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Maestría en Lingüística Aplicada a la Enseñanza del Inglés como Lengua Extranjera

ESP Vocabulary Handbook for Beginner Students of the Software
Development Major at the Instituto Superior Tecnológico del Azuay

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Resumen

El objetivo de este estudio de investigación es la creación de un manual de vocabulario para el aprendizaje de Inglés con propósitos específicos para la carrera Tecnología Superior en Desarrollo de Software del Instituto Superior Tecnológico del Azuay y determinar el grado de mejoramiento del vocabulario después de su aplicación. Los participantes fueron 20 estudiantes del Primer Ciclo de la sección matutina que estaban cursando la carrera Desarrollo de Software.

El diseño cuasi experimental de este estudio combina lo cualitativo y cuantitativo. La fase cualitativa consistió en dos encuestas antes de la intervención para analizar su grado de interés para aprender Inglés Técnico y observaciones de clase durante la aplicación del manual. Los resultados se examinaron empleando el análisis estadístico descriptivo de frecuencias relativas. La fase cuantitativa consistió en un examen antes de la intervención para determinar su nivel de conocimientos de vocabulario y un examen posterior a la aplicación del manual para revisar si su nivel de aprendizaje se había elevado o no, en relación a su nivel inicial y los resultados fueron examinados a través del Paquete Estadístico para Ciencias Sociales (SPSS 24).

Los resultados de la investigación demuestran que los estudiantes incrementaron su nivel de vocabulario después de la aplicación de un manual para el aprendizaje de Inglés con propósitos específicos que fue creado para la carrera Desarrollo de Software.

Palabras clave: Manual. Vocabulario. Inglés con Propósitos Específicos. Computadoras. Desarrollo de Software.



Abstract

This research study aims to create an English for Specific Purposes (ESP) vocabulary handbook for the Software Development Major of the Instituto Superior Tecnológico del Azuay and determine the degree of vocabulary improvement after its application. The participants were 20 first-level students at the morning schedule of the Software Development Major.

This quasi-experimental research design used mixed methods for data collection. In order to collect qualitative data, two questionnaires were administered to determine the degree of interest in learning technical English before the intervention and observational field notes were taken during the application of the manual. The quantitative data were collected from a pre-test to determine their level of vocabulary knowledge, and a post-test after the application of the handbook to find out whether the students had made some progress. The data were calculated through the Statistical Package for Social Sciences (SPSS 24).

The results of the research demonstrate that students increased their vocabulary knowledge after applying an ESP handbook that was created for the Software Development Major.

Keywords: Handbook. Vocabulary. English for Specific Purposes. Computers. Software Development.



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Dedication

I dedicate this research study to my two princesses, my beloved daughters, Luna and Adriana, who have suffered those long working hours and my lack of time to take care of them. They will always be my eternal inspiration.

¡I love you Lunəchy!

Mom



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Danny



Introduction

In Ecuador, English as a Foreign Language (EFL) has been taught from primary school to high school; however, once participants reach university, their English test scores reflect a low proficiency. As reported by English First (EF) and English Proficiency Index (EPI) (2020), a worldwide organization that measures English proficiency levels in different countries, English is the key competitive weaknesses of Latin America. In Ecuador, high school students scored an average score of 411 over 700 in 2020, showing low proficiency and ultimately ranking ninety third out of 100 countries.

These results are little encouraging since they indicate that students may not be aware of the substantial benefits that learning English brings to their lives. Many questions arise in this perspective; consequently, the Ecuadorian population must bear in mind that higher English proficiency is correlated with a higher income, a higher quality of life, creative ways of doing business, and more emerging innovation.

Over the last thirty years, English has been taught at the elementary school, high school, and university levels in Cuenca, Ecuador; however, there are factors that have affected the teaching-learning process of the target language. First, the focus of language teaching has been on form rather than on function, which has led students to concentrate on the structure rather than on the content. According to Clavijo and Solís (2001), factors that hinder acquisition of the target language are “the lack of professionally trained teaching staff, the need of a curriculum design which suits the Ecuadorian student population in the different levels of education, standardized goals for the different levels, adequate didactic materials and a proper methodology” (p. 417). As a result, English teaching and learning has failed in the process of respectively imparting and acquiring the target language.



English for Specific Purposes (ESP) is an approach that teaches English as a second language. It is designed to achieve students' goals by teaching English according to their needs. In a research article by Bowker (2002), the author declares that ESP classes fulfill students' needs of English language that are necessary to achieve their goals for future. According to the author, ESP is a learner-centered approach that focuses on developing communicative competence in a specific discipline such as engineering, computing, or accounting.

Furthermore, in a research article by Hewings (2002), the author states that "the ability to maintain a balance between, on one hand, the report of sound and interesting research and, on the other, discussion of its implications for pedagogical practice relevant to a wide range of teaching contexts" (p. 5). This research shows the importance of ESP programs for learning a new language for professionals who need to accomplish a level of language as an important requirement to get their bachelor's degrees.



Chapter 1

Research Description

1.1. Background and Justification

In 2017, the Instituto Superior Tecnológico del Azuay; reopened the first cohort (October 2017–April 2018) of this emblematic program. In September, 252 students attended the program, but under the name Superior Technician in Software Development. This program lasted three years or five semesters with six subjects in each term. There are three class schedules for students to choose: morning school, evening school or night school including Saturdays.

The rationale of the program is based on the language needs of learners. According to Richards and Rodgers (2001), “ESP seeks to focus the language for specific roles” (p. 207). In the case of this study, ESP instruction highlights handbooks material that contains activities for vocabulary learning. This handbook will be elaborated according to the ESP methodological principles to help students learn specific vocabulary for their jobs.

This research aims to create an ESP vocabulary handbook that provides participants with topics related to software programs, applications, and utilities.

1.2. Problem Statement

On January 27th, 2018, the Instituto Superior Tecnológico del Azuay received an English proposal for all higher technological and technician institutes of Ecuador from SENESCYT. It included a new distribution of English hours per week and per semester for all careers. This English proposal aims to help students achieve A2 English language



proficiency (Common European Framework of Reference for Languages, CEFR) by the end of their fourth semester.

The Common European Framework of Reference for Languages (CEFR) is an international standard for describing language ability. It describes language ability on a six-point scale, from A1 for beginners up to C2 for advanced.

The CEFR describes what a beginner user or an A1 English language proficiency learner is supposed to be able to do in regards to reading, listening, speaking and writing. It states that an A1 learner will achieve three domains: understand and use familiar everyday expressions, introduce themselves and others, and interact in a simple way provided the other person talks slowly and clearly and is prepared to help.

The Superior Technician in Software Development Major (STSDM) opened a second cohort in the term May – October 2018, with 140 new students divided up into seven courses. Students were expected to reach A1.1 by the end of the first cycle. However, it was observed that English teachers were unable to accomplish this task because they used a basic English textbook without vocabulary related to the students' careers.

The exit English level of each program demand students a fair level of reading comprehension of technical literature related to the career. Therefore, this study includes the creation of a handbook that will help students accomplish vocabulary learning, an important aspect of reading comprehension.

This program lacks proper academic teaching materials that provide information about software programs, applications, and utilities. Therefore, it is necessary to create an ESP vocabulary handbook for this program with teaching material to suit participants' needs and interests. There is vast information about software and computers written in English



(Pffleeger and Atlee, 2010; Sommerville, 2004; Vliet, 2008) but unfortunately, students are not able to use it due to their lack of knowledge of English.

1.3. Research Questions

English language is the means by which students ought to be trained to talk about software programs and computers. So, this thesis addresses the following research questions:

To what degree can beginner students improve their English vocabulary skills by using an ESP vocabulary handbook created for the Software Development major at the Instituto Superior Tecnológico del Azuay?

To what extent can the application of an ESP handbook be useful for beginner students to improve their English proficiency level at the Instituto Superior Tecnológico del Azuay?

1.4. Objectives

1.4.1. General Objective

To create and apply an ESP handbook for Software Development beginner students at the Instituto Superior Tecnológico del Azuay that will be used as learning material for teachers and students.

1.4.2. Specific Objectives

To build ESP tasks and material that will lead students to construct vocabulary knowledge.



To increase students' vocabulary skills through the use of tasks related to software and computers.

To determine the degree of vocabulary improvement after the application of the ESP handbook according to students' perceptions.



Chapter 2

Theoretical Framework and Literature Review

In the era of globalization, English communication for scientists and engineers whose native language is not English has become as important as their major-related abilities. Consequently, English language for Specific Purposes (ESP) has generated attention, as opposed to focusing on acquiring English for general purposes. Educational and language teachers concern about the methods, techniques and approaches that would lead to the appropriate classroom method and techniques to construct English language specifically focusing on the acquisition of specialized vocabulary knowledge (Ahmadi-Azad and Kuhí, 2016). Authors like Wang (2006) reported that designing, producing, applying, and analyzing tasks with specific students' goals in mind is more meaningful for their language acquisition. She also indicated that communicative ESP tasks designed based on a Content-based Instruction (CBI) approach should meet certain standards for the analysis of College English textbooks. It is because not all texts meet the students' expectations and interests. Moreover, tasks without goals are not real English language classroom material.

2.1. Content-based Instruction and English for Specific Purposes

English Educational researchers like Ahmadi-Azad and Kuhí (2016) reported that ESP courses often follow a Content-based methodology like the Content-based Instruction (CBI) approach through the frequent use of authentic materials concerning the students' real-life purposes. For instance, content instruction integrated with explicit language instruction in a relevant and purposeful profession-related classroom context facilitates the language teaching and learning process (Tzoannopoulou, 2015). This suggests that



learners become more interested in learning a language when it is focused on a purpose for their real life, namely their professional activities (Pradhan, 2013).

Prior researches substantiated the belief that a CBI approach is generally incorporated in an ESP context. To illustrate, Chau (2011) demonstrated the incorporation of the CBI approach in the ESP context in his quasi-experimental research study. ESP materials designed in the CBI approach were used in the treatment of a group of participants to see its effects. The findings from this research revealed the students' interest and involvement in the course. The study also highlighted the students' ability to achieve better scores in all modes of ESP. In a similar study, Kavaliauskiene (2010) described that a foreign language is more successfully acquired when learners are exposed to content that is integrated with explicit and purposeful contexts. The author also commented that CBI comprises oral and written steps, where the acquisition of specific vocabulary in both skills is highlighted. The results of this study showed that ESP is best acquired through the integration of an explicit subject matter because learners are genuinely interested. Finally, research conducted by Al Amrani (2019) demonstrates the impact of Content-based Instruction (CBI) in a course of English for Specific Purposes at an engineering school. The results of this study concluded that CBI is present in ESP educational contexts. The qualitative research investigation was carried out with a total of 40 students divided into two groups of 20 students each. The students were exposed to a fifteen-hour course of legal English over a period of six weeks. Each class lasted one hour and fifteen minutes, and classes were held twice per week. The focus was on reading comprehension and acquisition of engineering-specialized learning vocabulary.

Given the above, it is evident that when students are exposed to ESP educational contexts, the presence of a CBI approach is crucial.



2.2. English for Specific Purposes

Plesca (2016), defined ESP as a branch of English Language Teaching (ELT) that has a narrower focus than that of EGP (English for General Purposes). ESP is focused on specific learning needs of the language learner. This means that ESP involves the teaching and learning of the foreign language for purposes such as professional purposes. In this way, it will be easy for learners to be able to interact in specific workplace situations after their English courses (Garcia and Frances, 2015). Likewise, ESP refers to the specialized teaching and learning of the English language to learners who already have had some general knowledge of it (Rahman, 2015 and Fiorito, 2006). Garcia and Frances (2015) underlined that the key feature of ESP is that English is not taught as a subject separated from the learners' real world or wishes; instead, it is integrated into a subject matter that is important to them and will be used in their future lives.

