maintenance, for example.

The courses selected for the research are two. The first one is “11th grade” of the industrial mechanics area (3ro C). This class will serve as the *experimental group*, i.e., they will be affected by the new methodology and will be directly influenced by the research. It consists of twenty-eight students of 11th grade of secondary level education.

The second course selected is 11th grade of the industrial mechanics (3ro B). It consists of thirty-one students, and they will be part of the *control group*, i.e., they will receive no influence by the experiment and no modification to their classes will be made.

As stated earlier, the area of expertise of both groups is industrial mechanics, and this is their first year studying this technical field imparted by the school. In our opinion, this has a great deal of relevance in our research, since school subjects related to Industrial Mechanics (Equipment maintenance, for example), are more motivating and appealing to the students, especially in their first year of studies.

According to the group's experience, teaching English in the fields of Electricity, Industrial Mechanics and Geology at Liceo Industrial y de Minas Ignacio Domeyko, we believe:

- The students' profile and the "learning to do" area differ from the reality of the classroom in English classes. One example of this is the fact that the English planning is oriented towards a general use of the language, and it does not represent what has been established as one of the skills to be developed in the student profile of the school, which is the ability to comprehend manuals in English at the end of the students' formation process.

- The amount of hours assigned to the English class in 11th and 12th grades is insufficient to achieve the goals previously established both in the student profile of the school and in their planning.
- English classes, oriented towards a general use of the language, have not been relevant and/or challenging for the students, since contents covered in class do not relate to their current skill development stage, and do not relate to their own field. Consequently, the contents taught to the students are not meaningful for their professional formation.

1.5. Objectives

This section outlines the general and specific objectives set by the research group. As mentioned before, we have chosen the Task-based methodology for its resemblance to what the students of Industrial Mechanics will have to accomplish at the end of their specialty course, which is interpreting manuals of their respective field and using a certain type of language to perform a task. Our purpose is to determine and describe the effects on their performance in the English language, by presenting them with familiar language, activities, potentially achievable contents, and determining what degree of influence these strategies have on the students.

On another matter, we will focus on the students' perception about the English language. In relation to what the group have observed, the classes

have not been of any relevance or interest to the students, whether because of the aim of the English classes towards a general use of the language, the challenging level of the contents covered throughout the lessons, or simply because of the students' indifference towards learning a foreign language. We will try to determine the general perception of the students regarding the English Subject, and if there is an increase or not in said perception at the end of the research and the implementation of the Task-based methodology.

Having said this, the general objective of our investigation is:

- To investigate the effects of the Task-based methodology, according to the principles of "English for specific purposes", on the academic performance of Industrial Mechanics students at Liceo Industrial y de Minas Ignacio Domeyko.

The specific objectives of our investigation are:

a) To determine if there is an increase of the students' general perception towards the English subject.

b) To determine if there is an increase in the students' school performance on the English subject.

1.6. Hypotheses

In this section we turn our attention to the hypotheses stated by the research group, regarding the students, the context of the school, the English subject and the technical field the students are undergoing at the present time.

Due to the fact that the students are pursuing the first year of studies in a technical field at school, their attention and interests might be focused on specialty courses and the English subject may be relegated to a lower level of significance within the contents of the school lesson planning.

A second aspect that may play an important role in this investigation is the limited number of English classes that both groups (experimental and control) have experienced throughout the first and second semester. The full-time English teacher has been on medical leave since late July and the English classes for both groups of students have been fully re-established since September. We think this might be an important factor when conducting the lessons and asking the students to make use of the English language, for they may feel reluctant to participate in classes, whether because of shame, lack of motivation or simply because they feel comfortable not having English classes anymore. Having said this, and taking into account the preceding section, it would be reasonable to assume that this methodology may not be as effective as previously thought.

On the other hand, presenting the students with contents they are already familiarised with, might lead to an increase on their academic performance, for they will be facing contents, activities and tasks potentially achievable through previous knowledge. These claims rest on Krashen's research (1982); by engaging previous knowledge and working with it in the classroom, students might feel motivated, and their affective filter will be lowered, thus, improving the English language learning.

Having established these variables, our hypotheses are:

- The Task-based methodology, based on the principles of English for Specific Purposes, generates a positive general perception of the English language in students.

- The Task-based methodology, based on the principles of English for Specific Purposes, improves students' academic performance in the English subject.

- The Task-based methodology, based on the principles of English for Specific Purposes, reduces the students' academic performance in the English subject.

CHAPTER II:

THEORETICAL FRAMEWORK

2.1. Overview of the Technical Education in Chile

Technical education in Chile began in 1849, when president Manuel Bulnes officially founded “La Escuela de Artes y Oficios” (The School of Arts and Crafts) in “Barrio Yungay”. This type of education was a great challenge not only for the country, but also for authorities as well; they managed to develop and deliver an educational system according to the needs of the newly resurgent republic.

During the 1940’s, the Federation of Mining and Industrial students in Chile began adapting their own institutions to convert them into certified universities. Their aspirations materialized on April 9th, 1947, when President Gabriel González Videla, by decree N°1831, founded the “Universidad Técnica del Estado” (State Technical University).

In the last few years, Technical Education has suffered constant modifications. Technical institutions are now administrated by non-profit corporations, according to the decree N°3166 (delegated administration); all 70 technical schools in Chile work under this type of system. According to Blas and Planells (2009, p. 78); “the aim of technical education in Chile is to provide students with a specific labour formation as a result of an important part of educational objectives, and within the schedules and developmental stages of school trajectory of teenagers”.

Technical education plays an important role in the economic growth and development of the country. However, public policies regarding this specific type of education are limited and not assessed. According to an article published in 2013 by the Centre of Journalism Investigation ("CIPER", for its Spanish acronym), there is a lack of 600,000 professional technicians which, due to the important role that they play in social development as well as in national innovation and productivity, makes it necessary to strengthen and optimise the technical-professional education at both secondary level and higher education (CIPER Chile, 2013). "The labour market is now focusing on people's skills to contribute to the planned results of an organization and to adapt themselves to swift and strong changes. However, the skills of remaining 'employable' derived from a proper and adequate educational formation" (Blas & Planells, 2009, p.26)

This investigation took place in one of the 70 schools mentioned before. In 1988, former students of the Mining school of La Serena and the State Technical University founded a non-profit corporation, whose main objective was to collaborate with the development of the country by preparing highly qualified people and implementing a new educational project capable of adapting to the necessities of modern industries. In order to do that, three technical fields were implemented: Electricity, Industrial Mechanics and

Geology. This is what “Liceo Industrial y de Minas Ignacio Domeyko” (former “Liceo Industrial A - 21) was founded for.

Among the many subjects imparted by the school, one of them is “English as a foreign language”. Regarding this matter, the members of this seminar group have realised that the English subject at the Technical School is not appropriately developed. 11th and 12th grade students have only two hours of English per week, and the type of English covered in class does not relate to the basic skills students need to work on, according to the student profile of the school (“learning to do”, specifically). One of the skills is to interpret English Manuals of the Student’s own Field (Corporación Minera, 2014, para. 2); in relation to the student profile of the school, the group has observed that there is not concordance between the *General English* approach at the school, the resources used and taught, and what students should be able to do after graduating from Secondary level education.

2.2. English for Specific Purposes

English for Specific Purposes (ESP), as opposed to *English for General Purposes* (EGP), is a sphere of teaching considered to be a branch of *Language for Specific Purposes*. Since the term *specific* could result in many different explanations, depending on what is considered specific to people and disciplines in general, a definition for ESP is hard to provide. A review of the literature shows that Hutchinson and Waters (1991) refer to ESP

as an approach which is based on designing courses that may meet the learners' needs; it focuses on the reason why people would need to learn English. According to the authors, "Tell me what you need English for, and I will tell you the English that you need" is the main principle when working with English for Specific Purposes. (Hutchinson & Waters, 1991, p. 8)

There are some characteristics that define the ESP sphere of teaching. Many authors have developed their own absolute and variable features. We will refer to Dudley-Evans and St. John (1998), who have provided a list of absolute and variable characteristics:

2.2.1. Absolute characteristics

a) ESP is designed to satisfy the specific need of the learners.
b) It uses activities and methodologies according to the discipline that ESP serves.
c) It is centred on Language (grammar, lexis, and register), learning skills, discourse and protocol.

2.2.2. Variable characteristics

a) It may be related to or designed for specific disciplines.
b) It can, in a specific learning context, use a different methodology.

c) ESP is generally designed for students with an *intermediate* to *advanced* level of English, since it is assumed that they have basic linguistic knowledge of the target language.

Onysko, quoted by Girardot (2006), also points out the use of certain distinctive linguistic characteristics in ESP. One example is the reduction of lexical ambiguity, that is to say, the use of certain lexical terms that belong to a specific context. This is said to improve the learning process for people whose first language is not English, since ambiguous terms and potentially unhelpful lexical terms will be left aside.

2.2.3. Teachers and theoretical content

One of the problems in the ESP branch of teaching is the lack of skills, or more accurately, the unawareness of teachers about the discipline they will cover and adapt to English as a Foreign Language. Being Industrial Mechanics the discipline chosen for this particular investigation, it is difficult for a teacher to become a useful part of the learning process, when the students are already familiarized and, perhaps, more skilled in the technical field; Girardot (2006), states that English for General Purposes teachers would have to study and learn disciplines very different from their own area of expertise. In most cases, as the author points out, ESP teachers may find themselves in an uncomfortable position because they might feel incompetent about the discipline or technical field they are taking into account when

preparing their classes. However, Girardot (2006) refers to this matter stating that, while ESP teachers are said to work with specific vocabulary, the contents covered in class should not be too specific regarding the students' technical field. Instead, ESP teachers must have the ability to manage the class and become a proper link between the theoretical contents and the students, rather than trying to master the specific vocabulary of the target discipline.

There are some differences that emerge when talking about the way ESP and EGP teachers prepare class material and approach to the contents. ESP teachers may have not been prepared for the discipline they will serve. Therefore, they go through a self-guidance process in order to perform an activity that lies outside of their respective fields. This allows them to have a notion of the field on which they base their classes (Girardot, 2006). Also, Kertész (1997), quoted by Girardot, states that teachers of English for Specific Purposes differentiate from General English teachers in terms of adapting resources, contents and analysing the needs of English students.

2.3. Ausubel's Meaningful Learning

"If I had to reduce all of educational psychology to just one principle, I would say this: The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly" (Ausubel, 1968).

The concept of *meaningful learning* was coined by the American psychologist and professor, and one of the most influential figures of Constructivism, David Ausubel. This concept describes the type of learning in which the students relate the theoretical contents they already know to the ones that are being presented by the teacher. Thus, creating new ideas and re-organising the structures in order to form new knowledge. This new knowledge is considered *meaningful* when it is acquired and related to older contents by the students in a substantial way, rather than arbitrarily; that is to say, there is a link to some relevant aspects in the cognitive structure of the learner, such as an image or a concept (Ausubel, Novak, & Hanesian, 1983). Under this paradigm, it is suggested that the Teaching-Learning processes should have at least two defining features:

a) Teaching resources delivered to the students should possess a significance of their own; that is to say, all of their characteristics should be related with a certain amount of logical meaning.
b) Teaching resources should result in a potentially meaningful learning for the students; they should include in their design a link between previous knowledge of the students and the learning expectations (what the students will be able to do), so that they contain inclusive ideas in order to acquire new knowledge.

This type of learning differentiates from the more superficial and less substantial learning processes, such as the rote, repetitive, or *mechanical* learning (Ausubel, 1983), since the latter type of learning lacks a meaning of its own, or does not relate directly to the students' interests and previous knowledge. Generally, contents are *assimilated* more than *learnt*, where assimilated would mean that they require permanent practice by the learner, and if not, are otherwise forgotten; on the other hand, learnt would signify that contents and knowledge are internalised in a more permanent and significant way.

As stated earlier, meaningful learning is accomplished when contents are re-structured substantially and not arbitrarily, yet Ausubel does not separate both of these concepts completely. Instead, as mentioned by Orellana Valdés (2009), Ausubel places them at two ends, stating a continuum of knowledge where mechanical learning would be on one side, and meaningful learning would be placed on the opposite side. One example of mechanical learning would be the simple and meaningless learning of a mathematical formula, and an example of meaningful learning would be the relationship between various concepts of mathematical formulas (e.g., their similarities, differences, and usefulness when facing a mathematical problem). It is important here to stress, however, that meaningful learning is not just the simple connection between previous and new knowledge, but

also the re-structuring and modification of the cognitive structures of the learner (Orellana Valdés, 2009)

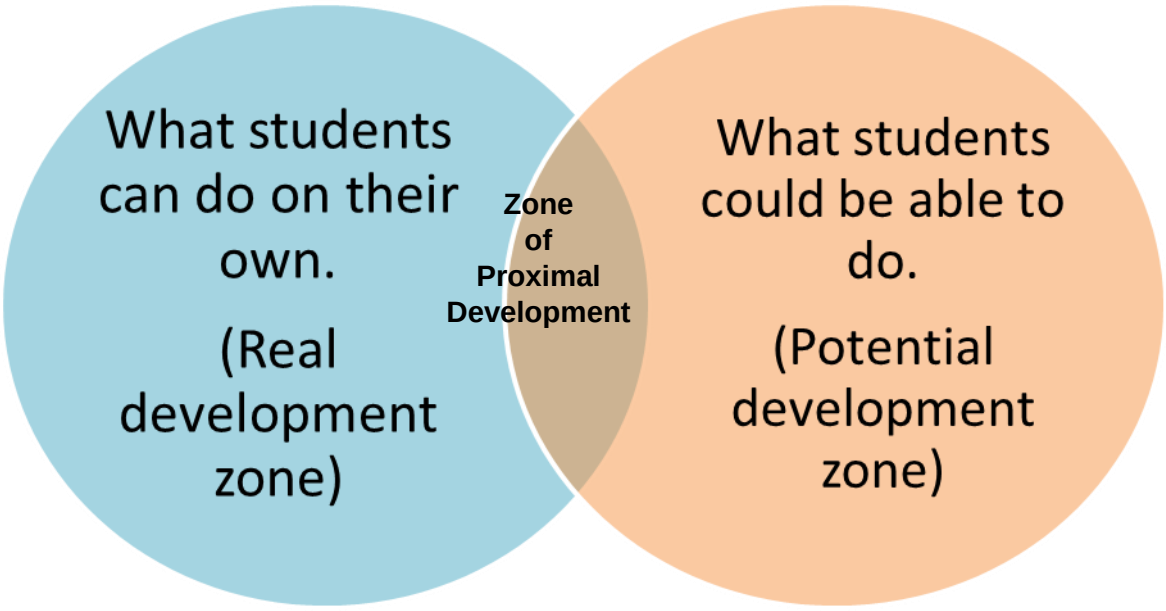
2.4. Vygotsky's Proximal Development Zone

The *proximal development zone* is a term coined by the Russian psychologist Lev Vygotsky in 1931. This concept specifies that two students, with similar cognitive development and having been presented with an activity that involves a problem, can solve the latter with the help of a tutor, teacher, guide, or more qualified classmate.

To understand this concept, which plays an important role in the socio-cultural and socio-historical theory, two factors should be taken into account:

a) The *Real* development zone, which corresponds to any task or activity the students *are* capable of doing on their own that involves real and effective knowledge. For example, the students' ability to describe their bedrooms using English vocabulary.
b) The *Potential* development zone, which corresponds to theoretical contents, activities and tasks students *may* be able to do, with the help of the teacher, a tutor, or a more skilled classmate. For example, the students' ability to describe their homes using English vocabulary.

As a result, the proximal development zone is defined as the gap between the real level of development, determined by the ability to resolve a problem alone, and the potential level of development, determined by the solution to that problem, accomplished under the guidance and help of an adult or a more skilled classmate (Vygotsky, 1988).



The concept *proximal* points at the help provided to the student, which does not have to be greater than what the student already knows or is familiarised with, since it would not be coherent with the contents covered. Thus, it would not be focused on the *potentially developing* areas. Furthermore, the help provided must be on relatively new contents, and not on contents already covered. The teacher must provide the student with tasks

and activities that can be completed in a short period of time, and later on, performed autonomously.

The zone of proximal development suggests a series of steps to follow, so that an optimum learning can be achieved:

a) To know the real abilities of the students: knowing what students are able to do, so that *developable* content can be delivered to them.
b) To keep a systematic monitoring of the progress: making sure who, or which groups of students, can move on to the next level and who needs counselling and reinforcement.
c) To respect the natural transition of accomplishing task after task: following a logical mastery of skills (performing a simple jump before executing a double summersault, for example).
d) To not overlook the natural process: it is common in many teachers to skip steps and tasks to move on to the next unit or set of contents in order to optimise their time. This could result in stagnation in the students' development, since they could be deficient in performing a specific activity of vital importance to develop complex ones. The students, realising their lack of skills, will be reluctant to do the task assigned, or even to take part in the school subject.

Regarding this matter, we believe that these ideas relate directly to our research. It is of great importance to take into account the previous knowledge and the current level of cognitive development (being, in this case, the level of English possessed by the students). By knowing this, we could be able to determine the starting point of our investigation, and we could work with more useful contents to generate a positive influence on students, in terms of academic performance and motivation.

Vygotsky (1988), states that the learning process stirs a series of internal evolutionary processes that may arise when the students interact with people in their own environment and with a helpful guide. All of these factors are essential features of learning. Moreover, Vygotsky stresses the fact that the person acting as a *scaffold* between real and potential knowledge should be someone that knows not only more about the contents than the student, but also knows about a topic that the students shall develop and internalise in the near future.

2.5. Stephen Krashen: Theories of Second Language Acquisition

Stephen Krashen is an American Linguist and Emeritus teacher, author of the five theories of second language acquisition. While the theories are referred to as a single group, these investigators have based their research on three important and defining hypotheses:

2.5.1 The input hypothesis

The input hypothesis, in an educational context, makes reference to the amount of Input (in this case, a foreign language) used in the acquisition process. Krashen (1982) establishes that this input (referred to as *i*) should be related to what has already been learnt or to concepts that are useful for the students. Furthermore, he establishes that, in order to foster the acquisition process, the teacher or guide must provide the students with the immediate next level of a logical skill sequence, defined as *i+1*. This type of content is referred to as *comprehensible input*; knowledge that is understandable and relevant to the students, according to their stage of development, age, personal interests, and previous experience. This is similar to what Vygotsky (1988) published, where the tutor in charge works with *potentially developable* knowledge.

2.5.2. The affective filter hypothesis

The affective filter hypothesis states that affective and emotional factors can foster or hinder the acquisition process of a second or, in this case, a foreign language; however, these factors are external to the process. The theory still maintains the input as the main variable in the acquisition of a second or foreign language (Krashen, 1982). The external variables, then, are motivation, self-esteem, and anxiety. The affective filter theory explains that the students' results vary depending on the level or strength in which

these variables manifest themselves. A clear example of this would be an extremely anxious student; his/her affective filter would rise, inhibiting the acquisition process and rejecting the potentially *developable* input delivered. On the contrary, a motivated and confident student would acquire knowledge in a better way because his/her affective filter would be “lowered” (Krashen, 1982).

2.5.3. The natural order hypothesis

The natural order hypothesis states that there is a predictable order of acquisition of grammatical structures in which students develop certain competences in their first levels of the learning process, and others in the next levels, following an order or logical pattern which goes in concordance with the knowledge learnt (Krashen, 1982); in other words, certain abilities are acquired, and then, new knowledge is built onto previous knowledge.

2.6. Task-based learning.

“Task-based learning is a natural extension of communicative language teaching” (Harmer, 1998). It is based on the principle of presenting students with real-life tasks which are focused and targeted to use the language in a real context. Instead of teaching a language to perform a specific activity, the activity itself becomes the main focus that can lead to a subsequent study later (Harmer, 1998). Harmer states that the typical sequence of TBL begins with a *pre-task*, where students are introduced to the

topic. Later, they are presented with a *task cycle*, where the students plan the task and gather information to perform it. Finally, a *language focus* phase is presented where the students practice the language and make improvements to it (Harmer, 1998).

Task-based learning allows students to concentrate on achieving things with language; the objective of the lesson is most essential when selecting the language that is going to be used to perform certain tasks (Harmer, 1998).

2.7. Overview of the theoretical framework

The previous theories were chosen due to three main reasons. First of all, as teachers at Liceo Industrial y de Minas Ignacio Domeyko, we could observe that students of specialties (Geology, Industrial Mechanics and Electricity) were covering a basic and, we could say, general use of the English Language, instead of using vocabulary words related to their technical field (Machinery, Security gear, Mechanic workshop vocabulary, among others). Based on the English for specific purposes concept, we intend to face this problem, emphasizing the contents students need to know in their fields, thus, achieving one of the main objectives stated in the school profile, which is to read and interpret manuals in order to follow logical sequences (“La plaza Domeykana”, 2014).

Secondly, the content covered by the teachers of English at the school might not be appropriate for students due to the fact that such contents and topics are not contextualized, so students might not understand them very well; Krashen (1982), Vygotsky (1988) and Ausubel (1983) mention this situation talking about *the Input Hypothesis, the Zone of Proximal Development*, and *Meaningful Learning*, respectively. All these theories are combined to make the contents more familiar, using previous knowledge and pointing to their needs.

The third main reason has to do with the students' motivation. As the contents were not familiar to students, they did not feel motivated in the English classes. This is why the affective filter hypothesis is so relevant in this investigation (Krashen, 1982). The more motivated the students, the lower the affective barrier and the more likely students will learn.

The previous literature review has led the group members to realise that a new methodology has to be developed in order to make English classes more effective and motivating to the students. In order to provide students of a technical field with potentially meaningful learning, a thorough revision of resources has to be made. Specifically, in terms of the English subject, class contents and resources have to be focused on the students' needs and skills required by the technical school. By presenting a tailor-made language, based on previous knowledge and comprehensible theoretical

content, it may be possible to make English lessons achievable to students. Furthermore, presenting this familiar content to students may help them to acquire the English language in a more significant way, since English classes will not be so different from their actual line of work and personal interests. This new methodology could result in a change of perception towards the English language since it could become a useful tool when facing the labour market.

CHAPTER III:

DESCRIPTION OF THE STUDY

3.1. The Study

The following chapter outlines the type of investigation the research group carried out.

This investigation corresponds to a quasi-experimental quantitative approach with a correlational design.

Hernández, Fernández & Baptista (2006, our translation) explain that the quantitative approach deals with objective facts and numerical interpretation based on statistics; however, any quantitative analysis is related to a qualitative part present in the data interpretation. The previous is reflected in our work, due to the fact that data interpretation is in form of statistical graphs and numerical data, yet the results were also analysed and interpreted by the investigators in order to provide a more detailed summary of the facts.

Being this a correlational type of investigation, we will try to establish the relationship between the independent variable (Task-based methodology) and the dependent variables (students' general perception and students' academic performance in the English subject), analysing the outcomes obtained through this relationship (Hernández, et al., 2006).

Furthermore, the investigation corresponds to quasi-experimental study, as the investigators will modify at least one Independent variable in order to observe its effects on the dependent variables (Hernández, et al. 2006).

3.2. Research Problem

This investigation originated after reading the student profile of the school, which is available in the school public website. It establishes all the abilities and skills that the students are supposed to develop at the end of their academic process. Among those skills, there are some related to the English subject. The most important one establishes that the students will be able to read and understand a technical manual related to the students' specific fields ("La plaza Domeykana", 2014). The problem is that the methodologies used in the English classes do not go along with the skills that are meant to be developed because the English subject is aimed to develop a general use of the language, and there is not a specific planning according to the students' real necessities which are to interpret technical manuals in English. This is the reason why the group decided to elaborate an English unit following the principles of the Task-based methodology in one of the technical courses. The present research investigated the effects of this methodology on one of the 11^{th} grade classes of Industrial Mechanics at Ignacio Domeyko Industrial and Mining School. This methodology focused on developing the skills and accomplishing the objectives described in the

student profile of the school for the students completing their high school education.

3.3. Methodology

The members of the investigation group narrowed the research to one field only, for elaborating a lesson unit of a technical area demands reading and training in the field selected; in order to elaborate and appropriate competent technical lesson planning, outside of the investigator's area of expertise, the group focused only on the Industrial Mechanics class. The level selected was 11th grade. Teachers of the selected area were interviewed in order to gather information about the contents covered in their classes. Bibliography recommended by the teachers was consulted and that information was taken into account to elaborate the lesson planning (see Appendix M), activities and lesson resources for the intervention unit.

After selecting the methodology that was going to be applied in the research, and developing the oriented lesson planning, the group set the objective of assessing the general perception of the students towards the English subject at the school. This was accomplished by applying a *Likert scale* to the students. The scale was written in Spanish so that students could understand the sentences, avoiding ambiguity and miscomprehension, thus, providing us with reliable results.

The scale consisted of fifteen items, presented into the form of positive statements which students had to evaluate according to five agreement levels. The group represented each response to these levels with a number. The levels of agreement are: *strongly disagree* (1), *disagree* (2), *neither agree nor disagree* (3), *agree* (4), and *strongly agree* (5).

In order to measure the students' general perception of the English subject, the Likert scale deals with three main areas. The first area is related to the teacher's skills and attitudes in the English subject; statements 1 to 8 deal with aspects such as classroom management, the type of class work fostered by the teacher, and English knowledge, among others (see Appendix A).

The second area is related to the students' skills and attitudes that are part of the investigation; statements 9 to 12 deal with aspects such as students' English knowledge and students' disposition in the English classes, among others (see Appendix A).

The third area assesses the importance and utility of the English language and subject, both in the present and the fore coming future; statements 13 to 15 deal with aspects such as the utility of the English language, the importance of it in the labour market, and the meaningful

relationship between the English language and the students' own technical field (see Appendix A).

The Likert scale was applied at the beginning and at the end of the investigation; by comparing the first results to the last ones it could be possible to ascertain if the general perception of students towards the English subject, in the three major areas described, was altered or not by this new methodology implemented.

The Likert scale was validated by University Professors of the "Educational Research" area, and English teachers who also contributed to the validation of the scale. The Likert scale was submitted to a total of three revisions before applying it to the courses selected for this investigation.

To evaluate if there is an increase in the students' performance in the English classes, the group elaborated an English test containing exercises that can assess the skills stated in the student profile of the school (see Appendix N). This test was applied at the beginning and at the end of the investigation. We compared and analysed the results from both tests so we could evaluate if the new methodology had any influence on the students' performance in the English subject.

The English test consisted of five items, with a total of 45 points. Each item focused on one comprehension and knowledge skill, according to

Bloom's Taxonomy of objectives (see Appendix J). Each student was placed into three different categories according to the test results. Students who accomplished 29 percent or less of the total score was labelled under the *Beginner* category; students who achieved between 30 percent and 70 percent of the total score were placed on the *Intermediate* level; and finally, students who obtained between 71 percent and 100 percent of the test, were placed on the *Advanced* level. The English test was revised by University professors of English who contributed their opinions regarding syntactic and grammatical accuracy. Moreover, a Spanish copy was handed out to a professor of Industrial Mechanics at Ignacio Domeyko School, who also contributed to the edition of the English test in terms of the contents of the technical field included in the evaluation instrument.

Once the methodology was selected and the evaluation instruments were developed and edited, the group set the hypotheses, in which the investigators inferred what will possibly happen at the end of the intervention project. According to previous experience with students, gathered in English classes at the school, it is hard to believe that they will increase their academic results because they have not been exposed to either this type of English or this type of methodology.

The first step of the intervention unit was to apply the data collection instruments. The group applied the Likert scale and the English test to the

two groups selected for the research; the experimental group and the control group. By contrasting the results of the Likert scale and the English test from both groups, the results should be more accurate and internally valid because of the comparison and analysis of two different sets of students' data.

The next step of the intervention project was to carry out the new lesson planning based on the Task-based methodology. This planning was divided into six classes which were focused on developing students' skills stated in the "learning to do" area of the student profile ("La plaza Domeykana", 2014). Contents of the industrial mechanics field were presented in the form of simple English exercises and tasks, so that the content could result common to the students; e.g., lexis and topics related to the industrial mechanics area, emphasizing vocabulary related to machinery, tools, processes and risk prevention. The classes had an increasing level of difficulty, going from *knowledge* to *comprehension* skills, according to Bloom's taxonomy of Objectives (see Appendix J). Students covered in classes how to identify and understand words and concepts, along with understanding general ideas in a text. Then, how to understand a descriptive text related to their field, which supposes a higher degree of comprehension. The objective of every class is to cover lexis and specific contents related to the industrial mechanics field in the *pre-task, task-cycle*, and *language focus* phases, according to the Task-based methodology (Harmer, 1998). The purpose of

this type of methodology is to present students with a type of language necessary to perform a *big-task* at the end of the intervention process, where all of the English lexical terms and reading strategies could result in a more useful type of English, related to the students' field and needs. The planning included some evaluations along the process in order to monitor and check the students' progress not only at the end of the unit, but also during the whole intervention.

The third step was to apply the evaluation instruments on both groups once the intervention unit has finished. As it was established beforehand, the purpose of applying these English post-test and Likert scale was to contrast the results and determine if there were modifications in the students' academic performance and perception of the English subject. Once the group collected the data from the pre- and post-evaluation instruments, it was necessary to analyse and interpret the results gathered. These results were plotted on graphs and then contrasted; on a first instance, by comparing the results from the pre- and post-test of each group separately, and afterwards, by comparing the results of the control group with the experimental group. This was done to determine the influence of the new methodology and to observe the difference between the two groups.

After analysing and interpreting the results of the investigation, the group described and commented on the evaluation results. The investigators

came to the conclusions on the investigation; determined and corroborate the hypotheses and gave the group's opinions, comments, and suggestions about the results.

After gathering the results of the pre- and post-Likert scales, and the pre- and post-English tests, the research group conducted a focus group at the end of the process of implementation of the new methodology. The focus group results complemented the ones provided by the Likert scale. The group generated a dialogue among the students to inquire about their general perception in a more detailed way, thus, supporting the results evidenced in the Likert scales. Some of the open questions the investigators asked were "How do you describe the relationship with your teacher during the English classes?" "How helpful is English for you?" "Do you feel motivated in the English classes?" among others.

CHAPTER IV:

RESULTS AND DATA INTERPRETATION

This chapter outlines the results provided by the data collection instruments applied in both the control and experimental group.

The investigators analysed the relationship between the experiment variables. The independent variable is the Task-based learning methodology. The dependent variables are the students' general perception towards the English subject and the students' school performance. The independent variable was expected to modify both dependent variables in the experimental group as the investigators applied the methodology mentioned before.

Due to the fact that there were a total of twenty-one out of thirty students in the control group, and sixteen out of twenty-eight students in the experimental group, the investigators decided to consider them as the definitive sample. The same amounts of students were considered for all of the evaluation instruments (Likert scale and English test).

4.1. Pre-intervention instruments: Likert scale

The Likert scale is supposed to measure the students' general perception towards the English subject. The results of the Likert scale were tabulated in an excel spreadsheet. The investigators assigned a number to each level of agreement; as all the statements were affirmative, it was possible to enumerate them from 1 to 5 in an increasing order. The levels of agreements s*trongly disagree*, d*isagree*, n*either agree nor disagree*, *agree*, and s*trongly agree* were assigned to the numbers *1, 2, 3, 4*, and *5* respectively, to represent a range of approval or agreement (see Appendix A).

4.1.1. Pre-Likert: control group results

The pre-Likert scale was administered to the control group and the results were tabulated in an excel spreadsheet (for details, see Appendix B).

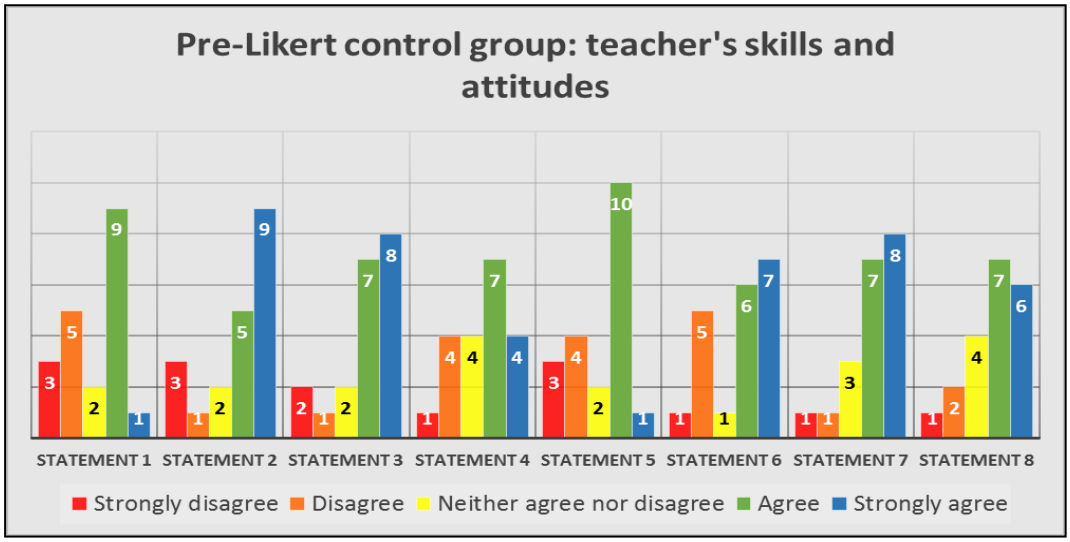


Illustration A.1

Regarding the teacher's skills and attitudes in the control group, in general, students felt comfortable and they approved of the way the teacher is prepared, conducts the class and generates an atmosphere of group work where they can develop themselves in the English language; statements 1, 2, and 5 relate to these matters and had the highest levels of approval.

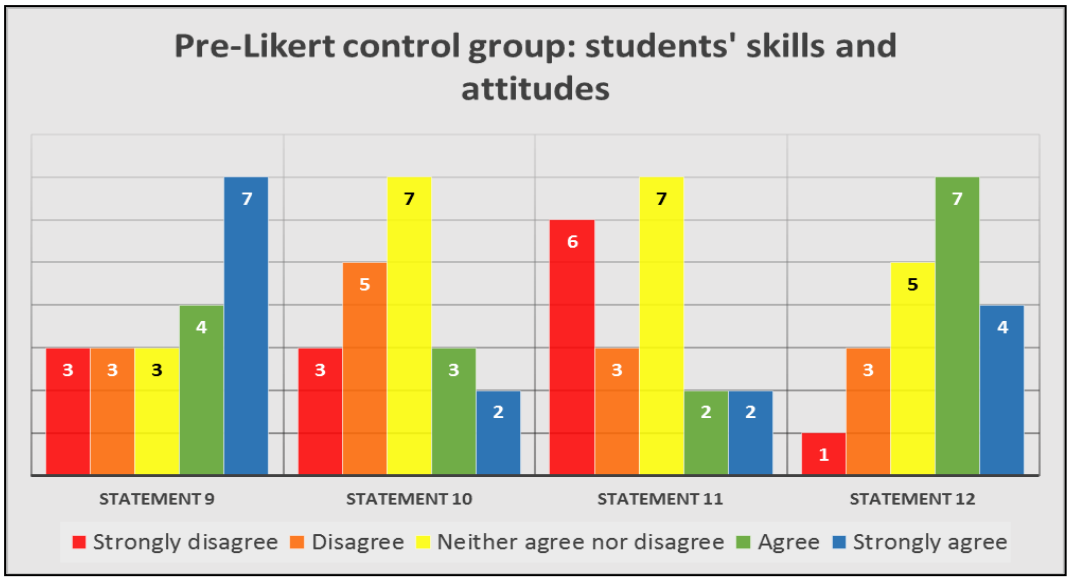


Illustration A.2

The students' skills and attitudes category in illustration A.2 showed that students were quite divided in their decision. English was interesting and appealing to them (statement 9), yet they were not so inclined to say that English is a language they could understand in written form (statement 10). Also, oral production was a problem for them (statement 11). However, they felt their work and performance in the English subject was acceptable and positive (statement 12). As a group, we think of this as a contradiction and it reflects the control group's way of working in the English classes; lessons that are not so challenging are the most preferred ones.