Different previous research studies indicated the importance of ESP in EFL contexts aimed at professional language training of learners. To clarify, Pradhan (2013) mentioned that to focus on EFL language teaching course design, it is relevant to consider English tasks based on the contents of different subjects. The study results indicated that this type of material covered learners' specific needs and that therefore the students were more interested in learning English. Musikhin (2016) also highlighted the importance of an ESP course for scientists and engineers: it helps learners develop the language skills necessary to be active and contributive players in these competitive fields.

As described previously, ESP materials are very helpful for EFL students, especially for those who intend to use English in their professional lives.



2.3. The Content-based Instruction

Content-based Instruction is an approach applied in second language teaching and learning that is focused on the construction of language (Richard and Rodgers, 2014). In Content-based classrooms, the construction of knowledge needs to progress hand-in-hand with the development of English (Gibbons, 2015). This type of approach combines the language within a context such as math, science, social studies, and so on. (Vergara et al., 2016). In addition, this type of approach can be adjusted in the language level being sought (Stoller, 2008 and Tsou, 2015). There are different studies carried out in different countries and subject contexts that prove that CBI is necessary for EFL contexts. For instance, a research study carried out by Schleppegrell (2012) suggested that teachers can build students' knowledge in content areas while the students simultaneously develop English proficiency. This research shows how CBI works because language and content are never separated. Pessoa (2008) also corroborated that Content-based Instruction is useful for EFL contexts because it provides a meaningful context for learners' language instructions. Likewise, Gibbons (2015) revealed how teacher-student interactions in an Australian Content-based science classroom contributed to ESL students' language development. The author's article described how teachers mediated the students' first language abilities in a specific subject and the specialist understanding of it.

Research findings obtained in more natural contexts than the ones reported above, provide evidence of CBI focused on vocabulary acquisition and development at the tertiary level. To clarify, Martin (1990) mentioned that vocabulary acquisition is one of the most complex aspects of both theory and practice of foreign language teaching and learning. Likewise, Hatch (1983) argued in favor of the centrality of the lexicon to both acquisition and use by stating that "it is the lexical level that adult L2 learners regard as



most important" (p. 74). The author mentioned that if the prime goal is communication when there is little of the new language in command, basic communication is engendered through words. In addition, McCarthy (1984) indicated that the purpose of vocabulary learning should include both remembering words and the ability to use them automatically in a wide range of language contexts when the need arises.

Altogether, extended CBI is effective in promoting high levels of functional proficiency in the L2. It depends on the educational level, the organization of the curriculum and the relative emphasis on language or content (Lindholm-Leary and Genesee, 2014).

2.4. Vocabulary Acquisition in ESP

Vocabulary learning is an essential part of the language learning process (Ahmadi-Azad and Kuhi, 2016) especially for ESP classroom contexts. It is very important for learners to build a consistent body of specific terms (Chirobocea, 2018) and receive a body of authentic material (Ahmadi-Azad and Kuhi, 2016). Prior research confirmed that the incorporation of language and communication improvement courses such as the ESP manuals is an important element of continuous learning and will eventually contribute to life-long learning of vocabulary (Musikhin, 2016).

Chirobocea (2018) underlined the importance of exposing learners to a carefully selected body of authentic materials where real-life situations and context-appropriate language are used, and where focus on lexis and specific vocabulary is preferred. In this way, ESP materials will help learners to be prepared for chosen communicative environments such as their particular profession-related activities (Mulleneaux, 2017). This is also evident in research study carried out by Chirobocea (2018), where the results



demonstrated that ESP vocabulary tasks lead to students' overall vocabulary development mainly through the acquisition of the specialized vocabulary. The study participants were Iranian ESP students. They were placed in two intact classes of specialized English for management students in Gowgan at Azad University. The data were collected through a teacher-made management vocabulary test which was given as both a pre-test and post-test.

Similarly, Ruzhekova – Rogozherova (2018) confirmed that ESP study materials boost language skills that contribute to general and specific communicative competence improvement. Learners become more motivated to learn the language with this type of material since their interest in independent studying and sense of responsibility as learners are enhanced. The author indicated that this is due to students being exposed to constructed, elaborated and consolidated linguistic and contextual adequate tasks.

Overall, ESP-constructed materials are very helpful educational tools for EFL learners to acquire, enhance, and develop specific vocabulary knowledge. This type of material allows teachers to use more contextualized resources in their classrooms so that students acquire more meaningful language knowledge that they can use in their professional lives. Moreover, through this type of material, they will become less reluctant EFL students and therefore their interest in learning the language will increase.



Chapter 3

Methodology

This chapter will describe the methodology used to develop this research. It contains the description of the context, the participants, the method selected for conducting this study, the procedure, and the data collection instruments.

3.1. Research Context

The research took place at the Instituto Superior Tecnológico del Azuay in Cuenca, province of Azuay. Instituto Superior Tecnológico del Azuay is the first public higher education institute in Cuenca, with more than 1,000 students coming from public high schools where English is taught for one or two hours a week.

3.2. Participants

A mixed gender group of twenty students, 11 females and 9 males, from different cities throughout Azuay participated in the study. All students were in the first level at the morning schedule of the Software Development Major. They ranged from 18 to 20 years of age and had basic level of English. All students consented (Appendix A) to participate in the research and the career coordinator was informed about the procedures of the research.

3.3. Research Design

The overall research design was a quasi-experimental study, since it was applied to an intact group of twenty students. Grant and Wall (2009) underlined that quasi-experimental studies are particularly useful under certain conditions, for example, when randomization to treatment condition is not possible or to take advantage of un-



controllable environmental events. For this study, a mixed methods research design was used due to the fact that the data were collected and analyzed in a quantitative and qualitative way. The two data sets were collected with the purpose of answering two research questions. This study aimed at investigating the effect of the technical English – constituting the independent variable – on the performance obtained by the students as the dependent variable.

This methodology was selected based on the fact that researchers can make use of the methodology that best fits the nature of the investigation (Creswell, 2014). Besides, researchers can benefit from mixed methods designs since the combination of qualitative and quantitative data can provide an integral understanding of the investigation (Creswell & Creswell, 2014).

3.4. Procedure

This section presents the processes that were used to collect information for this research study as well as a detailed description of the phase of intervention. This treatment was administered in seven weeks. At the beginning, two open-ended and close-ended questionnaires (Appendices B and C) were administered to the students of the Software Development Major to determine the degree of interest in learning technical English through their perceptions. Then students were given a pre-test (Appendix E) to determine their current degree of vocabulary knowledge related to computers.

Both questionnaires were used to collect qualitative and quantitative data, which was later analyzed and tabulated to determine their perceptions related to technical English.



Then a handbook was created as a means to improve students' vocabulary knowledge. The handbook consisted of eight worksheets including topics such as types of computers, internal and external components of computers, desktop and icons, digital devices, internet vocabulary, keyboard parts and functions, and apps and features (Appendix F).

For seven weeks, students practiced and tried to improve their vocabulary skills by completing vocabulary worksheets related to computers. During the learning period, observation field notes (Appendix D) were taken by another English teacher to evaluate the class' performance while using the handbook.

After the treatment was administered, students completed a post-test (Appendix E) to measure their progress. The post-test data were tabulated and presented in tables, as seen in the next chapter. The analysis and interpretation of results allowed conclusions to be obtained.

3.5. Intervention

The intervention took place during the academic semester November 2018 – April 2019 for seven weeks from December 2018 to January of 2019. Students received 5 sessions of English instruction per week. Each session lasted sixty minutes.

3.6. Data Collection Instruments

The data collection method was based on a mixed-methods design. Therefore, this section will detail the data collection instruments used to obtain the quantitative and qualitative data.



3.6.1. Quantitative Data Collection Instrument

In order to collect quantitative information about students' degree of interest in learning technical English through their perceptions, two questionnaires were administered to the students at the beginning of the study. These questionnaires were elaborated and validated in the first level at the afternoon schedule of the Software Development Major during the academic semester May – October 2018 since this class had the same characteristics as the studied group. After piloting these instruments, some changes were done so that the questions to be asked were clear. Piloting questionnaires was relevant since it also helped the researcher have validated instruments.

The first questionnaire (See Appendix B) measured how interested the students were about learning technical English, and it contained two closed-ended questions. The second questionnaire (See Appendix C) measured the degree of interest in learning English vocabulary through students' perceptions, and it contained four closed-ended questions.

Before the intervention, a pre-test (See Appendix D) was given to the students to determine their degree of learned vocabulary related to computers. The test was rated so as capture the students' knowledge as accurately as possible, and the results were considered in the construction of the handbook. The test contained eight closed-ended questions about computer related vocabulary such as types of computers, internal and external components of computers, desktop and icons, digital devices, internet vocabulary, keyboard parts and functions, and apps and features.



After the intervention, a post-test was given with the aim of determining students' degree of vocabulary improvement after the application of the handbook. This post-test was exactly the same as the pre-test.

3.6.2. Qualitative Data Collection Instrument

Regarding the qualitative data, a questionnaire (See Appendix B) was administered to the students at the beginning of the study. This questionnaire measured how interested the students were in learning technical English, and it contained three open-ended questions.

3.6.2.1. Observational field notes

Observational field notes were taken for thirty-five hours, seven weeks one hour every day, by an English coworker to evaluate the class' performance while using the handbook. This English teacher also worked at the Software Development Major and he had classes at night. He helped me with the thirty-five days of observational field notes and filled in the templates (See Appendix D) by hand one per topic. Besides, we both taught the same English level but on different schedules.

During the observations, students practiced and tried to improve their vocabulary skills by completing vocabulary worksheets related to computers. The authors Schatzman and Strauss (1973) mentioned that “for observational field notes the aspects can be selected according to statements involving events experienced principally through watching and listening, and they must contain as little interpretation as possible” (p.100).

During the learning period, five aspects were assessed to evaluate the class' performance while using the handbook, and they were selected after reviewing some research studies. These aspects included preparation, classroom management, classroom



atmosphere, use of the handbook, and students' participation. Regarding preparation, authors like Lange and R. Sims (1990) mentioned that "when teaching a second language more attention should be paid to class preparation" (p. 300). Regarding classroom management and atmosphere, (Gencer and Cakiroglu, 2007, Woolfolk and Hoy, 1990) mentioned that teacher efficacy can be related to teachers' perceptions of classroom management strategies, and Pan (2014) underlined that teachers should maintain a good learning atmosphere to achieve teaching objectives. In the aspect use of the handbook, Diamond and Gutlohn (2006) confirmed that a handbook examines a component of effective vocabulary instruction. The last assessed aspect was students' participation and Balas (2000) explained in his article that it helps in evaluating students' knowledge and helped them actively engage with content.

3.7. Data Processing and Analysis

The data underwent quantitative as well as qualitative analysis. Therefore, this section will detail how the quantitative and qualitative data were analyzed.

3.7.1. Quantitative Data Analysis

Quantitative data was collected through the use of four instruments. The first instrument was a questionnaire with two closed-ended questions aimed to measure how interested the students were in learning technical English. Responses from the two questions were manually transferred into an excel spreadsheet. Then, nominal scales were used to measure the answers and the program Microsoft Excel 2019 was used to edit graphics and tables. Each tag on the nominal scales was tabulated independently. The responses from the closed-ended questions were analyzed using the relative frequency of students' answers.