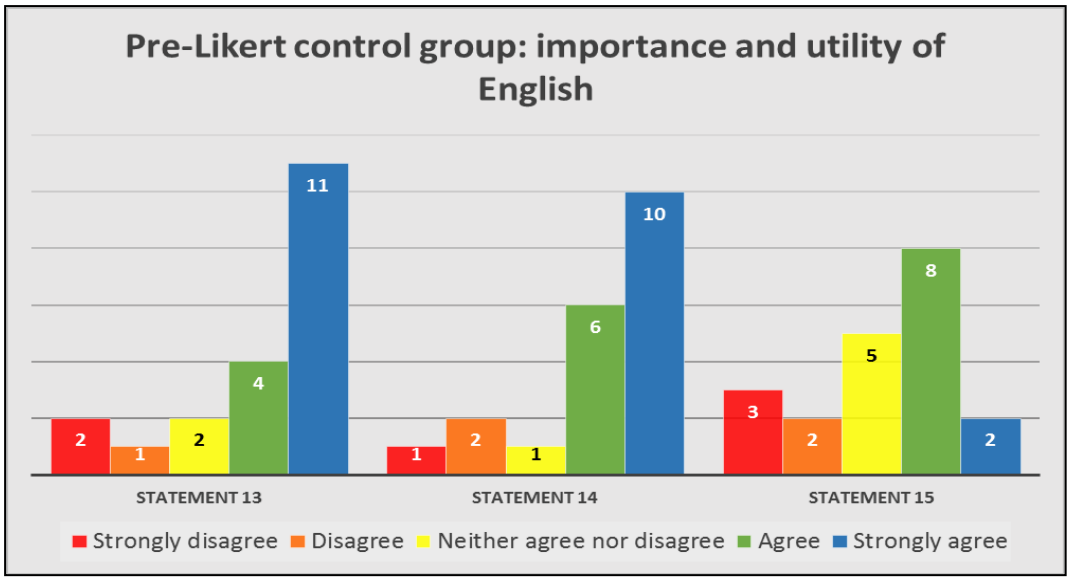


Illustration A.3

Regarding the importance and utility of English, showed in illustration A.3, students strongly agreed with the notion of English being a language that will offer work opportunities in the future (statement 13) and it will be useful in work contexts, as well as in everyday life situations (statement 14). However, when talking about covering technical content in the English class (statement 15), students were quite divided in their decision, where just two students felt they strongly agreed with this statement, eight students who agreed and five students who neither agreed nor disagreed.

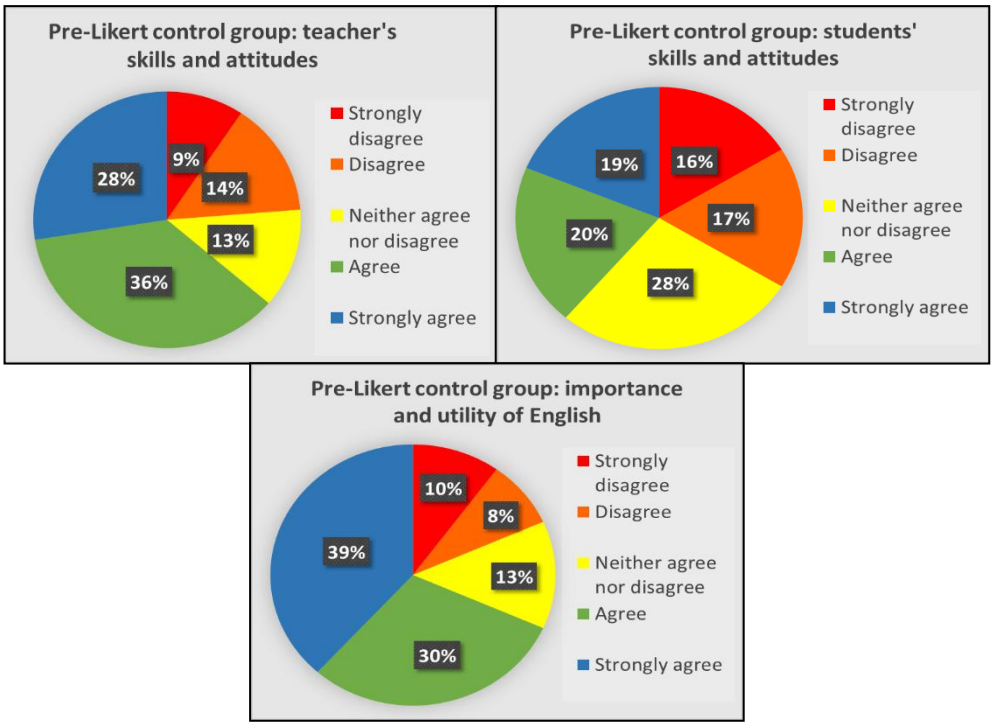


Illustration A.4

According to illustration A.4, we could observe that the general perception of the control group towards the teacher's skills and attitudes was quite positive; 36 percent of the students agreed and 28 percent strongly agreed with this criterion.

Regarding the students' skills and attitudes, we could observe that there was no clear consensus in this particular criterion. Percentages were quite similar, yet the highest percentage belonged to the *neither agree nor disagree* category. We could infer that students were not very confident towards their skills in the English subject.

Regarding the importance and utility of English, the highest percentages came from the agree and strongly agree categories; according to students, English language was considered to be of vital importance and they felt it could be a useful tool in their own line of work.

4.1.2. Pre-Likert: experimental group Results

The control group was presented with the pre-Likert scale and the results were tabulated and charted (for details, see Appendix C).

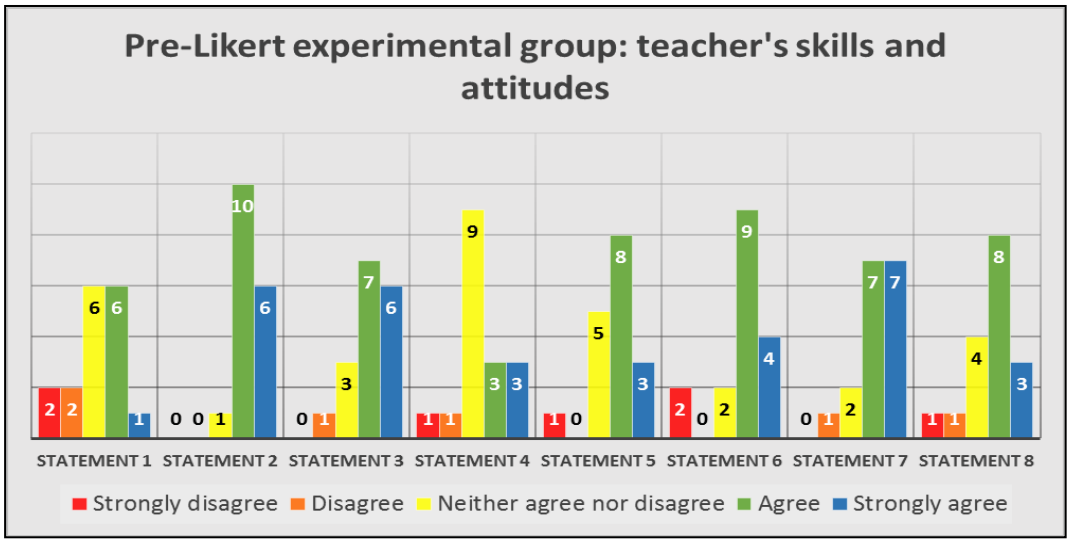


Illustration A.5

Regarding teacher's skills and attitudes from the statements 1 to 8 in the pre-Likert scale of the experimental group, illustration A.5 showed that 43 percent of the class agreed with the teacher's knowledge and the way the classes were conducted, being the statements 2 and 6 the ones with the highest levels of acceptance.

In general, illustration A.5 showed that the level of agreement towards the teacher's skills and attitudes was positive and students recognised and approved of the teacher's English knowledge and class management.

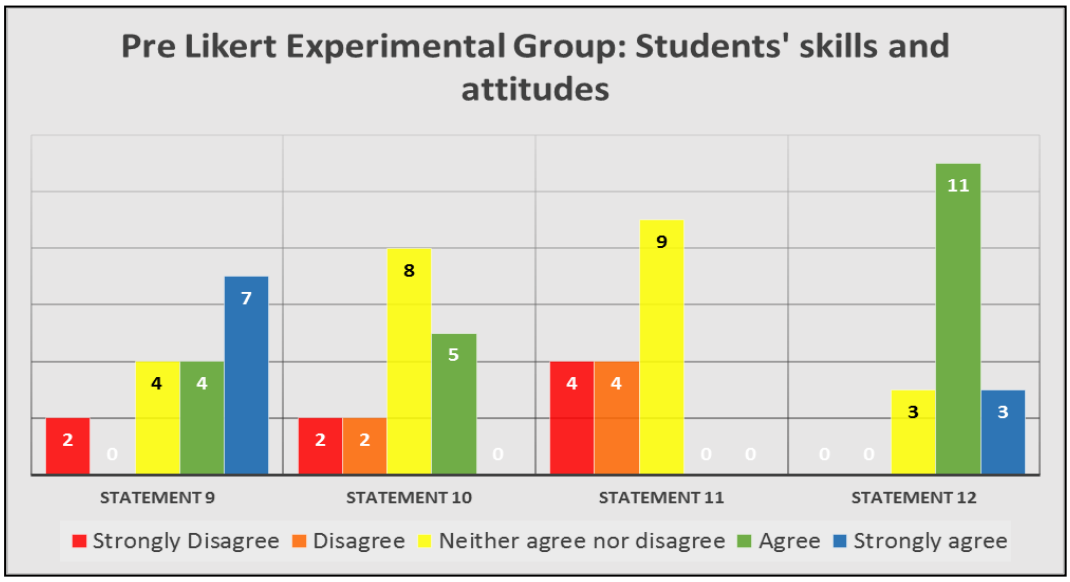


Illustration A.6

Regarding students' skills and attitudes, illustration A.6 showed that there was a tendency from students to approve of their own skills. Statement 12, related to English tasks and exercises performed by students in the English class (see Appendix A), has the highest percentages of acceptance. Statements 10 and 11, related to the students' competence regarding written and oral production, showed that students were not so comfortable and in agreement with their own productive skills. Still, levels of acceptance were quite positive for this category.

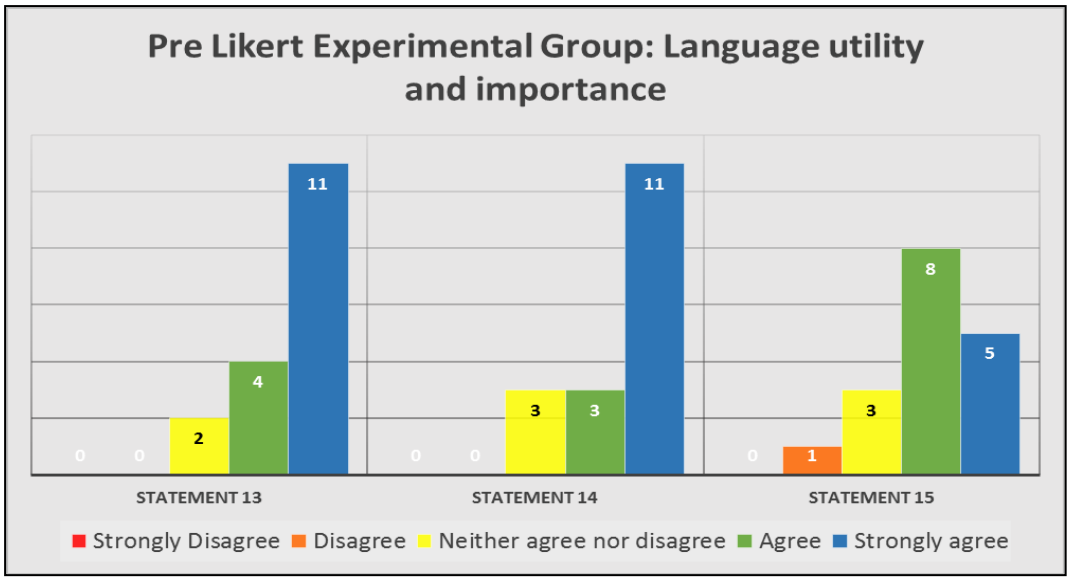


Illustration A.7

Concerning the importance and utility of English, we could observe from illustration A.7 that, according to students, English is a useful tool and a language that can provide work offers and opportunities even outside their technical field (see Appendix A). Students could relate English to contents of their own field and they felt they could reinforce such contents in the English subject.

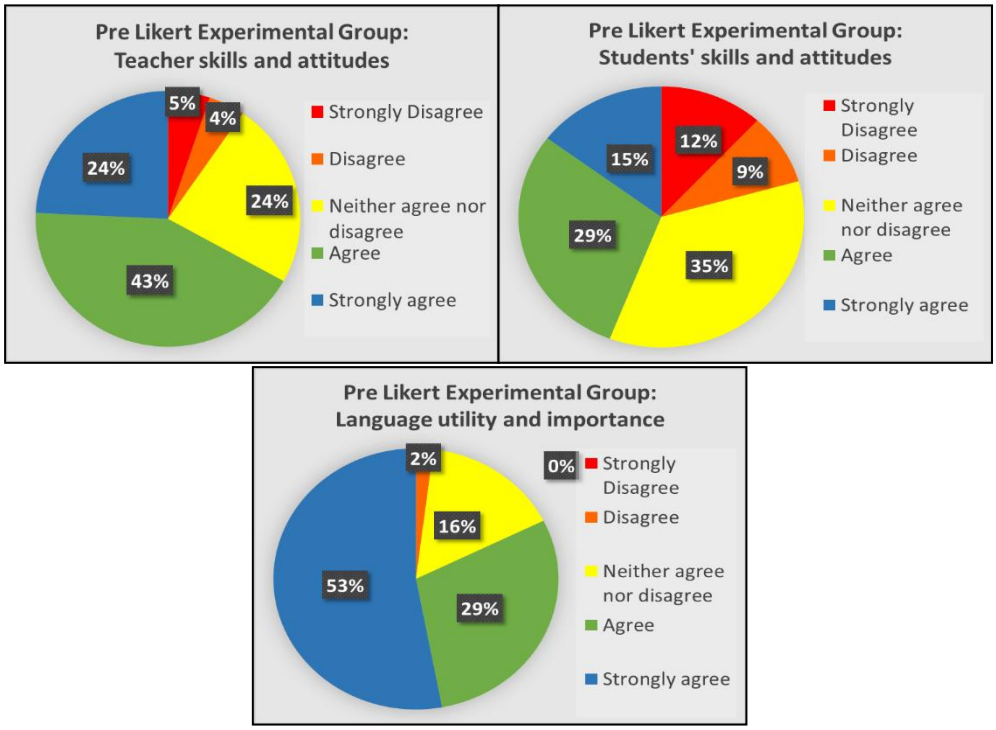


Illustration A.8

The general perception of the experimental group was quite positive. Regarding the teacher's skills and attitudes, 43 percent agreed with the way their teacher prepared and conducted an English lesson, which represented the highest percentage. However, 24 percent of the students either strongly agreed or neither agreed nor disagreed with the same category, dividing the students' sample in its decision.

Regarding the students' skills and attitudes, 35 percent of the students neither agreed nor disagreed with their own performance in the English subject, i.e., productive skills, reading comprehension and overall development in the class.

Regarding the importance and utility of English, 53 percent of the students strongly agreed with the notion of English being an important and useful tool for their line of work (see Appendix A). The second highest percentage was the Agree category with 29 percent of preferences.

4.2. Pre-intervention instruments: English test

The pre-test results were gathered and tabulated into an Excel spreadsheet (see Appendix D and E). The data were inserted in the spreadsheet as follows:

- "X" for every right answer,

- "\" for every wrong answer;

- "0" for every blank answer.

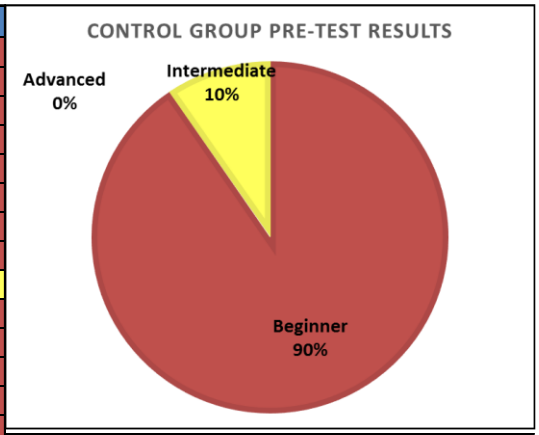
The previous symbols were chosen and inserted to obtain information as to what extent the tests were developed; this, to evaluate the level of skills, commitment, and participation of the students at the moment of responding to each question of the test.

In terms of the Test results, the investigators established a 15 percent range to determine if there is a significant change between pre- and post-tests; i.e., a 15% increase of the total score, compared to the pre-test, would represent a significant positive change in students' academic result, whereas 15% decrease, regarding the pre-test total score, would show a significant negative change in students' academic result.

4.2.1 Pre-test: control group results

The control group results were tabulated and charted (for details, see Appendix D). As stated earlier, nine-teen students, out of thirty were considered in this evaluation.

Tests Applied	Percentage	Category
Student 1	13%	Beginner
Student 2	4%	Beginner
Student 3	4%	Beginner
Student 4	7%	Beginner
Student 5	4%	Beginner
Student 6	9%	Beginner
Student 7	9%	Beginner
Student 8	2%	Beginner
Student 9	31%	Intermediate
Student 10	18%	Beginner
Student 11	7%	Beginner
Student 12	11%	Beginner
Student 13	27%	Beginner
Student 14	9%	Beginner
Student 15	7%	Beginner
Student 16	4%	Beginner
Student 17	4%	Beginner
Student 18	18%	Beginner
Student 19	33%	Intermediate
Student 20	9%	Beginner
Student 21	18%	Beginner



Beginner	Intermediate	Advanced	Absent
19	2	0	9

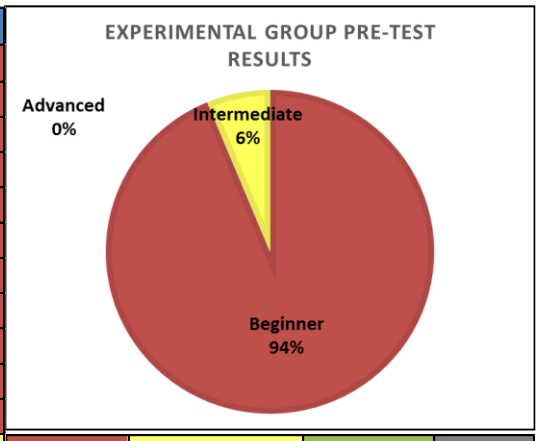
Illustration A.9

The pre-test results of the control group showed that 90% of the students were placed in the *beginner* level, and only two students achieved the *intermediate* level; student 9 got 31 percent of correct answers in the test, and student 19 obtained 33 percent, being the two highest scores for the control group. In general, these results reflected the initial premise of the investigators, since it was the first test of this kind ever applied in the school, and students were not too familiarized with the contents and type of exercises provided in the test.

4.2.2. Pre-test: experimental group results

The results of the experimental group were tabulated and charted (for details, see Appendix E). In this group, sixteen out of twenty-eight students participated in the pre-English Test.

Tests Applied	Percentage	Category
Student 1	4%	Beginner
Student 2	0%	Beginner
Student 3	4%	Beginner
Student 4	4%	Beginner
Student 5	0%	Beginner
Student 6	11%	Beginner
Student 7	4%	Beginner
Student 8	20%	Beginner
Student 9	4%	Beginner
Student 10	24%	Beginner
Student 11	7%	Beginner
Student 12	49%	Intermediate
Student 13	0%	Beginner
Student 14	9%	Beginner
Student 15	4%	Beginner
Student 16	7%	Beginner

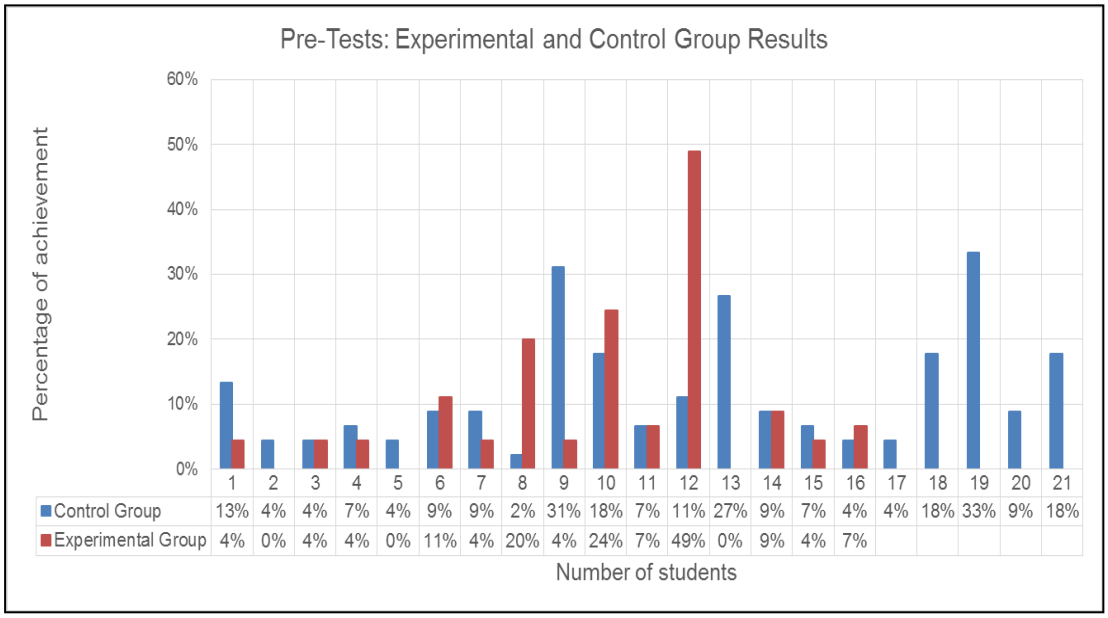


Beginner	Intermediate	Advanced	Absent
15	1	0	12

Illustration A.10

The pre-test of the experimental group evidenced that 94 percent of the class was placed in the *beginner* level, where only one student achieved the *intermediate* level with 49 percent of the total score. As in the control group, this was the first time that the class was presented with a test of this kind, and none of the students were placed in the *advanced* level.

4.2.3. Pre-test: control and experimental group results



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Control Group	13%	4%	4%	7%	4%	9%	9%	2%	31%	18%	7%	11%	27%	9%	7%	4%	4%	18%	33%	9%	18%
Experimental Group	4%	0%	4%	4%	0%	11%	4%	20%	4%	24%	7%	49%	0%	9%	4%	7%					

Illustration A.11

A comparison of both pre-tests of the control and experimental group showed that their results were quite low; only student 12 from the experimental group managed to answer 49 percent of the questions correctly. The rest of the students achieved fewer than 33 percent of the total score.

These results were to be expected since none of the groups were exposed to this type of English vocabulary and exercises.

By analysing the answers provided in the test from both groups (see Appendixes D and E), we could see that most of the students chose to leave some of the exercises blank (or in some cases, the whole test), despite the fact they were urged to complete the test as much as they could. This has led us to believe that those students were not so much interested in participating in the evaluation because English is not a language they feel competent in, according to the results of the pre-Likert scale, regarding students' skills and attitudes (see illustration A.2 and A.6). The Likert scale graphs showed that the English language was appealing to students, English classes were interesting, but they did not feel totally capable of understanding English texts. This may have been the reason why some of the tests were handed in partially or totally blank.

4.3. Post-intervention instruments: Likert scale

The general objective of the post-Likert scale was to show the variations in the perception of the students, after the intervention process of the investigation, from both the control and the experimental group. By comparing the pre- and post-Likert scale results, we could be able to determine if the new methodology implemented affected at all the students'

general perception of the English language, as well as the English subject at school.

4.3.1. Post-Likert: control group results

The control group were presented with the post-Likert scale. Their results were tabulated and charted (for details, see Appendix F).

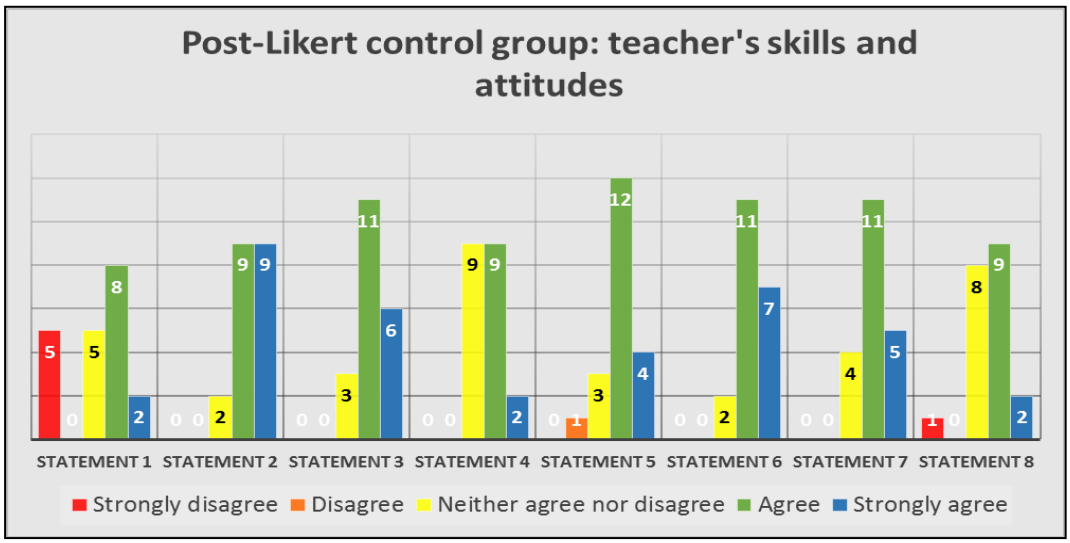


Illustration B.1

The post-Likert results, regarding teacher's skills and attitudes, showed that students were in agreement with the teacher's knowledge of English and the way classes are conducted; statement number 2 and 5 got the highest level of approval. In general, students showed a positive reception towards the teacher and the English class altogether. It is interesting to observe here that, compared to the previous Likert scale results, there is now a higher level of approval towards the English subject and the teacher, in spite of the fact

that this particular group did not go through any of the intervention part of this investigation.

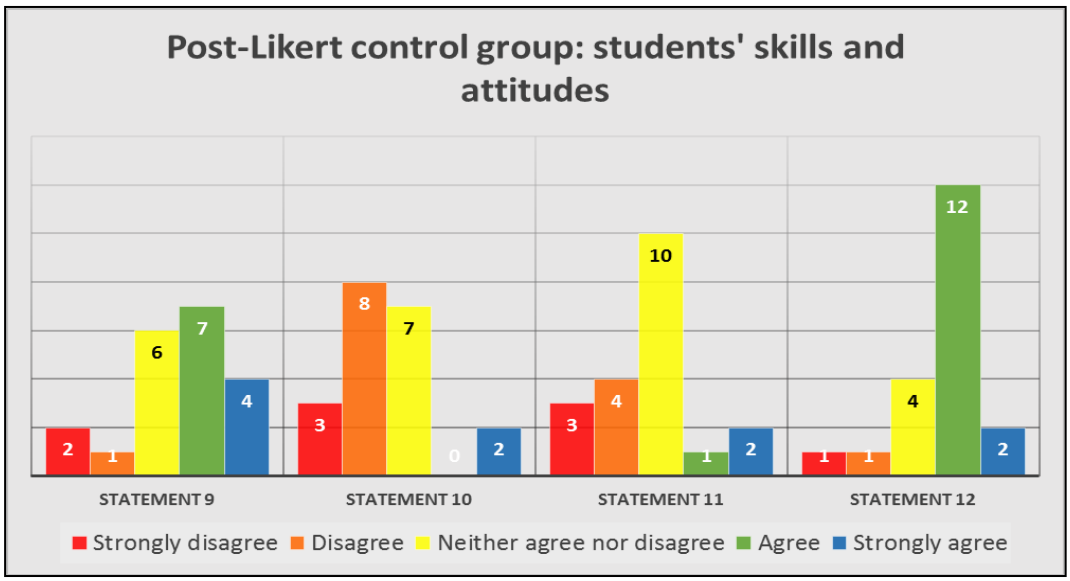


Illustration B.2

Regarding student's skills and attitudes, illustration B.2 showed that, compared to the last Likert scale, students agreed more with the way they carried out tasks provided in the English subject. The results also showed a decrease in the level of approval towards the English language: statement 9 (see Appendix A) showed that only four students were interested in learning the English language, different from the seven students from the previous Likert scale.

It is relevant here to point out that, according to statement 10 and 11, related to students' reading and speaking skills, the graph showed a

decrease in the percentages of agreement towards said skills. Yet, students felt comfortable with their performance in the English subject, according to the result in statement 12, related to exercises in the English subject.

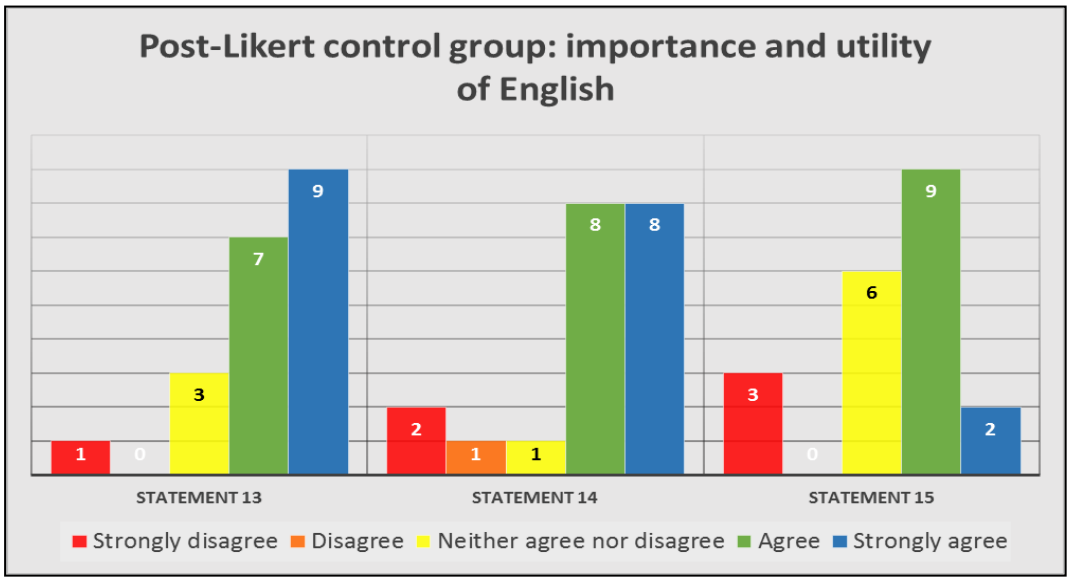


Illustration B.3

Regarding the importance and utility of English, students' responses have constantly suggested that this language would generate work opportunities for them (statement 13, see appendix A) and it would also be useful in everyday situations and contexts. Levels of acceptance were still within the highest ranges. No major changes were evidenced compared to the previous results of the Likert scale.

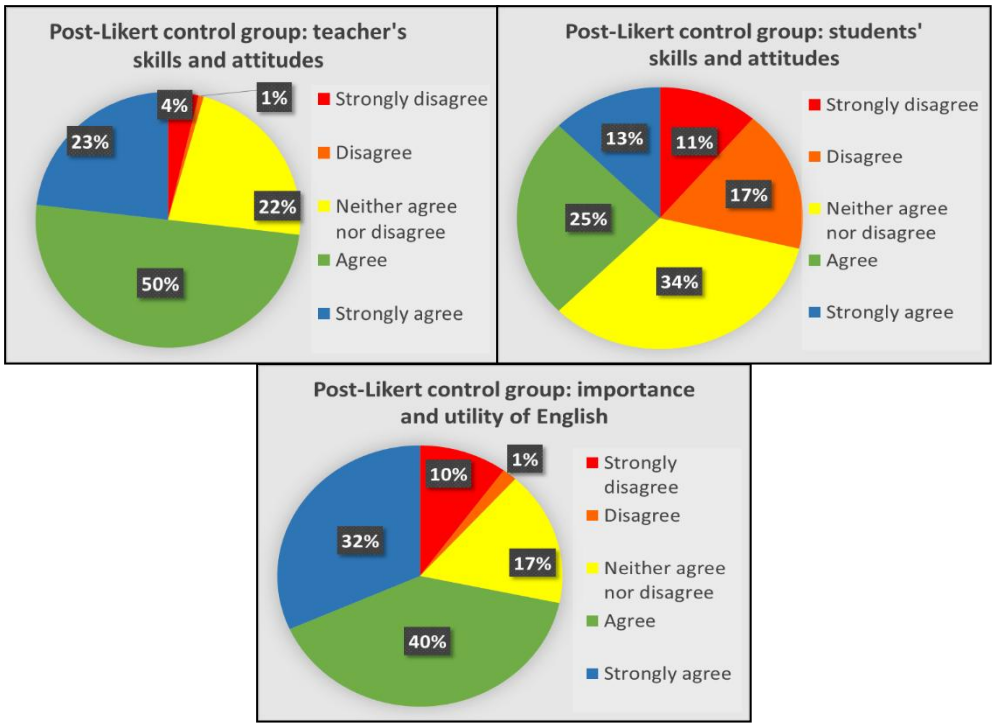


Illustration B.4

Illustration B.4 suggested an acceptance from the students towards the English subject. 50 percent of the whole group felt comfortable and content with the teacher's knowledge and the way the English lesson was conducted. However, a large percent of students did not feel confident regarding their own skills and attitudes; 34 percent of the sample neither agreed nor disagreed with their performance in the English subject, six percent more compared to the last Likert scale.

Lastly, 40 percent of the control group accepted the fact that English is an important language and a useful tool that would help them in their line of work, 10 percent more than the last Likert scale.

It is relevant to observe here that this group did not go through any of the intervention process, but still levels of acceptance were quite high and there was a feeling of content from the students regarding their own participation in class, although grades and academic performance did not reflect that particular sentiment (see Appendix F). This has led the investigators to infer that there was a feeling of indifference with English classes. Perhaps, it was due to the fact that they were undergoing through more motivational and significant school subjects which related to their own technical field.

4.3.2. Post-Likert: experimental group results

The post-Likert results of the experimental group, which are shown on the next page, were tabulated and charted (for details, see Appendix G).

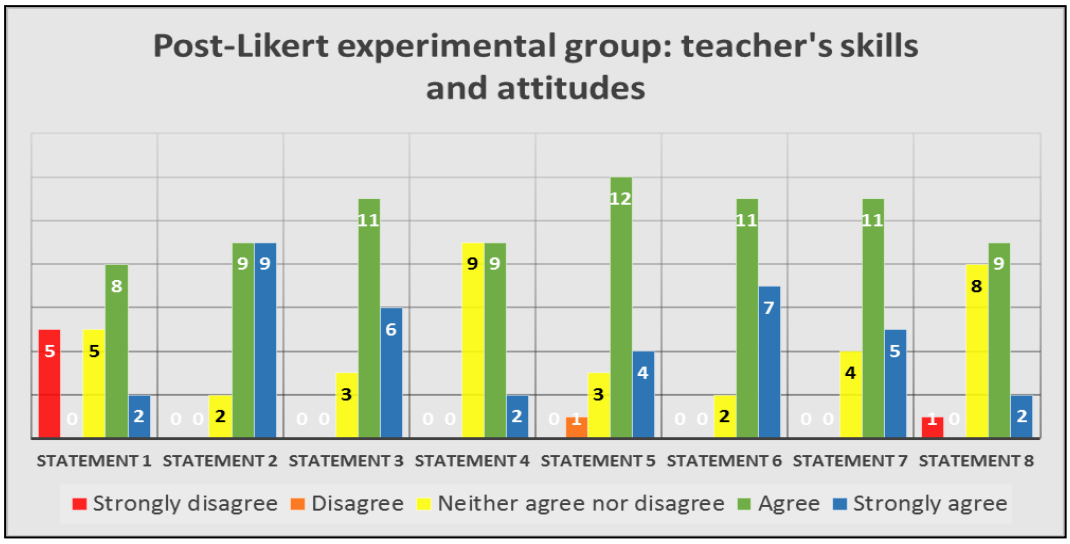


Illustration B.5

Illustration B.5 showed that there was a high level of acceptance towards the teacher's skills and attitudes. Statement 3, 5, 6 and 7 (see Appendix A) carried the highest level of acceptance in the Likert scale. Those students believed that the teacher prepared the class beforehand, and that the teacher promoted group work and a confident environment for students to develop English tasks and skills.