The second instrument was a questionnaire with four closed-ended questions that measured the degree of interest in learning English vocabulary through students' perceptions. Responses from this questionnaire were manually transferred into an excel spreadsheet. Then, three nominal scales and a Likert scale were used to measure the answers and the program Microsoft Excel 2019 was used to edit graphics and tables. Each tag on the nominal scales and each rank on the Likert scale were tabulated independently. The responses from the questionnaire were analyzed using the relative frequency of students' answers.

Then a pre-test with eight closed-ended questions about computer related vocabulary determined students' degree of learned vocabulary related to computers. Finally, a post-test (See Appendix D) was given with the aim of determining students' degree of vocabulary improvement after the application of the handbook. This post-test was exactly the same as the pre-test with eight closed-ended questions about computer related vocabulary.

In addition, the statistical processing of data was done in the SPSS 24 program by an expert statistician. For comparing the pre and posttests, the analysis of information was carried out by using inferential statistics. The results from the pre-test and the post-test were put on a spreadsheet and to compare the pre- and post-intervention of students' statistical results, a T-Test was used for assessment of the outcomes. The pre-test was administered to the group before the intervention and the post-test was applied to them after the implementation of the vocabulary handbook. It is important to keep in mind that the pre-test constitutes baseline data since it functions as the foundation of the research project and is utilized in comparison with other data obtained after the intervention, namely post-test (Moscoso and Calle, 2011).



3.7.1. Qualitative Data Analysis

Responses from the first questionnaire which contained three open-ended questions were manually transferred into an excel spreadsheet. Then, they were classified into categories according to the answers. After that, the data was organized in frequency tables to determine how interested the students were in learning technical English. Once the top responses were obtained, they were used to create the worksheets for the vocabulary handbook. Finally, descriptive statistical analysis of relative frequencies was used to analyze the responses from the open-ended questions, and the program Microsoft Excel 2019 was used to edit graphics and tables.

Regarding the questions, the first one was about the reasons for studying English. Thus, Box 1 shows that three components had emerged from this question. They have been listed from the most frequent to the least below.

Box 1

Questionnaire 1, question 1

Question 1: Why do you study English?

1. I like it.
2. Mandatory subject.
3. International language.

The response “I like it” has been mentioned 13 times. Students perceived that English was their favorite subject. Student 3, for example, stated, “I love English since I was a kid.”

A mandatory subject has been mentioned 6 times. Students pointed out, “I have to study this subject, it’s mandatory.”



International language has been mentioned once. Student 7 reported, “I study English because it’s an international language”.

The second question was about the kinds of vocabulary their English book have. Thus, Box 2 shows that six components had emerged from this question. They have been listed from the most frequent to the least below.

Box 2

Questionnaire 1, question 2

Question 2: What kind of vocabulary does your English book have?

1. Basic
2. Writing
3. Reading
4. Speaking
5. Listening
6. Slang

Basic has been mentioned 11 times. Students perceived that their English books had a basic vocabulary. Student 2, for example, pointed out “It has basic vocabulary”.

Writing has been mentioned 4 times. Students reported that their English books had vocabulary related to writing skills. Student 10, for example, stated “It contains vocabulary for writing letters.”

Reading has been mentioned twice. Students reported, “My English book has readings.”

Speaking, Listening, and Slang have been mentioned once. Students stated that their English books contained vocabulary related to conversations, songs, and slang.



The third question was about the kinds of English vocabulary they would like to learn. Thus, Box 3 shows that 5 components had emerged from this question. They have been listed from the most frequent to the least below.

Box 3*Questionnaire 1, question 4*

Question 4: What kind of English vocabulary would you like to learn?

1. Computers
2. Internet
3. Computer parts
4. Apps
5. Digital devices

Computers have been mentioned six times. Students pointed out that they would like to learn English vocabulary related to computers. Student 19, for example, stated “I want to learn vocabulary about computers.”

Internet, Computer parts, and Apps have been mentioned four times. Students perceived that they wanted to learn new vocabulary about hardware and software. Student 20, for example, reported “I want to learn internet vocabulary.” Referring to computer parts, student 18 pointed out, “More vocabulary about parts of computers.”

Digital devices were mentioned twice. Student 15 stated, “I need more vocabulary about electronic devices.”

Regarding the information taken from the observational field notes to evaluate the class' performance while using the handbook, it was evaluated according to five aspects mentioned previously, and the responses from each parameter were analyzed according



to the level over 100% of productivity, organization, motivation, acceptance, and initiative shown by the students or the teacher in each unit. These results were manually transferred into an excel spreadsheet. Then the program Microsoft Excel 2019 was used to obtain average percentages of each evaluated aspect in all units. Finally, this program was also used to edit graphics and tables.

As a final step, the results of quantitative and qualitative data were compared to establish a connection between them. This analysis let us find the relationship between these results and the objectives of this research.

As it can be seen, this chapter provides information about the research design of the current study, where information about the methodology, intervention phase, context, participants, instruments used to collect the data, and data processing and analysis have been described in detail, giving an overall view of how this research has been conducted.

Chapter 4

Discussion of Results

4.1. Analysis and Interpretations of Results

4.1.1. Questionnaire 1

The first questionnaire was administered to the students majoring in Software Development to determine their degree of interest in learning vocabulary. The main objective of this questionnaire was to measure how interested the students are about learning technical vocabulary related to their career. This questionnaire contained three open-ended and two closed-ended questions, and these are the results:

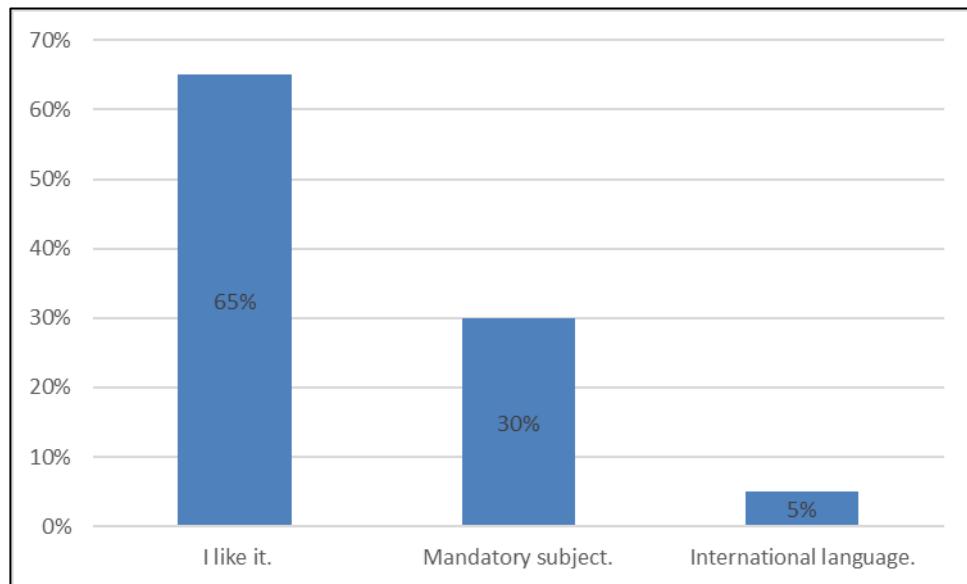


Figure 1. Why do you study English?

When students were asked why they study English, various reasons were noted. The most common was that they like it, which represented 65% of students who agreed. Additionally, 30% of the students indicated that they study English because it is a

mandatory subject, and 5% of the respondents indicated that they study English because it is an international language.

According to Melitz (2016), it is amazing the extent to which English dominates in certain cultural areas, including song, film and best-sellers, though not necessarily publishing in general. This information demonstrates that English is the lingua franca of the world and therefore, that it is very important for students to learn it.

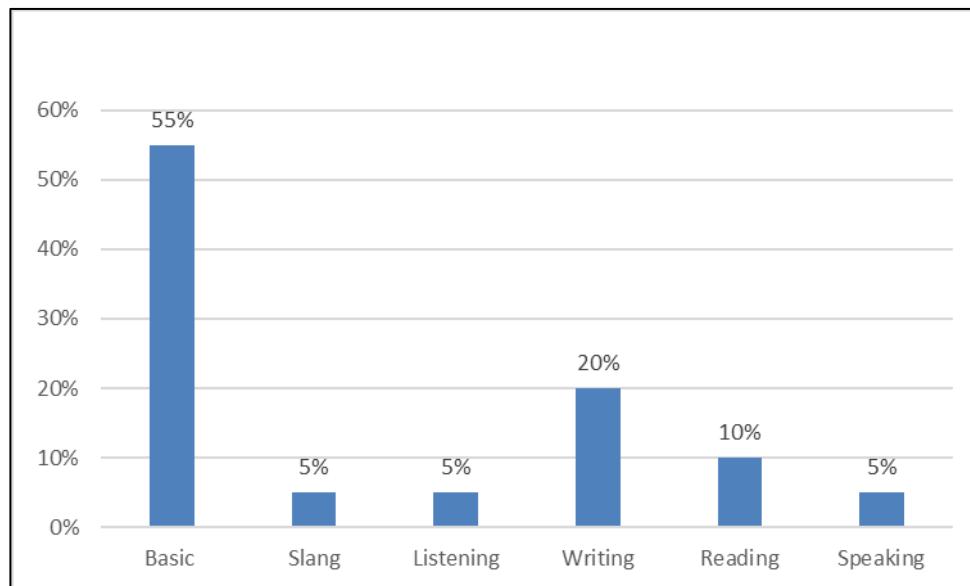


Figure 2. What kind of vocabulary does your English book have?

Regarding question number 2, this figure shows that students' English books contained basic vocabulary (55%), followed by writing vocabulary (20%), reading vocabulary (10%), slang (5%), listening vocabulary (5%), and speaking vocabulary (5%). This data showed clearly that not all English books are targeted to all students, depending on the career they are in. This concept agrees with Fiorito's opinion about ESP, which states that

ESP allows students to learn more English since their interest in their field will motivate them to interact with speakers and texts. (2006)

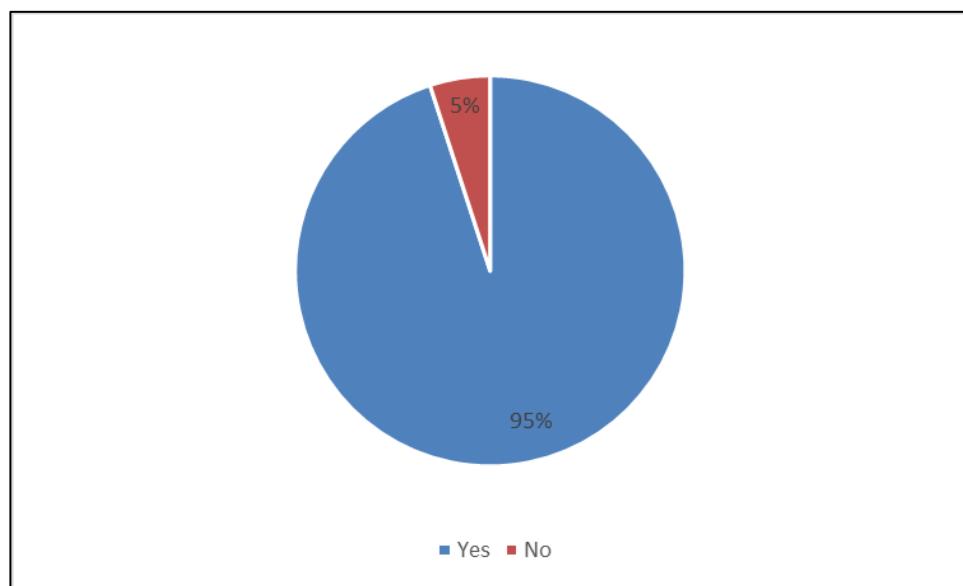


Figure 3. Would you like to learn English vocabulary related to your career?