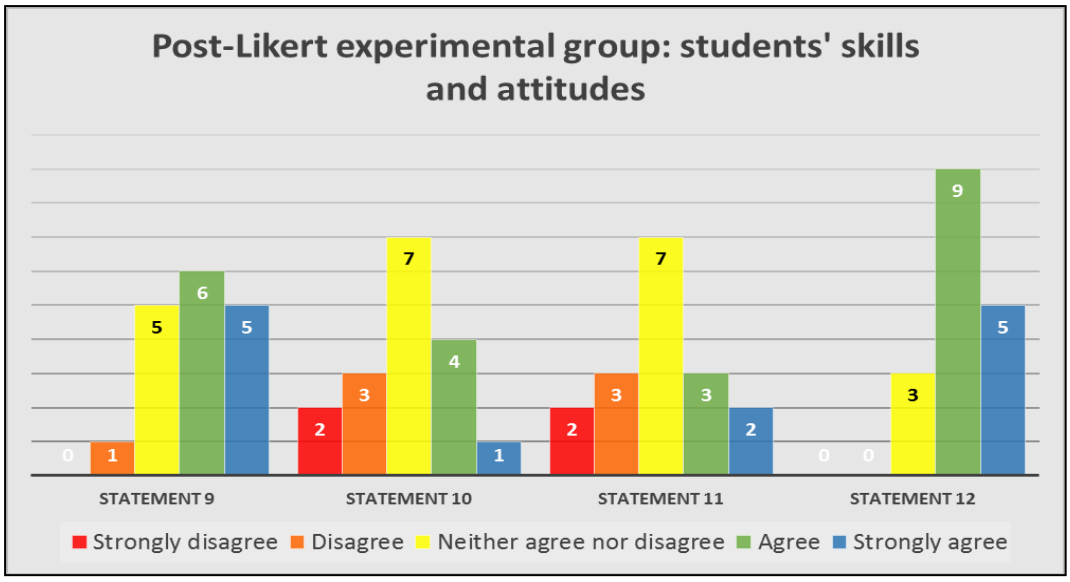


Illustration B.6

Regarding students' skills and attitudes, there was no clear consensus related to the tasks students could perform in the English subject. Statement 11, related to the students skills to produce English in an oral way (see Appendix A), did not show a preferred choice, where 9 students neither agreed nor disagreed with this particular criterion. On the other hand, statement 12, related to English tasks and exercises in the class, showed that there was an agreement in the way said exercises were performed during the lesson, which did not show major changes compared to the last Likert scale. Lastly, statement 9, related to students' level of interest in the English language, showed an increase in the agree category, with two more students in the last Likert Scale.

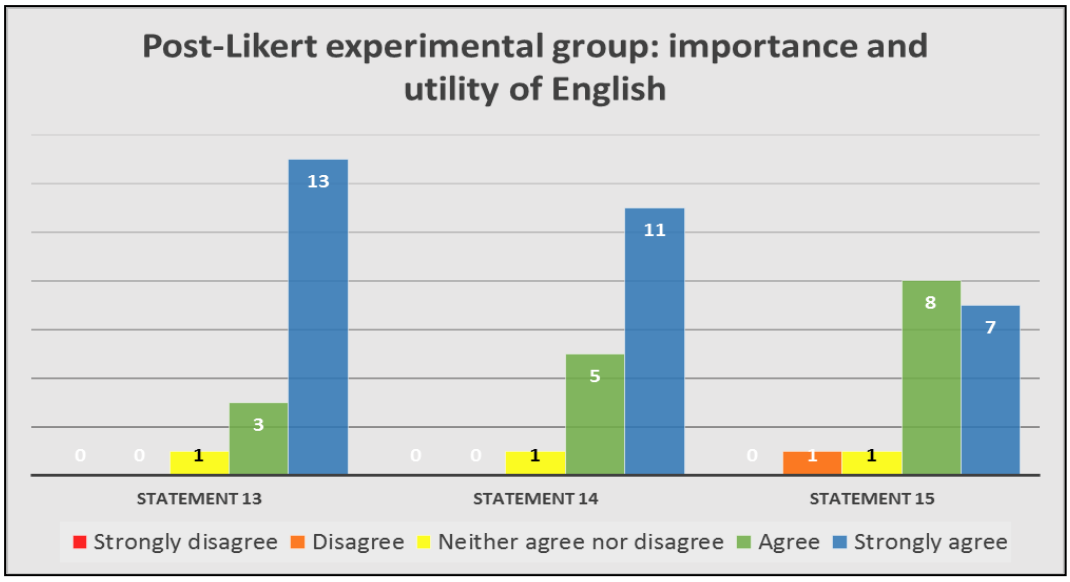


Illustration B.7

Regarding the importance and utility of English, shown in illustration B.7, students from the experimental group agreed that English was an important and useful tool for their line of work, and that knowing a second language as relevant as English would generate work opportunities in the future. There was a higher level of acceptance towards this particular category: four more students chose the strongly agree option in this criterion. As was the case in the control group, the belief that English is important and useful was constantly present in the general perception of the experimental group, so no major changes were evidenced in the post-Likert results.

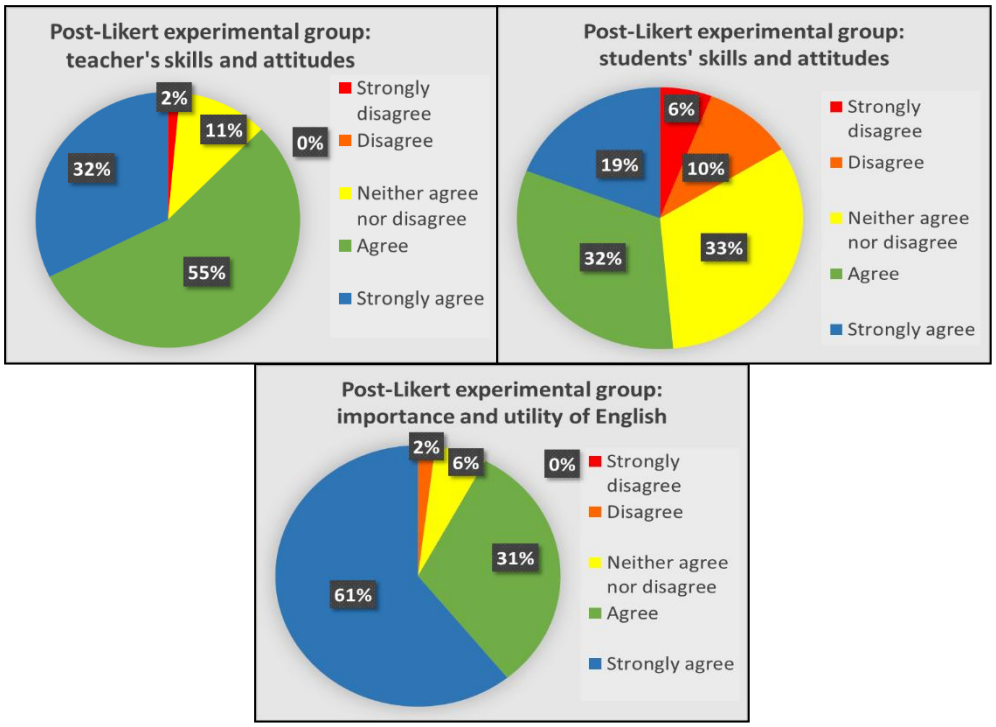


Illustration B.8

The general perception of the experimental group showed that levels of acceptance increased in 12 percent in the agree category and 8 percent in the strongly agree category, compared to the last Likert scale results (see illustration A.8).

Regarding the students' skills and attitudes, there was an increase of 3 percent in the agree category and a decrease of 6 percent in the strongly disagree category, compared to the pre-Likert scale results. Students felt more comfortable with their own knowledge of English and with their performance in the English subject.

Regarding the importance and utility of English, there was an increase of 8 percent of students who strongly agreed with the notion of English being an important tool for their technical field and line of work, and a decrease of up to 6 percent of students who were divided in their decision, making a difference of 10 percent compared to the last Likert scale.

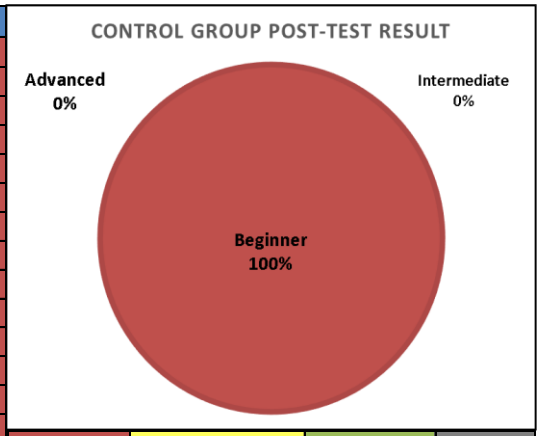
4.4. Post-intervention instruments: English test

The post-test (see Appendix O) was administered to the control and experimental group after a period of six interventions, where the new Task-based methodology was implemented. The test remained with 45 points and some test items were slightly changed in terms of images and concepts, yet the skills measured were still the same as the pre-test, according to Bloom's taxonomy of objectives (see Appendix J).

4.4.1. Post-test: control group results

The post-test results of the control group, which are shown on the next page, were tabulated and charted (for details, see Appendix H).

Test Applied	Percentage	Category
Student 1	0%	Beginner
Student 2	16%	Beginner
Student 3	2%	Beginner
Student 4	11%	Beginner
Student 5	7%	Beginner
Student 6	4%	Beginner
Student 7	0%	Beginner
Student 8	13%	Beginner
Student 9	0%	Beginner
Student 10	7%	Beginner
Student 11	4%	Beginner
Student 12	22%	Beginner
Student 13	0%	Beginner
Student 14	2%	Beginner
Student 15	2%	Beginner
Student 16	18%	Beginner
Student 17	0%	Beginner
Student 18	0%	Beginner
Student 19	7%	Beginner
Student 20	7%	Beginner
Student 21	13%	Beginner



Beginner	Intermediate	Advanced	Absent
21	0	0	9

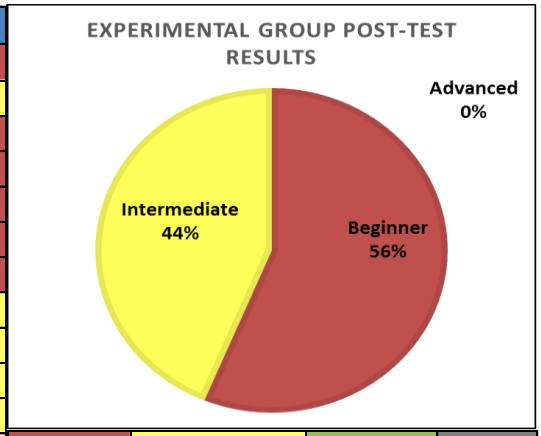
Illustration B.9

Illustration B.9 corresponds to the sample of the control group post-test, where all students were placed in the *beginner* level, totalling 100 percent of the students. Interesting cases to be noticed were students 1, 7, 9, 13, 17 and 18, who obtained 0 percent of the total score, whereas student 12 obtained 22 percent, achieving the highest qualification. However, student 12 remained in the *beginner* level. In addition, we could see a high number of students who left their test blank (see Appendix H), which led the investigators to assume that the contents were still too advanced and unfamiliar to them.

4.4.2. Post-test: experimental group results

The post-test results of the control group, which are shown on the next page, were tabulated and charted (for details, see Appendix I).

Tests Applied	Percentage	Category
Student 1	13%	Beginner
Student 2	33%	Intermediate
Student 3	11%	Beginner
Student 4	29%	Beginner
Student 5	9%	Beginner
Student 6	13%	Beginner
Student 7	20%	Beginner
Student 8	49%	Intermediate
Student 9	40%	Intermediate
Student 10	62%	Intermediate
Student 11	33%	Intermediate
Student 12	58%	Intermediate
Student 13	24%	Beginner
Student 14	24%	Beginner
Student 15	38%	Intermediate
Student 16	13%	Beginner



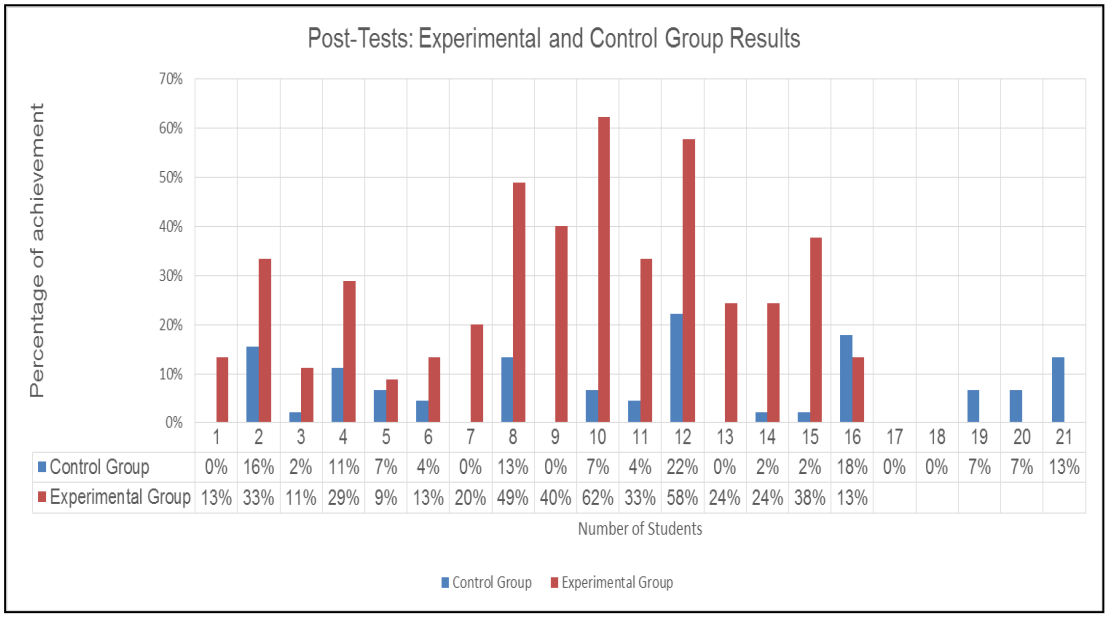
Beginner	Intermediate	Advanced	Absent
9	7	0	12

Illustration B.10

Illustration B.10 showed the post-test results of students in the experimental group when taking the post-test. We could observe that seven students were placed in the *intermediate* level, where subject 2, 8, 9, 10, 11, 12 and 15 represented 44 percent of the cases. However, many students remained in the *beginner* level (nine students from the sample) which represented 56 percent of the whole group. In terms of category progress, none of them got in the *advanced* level. On the one hand, the highest percentages in the *intermediate* level were student 10, who obtained 62 percent of the total score, followed by student 12 with 58 percent of the score.

On the other hand, the lowest percentages were student 5 with 9 percent, followed by student 3 with 11 percent, both placed in the *beginner* level.

4.4.3. Post-test: control and experimental group results



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Control Group	0%	16%	2%	11%	7%	4%	0%	13%	0%	7%	4%	22%	0%	2%	2%	18%	0%	0%	7%	7%	13%
Experimental Group	13%	33%	11%	29%	9%	13%	20%	49%	40%	62%	33%	58%	24%	24%	38%	13%					

Illustration B.11

Illustration B.11 represents a comparison of the results from both the control and the experimental group in the post-test. The experimental group got better results compared to the pre-test; in total, seven students progressed from *beginner* to *intermediate*. In comparison, the control group obtained the lowest results because none of them achieved a better level and they remained in the *beginner* level, where five of them obtained 0 percent of the total score. Regarding the experimental group, none of them left the test blank, and the lowest result was only 9 percent of the test score.

4.5. Control group: pre-and post-test comparison

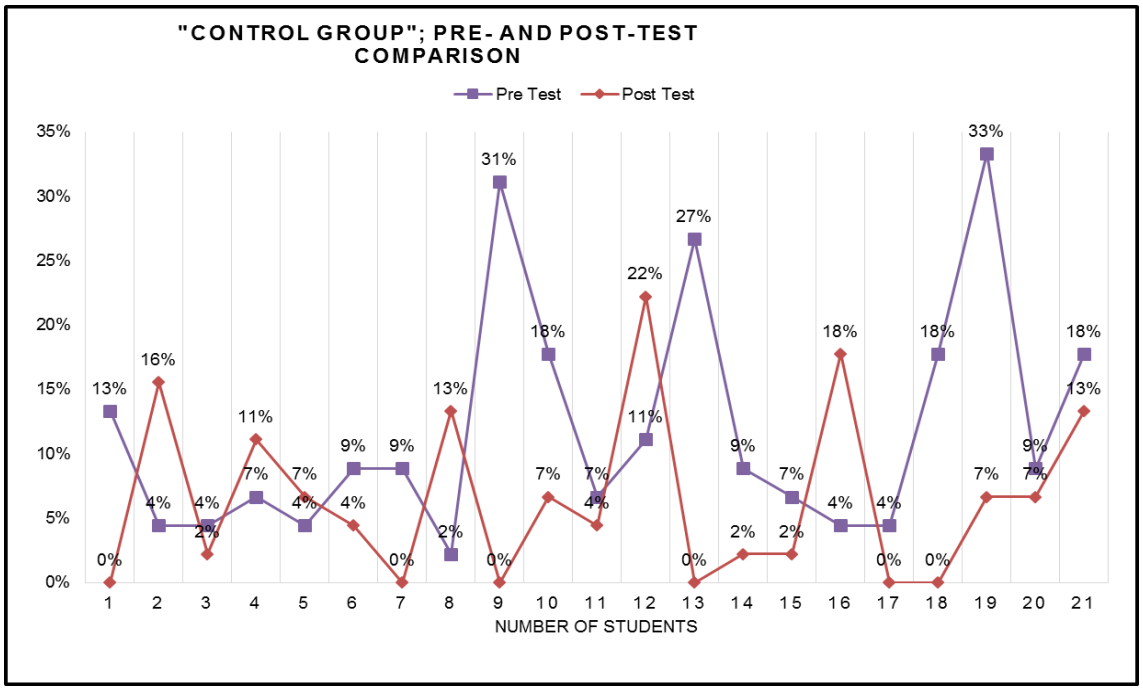


Illustration C.1

Illustration C.2 shows that there was no improvement in the students' academic performance in the control group according to the results obtained in their pre- and post-test. As it was evidenced in the pre-test, the results provided by the post-test show that none of the students achieved the *advanced* level. Furthermore, it can be seen that the students' level of achievement decreased and all the students were placed in the *beginner* level, compared to the previous English evaluation (see Appendix K). The results also stated that four students experienced a significant decrease compared to the last English test, i.e., they dropped 15 percent regarding

their previous score. On the other hand, 14 percent of the students increased their results, but that improvement was not enough to be part of the significant range established by the investigators. However, it is relevant to point out that students 2 and 14 experienced an increase of 12 and 14 percent respectively, which represented the two largest differences between pre- and post-test in the control group (see Appendix K).

4.6. Experimental group: pre- and post-test comparison

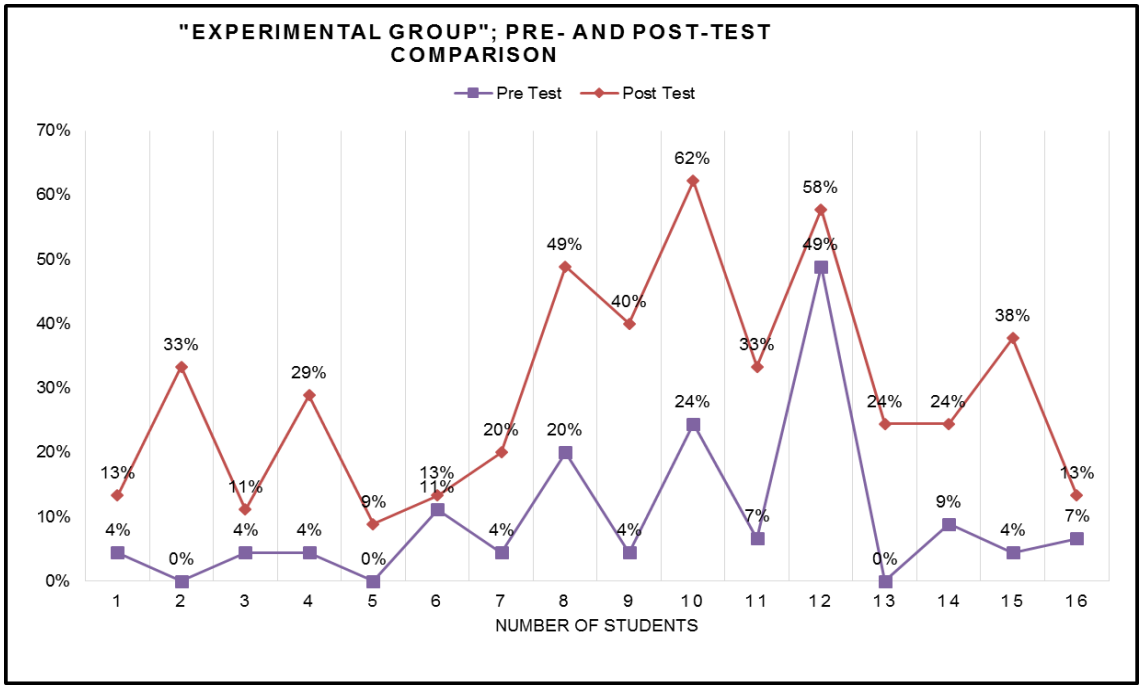


Illustration C.2

As expected, illustration C.4 clearly shows that there is an increase in the results between the pre- and post-test in the experimental group. It can be noticed that this group scored better results in the post-test compared to the

previous evaluation. This has led the investigators to infer that this new methodology has helped the students to achieve better results and improve their academic performance. The amount of *intermediate* level students increased from 6 percent to 44 percent, and consequently, the *beginner* level decreased from 94 to 56 percent. Among the students who improved their results in the post-test, ten of them experienced an increase of 15 percent or more in their results (see Appendix L). Such improvement is part of the significant range stipulated by the investigators. One element to be considered is the case of student 10, who experienced a shift in his academic performance of 38 percent representing the widest shift and the highest score in the post-test. Lastly, none of the students who were part of the experimental group reduced their results in the post-test.

CONCLUSIONS

After applying all the evaluation instruments and the six interventions established by the investigators to implement the Task-based methodology, this chapter will refer to the conclusions and comments of the investigation.

Regarding the control group, the investigators can establish that there is a general feeling of indifference towards the English language and the subject in general. According to the results provided by the pre- and post-Likert scale, students from the control group have different notions and beliefs that contradict with their performance in the English class. On the one hand, they feel comfortable with the way classes are conducted, with the contents covered, with the relationship with the teacher, and with their own performance in the English subject. However, the percentages from the pre- and post-tests reflect that they were not so competent regarding English skills related to their own technical field. Students did not improve in their academic performance and some of them even experienced a significant decrease, according to the 15 percent range established by the research group. By analysing both data from the Likert scale and the English Test, it can be assumed that basic and general knowledge of English is sufficient for them, probably because they are undergoing a different educational process; the process of becoming a technical professional in their field, and English is not part of the structural curriculum, if you will. i.e., English is not a tool they will use in any part of the future. Still, they acknowledge the fact that English is

becoming a popular and important language, yet they do not feel motivated to participate in the English class.

Answers from the focus group conducted by the investigators after the intervention process (personal communication December 4, 2014) support the notion of indifference that the investigators hypothesised earlier. In general terms, the less challenging the English classes are, the better it is for students, since English is not a language they feel completely competent in, nor one they could possibly learn in the future. Relationship with their teacher is essential, for if their relationship is in good terms, English classes will not be so challenging and, probably, dull.

Regarding the experimental group, it is important to notice that students had not been in English classes for almost two months before the beginning of the intervention process. So, low results in the English test and low acceptance towards the English subject were to be expected. However, some of the students managed to answer most of the test, and demonstrated a positive attitude towards the lesson.

After the intervention process, students showed a significant improvement, compared to the previous English test. A total of ten students experienced a significant improvement according to the 15 percent range established by the investigators. Consequently, their general perception towards the English subject and their own skills in the subject improved

compared to the previous Likert scale. We believe that it is because now there are more familiar content presented in the English classes, which motivates students and make them feel that English is a language they can learn and feel competent in.

Regarding the focus group, students from the experimental group (personal communication, December 4, 2014) stated that the relationship between them and the teacher was essential, because they felt they were going through a meaningful and relevant subject now, compared to what they had been covering, for example, during the first semester. They now feel their teacher creates a positive and ideal atmosphere to work and develop in the English subject. They feel comfortable and confident with their own skills now, and the thought of English being a useful tool has now accentuated during this intervention process. It is relevant to observe here that, compared to the control group which had a permanent teacher throughout the whole year, this particular group were not indifferent regarding the English class. Instead, they feel interested in this new methodology and their thoughts towards it are of approval and acceptance.

As a group, we believe that the general objective of this particular investigation, which was to investigate the effects of a new methodology based on the principles of English for Specific Purposes (ESP) on students of the industrial mechanics area, has been achieved; all of the evaluation

instruments were administered and evaluated in time, and those results were very helpful in determining what was the influence that a new methodology, targeting previous and familiar content, had on students of a technical field.

Regarding the specific objectives of our investigation, we believe that we could be able to meet both of them. On the one hand, by contrasting results from the pre- and post-Likert scales we could be able to analyse and assess what was the general perception of the English subject from the students' point of view, and if the new methodology implemented affected at all this general perception at the end of the intervention process. On the other hand, we could be able to determine the level of progress from both groups of this investigation, contrasting results from the pre- and post-tests of English of each group separately and, also, to each other. This gave us a reasonable and valid data to infer that the new methodology implemented affected in a positive way the academic performance of the experimental group, which had a better outcome in the English tests and in the subject in general.

Taking into account these conclusions we now turn our attention to the hypothesis. After completing this investigation, it seems reasonable to conclude that the hypotheses confirmed were:

a. *The Task-based methodology, based on the principles of English for Specific Purposes, generates a positive general perception of the English language in students*.

The results have shown that, even not going through the intervention process of Task-based lessons, students from the control group felt somewhat motivated to work with a second language such as English. Their general perception is generally positive towards this particular language. However, levels of confidence towards their own abilities did not suffer any major variations after the intervention process. Although this is not conclusive, there is a tendency to believe that the Task-based methodology by itself does not necessary alter or modify the students' motivation and general perception towards the English subject, but it is essential since students can feel a sense of relevance and utility towards the English subject, as it is the case with the experimental group.

b. *The Task-based methodology, based on the principles of English for Specific Purposes, improves students' academic performance in the English subject.*

The Task-based methodology, as stated earlier, has made students feel a sense of relevance and utility about the English language. This may have motivated students to learn a language that is familiar, relevant and meaningful now to them, since contents presented to students are related to their specific area of expertise. As a consequence, academic performance of the experimental group has

improved, whereas the academic performance of the control group decreased. This evidence leads the investigators to believe that motivation along with a methodology based on familiar contents and tasks related to a specific field can influence and modify the academic performance of students of a technical field at the school (in this case, industrial mechanics students); all of this because the contents covered in class are now related to their own line of work. Since the control group showed a higher level of approval towards the English subject, yet their grades in the pre- and post-test were still low, it is reasonable to suggest that this new methodology, based on the principles of ESP (English for specific purposes) affects in a positive way the academic performance of industrial mechanics students at Liceo Industrial y de minas Ignacio Domeyko. Furthermore, if this methodology focused on the students' needs goes along with comprehensible content (Krashen, 1982) and meaningful topics and tasks (Ausubel, 1968) the gap between *content already known* and *content potentially achievable* could be reduced (Vygotsky, 1988), allowing students to develop the necessary skills demanded by the labour market and by the student's profile of the school.

Obviously, these claims are based on the investigation performed in just one of the technical fields imparted by the school. More research is needed to investigate the relationship of a new methodology, based on the principles of ESP, in a more extended period of time. We suggest that this investigation takes place over the course of a whole school year, to obtain further information on the academic performance of technical industrial students in the English subject.

Another topic for consideration is the implementation of this new methodology on a different technical field, in order to obtain more information regarding how influential an oriented and tailor-made lesson can be on students of the other technical fields imparted by the school.

Lastly, we suggest a further investigation on the perception of utility and importance of the English language of technical industrial students who have finished secondary education and who are either studying for an undergraduate degree related to the industrial mechanics area or working in a field related to such area. By doing a research in students who already are working and/or studying something related to that technical field, it could be possible to determine if the English language has actually been a useful tool in their line of work.

REFERENCES

Ausubel, D. P., Novak, J. D., & Hanesian, H. (1983). *Psicología educativa: un punto de vista cognoscitivo* (2. ed.). México: Editorial Trillas.

Ausubel, D.P. (1968). *Educational Psychology: A Cognitive View*. New York: Holt, Rinehart & Winston

Blas, F. & Planells, J. (2009). *Retos actuales de la educación técnico-profesional* (1a ed.). Madrid, España: OEI.

Corporación Minera. (n.d.). *La plaza Domeykana*. Retrieved October 24, 2014, from http://www.corporacionminera.cl/html/fr_nuest.html

Dudley-Evans, T. & Saint John, M. (1998). *Developments in English for Specific Purposes - A multidisciplinary approach*. England, London: Cambridge University Press.

Girardot, L. (2006). *Formación docente en Inglés con Fines Específicos (IFE)*. San Cristóbal: Universidad de Los Andes (ULA).

Harmer, J. (1998). *How to teach English: an introduction to the practice of English language teaching*. Harlow: Longman.

Hernandez Sampieri, R., Fernandez Collado, C., & Baptista Lucio, P. (2006). *Metodología de la Investigación* (4ta Edición ed.). México D.F., México: McGraw-Hill Interamericana Editores.

Hutchinson, T., & Waters, A. (1987). *English for specific purposes: a learning-centred approach* (6th Printing, 1991 ed.). Cambridge: Cambridge University Press.

Kertész, S. (1997). *Diseño de Cursos de Idiomas: Dos estudios de casos. Trabajo de Ascenso*. Caracas: Universidad Simón Bolívar.

Krashen, S. D. (1982). *Principles and practice in second language acquisition*. Oxford: Pergamon.

Las demoledoras cifras de la Educación Técnico-Profesional en Chile. (n.d.). *CIPER Chile, Centro de Investigación e Información Periodística*. Retrieved October 24, 2014, from http://www.ciperchile.cl/2013/10/15/las-demoledoras-cifras-de-la-educacion-tecnico-profesional-en-chile/

Onysko. A. (1998). ESP: English for Specific Purposes. Disponible: http://www.eslcafe.com [Consulta: 2000, Enero 10]

Orellana Valdés, R. (2009). *Mapas conceptuales y Aprendizaje Significativo* (Apuntes). Argentina: El Cid Editor.

Vygotsky, L. (1988). *El desarrollo de los procesos psicológicos superiores*. Mexico: Editorial Crítica, Grupo Editorial Grijalbo.

APPENDIXES

Appendix A

A continuación se le presentan una serie de afirmaciones relacionadas con la asignatura inglés, las cuales están seguidas con sus respectivas alternativas. Selecciona la alternativa que más lo identifique marcando con una X la casilla correspondiente. De esta manera, estará ayudando a los futuros profesores de inglés en su proceso de formación.

	Muy en desacuerdo	En desacuerdo	Ni en desacuerdo, ni en acuerdo	En acuerdo	Muy de acuerdo
1) Las clases de inglés de mi liceo son motivantes					
2) Los profesores de inglés de mi liceo muestran un claro dominio de los contenidos					
3) En mi liceo, los profesores de inglés preparan su material clase a clase					
4) En mi clase de inglés las tareas a realizar se adaptan según las necesidades de los estudiantes					
5) En mis clases de inglés se promueve el trabajo grupal					
6) Previamente a las evaluaciones de inglés, los criterios de estas son explicados					
7) El profesor crea un ambiente de confianza en el aula fomentando una buena relación con los alumnos					
8) Los profesores de inglés de mi liceo muestran interés en nuestra formación personal sin dejar de lado nuestra formación profesional					
9) El idioma inglés me es interesante					
10) Los textos en ingles me son fáciles de comprender					
11) El idioma inglés me es fácil de producir oralmente					
12) Cumplo con las actividades asignadas en la asignatura inglés					
13) El idioma inglés me generara oportunidades en el mundo laboral					
14) El idioma inglés me será útil en situaciones ajenas a lo académico y laboral					
15) Refuerzo contenidos de mi especialidad en la clase de inglés					

Appendix B

PRE LIKERT: CONTROL GROUP RESULTS

Scales Applied	Statement 1	Statement 2	Statement 3	Statement 4	Statement 5	Statement 6	Statement 7	Statement 8	Statement 9	Statement 10	Statement 11	Statement 12	Statement 13	Statement 14	Statement 15
1	4	5	5	3	3	4	5	4	4	2	2	3	5	5	5
2	2	4	4	4	1	4	4	3	2	2	4	4	3	2	4
3	2	5	4	2	4	4	4	4	3	3	3	3	4	4	4
4	4	3	4	5	4	4	5	3	4	5	3	5	4	4	3
5	1	4	4	2	4	3	4	2	3	3	1	3	5	4	3
6	4	5	5	4	4	5	5	5	2	1	1	2	5	5	1
7	3	5	3	4	5	4	5	4	5	2	1	4	5	5	3
8	3	3	4	3	4	2	4	4	1	1	1	3	4	5	2
9	1	1	1	2	1	2	2	2	5	5	2	2	5	5	5
10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	2	2	2	2	2	2	3	3	1	3	3	2	2	2	2
12	2	4	4	4	2	2	4	4	5	2	5	4	5	5	4
13	4	5	5	4	2	5	5	4	5	4	5	4	5	4	4
14	5	5	5	5	3	5	3	4	5	3	4	3	5	5	4
15	4	4	5	5	4	5	5	5	4	4	3	4	4	4	4
16	4	4	5	4	4	5	4	5	5	3	3	4	5	5	3
17	4	5	4	3	2	4	5	5	3	3	1	4	3	3	4
18	4	5	5	4	4	5	5	5	4	3	3	5	5	5	4
19	4	5	5	5	4	5	4	5	5	4	2	5	5	5	3
20	2	1	3	3	4	2	3	3	2	2	3	5	1	4	1
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															
Strongly disagree	3	3	2	1	3	1	1	1	3	3	6	1	2	1	3
Disagree	5	1	1	4	4	5	1	2	3	5	3	3	1	2	2
Neither agree nor disagree	2	2	2	4	2	1	3	4	3	7	7	5	2	1	5
Agree	9	5	7	7	10	6	7	7	4	3	2	7	4	6	8
Strongly agree	1	9	8	4	1	7	8	6	7	2	2	4	11	10	2
Answered	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Absents	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
TOTAL	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

	Regarding teacher' skills and attitudes
	Regarding students' skills and attitudes
	Regarding English utility and importance