The above figure shows that 95% of the students would like to learn English vocabulary related to their career and 5% say they would not. These results agree with research conducted by Belcher (2006) which demonstrated that English for specific purposes (ESP) assumes there are problems or gaps that education can ameliorate but they are unique to specific learners in specific contexts and thus must be carefully delineated and addressed with carefully tailored instruction. This means that students belonging to certain careers must study English vocabulary according to their needs.

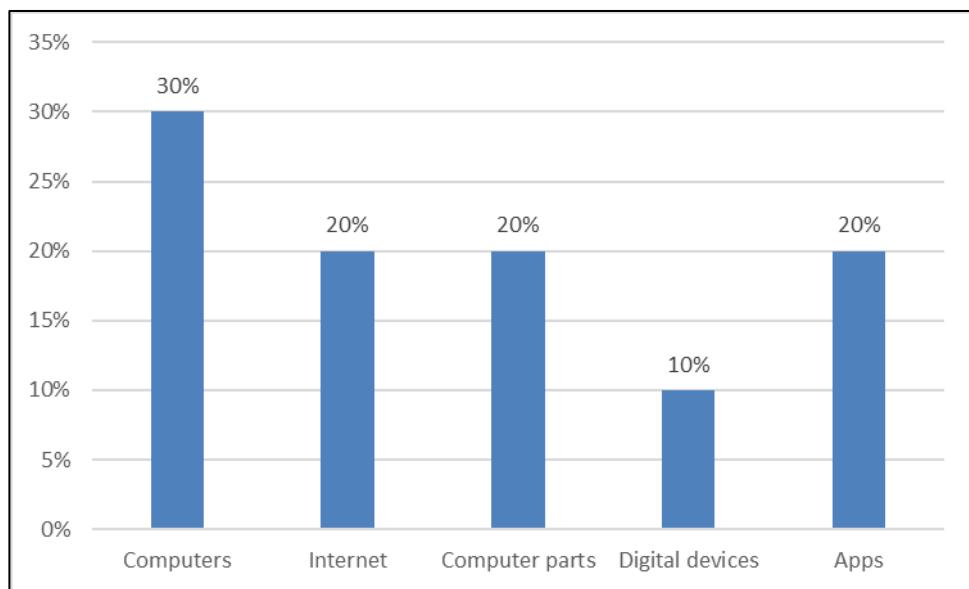


Figure 4. What kind of English vocabulary would you like to learn?

Regarding question 4, some students (30%) would like to learn English vocabulary related to computers, 20% related to the internet, 20% about computer parts, 10% say they would like to learn vocabulary about digital devices, and 20% about apps. Authors like Hyland (2007) agree with these results, since he underlined that English for specific purposes (ESP) refers to language research that focuses on the specific communicative needs and practices of particular social groups. This concept demonstrates that students from the Software Development Major need a handbook with English vocabulary focused on their career, justifying the elaboration of a computer-related vocabulary handbook for teaching English to these students. Their preferences will be considered when choosing the content for the English vocabulary handbook.

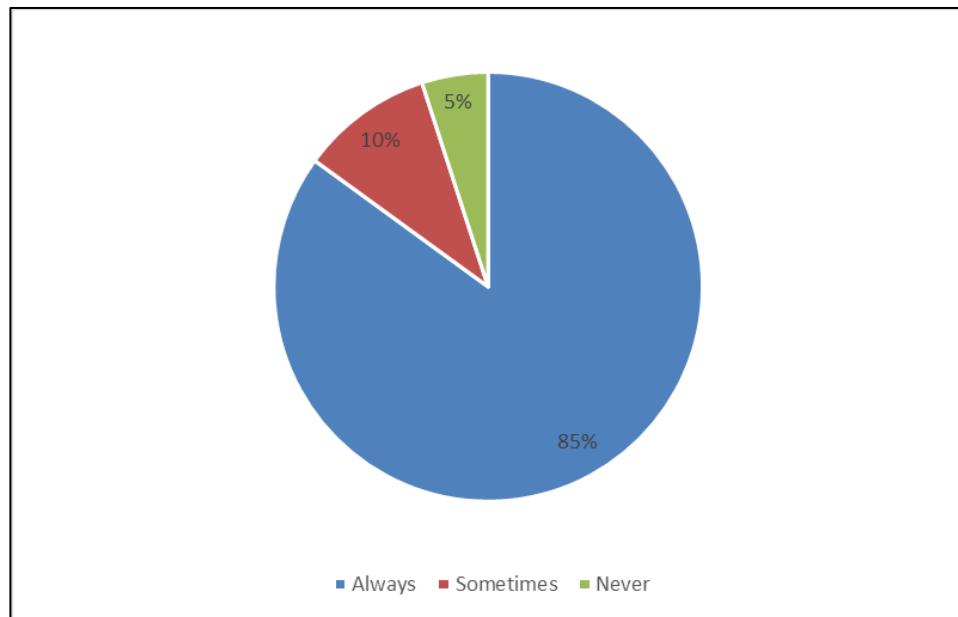


Figure 5. How often an English vocabulary handbook with computer-related words would help you to improve your language learning?

Finally, this figure shows that 85% of the students think an English vocabulary handbook with computer-related words would always help them to improve their language learning, 10% say it would sometimes help them, and only 5% mention it would never help. These data agree with Soodeh et al's concept since the authors consider that language acquisition is an active procedure, which requires that learners continually acquire vocabulary of the target language (2012). In other words, learning vocabulary is the most important skill when learning a new language.

4.1.2. Questionnaire 2

The second questionnaire was conducted to the students of the Software Development Major to determine the degree of interest through students' perceptions. The main objective of this questionnaire was to measure how interested the students are in learning English and design the eight worksheets for the handbook. This questionnaire contained four closed-ended questions, and these are the results:

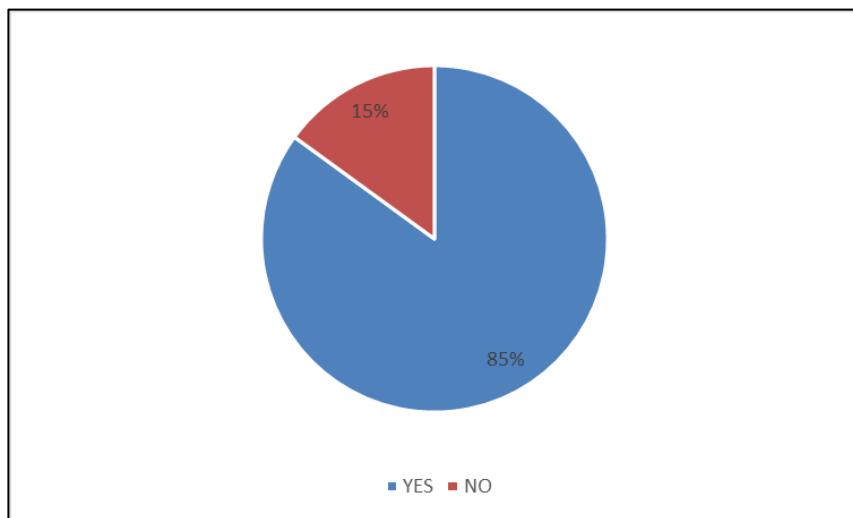


Figure 6. Do you like learning English vocabulary?

About question 1, the figure shows that 85% of the students like learning English vocabulary and 15% do not. These results agree with Schmitt (2000), who mentions that “vocabulary is essential and required where it appears in every skill of using a language.” With these data, it is possible to confirm that students require an English vocabulary handbook with contents focused on computer topics so that students can practice their skills in the English language and raise their level of understanding of the target language.

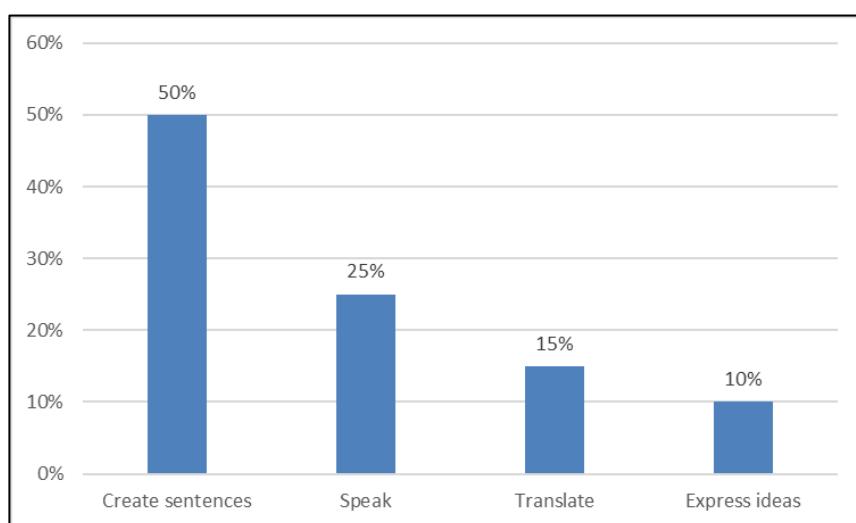


Figure 7. Why is English vocabulary important?

The figure shows that 50% of the students mentioned that English vocabulary is important for creating sentences, 25% say it is important for speaking, 15% say that it is important for translating, and only 10% mention that it is important for expressing ideas. These results agree with UK Essays' concept, which states that vocabulary is one of the most important skills necessary for teaching and learning a foreign language, and it is the basis for the development of all the other skills: reading comprehension, listening comprehension, speaking, writing, spelling and pronunciation. In other words, vocabulary is the main tool for learning English (2018).

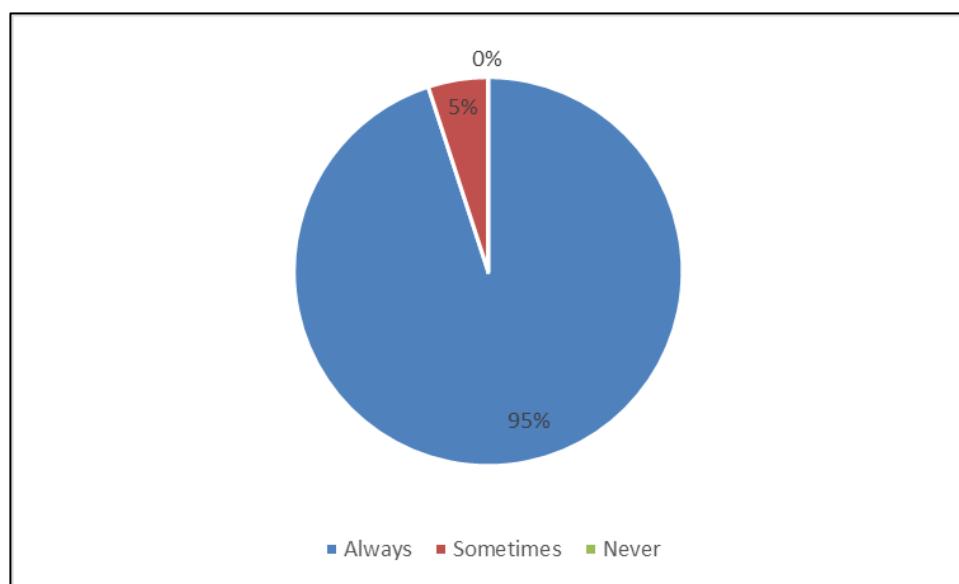


Figure 8. I am able to learn vocabulary better when it's presented in multiple ways (pictures, definitions, examples)

Regarding question 3, students reported that they are always able to learn vocabulary better when it is presented in multiple ways (95%), and only 5% said that they are sometimes able to learn vocabulary better in that way. These results agree with Phillips (2016) who states that one method of teaching vocabulary is by utilizing the visual modality. In this sense, the data demonstrates that students prefer learning English

vocabulary through pictures, and these preferences will be considered when choosing the content for the English vocabulary handbook.