Levels	Value
Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5

Appendix C

PRE LIKERT: EXPERIMENTAL GROUP RESULTS

Scales Applied	Statement 1	Statement 2	Statement 3	Statement 4	Statement 5	Statement 6	Statement 7	Statement 8	Statement 9	Statement 10	Statement 11	Statement 12	Statement 13	Statement 14	Statement 15
1	3	4	4	3	5	5	4	4	3	3	2	4	5	5	4
2	1	4	4	3	1	4	5	4	4	3	2	3	5	5	4
3	3	4	4	3	3	4	4	3	4	4	3	4	4	4	5
4	3	4	4	3	4	4	4	3	5	3	3	4	4	4	3
5	1	3	3	1	4	1	2	1	5	4	2	4	4	4	3
6	2	4	3	3	3	3	4	3	1	2	1	4	3	3	3
7	2	4	2	3	3	4	3	2	3	4	3	4	3	3	4
8	3	4	3	2	3	1	3	3	1	1	1	3	4	3	2
9	4	5	5	5	5	4	5	5	5	3	3	5	5	5	5
10	4	5	5	5	4	4	5	5	5	3	3	5	5	5	5
11	4	5	5	5	4	4	5	5	5	3	3	5	5	5	5
12	5	4	5	3	4	5	4	4	5	3	3	4	5	5	4
13	4	4	5	3	4	4	4	4	3	1	3	4	5	5	4
14	4	4	4	4	4	3	4	4	3	4	1	4	5	5	4
15	3	5	4	4	3	5	5	4	4	4	3	4	5	5	4
16	3	5	4	4	5	5	5	4	4	3	2	4	5	5	5
17	4	5	5	3	4	4	5	4	5	2	1	3	5	5	4
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
Strongly Disagree	2	0	0	1	1	2	0	1	2	2	4	0	0	0	0
Disagree	2	0	1	1	0	0	1	1	0	2	4	0	0	0	1
Neither agree nor disagree	6	1	3	9	5	2	2	4	4	8	9	3	2	3	3
Agree	6	10	7	3	8	9	7	8	4	5	0	11	4	3	8
Strongly agree	1	6	6	3	3	4	7	3	7	0	0	3	11	11	5

Answered	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Absents	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28

	Regarding teacher' skills and attitudes
	Regarding students' skills and attitudes
	Regarding English utility and importance

Levels	Value
Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5

Appendix D

Pre-test: control group results

	Item I				Item II (a)								Item II (b)			Item III					
Tests Applied	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**	**Q12**	**Q13**	**Q14**	**Q15**	**Q16**	**Q17**	**Q18**	**Q19**	**Q20**	**Q21**
Question 1	x	x	x	x	0	0	0	0	0	0	0	0	\	\	\	\	\	\	x	\	\
Question 2	0	0	0	0	\	0	0	0	0	0	0	0	0	\	\	0	0	0	0	0	0
Question 3	x	\	0	0	0	0	0	0	0	0	0	0	\	\	\	\	\	\	0	0	0
Question 4	\	\	0	0	0	0	0	0	0	0	0	0	\	\	\	\	\	\	\	x	x
Question 5	\	0	0	0	\	0	0	0	0	0	0	0	0	\	\	0	0	0	0	0	0
Question 6	x	x	x	\	0	0	0	0	0	0	0	0	\	\	\	\	\	\	\	\	\
Question 7	0	0	0	\	\	0	0	0	0	\	\	0	0	0	0	\	\	x	\	\	x
Question 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Question 9	x	x	x	x	0	0	0	0	0	0	0	0	x	x	x	\	x	\	x	\	\
Question 10	x	x	x	x	0	0	0	0	0	0	0	0	\	\	\	\	x	\	x	\	\
Question 11	x	\	\	\	0	\	\	\	0	0	0	0	\	\	0	0	x	0	0	\	0
Question 12	x	x	x	x	0	0	0	0	0	0	0	0	\	\	\	\	\	\	\	x	\
Question 13	x	x	x	x	0	0	0	0	0	0	0	0	x	x	x	\	x	\	\	x	\
Question 14	x	\	\	\	0	0	0	0	0	0	0	0	\	x	x	\	\	\	\	x	\
Question 15	x	\	\	\	0	0	\	0	0	0	0	0	0	0	0	\	x	\	\	\	\
Question 16	0	0	0	0	\	0	0	\	0	0	0	0	\	\	\	\	\	\	\	\	\
Question 17	x	\	\	\	0	\	0	\	0	0	0	0	0	0	0	0	0	0	0	0	0
Question 18	x	x	x	x	0	0	0	0	0	0	0	0	0	\	\	\	x	\	x	\	\
Question 19	x	x	x	x	0	0	0	0	0	0	0	0	\	x	x	\	\	\	x	\	\
Question 20	x	0	x	x	0	0	0	0	0	0	0	0	0	\	\	0	0	0	0	0	0
Question 21	x	x	0	x	0	0	0	0	0	0	0	0	x	\	x	0	0	0	0	0	0

Item IV (a)				Item IV (b)			Item V (1)						Item V (2)					Item V (3)					
Q22	**Q23**	**Q24**	**Q25**	**Q26**	**Q27**	**Q28**	**Q29**	**Q30**	**Q31**	**Q32**	**Q33**	**Q34**	**Q35**	**Q36**	**Q37**	**Q38**	**Q39**	**Q40**	**Q41**	**Q42**	**Q43**	**Q44**	**Q45**
\	0	\	\	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	\	0	x	0	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	\	\	0	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	\	\	0	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	\	0	x	0	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	0	\	0	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	\	\	\	x	\	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	0	\	0	x	\	x	\	\	\	x	\	\	0	0	0	0	0	x	x	\	\	\	\
\	0	\	0	x	\	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	0	\	0	\	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	0	\	0	x	\	x	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	0	0	0	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	0	\	0	x	\	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	\	0	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	0	\	0	x	\	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	0	\	x	x	\	x	\	\	\	x	\	x	\	x	\	\	x	\	x	\	\	\	\
0	0	\	0	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	0	\	0	x	x	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Correct Answers	**Wrong Answers**	**Blank Answers**	**Total points**	**Absents**
6	13	26	**6**	**9**
2	4	39	**2**	
2	12	31	**2**	**X = Correct**
3	14	28	**3**	**\ = Wrong**
2	5	38	**2**	**0 = Blank**
4	14	27	**4**	
4	13	28	**4**	
1	2	42	**1**	
14	16	15	**14**	
8	10	27	**8**	
3	11	31	**3**	
5	13	27	**5**	
12	7	26	**12**	
4	12	29	**4**	
3	12	30	**3**	
2	14	29	**2**	
2	8	35	**2**	
8	9	28	**8**	
15	21	9	**15**	
4	5	36	**4**	
8	3	34	**8**	

Appendix E

Pre-test: experimental group results

	Item I				Item II (a)								Item II (b)			Item III					
Tests Applied	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21
Student 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Student 2	\	0	0	\	0	0	0	0	0	0	0	0	\	0	0	0	0	0	0	0	0
Student 3	x	0	0	\	0	0	0	0	0	0	0	0	0	0	0	\	\	\	\	\	\
Student 4	0	0	0	0	\	0	0	0	0	0	0	\	\	\	\	x	\	\	\	x	\
Student 5	0	0	0	0	0	0	0	\	\	\	\	0	\	\	\	0	0	0	0	0	0
Student 6	x	x	0	0	0	0	0	0	0	0	0	0	0	0	0	x	\	x	\	\	\
Student 7	0	0	0	0	0	0	0	0	0	0	0	0	\	\	\	\	\	\	\	\	\
Student 8	x	x	\	\	\	\	0	0	0	\	0	0	0	0	0	0	\	x	0	0	x
Student 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\	x	\	\	x	\
Student 10	x	x	0	0	0	0	0	0	0	0	0	0	0	0	0	x	x	x	x	x	x
Student 11	x	0	0	\	\	0	0	0	0	0	0	0	0	\	\	0	0	0	0	0	0
Student 12	x	x	0	\	0	0	0	\	0	0	0	0	\	x	0	x	x	x	x	x	x
Student 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Student 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\	\	\	\	\	\
Student 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Student 16	0	0	0	0	0	0	0	0	0	0	0	0	\	\	\	\	\	\	\	x	x

Item IV (a)				Item IV (b)			Item V (1)						Item V (2)					Item V (3)					
Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45
0	0	0	0	x	x	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	\	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	\	\	\	\	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	\	\	\	\	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	\	\	\	x	x	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	x	\	\	x	\	\	x	\	\	x	x	\	\	\	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	x	0	0	x	\	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	0	\	0	x	\	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
x	x	x	x	x	x	x	\	\	\	x	\	\	\	\	x	x	x	x	x	\	\	\	\
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	x	\	x	\	\	\	\	\	\	\	\	\	x	\	\	\	\	x	\	\
0	0	0	0	\	x	x	0	0	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	\	\	\	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Correct Answers	Wrong Answers	Blank Answers	Total points	Absents
2	1	42	**2**	**12**
0	4	41	**0**	
2	8	35	**2**	**X = Correct**
2	16	27	**2**	**\ = Wrong**
0	13	32	**0**	**0 = Blank**
5	6	34	**5**	
2	14	29	**2**	
9	15	21	**9**	
2	4	39	**2**	
11	1	33	**11**	
3	7	35	**3**	
22	14	9	**22**	
0	0	45	**0**	
4	22	19	**4**	
2	2	41	**2**	
3	13	29	**3**	

Appendix F

POST LIKERT: CONTROL GROUP RESULTS

Scales Applied	Statement 1	Statement 2	Statement 3	Statement 4	Statement 5	Statement 6	Statement 7	Statement 8	Statement 9	Statement 10	Statement 11	Statement 12	Statement 13	Statement 14	Statement 15
1	4	4	3	3	4	5	5	3	3	2	2	4	4	3	4
2	3	5	4	5	4	4	5	4	5	2	3	3	5	5	4
3	1	4	4	3	4	4	3	3	1	2	2	4	3	4	4
4	4	5	5	3	4	5	3	3	2	1	1	4	5	5	4
5	3	5	4	4	4	4	4	4	4	3	3	4	4	4	4
6	5	4	5	4	5	5	5	5	3	3	4	4	4	2	3
7	1	3	4	3	4	4	4	4	3	2	1	4	4	1	1
8	4	5	5	4	5	4	5	3	4	5	5	4	3	5	4
9	3	4	4	3	3	4	4	4	4	2	3	3	5	4	3
10	1	5	5	4	3	4	4	4	4	3	3	3	5	5	4
11	4	4	3	4	4	5	4	4	4	3	3	4	5	5	3
12	3	4	4	4	2	3	4	3	5	1	5	4	5	5	1
13	4	3	4	3	4	4	4	3	3	2	3	2	4	4	4
14	1	5	5	4	4	3	3	3	5	1	1	1	1	1	1
15	4	5	4	3	4	5	5	5	3	3	2	5	5	5	3
16	5	5	5	5	5	4	4	1	5	5	3	5	4	4	5
17	4	5	4	4	5	5	4	4	3	3	3	4	4	4	5
18	1	4	4	3	4	4	3	3	1	2	2	4	3	4	4
19	3	4	4	3	3	4	4	4	4	2	3	3	5	4	3
20	4	4	3	4	4	5	4	4	4	3	3	4	5	5	3
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															
31															
Strongly disagree	5	0	0	0	0	0	0	1	2	3	3	1	1	2	3
Disagree	0	0	0	0	1	0	0	0	1	8	4	1	0	1	0
Neither agree nor disagree	5	2	3	9	3	2	4	8	6	7	10	4	3	1	6
Agree	8	9	11	9	12	11	11	9	7	0	1	12	7	8	9
Strongly agree	2	9	6	2	4	7	5	2	4	2	2	2	9	8	2
Answered	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Absents	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31

	Regarding teacher' skills and attitudes
	Regarding students' skills and attitudes
	Regarding English utility and importance

Levels	Value
Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5

Appendix G

POST LIKERT: EXPERIMENTAL GROUP RESULTS

Scales Applied	Statement 1	Statement 2	Statement 3	Statement 4	Statement 5	Statement 6	Statement 7	Statement 8	Statement 9	Statement 10	Statement 11	Statement 12	Statement 13	Statement 14	Statement 15
1	4	4	5	5	5	4	4	5	5	4	4	5	5	5	4
2	3	4	5	4	5	5	4	4	4	3	3	4	4	4	5
3	4	4	4	4	4	4	4	4	5	3	3	4	5	5	4
4	4	5	4	4	5	5	4	5	5	4	5	4	5	4	5
5	4	5	4	4	3	4	4	4	4	4	2	3	5	5	4
6	5	5	5	5	5	5	5	5	5	4	3	5	5	5	5
7	3	4	4	5	4	4	5	3	4	3	4	5	5	4	5
8	4	5	5	4	4	5	5	5	4	3	4	4	5	5	4
9	5	4	5	4	1	5	4	5	3	1	1	5	5	5	5
10	3	5	4	4	3	4	4	4	2	1	1	4	5	5	2
11	4	4	5	5	5	5	5	4	4	3	3	4	5	5	4
12	4	4	5	5	4	4	4	4	4	2	3	3	5	5	4
13	3	4	4	4	3	4	4	3	3	3	3	4	4	4	4
14	4	5	5	5	1	4	5	5	3	3	3	3	5	5	3
15	4	4	4	4	4	4	4	3	3	2	2	4	4	4	4
16	3	4	4	4	4	4	4	4	3	2	2	4	3	3	5
17	3	4	4	3	3	4	4	3	5	5	5	5	5	5	5
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
Strongly disagree	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0
Disagree	0	0	0	0	0	0	0	0	1	3	3	0	0	0	1
Neither agree nor disagree	6	0	0	1	4	0	0	4	5	7	7	3	1	1	1
Agree	9	11	9	10	6	11	12	7	6	4	3	9	3	5	8
Strongly agree	2	6	8	6	5	6	5	6	5	1	2	5	13	11	7
Answered	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Absents	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28

	Regarding teacher' skills and attitudes
	Regarding students' skills and attitudes
	Regarding English utility and importance

Levels	Value
Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5

Appendix H

Post-test: control group results

	Item I				Item II (a)								Item II (b)			Item III					
Tests Applied	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21
Student 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Student 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	x	x	0	0	0	x
Student 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\	\	\	\	\	\
Student 4	\	0	0	x	0	0	\	0	0	0	0	0	0	0	0	\	\	\	\	x	\
Student 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\	\	x	\	\	\
Student 6	\	\	\	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Student 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\	\	\	\	\	\
Student 8	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\
Student 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Student 10	0	0	0	0	0	0	\	0	0	0	0	0	0	\	\	\	\	\	\	\	\
Student 11	0	0	0	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Student 12	0	0	\	\	0	0	0	0	0	0	0	0	0	0	0	x	x	x	x	\	\
Student 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Student 14	\	0	0	\	0	0	0	0	0	0	0	0	\	0	\	\	\	\	\	\	\
Student 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Student 16	\	0	0	x	0	0	0	0	0	0	0	0	\	\	\	\	x	\	\	\	x
Student 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Student 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Student 19	\	0	0	x	0	0	0	0	0	0	0	0	\	0	\	\	\	\	\	\	\
Student 20	0	0	0	0	\	0	0	0	0	0	0	0	0	0	0	x	x	\	\	\	\
Student 21	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\

Item IV (a)				Item IV (b)			Item V (1)					Item V (2)						Item V (3)					
Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	x	x	\	\	\	\	\	\	\	\	\	\	x	x	\	0	0	0	0	0	0
0	0	0	\	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	\	x	\	\	\	\	\	\	\	\	x	\	x	\	\	\	\	\	\	\	\
\	0	0	\	\	x	\	\	\	\	\	\	\	\	\	\	\	\	\	\	\	x	\	\
0	0	0	\	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	0	0	\	\	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	\	\	\	\	\	x	\	\	\	\	\	\	\	x	x	\	\	\	x	x	x	\	\
0	0	0	0	\	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	\	\	\	\	x	\	\	\	\	x	\	\	\	x	\	\	\	\	\	\	\	\	\
0	0	0	\	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	\	\	\	x	x	x	x	\	x	x	\	\	\	\	\	\	\	\	\	\	\	\	\
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	\	\	\	\	\	\	\	\	\	\	x	\	\	\	\	\	\	\	\	\
\	\	0	0	\	\	0	\	\	\	\	\	\	\	\	\	\	\	\	\	\	x	\	\
\	\	0	\	x	\	x	\	\	\	x	\	\	\	\	x	\	\	\	\	\	\	x	\
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	\	0	\	0	0	0	\	\	\	x	\	\	\	\	x	\	\	\	\	\	\	\	\
0	0	0	0	x	\	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\	\	\	\	\	\	x	\	\	\	\	\	\	\	x	x	\	\	\	x	x	x	\	\

Correct Answers	Wrong Answers	Blank Answers	Total points	Absents
0	0	45	**0**	**9**
7	11	27	**7**	
1	9	35	**1**	**X = Correct**
5	25	15	**5**	**\ = Wrong**
3	25	17	**3**	**0 = Blank**
2	6	37	**2**	
0	11	34	**0**	
6	39	0	**6**	
0	3	42	**0**	
3	30	12	**3**	
2	3	40	**2**	
10	22	13	**10**	
0	0	45	**0**	
1	29	15	**1**	
1	20	24	**1**	
8	26	11	**8**	
0	0	45	**0**	
0	0	45	**0**	
3	26	16	**3**	
3	7	35	**3**	
6	39	0	**6**	