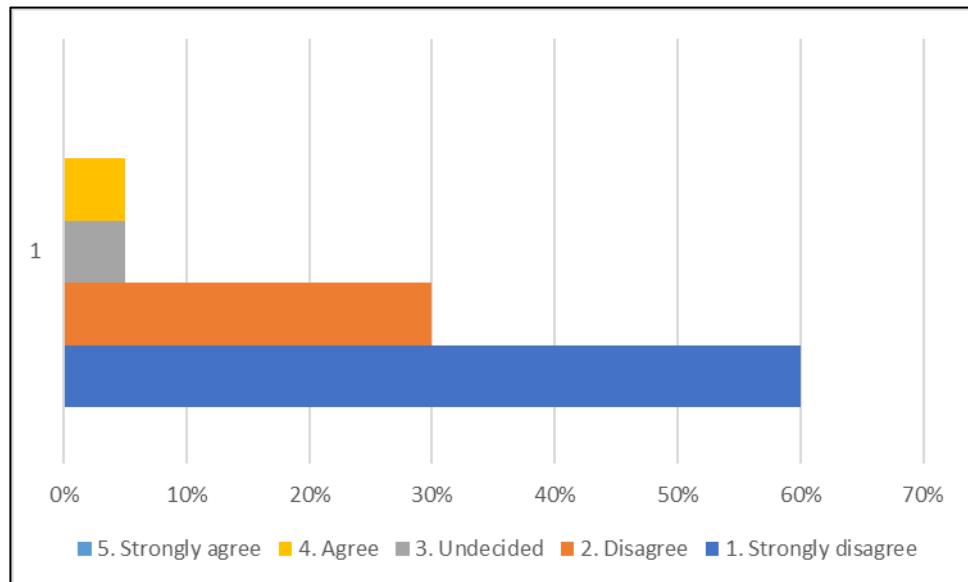


Figure 9. I understand basic vocabulary words about computing on the internet.

Finally, the figure shows that students strongly disagree with the statement that they understand basic vocabulary words about computing on the internet (60%), followed by 30% of students who disagree, 5% who are undecided, and 5% who agree. Unfortunately, none of them strongly agree with the statement. These results agree with Swales, who states that “the area of inquiry and practice in the development of language programs for people who need a language to meet a predictable range of communicative needs” (1992). In this sense, the data demonstrates that students are having lots of problems when trying to understand computer-related vocabulary words they find on the web.

4.1.3. Observational Field Notes

During the learning period, five aspects including preparation, classroom management, classroom atmosphere, use of the handbook, and students' participation were assessed to evaluate the class' performance while using the handbook.

In addition, each aspect was evaluated according to the level over 100% of productivity, organization, motivation, acceptance, and initiative shown by the students or the teacher in each unit. The results are presented in percentages as follows:

4.1.3.1. Preparation

This aspect was evaluated according to the level of teacher productivity shown in each unit. It also included the activities presented and used in class. The results show high levels of productivity in each unit, that is to say, exceptional in its majority because its average percentage is 97.38%. It should be noted that when teaching a second language more attention should be paid to class preparation (Lange and R. Sims, 1990) since it catches students' attention from the beginning of the class.

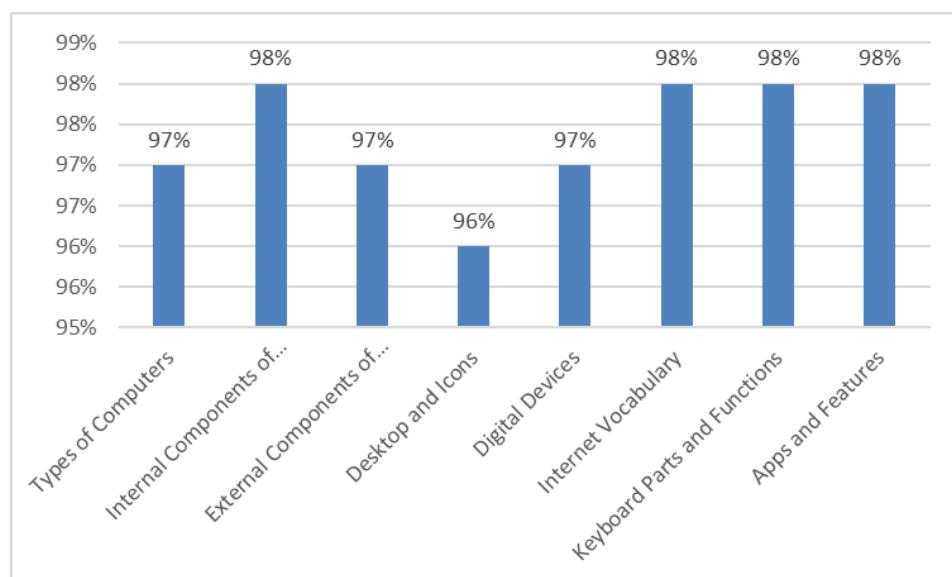


Figure 10. Preparation

4.1.3.2. Classroom Management

This aspect was evaluated according to the level of teacher organization shown in each unit. Authors like Gencer and Cakiroglu (2007) and Woolfolk and Hoy (1990) mentioned that teacher efficacy can be related to teachers' perceptions of classroom management strategies and in this specific aspect, a high average percentage was shown (97%) which demonstrates that the teacher managed the class effectively while using the vocabulary handbook.

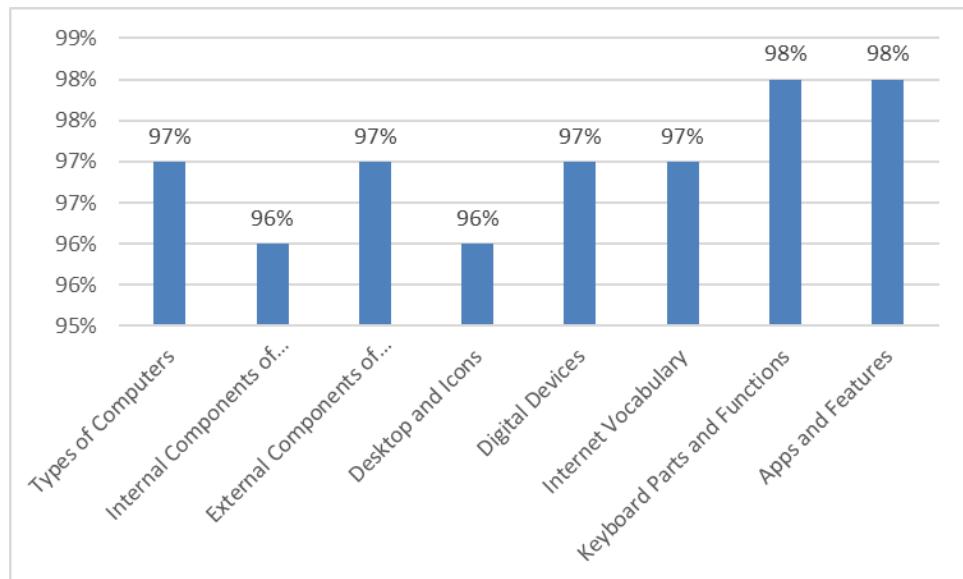


Figure 11. Classroom Management

4.1.3.3. Classroom Atmosphere

This aspect was evaluated according to the level of teacher motivation shown in each unit. According to Pan (2014), teachers should maintain a good learning atmosphere to achieve teaching objectives. The results show classroom atmosphere and all aspects exceed 96%. Its average percentage is 96.75%.

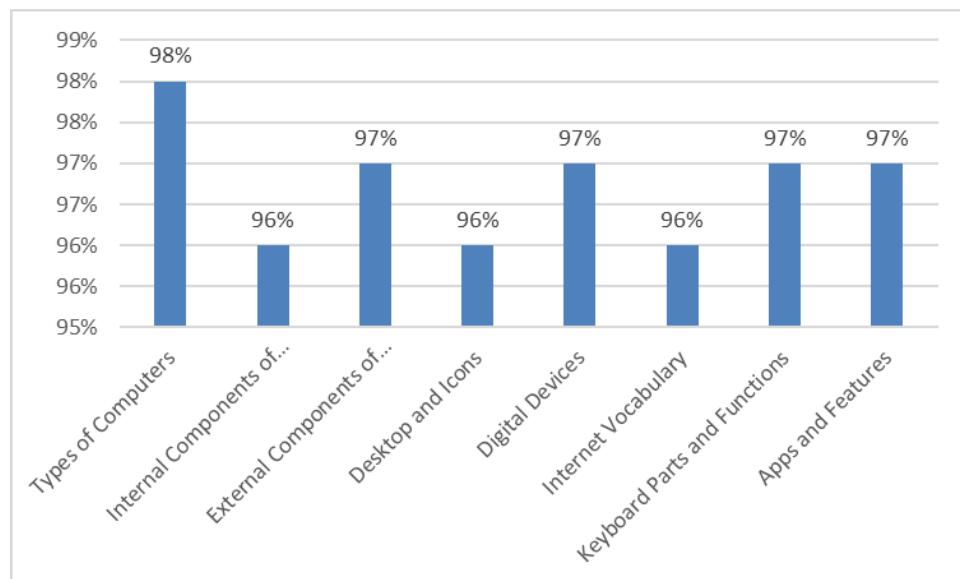


Figure 12. Classroom Atmosphere

4.1.3.4. Use of the Handbook

This aspect was evaluated according to the level of handbook acceptance by the students in each unit. According to the results, the vocabulary handbook was well-received by the students and all the eight worksheets were completed correctly. The figure shows much higher values than all other aspects evaluated, in this case the average percentage is 98.38%. In addition, Diamond and Gutlohn (2006) confirmed that a handbook examines a component of effective vocabulary instruction.

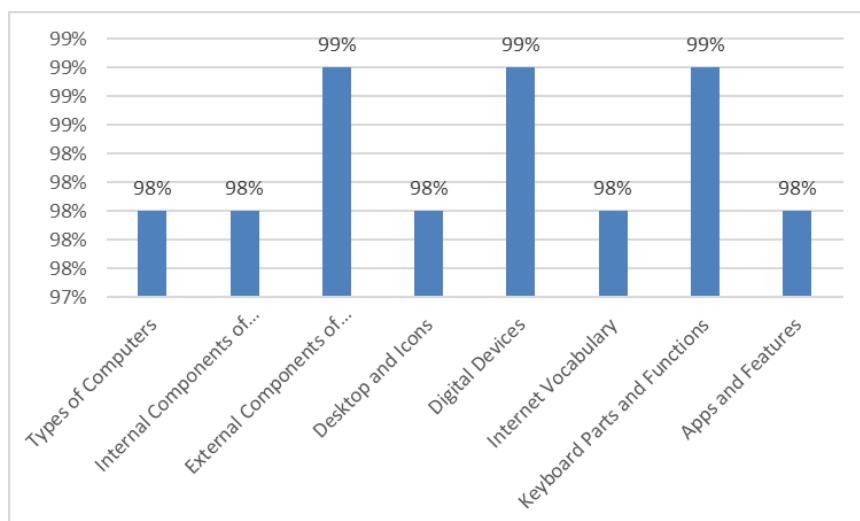


Figure 13. Use of the Handbook

4.1.3.5. Students' Participation

This aspect was evaluated according to the level of initiative shown by the students in each unit. During the learning period, almost all students participated actively in class while using the handbook. The results from this assessed aspect present an assessment with an exceptional tendency toward compliance, which is why its average percentage is 98%. Balas (2000) explained in his article that students' participation helps in evaluating students' knowledge and helped them actively engage with content.

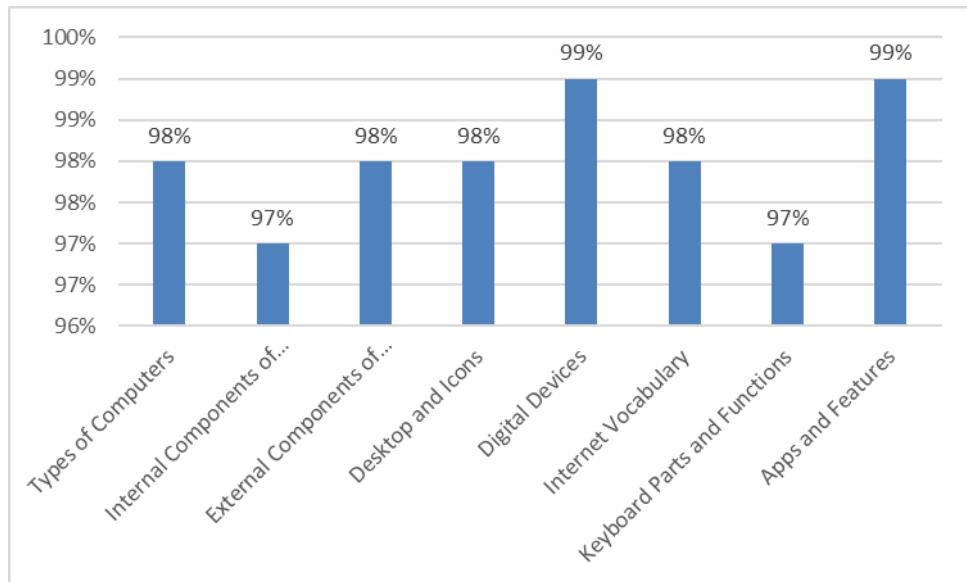


Figure 14. Students' Participation

4.1.4. Vocabulary improvement after the application of the ESP vocabulary handbook

The degree of vocabulary improvement of Software Development beginner students at the Instituto Superior Tecnológico del Azuay was analyzed and determined through the



comparison of results obtained from the pre-test and the post-test, taking as intermediate factor teacher intervention.

4.1.4.1. Initial situation analysis

Regarding impact determination of the ESP vocabulary handbook application, an analysis of the initial situation of the group was carried out through a pre-test.

Table 1. Pre-test Relative and Cumulative Frequencies

Pre-test				
Score	Percentage	Cumulative Percentage	Scale	
2.75	5%	5%	Very Bad	
3.50	5%	10%	Very Bad	
4.00	5%	15%	Very Bad	
6.00	5%	20%	Bad	
7.00	5%	25%	Bad	
8.00	5%	30%	Bad	
10.00	50%	80%	Regular	
12.75	5%	85%	Good	
17.00	5%	90%	Very Good	
20.00	10%	100%	Excellent	

Before teacher's intervention, most students (50%) obtained a regular scale rating (10 points), 30% of the students were between the scales "Very Bad – Bad" (2 – 8 points), and 20% obtained a grade between 12 and 20 points that means "Good – Excellent".

Table 2. Pre-test Measures of central tendency

Pre-test	
Mean	10.05
Maximum	20.00
Minimum	2.75
Median	10.00
Mode	10.00



The analysis of the measures of central tendency indicates that before the teacher's intervention, the study group has an average score of 10.05 points, which represents a regular level. At the beginning of the investigation, the group presents a minimum score of 2.75 points and a maximum score of 20 points. At least 50% of the students, who are also the highest percentage, have a grade of 10 points.

4.1.4.2. Final situation analysis

An analysis of the results was obtained by the study group after the teacher's intervention using the ESP vocabulary handbook.

Table 3. Post-test Relative and Cumulative Frequencies

Post-test			
Score	Percentage	Cumulative Percentage	Scale
10.00	10%	10%	Regular
14.00	5%	15%	Good
16.50	10%	25%	Very Good
17.00	5%	30%	Very Good
17.50	5%	35%	Very Good
18.00	5%	40%	Very Good
20.00	60%	100%	Excellent

After teacher's intervention, an improvement in the results of the grades was visualized. Most of the students, 60%, obtained an excellent scale rating (20 points), 25% of the students were at a "Very Good" level (16.50 - 18.00 points), 15% of the students had a "Good level" with 14 points, and 10% of them had a regular grade with 10 points.

Table 4. Post-test Measures of central tendency

Post - Test	
Mean	17.98
Maximum	20.00
Minimum	10.00
Median	20.00
Mode	20.00



The analysis of the central tendency measures indicated that after the teacher's intervention, the study group had an average score of 17.98 points, which represents a "Very Good" level.

At the end of the investigation, the group presented a minimum score of 10 points and a maximum score of 20 points. At least 50% of the students, who were also the highest percentage, had a score of 20 points that means an "Excellent" level.

4.1.4.3 Pre-test vs. Post-test

Table 5. Pre-test vs. Post-test

Pre-test		Post-test		
Mean	10.05	Regular	Mean	17.98
Maximum	20.00	Excellent	Maximum	20.00
Minimum	2.75	Very Bad	Minimum	10.00
Median	10.00	Regular	Median	20.00
Mode	10.00	Regular	Mode	20.00

Statistics indicated that the application of the ESP vocabulary handbook had generated an improvement of 7.93 points in the average of the study group that raised the average from a regular level to a very good level.

The upper limits were maintained in the group in the two moments of the investigation. However, the range with the lower limit in the post-test decreased. The group improved by 7.25 points in the minimum grade with the teacher's intervention and reached a regular level.

Finally, most students showed a 100% increase in their grades, going from a regular level to an excellent level.



In order to reinforce the descriptive results that the study group presented about vocabulary improvement; a hypothesis test was carried out through the paired “t” test to determine if the mean of the differences in the scores of the parameters in the pre-test with the post-test were statistically significant.

The following tables showed the results of the parametric analysis for paired samples to test the null hypothesis that the means were equal.

Table 6. t Test

Paired Samples Statistics		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-test	10.0500	20	4.68101	1.04671
	Post Test	17.9750	20	3.22602	.72136

Paired Samples Test	Paired Differences						t	df	Sig. (2-tailed)			
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference								
				Lower	Upper							
Pair 1	Pre-test - Post Test	-7.92500	3.27681	.73272	-9.45860	-6.39140	-10.816	19	.000			

The results indicated that the paired samples of the analyzed parameter were rejected by H_0 . It can be concluded that with an error of 0.000 there was a significant difference in the average of the students' grades between the pre-test and the post-test. Therefore, the teacher's intervention through the ESP vocabulary handbook did improve the development of the English vocabulary in the group of students, ($sig < 0,05$).

The average performance obtained in the pre-test by the group (10.05) with the average performance obtained in the post-test (17.98) had a difference (7.93 points), an improvement, statistically significant. This difference represented an increase in performance of 79% after the application of the ESP vocabulary handbook.



It can be concluded that the study group presented a statistically significant improvement in English vocabulary that was given by an increase in the average performance after the teacher's intervention with the ESP vocabulary handbook.

4.2. Discussion of results

This section discusses the significance of the results from both the quantitative and qualitative findings gathered from this research study. All the results obtained from this study, will be compared and analyze to the findings of previous studies mentioned in the literature review. Additionally, this section answers the two research questions that guided this research.

4.2.1. Research question one: To what degree can beginner students improve their English vocabulary skills by using an ESP vocabulary handbook created for the Software Development Major at the Instituto Superior Tecnológico del Azuay?

The main purpose of this study was to create and apply an ESP handbook for Software Development beginner students at the Instituto Superior Tecnológico del Azuay that will be used as learning material for teachers and students. In this regard, two questionnaires were administered to the students of the Software Development Major to determine the degree of interest in vocabulary learning through their perceptions and with the results of these applications create the worksheets for the vocabulary handbook. In addition, a pre-test and post-test were conducted to answer the first research question of this study. The results revealed that there was a significant difference between the results presented on the pre-test towards the results obtained on the post-test. In fact, these results basically confirm that the ESP vocabulary handbook helped students of the Software Development



Major improve their English vocabulary skills.

These findings are compatible with all of the empirical studies conducted earlier and reported in literature review about English for Specific Purposes (ESP). Therefore, the results obtained in this study are similar to the one presented by Chau (2011). The findings from this research revealed the positive effects of using ESP materials in class and highlighted the students' ability to achieve better scores in all modes of ESP. Kavaliauskiene (2010) described that a foreign language is more successfully acquired when learners are exposed to content that is integrated with explicit and purposeful contexts. In sum, in a research study carried out by Chirobocea (2018), the results demonstrated that ESP vocabulary tasks lead to students' overall vocabulary development mainly through the acquisition of the specialized vocabulary. Accordingly, it can be said that an ESP vocabulary handbook for a specific career or major helps students learn English to communicate a set of professional skills and to perform particular job-related functions (Fiorito, 2006).

In terms of Content-based Instruction, Ahmadi-Azad and Kuhí (2016) reported that ESP courses often follow a Content-based methodology like the Content-based Instruction (CBI) approach through the frequent use of authentic materials concerning the students' real-life purposes. In addition, Tzoannopoulou mentioned that content instruction integrated with explicit language instruction in a relevant and purposeful profession-related classroom context facilitates the language teaching and learning process (2015). Additionally, these results can also be compared to the ones obtained by Al Amrani (2019) whose focus was on reading comprehension and acquisition of engineering-specialized learning vocabulary. The results of this study concluded that CBI is present in ESP educational contexts. Finally, Wang (2006) reported that designing,



producing, applying, and analyzing tasks with specific students' goals in mind is more meaningful for their language acquisition. She also indicated that communicative ESP task design based on a CBI approach should meet certain standards for the analysis of College English textbooks. A possible explanation for this could be that not all texts meet the students' expectations and interests. In other words, teachers can build students' knowledge in content areas while the students simultaneously develop English proficiency (Schleppegrell, 2012) when they use appropriate handbooks and books.

Regarding vocabulary learning, it is an essential part of the language learning process (Ahmadi-Azad and Kuhi, 2016) and prior research confirmed that the incorporation of language and communication improvement courses such as the ESP manuals is an important element of continuous learning and will eventually contribute to life-long learning of vocabulary (Musikhin, 2016). In addition, McCarthy (1984) indicated that the purpose of vocabulary learning should include both remembering words and the ability to use them automatically in a wide range of language contexts when the need arises. At last, if the prime goal is communication when there is little of the new language in command, basic communication is engendered through words (Hatch, 1983).

4.2.2. Research question two: To what extent can the application of an ESP handbook be useful for beginner students to improve their English proficiency level at the Instituto Superior Tecnológico del Azuay?

Additionally, the findings not only were connected to the usage of an ESP vocabulary handbook and the improvement of students' English vocabulary skills, but also to the application of an ESP handbook and the improvement of students' English proficiency level.



On January 27th, 2018, the Instituto Superior Tecnológico del Azuay received an English proposal for all higher technological and technician institutes of Ecuador from SENESCYT. It included a new distribution of English hours per week and per semester for all careers. This English proposal aims to help students achieve A2 English language proficiency (Common European Framework of Reference for Languages, CEFR) by the end of their fourth semester.