Appendix I

Post-test: experimental group results

	Item I				Item II (a)								Item II (b)			Item III					
Tests Applied	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21
Student 1	0	0	0	0	\	0	0	0	0	0	0	0	\	\	\	\	\	\	\	\	x
Student 2	0	0	\	x	\	0	0	0	x	0	0	0	\	0	0	x	x	x	x	x	x
Student 3	\	0	\	x	0	0	0	0	0	0	0	0	0	0	0	\	\	\	\	\	\
Student 4	0	0	x	x	x	0	\	0	0	0	0	0	0	\	\	\	\	\	\	\	x
Student 5	0	0	0	\	x	0	\	0	0	0	0	0	0	0	0	\	\	\	\	\	\
Student 6	0	0	0	x	x	0	0	0	0	0	0	0	0	0	0	\	\	\	\	\	\
Student 7	0	0	x	x	0	0	0	0	0	0	0	0	0	0	\	\	\	x	\	\	\
Student 8	0	0	x	x	x	0	0	0	x	0	0	0	\	x	0	x	x	x	x	x	x
Student 9	0	0	x	x	x	0	\	\	\	0	0	\	\	\	\	\	\	x	x	x	x
Student 10	0	0	x	x	x	0	x	0	0	0	0	0	0	\	\	x	x	x	x	x	x
Student 11	\	x	x	x	x	0	\	\	0	0	0	0	0	\	\	\	\	x	x	x	x
Student 12	\	\	x	x	x	0	0	0	0	0	0	0	0	\	0	x	x	x	x	x	x
Student 13	\	x	x	x	x	0	0	0	0	0	0	0	\	\	\	\	\	\	\	x	\
Student 14	\	\	\	x	0	0	0	0	0	0	0	0	0	0	0	\	\	x	\	x	x
Student 15	\	0	0	x	x	0	x	0	0	0	0	x	x	\	0	\	\	\	\	x	x
Student 16	0	0	0	0	x	0	0	0	0	0	0	0	0	\	\	\	\	\	\	\	\

Item IV (a)				Item IV (b)			Item V (1)					Item V (2)						Item V (3)					
Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45
0	0	\	0	x	\	\	\	\	x	\	\	\	\	\	x	\	\	\	x	\	x	\	\
0	x	x	\	x	x	\	\	\	\	0	\	x	x	x	\	\	0	\	\	\	\	0	\
0	\	0	0	x	\	x	\	\	\	\	\	\	\	\	\	\	\	\	\	x	\	\	x
0	0	0	x	x	x	x	\	\	\	\	\	x	\	x	x	\	\	\	\	\	\	x	x
0	0	0	x	x	x	\	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	x	x	\	\	\	\	\	\	\	\	x	x	\	\	0	0	0	0	0	0
0	\	0	0	x	x	x	\	\	\	\	\	\	\	x	\	\	\	\	\	\	\	x	x
0	0	x	\	x	x	\	\	\	\	\	\	x	x	x	x	x	x	\	x	\	\	x	\
\	0	x	x	x	x	x	\	\	\	\	\	x	\	x	x	\	\	\	x	\	x	x	\
x	x	x	x	x	x	\	x	x	x	x	x	x	\	x	x	\	\	\	x	x	x	x	\
\	x	x	\	x	x	x	0	0	0	0	0	x	\	\	x	\	\	0	0	0	0	0	0
x	x	x	\	x	x	\	x	\	x	x	\	\	x	\	x	x	\	x	x	x	x	x	x
\	\	x	x	x	\	\	\	\	\	\	x	\	\	x	\	x	\	0	0	0	0	0	0
0	0	\	0	x	x	\	\	\	x	\	\	x	\	x	\	\	x	\	x	\	\	\	\
0	0	0	\	x	\	x	x	\	x	\	\	x	\	\	\	x	\	\	x	x	x	x	\
0	0	x	\	\	x	x	\	\	\	\	\	\	x	x	\	\	\	\	\	\	\	\	\

Correct Answers	Wrong Answers	Blank Answers	Total points	Absents
6	25	14	**6**	**12**
15	16	14	**15**	
5	25	15	**5**	**X = Correct**
13	20	12	**13**	**\ = Wrong**
4	9	32	**4**	**0 = Blank**
6	16	23	**6**	
9	21	15	**9**	
22	12	11	**22**	
18	21	6	**18**	
28	8	9	**28**	
15	13	17	**15**	
26	10	9	**26**	
11	21	13	**11**	
11	20	14	**11**	
17	17	11	**17**	
6	25	14	**6**	

Appendix J

TAXONOMÍA de BLOOM

CONOCIMIENTO	COMPRENSIÓN	APLICACIÓN	ANÁLISIS	SINTESIS	EVALUACIÓN
Adquirir	Anular	Aplicar	Aclamar	Categorizar	Apreciar
Calcular	Cambiar	Clasificar	Analizar	Clasificar	Aprobar
Citar	Comentar	Comparar	Calcar	Coleccionar	Argumentar
Clasificar	Comparar	Demostrar	Comparar	Compilar	Asignar puntos
Conocer	Confeccionar	Desarrollar	Constatar	Componer	Asignar valor
Decir	Construir	Descubrir	Criticar	Concebir	Auscultar
Definir	Decir	Diseñar	Debatir	Concluir	Calcular
Describir	Describir	Dramatizar	Desarmar	Confeccionar	Calificar
Distinguir	Determinar	Efectuar	Descomponer	Constituir	Comparar
Enumerar	Dibujar	Ejemplificar	Descubrir	Crear	Comprobar
Fijar	Diferenciar	Ejercitar	Desmenuzar	Deducir	Considerar
Formular	Discutir	Ensayar	Determinar	Definir	Constatar
Hacer listado	Distinguir	Escoger	Diagramar	Diseñar	Criticar
Identificar	Explicar	Experimentar	Diferenciar	Elaborar	Decidir
Localizar	Expresar	Fomentar	Distinguir	Escribir	Discutir
Mostrar	Extraer conclusiones	Hacer	Enfocar	Especificar	Elegir
Nombrar	Fundamentar	Ilustrar	Examinar	Esquematizar	Escoger
Recitar	Generalizar	Interpretar	Experimentar	Fabricar	Estimar
Recordar	Hacer listas	Llevar a cabo	Inspeccionar	Formular	Jerarquizar
Relatar	Identificar	Modificar	Inventar	Idear	Juzgar
Repetir	Ilustrar	Operar	Investigar	Imaginar	Medir
Reproducir	Inferir	Organizar	Observar	Intuir	Preferir
Seleccionar	Informar	Planificar	Probar	Inventar	Rechazar
Señalar	Interpretar	Practicar	Relacionar	Juntar	Revisar
Subrayar	Justificar	Programar	Señalar	Manejar	Tipificar
Traducir	Leer	Realizar	Ver	Ordenar	Valorar
	Memorizar	Reestructurar		Organizar	
	Narrar	Relacionar		Planificar	
	Preparar	Resolver		Preparar	
	Recitar	Sintetizar		Producir	
	Reconocer	Usar		Proponer	
	Recordar	Utilizar		Proyectar	
	Relacionar			Reconstruir	
	Relatar			Relatar	
	Repetir			Resumir	
	Replantear			Sintetizar	
	Representar			Suponer	
	Resumir			Teorizar	
	Traducir				
	Transformar				
	Ubicar				

Appendix K

	Pre Test Results	Post Test Results	Difference
Student 1	13	0	-13
Student 2	4	16	12
Student 3	4	2	-2
Student 4	7	11	4
Student 5	4	7	3
Student 6	9	4	-5
Student 7	9	0	-9
Student 8	2	13	11
Student 9	31	0	-31
Student 10	18	7	-11
Student 11	7	4	-3
Student 12	11	22	11
Student 13	27	0	-27
Student 14	9	2	-7
Student 15	7	2	-5
Student 16	4	18	14
Student 17	4	0	-4
Student 18	18	0	-18
Student 19	33	7	-26
Student 20	9	7	-2
Student 21	18	13	-5

	15% Increase
	15 % Decrease

Control group: pre- and post test results

Appendix L

	Pre Test Results	Post Test Results	Difference
Student 1	4	13	9
Student 2	0	33	33
Student 3	4	11	7
Student 4	4	29	25
Student 5	0	9	9
Student 6	11	13	2
Student 7	4	20	16
Student 8	20	49	29
Student 9	4	40	36
Student 10	24	62	38
Student 11	7	33	26
Student 12	49	58	9
Student 13	0	24	24
Student 14	9	24	15
Student 15	4	38	34
Student 16	7	13	6

	15% Increase
	15 % Decrease

Experimental group: pre- and post test results

Appendix M

Liceo Industrial y de Minas Ignacio Domeyko
Departamento de Inglés

Clase 4: Vocabulario temático

Objetivo: Identificar vocabulario sobre señales de seguridad
Habilidad: Asimilar - Producir

Descripción de Actividades y Recursos

Inicio:

El profesor saluda a la clase, pasa la lista, explica el desafío de la clase y a la vez realiza una lluvia de ideas en relación a lo visto en la clase anterior.

Desarrollo:

El profesor enseña a los alumnos una lista de vocabulario con una serie de señales de seguridad a tener en cuenta en el taller de mecánica industrial. Los alumnos repiten éstas señales para lograr internalizarlas.

Luego, los alumnos desarrollan una guía de ejercicios donde deben ordenar palabras y oraciones, ordenar párrafos en secuencia lógica y redactar un párrafo nuevo sobre su especialidad siguiendo el ejemplo dado en la guía; el profesor va guiando y supervisando el trabajo de los estudiantes.

Cierre:

El profesor revisa los ejercicios de manera general con los alumnos, corrige errores en caso de haberlos.

Recursos de aprendizaje:

PPT, guías, diccionarios

Evaluación: Formativa.

Appendix N

Liceo Industrial y de Minas Ignacio Domeyko
Departamento de Inglés

English Pre-Test: "Simplified Technical English" in teaching "English for Specific Purposes".

Propósito:

La siguiente evaluación tiene como propósito proveer a los investigadores de información acerca del rendimiento escolar, centrado en la comprensión lectora, de alumnos de "3ro Medio Mecánico" en la asignatura de "Idioma extranjero: Inglés". Bajo la metodología del aprendizaje basado en tareas (TBL, por sus siglas en inglés) se pretende evaluar el aprendizaje de "Inglés Técnico Simplificado" (STE), que corresponde a una rama del idioma inglés centrada en una especialidad dada, con un fin específico (en este caso, Inglés orientado a la Mecánica Industrial).

Objetivos:

Fase 1: Conocimiento (Recordar información)

a. *Nombrar los tipos de herramientas usadas comúnmente en el área de Mecánica Industrial.*
b. *Relacionar verbos en inglés, usando el modo imperativo para dar direcciones, con su complemento correspondiente.*

Fase 2: Comprensión (Interpreta información de acuerdo a contenido teórico)

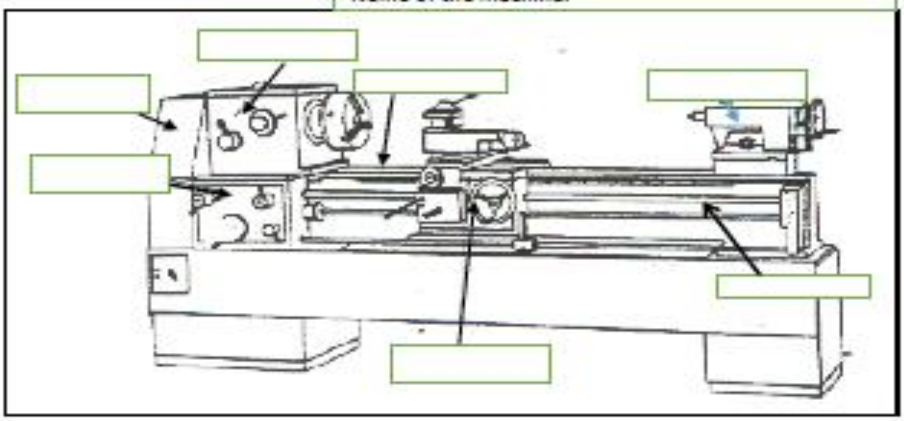
a. *Identificar las diferentes partes de maquinarias relacionadas al área de la especialidad. (Torno, Fresa y Taladro)*
b. *Identificar en contexto conceptos relacionados a la especialidad técnica (Maquinarias de Mecánica Industrial)*
c. *Ordenar una secuencia lógica para lograr la aplicación de una tarea específica.*
d. *Traducir conceptos relacionados al área de especialidad (procedimientos, procesos, y herramientas)*

I. Translate into spanish the following words related to the Unit:

Tools	Spanish Translation
Hammer	
Sandpaper	
Screwdriver	
File	

II. a) Identify the name and the parts of the machine presented in the image:

Name of the machine:



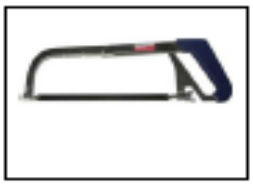
b) Identify the concept or the instruction that the images represent:

III. Match the commands in column A to the corresponding complement in column B

A	B
1) Drill	_____the angle grinder before you use it.
2) Cut	_____by using the correct drill bit.
3) Polish	_____the drill after you use it.
4) Turn on	_____the metal piece using the hacksaw.
5) Turn off	_____the piece of iron by using the sandpaper
6) Hammering	_____two nails in each corner

IV. a) Write the name for every tool in English:

_____



_____

_____

_____

b) Select the correct function for the following tools

1) 

a) to Measure
b) to Drill
c) to hammer

What does it do?

2) 

a) to press
b) to smooth
c) to nail

3) 

a) to secure
b) to slide
c) to connect

V. Sequence these commands and tasks in order to make a logical sequenced task:

1) Hard boil an egg

_____ Add a pinch of salt to the water.

_____ Stop the cooking process.

_____ Fill the pot with enough cold tap water to cover the eggs completely.

_____ Sort the eggs.

_____ Peel the eggs.

_____ Put on a lid.

2) Hammering a nail

_____ Hold the hammer near the end of the handle.

_____ Pick the hammer.

_____ Grasp the hammer firmly at the end and hit the nail straight on

_____ Choose the right nail for the job.

_____ Hold the nail below the head with the fingers of one hand.

3) Use a drill press

_____ wear Safety Gear

_____ Mark Your Material

_____ Clamp It and Align It

_____ Choose the Bit

_____ Drill It

_____ Set the Depth Stop

Appendix O

Liceo Industrial y de Minas Ignacio Domeyko
Departamento de Inglés

English Post-Test: "Simplified Technical English" in teaching "English for Specific Purposes".

Propósito:

La siguiente evaluación tiene como propósito proveer a los investigadores de información acerca del rendimiento escolar, centrado en la comprensión lectora, de alumnos de "3ro Medio Mecánico" en la asignatura de "Idioma extranjero: Inglés". Bajo la metodología del aprendizaje basado en tareas (TBL, por sus siglas en inglés) se pretende evaluar el aprendizaje de "Inglés Técnico Simplificado" (STE), que corresponde a una rama del idioma inglés centrada en una especialidad dada, con un fin específico (en este caso, Inglés orientado a la Mecánica Industrial).

Objetivos:

Fase 1: Conocimiento (Recordar información)

a. *Nombrar los tipos de herramientas usadas comúnmente en el área de Mecánica Industrial.*
b. *Relacionar verbos en inglés, usando el modo imperativo para dar direcciones, con su complemento correspondiente.*

Fase 2: Comprensión (Interpreta información de acuerdo a contenido teórico)

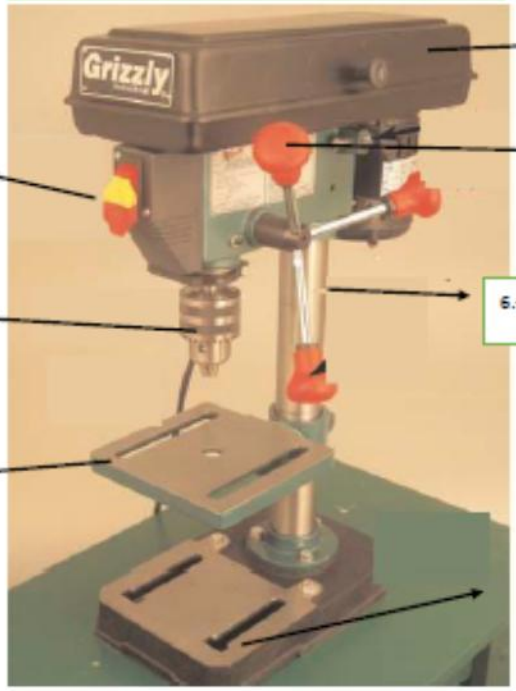
a. *Identificar las diferentes partes de maquinarias relacionadas al área de la especialidad. (Torno, Fresa y Taladro)*
b. *Identificar en contexto conceptos relacionados a la especialidad técnica (Maquinarias de Mecánica Industrial)*
c. *Ordenar una secuencia lógica para lograr la aplicación de una tarea específica.*
d. *Traducir conceptos relacionados al área de especialidad (procedimientos, procesos, y herramientas)*

I. Translate into Spanish the following words related to the unit.

Tools	Spanish Translation
File	
Screwdriver	
Sandpaper	
Hammer	

II. a) Identify the name and the parts of the machine presented in the image.

1.- Name of the machine:



8.-

2.-

7.-

3.-

6.-

4.-

5.-

b) Identify and write the instructions that the images represent:

1.

2.

3.

III. Match the commands in column A to the corresponding complement in column B:

Column A	**Column B**
a. Drill	1) _____The drill after you use it.
b. Cut	2) _____The angle grinder before you use it.
c. Polish	3) _____The metal piece using the hacksaw.
d. Turn on	4) _____The workpiece using the correct drill bit.
e. Turn off	5) _____The piece of iron by using the sandpaper
f. Hammer	6) _____Two nails in each corner.

IV. a) Write the name for every tool in English:

1. 

_____

2. 

_____

3. 

_____

4. 

_____

b) Circle the correct function for the following tools:

1) 

a) To measure
b) To Drill
c) To hammer

2) 

a) To smooth
b) To nail
c) To press

3) 

a) To slide
b) To hold
c) To connect

V. Sequence these commands and tasks in order to make a **logically sequenced** operation:

1) Hammering a nail

_____ Hold the hammer near the end of the handle.
_____ Pick the hammer.
_____ Hold the hammer firmly at the end and hit the nail straight on
_____ Choose the right nail for the job.
_____ Hold the nail below the head with the fingers of one hand.

2) Using a drill press

_____ Put on your safety Gear
_____ Turn on the drill press
_____ Secure and align the workpiece
_____ Secure the Drill Bit in the Drill chuck
_____ Drill the workpiece
_____ Set the Depth Stop and the drill speed

3) Hard boil an egg

_____ Add a pinch of salt to the water.
_____ Turn off the stove
_____ Fill the pot with enough water to cover the eggs completely.
_____ Put the eggs on a pot
_____ Peel and eat the eggs
_____ Put the pot in a stove and turn on the stove