Students from the Superior Technician in Software Development Major are expected to reach A1 by the end of the second cycle. The CEFR describes what a beginner user or an A1 English language proficiency learner is supposed to be able to do in regards to reading, listening, speaking and writing. It states that an A1 learner will achieve three domains: understand and use familiar everyday expressions, introduce themselves and others, and interact in a simple way provided the other person talks slowly and clearly and is prepared to help. In addition, the exit English level of each program demand students a fair level of reading comprehension of technical literature related to the career. Therefore, the creation of an ESP vocabulary handbook helped students accomplish vocabulary learning, an important aspect of reading comprehension.

The vocabulary improvement of the participants was measured by a pre-test and a post-test that evaluated the students' vocabulary knowledge. The results were compared to determine the degree of improvement after the handbook was applied. The results were positive. As a logical consequence of the students' vocabulary improvement, their capacity to identify words and meanings was measured by involving them in question-answer situations, that is, by having them ask and answer questions on the topics studied or other similar themes. They were also trained in



reading activities where they could identify meanings of vocabulary words related to computers.

These findings also match the results obtained in Chirobocea's (2018) research where the results demonstrated that ESP vocabulary tasks lead to students' overall vocabulary development mainly through the acquisition of the specialized vocabulary. Besides, the author underlined the importance of exposing learners to a carefully selected body of authentic materials where real-life situations and context-appropriate language are used, and where focus on lexis and specific vocabulary is preferred. Similarly, Ruzhekova – Rogozherova (2018) indicated that ESP study materials boost language skills that contribute to general and specific communicative competence improvement. This is due to students being exposed to constructed, elaborated and consolidated linguistic and contextual adequate tasks. In sum, learners become more interested in learning a language when it is focused on a purpose for their real life, namely their professional activities (Pradhan, 2013).

In order to evaluate my class' performance while using and applying the handbook in class, observational field notes were taken for thirty-five hours by another English teacher. During this time, students practiced and improved their vocabulary skills by completing eight vocabulary worksheets related to computers. During the learning period, five aspects were assessed including preparation, classroom management, classroom atmosphere, use of the handbook, and students' participation. The authors Schatzman and Strauss (1973) mentioned that for observational field notes the aspects can be selected according to statements involving events experienced principally through watching and listening, and they must contain as little interpretation as possible (p.100).



Taking into consideration all the results previously discussed, it can be stated that the creation and application of an ESP handbook for Software Development beginner students at the Instituto Superior Tecnológico del Azuay that will be used as learning material for teachers and students are confirmed to be positive and this study also demonstrated that it brings significant impacts on learners. This is not only confirmed by the study carried out at Instituto Superior Tecnológico del Azuay, but also supported by all the researchers that conducted a similar study of teaching ESP vocabulary.



Chapter 5

Conclusions

The topic of this research work emerged from the realization that the Software Development Major lacked proper academic teaching materials that provide information about software programs, applications, and utilities. For many years, elementary schools, high schools and universities have been using textbooks produced by linguists who are indeed professionals in the field of creating a product that is used by students worldwide. However, the goal for our students ought to be the acquisition of the target language through English for Specific Purposes (ESP) alongside Content-based Instruction which demands that instructors design, produce, apply and analyze meaningful tasks connected to the career that students are pursuing.

In other words, tasks applied in the language classroom have to be personalized to the topics that participants are interested in. Over the years, the same textbooks used in the different educational institutions in Ecuador have been used over and over again. They focus on the same topics and the same language structures without having any meaningful output and therefore cause demotivation and lack of interest in the target language. Two questions were stated at the beginning of this research work: “To what degree can beginner students improve their English vocabulary skills by using an ESP vocabulary handbook created for the Software Development Major at the Instituto Superior Tecnológico del Azuay?” And “To what extent can the application of an ESP handbook be useful for beginner students to improve their English proficiency level at the Instituto Superior Tecnológico del Azuay?”.



The results from the questionnaires applied gave the instructor fundamentals on how and where to start. Some ideas in the attached handbook for teaching English through the use of ESP and in connection with Content-based Instruction are offered. Moreover, the comparison between the pre-test and the post-test determined that students significantly improved their computer-related vocabulary knowledge. Most of the students who performed at a regular level at the beginning improved to excellent, and a lot of students from the very bad level improved to a very good level. One reason for this success may be the students' motivation, since they were exposed to activities in accordance with their interests. In the process of developing vocabulary learning, they had to acquire language skills to complete the exercises and do different activities.

This investigation has also established that the recollection of the right strategies and material to prepare a course is fundamental, considering the lack of right material may influence the construction of the objectives of the ESP program. In this research, a new handbook was designed. It contained a series of vocabulary activities that promote the identification of word meaning in different contexts and the retention of vocabulary.

Another important conclusion is the necessity of improving English at higher education level as an immediate requirement for workers, professionals, master's program students, etc. The different necessities and interests, the permanent changes of the English language, and the demands of the new world generate the obligation of using English for specific purposes or specific language needs. Educators must then diagnose the needs of the whole group of students, and prepare active and innovated strategies aimed at communication to make students work as a team during the ESP course or module. Many universities and educational institutions have faced the necessity of helping undergraduate students of different areas of study to design, prepare, and



implement ESP courses, modules, or programs. Software Development students at the Instituto Superior Tecnológico del Azuay will be open to studying and accepting the importance of learning a language when the program helps them understand elements of their own degree course. This means that topics related to Software Development, like computers, help students learn English through their own knowledge of the subject.



Recommendations

The Instituto Superior Tecnológico del Azuay should analyze the role of English from a wider perspective. Over the last decades, English has played an important role around the world as a common language for different purposes, such as economic, educational, scientific, and entertainment exchange between countries and, in particular, between people considering it is the language of our study. The English language opens doors for global communication and business because it has become a powerful tool in terms of improving productivity and driving growth where it is used. Therefore, it is important for the institution to acknowledge the advantages of increasing the support for English learning research and class methodologies to acquire a second language.

The Language Center of the Instituto Superior Tecnológico del Azuay should analyze whether each text used to teach English is appropriate for each degree course. This does not mean that the Language Center should separate students into groups according to their degree courses, but rather that they should analyze students' needs and interests with the goal to motivate them; methods for learning English should be effective and serve students in their professional lives. The institutional and organizational environment of teaching cannot be guided by rigidity and scarce creativity, but rather by breaking those barriers that are formed by laws, models, and paradigms.

Working with critical thinking implies a different role for the teacher. In a class, students should frequently practice conversation and readings that promote greater interaction and participation in critical thinking exercises, so that they can make better use of what they learn. Nowadays, the current role of the teacher is focused on facilitation. This means that he or she becomes a bridge that links the educational processes planned by state and institutional entities with the evolutionary development of students. This



bond is necessary inside the classrooms since, inside a quality education, there are a series of factors that contribute to students' development and performance outside the classroom, such as appropriate infrastructure, didactic material, family collaboration, support from authorities of the institutions, among other factors.

Because this handbook has been designed in eight worksheets, it is recommended that teachers work to coordinate and implement new Units that might be added to provide students with an important resource for learning. It is expected that all English teachers in the first level of the Software Development Major use this handbook in their classes as a complement to their current teaching method.

Research on English learning methodologies should deal with the incidence of new methodologies based on students' and teachers' weaknesses and needs. This must start with a general evaluation of the English institution at the Instituto Superior Tecnológico del Azuay and then encourage teachers to implement scientific research that may include different perspectives according to the parameters established by the institution.



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Appendices

Appendix A. Consent Form for Students

Cuenca, _____ de _____ de 2018

Licenciada

Daniela Piedad Cabrera Cabrera

DOCENTE DEL CENTRO DE IDOIMAS

INSTITUTO SUPERIOR TECNOLÓGICO DEL AZUAY

Ciudad.

De mi consideración:

Por medio del presente, yo _____ con cédula de ciudadanía número _____, y estudiante del Primer Ciclo Matutino “C” de la carrera “Tecnología Superior en Desarrollo de Software”, autorizo mi participación en el proyecto de Investigación de Acción titulado “An ESP Vocabulary Handbook for Beginner Students of the Software Development Major at the Instituto Superior Tecnológico del Azuay – Un Manual de Vocabulario en Inglés para Propósitos Específicos para los Estudiantes Principiantes de la Carrera de Desarrollo de Software del Instituto Superior Tecnológico del Azuay” a llevarse a cabo durante siete semanas en el actual periodo académico Noviembre 2018 – Abril 2019.

Se me ha explicado que mi participación consistirá en llenar dos cuestionarios acerca de mi interés para estudiar el idioma Inglés, una prueba de conocimientos antes de la investigación y otra al finalizar, ser parte de clases observadas por otro docente de la misma asignatura del Centro de Idiomas y participar activamente durante la utilización del nuevo material durante 35 horas de clase en la asignatura de Inglés A1.1 (Básico).

Finalmente, declaro que se me ha informado ampliamente sobre las posibles molestias y beneficios derivados de mi participación en este estudio.

Sin otro particular, suscribo.

Atentamente,

Nombre y apellido
ESTUDIANTE



Appendix B. Questionnaire 1



INSTITUTO SUPERIOR TECNOLÓGICO DEL AZUAY

MAESTRIA EN LINGÜÍSTICA APLICADA A LA ENSEÑANZA DEL INGLÉS COMO LENGUA EXTRANJERA

Questionnaire # 1 for Software Development Students

“An ESP Vocabulary Handbook for Beginner Students of the Software Development Major at the Instituto Superior Tecnológico del Azuay.”

REASONS FOR USING THE QUESTIONNAIRE:

The aim of this questionnaire is to measure how interested the students are in learning technical English.

This questionnaire will provide important information for the creation of a computer-related handbook.

Instructions:

- a. Read each question carefully and complete by filling in the blanks or checking (✓) one of the choices provided.
- b. If you consider that none of the alternatives correspond to your criteria, just leave a blank space.

1. Why do you study English?



2. What kind of vocabulary does your English book have?

3. Would you like to learn English vocabulary related to your career?

Yes No

4. What kind of English vocabulary would you like to learn?



5. How often an English vocabulary handbook with computer-related words would help you to improve your language learning?

Always

Sometimes

Never



Appendix C. Questionnaire 2



INSTITUTO SUPERIOR TECNOLÓGICO DEL AZUAY

MAESTRIA EN LINGÜÍSTICA APLICADA A LA ENSEÑANZA DEL INGLÉS COMO LENGUA EXTRANJERA

Questionnaire # 2 for Software Development Students

“An ESP Vocabulary Handbook for Beginner Students of the Software Development Major at the Instituto Superior Tecnológico del Azuay.”

REASONS FOR USING THE QUESTIONNAIRE:

The aim of this questionnaire is to determine the degree of interest through students' perceptions.

This questionnaire will measure how interested the students are in learning English vocabulary and it will be very useful for designing the handbook.

Instructions:

- a. Read each question carefully and complete by filling in the blanks or checking (✓) one of the choices provided.
- b. If you consider that none of the alternatives correspond to your criteria, just leave a blank space.

1. Do you like learning English vocabulary?

_____ Yes _____ No



2. Why is English vocabulary important?

Create sentences

Speak

Translate

Express ideas

3. I am able to learn vocabulary better when it's presented in multiple ways (pictures, definitions, examples)

Always

Sometimes

Never

4. I understand basic vocabulary words about computing on the internet.

1. Strongly disagree

2. Disagree

3. Undecided

4. Agree

5. Strongly agree



Appendix D. Observational Field Notes Sheets



INSTITUTO SUPERIOR TECNOLÓGICO DEL AZUAY

MAESTRIA EN LINGÜÍSTICA APLICADA A LA ENSEÑANZA DEL INGLÉS COMO LENGUA EXTRANJERA

Observational Field Notes

“An ESP Vocabulary Handbook for Beginner Students of the Software Development Major at the Instituto Superior Tecnológico del Azuay.”

Types of computers

Preparation	Classroom management	Classroom atmosphere
Use of the handbook	Students' participation	



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Observational Field Notes

“An ESP Vocabulary Handbook for Beginner Students of the Software Development Major at the Instituto Superior Tecnológico del Azuay.”

Internal Components of Computers

Preparation	Classroom management	Classroom atmosphere
Use of the handbook	Students' participation	



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Observational Field Notes

“An ESP Vocabulary Handbook for Beginner Students of the Software Development Major at the Instituto Superior Tecnológico del Azuay.”

External Components of Computers

Preparation	Classroom management	Classroom atmosphere
Use of the handbook	Students' participation	



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Observational Field Notes

“An ESP Vocabulary Handbook for Beginner Students of the Software Development Major at the Instituto Superior Tecnológico del Azuay.”

Desktop and Icons

Preparation	Classroom management	Classroom atmosphere
Use of the handbook	Students' participation	



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Observational Field Notes

“An ESP Vocabulary Handbook for Beginner Students of the Software Development Major at the Instituto Superior Tecnológico del Azuay.”

Digital Devices

Preparation	Classroom management	Classroom atmosphere
Use of the handbook	Students' participation	



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Observational Field Notes

“An ESP Vocabulary Handbook for Beginner Students of the Software Development Major at the Instituto Superior Tecnológico del Azuay.”

Internet Vocabulary

Preparation	Classroom management	Classroom atmosphere
Use of the handbook	Students' participation	



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Observational Field Notes

“An ESP Vocabulary Handbook for Beginner Students of the Software Development Major at the Instituto Superior Tecnológico del Azuay.”

Keyboard Parts and Functions

Preparation	Classroom management	Classroom atmosphere
Use of the handbook	Students' participation	



INSTITUTO SUPERIOR TECNOLÓGICO DEL AZUAY

MAESTRIA EN LINGÜÍSTICA APLICADA A LA ENSEÑANZA DEL INGLÉS COMO LENGUA EXTRANJERA

Observational Field Notes

“An ESP Vocabulary Handbook for Beginner Students of the Software Development Major at the Instituto Superior Tecnológico del Azuay.”

Apps and Features

Preparation	Classroom management	Classroom atmosphere
Use of the handbook	Students' participation	



Appendix E. Pre-test and Post-test



INSTITUTO SUPERIOR TECNOLÓGICO DEL AZUAY

MAESTRIA EN LINGÜÍSTICA APLICADA A LA ENSEÑANZA DEL INGLÉS COMO LENGUA EXTRANJERA

Pre-test and Post-test

“An ESP Vocabulary Handbook for Beginner Students of the Software Development Major at the Instituto Superior Tecnológico del Azuay.”

Thank you for allowing your valuable time to complete this pre-test which will be useful for having a clear scope of what beginner students know about computer-related vocabulary. If not much knowledge is proven from the participants, then this will serve as a preview of what will be expected throughout the whole course.

This pre-test will help the researcher to generate ideas for the lessons to be developed and it is intended to be used as a post-test to find out how much students have acquired from the lessons developed. Your observations are important. Please, feel free to provide comments.

A. Match each item in Column A with its description in Column B. (0.25 point each = 1.50 points)

A Item

DESKTOP COMPUTER _____

LAPTOP _____

NETBOOK _____

B Description

1. a portable computer that can be carried around easily.
2. a portable computer with a touchscreen instead of a keyboard.
3. a computer that uses digital and analog techniques.



HYBRID COMPUTER _____

4. a computer that fits on a desk and can't be moved from its place.

TABLET _____

5. a mobile phone that performs most of the functions of a computer.

SMARTPHONE _____

6. a small laptop that is suitable for word processing and internet-based applications access.

B. Circle the best option. (0.25 point each = 1.25 points)

SD cards can be read in a computer's _____.

a. storage reader b. memory reader c. card reader

To turn on the computer, _____ the "Start" button.

a. push b. press c. switch

Deleted documents stay in the recycle bin until you _____ it.

a. wash b. empty c. clean

The printer has _____ of ink.

a. finished b. ended c. run out

A number in a spreadsheet cell is often called a _____.

a. digit b. numeral c. value

C. Match the verbs with the nouns. (0.25 point each = 1.50 points)

move _____

a. the *monitor* height

position _____

b. the *mouse* to the side of the *keyboard*.

turn up _____

c. the *screen* for long periods of time

turn on _____

d. the *microphone*

adjust _____

e. the *speakers*

don't stare at _____

f. the *mouse*

**D. Complete the sentences using the words below. (0.25 point each = 1.75 points)**

<i>optical drive</i>	<i>fan</i>	<i>power supply</i>	<i>connector</i>
<i>expansion slot</i>	<i>motherboard</i>	<i>hard disk drive</i>	

A _____ is an electro-mechanical data storage device that stores and retrieves digital data using magnetic storage and one or more rigid rapidly rotating platters coated with magnetic material.

A _____ is the main printed circuit board in general-purpose computers and other expandable systems.

A _____ is a device that terminates a segment of cabling or provides a point of entry for networking devices such as computers, hubs, and routers.

An _____ allows you to use CDs, DVDs, and Blu-ray discs to listen to music or watch a movie.

A _____ is an electrical device that supplies electric power to an electrical load.

An _____ a place in a computer where an expansion card can be inserted.

A _____ is a hardware device that keeps the overall computer or a computer device cool by circulating air to or from the computer or component.

E. Listen to your teacher. Then Write T or F to show whether each statement is true or false. (0.25 point each = 3 points)

_____ A desktop is what you see when the computer is turned off.

_____ To make a window larger and fill the screen, click on the minimize button.

_____ The start button lets you close programs and files on your computer.

_____ To bring back the window, click on its button on the taskbar.

_____ Press the number keys for symbols and press the symbol keys for numbers.

_____ For capital letters, press up the shift key and hold and then type the letter

_____ The Caps Lock key lets you write in capital letters.

_____ The keys are the individual buttons you press when you type.



_____ The tool bar has shortcuts to the commands in the start button.

_____ You can't have more than one window open at a time.

_____ You can use the scroll bars to move around the screen.

_____ A taskbar is a bar at the edge of the display of a graphical user interface that allows quick access to current or favorite applications.

F. Match the words with their meanings. (0.25 point each = 2.50 points)

1. Password	a journal you keep on the Web: short for Web log. _____
2. E-mail	a secret word that only you and your parents know. _____
3. Internet address	a letter you send though your computer. _____
4. SPAM	another way to say URL. _____
5. Blog	advertising that comes to your e-mail address. _____
6. Screen name	a name you choose by yourself that isn't your real name. _____
7. Internet	another way to say "username". _____
8. Web-site	the world that only exists in the computer and your head. _____
9. Cyber space	a place on the Internet you can visit. _____
10. Username	a worldwide system of computers. _____

G. Match the shortcut to the correct function. (0.25 point each = 5 points)

SHORTCUT

1. Ctrl + Z	Open the shortcut menu for the active window. _____
2. Alt + Tab	Use the arrow keys to switch between all open apps. _____
3. Alt + F4	Activate the Menu bar in the active app. _____
4. Windows logo key + L	Cycle through screen elements in a window or on the desktop. _____
5. Windows logo key + D	Delete the selected item and move it to the Recycle Bin. _____

FUNCTION



6. F6 Refresh the active window. _____

7. F10 Close the active document (in apps that are full-screen and let you have multiple documents open at the same time). _____

8. Alt + F8 Lock your PC. _____

9. Alt + Esc Display and hide the desktop. _____

10. Alt + underlined letter Undo an action. _____

11. Alt + Enter Switch between open apps. _____

12. Alt + Spacebar Select all items in a document or window. _____

13. Ctrl + F4 Redo an action. _____

14. Ctrl + A When a group or tile is in focus on the Start menu, move it in the direction specified. _____

15. Ctrl + D (or Delete) When a tile is in focus on the Start menu, move it into another tile to create a folder. _____

16. Ctrl + R (or F5) Cycle through items in the order in which they were opened. _____

17. Ctrl + Y Show your password on the sign-in screen. _____

18. Ctrl + Alt + Tab Perform the command for that letter. _____

19. Alt + Shift + arrow keys Display properties for the selected item. _____

20. Ctrl + Shift + arrow keys Close the active item, or exit the active app. _____

H. Read the text and answer the questions. (0.50 point each = 3.50 points)

CACHE MEMORY

Most PCs are held back not by the speed of their main processor, but by the time it takes to move data in and out of memory. One of the most important techniques for getting around this bottleneck is the memory cache.

The idea is to use a small number of very fast memory chips as a buffer or cache between main memory and the processor. Whenever the processor needs to read data it looks in this cache area first. If it finds the data in the cache then this counts as a 'cache hit' and the processor need not go through the more laborious process of reading data from the main memory. Only if the data is not in the cache does it need to access main memory, but in the process it copies whatever it finds into the cache so that it is there ready for the next time it is needed. The whole process is controlled by a group of logic circuits called the cache controller.

One of the cache controller's main jobs is to look after 'cache coherency' which means ensuring that any changes written to main memory are reflected within the cache and vice versa. There are several techniques for achieving this, the most obvious

being for the processor to write directly to both the cache and main memory at the same time. This is known as a 'write-through' cache and is the safest solution, but also the slowest.

The main alternative is the 'write-back' cache which allows the processor to write changes only to the cache and not to main memory. Cache entries that have changed are flagged as 'dirty', telling the cache controller to write their contents back to main memory before using the space to cache new data. A write-back cache speeds up the write process, but does require a more intelligent cache controller.

Most cache controllers move a 'line' of data rather than just a single item each time they need to transfer data between main memory and the cache. This tends to improve the chance of a cache hit as most programs spend their time stepping through instructions stored sequentially in memory, rather than jumping about from one area to another. The amount of data transferred each time is known as the 'line size'.



1. What is one of the main causes of a PC not running at its highest potential speed?

2. What word in the text is used instead of “buffer”?

3. What device looks after cache coherency?

4. What is the main alternative to “write through cache”?

5. When does a write-back cache write its contents back to main memory?

6. When is data marked as “dirty” in a write-back cache?

7. What determines what data is replaced in a disk cache?



Appendix F. ESP Vocabulary Handbook



**Instituto Superior
Tecnológico del Azuay**

**TECNOLOGÍA SUPERIOR EN DESARROLLO DE
SOFTWARE**

**ESP VOCABULARY
HANDBOOK**

Author:

Lcda. Daniela Cabrera

Noviembre 2018 - Abril 2019



General objective:

To create and apply an ESP handbook for Software Development beginner students at the Instituto Superior Tecnológico del Azuay that will be used as learning material for teachers and students.

Specific objectives:

- To build ESP tasks and material that will lead students to construct vocabulary knowledge.
- To increase students' vocabulary skills through the use of tasks related to software and computers.
- To determine the degree of vocabulary improvement after the application of the ESP handbook according to students' perceptions.



Edit note

This vocabulary handbook contains didactic material compiled from different bibliographic sources, both physical and digital, with the aim of providing a pedagogical guide to those who take the subject of English A1 in the Software Development Major at the Instituto Superior Tecnológico del Azuay.

The information that I present below has been selected taking into account the criterion of theoretical importance and the curricular guidelines established by the Centro de Idiomas of the Instituto Superior Tecnológico del Azuay.



UNIT 1: Types of computers



Source: www.indiamart.com

DESKTOP COMPUTER



Source: www.dhresource.com

NETBOOK



Source: [https://www.joycemayne.com.au](http://www.joycemayne.com.au)

TABLET



Source: <https://www.popsci.com>

HYBRID COMPUTER



Source: <https://www.harveynorman.com.au>

SMARTPHONE



WORKSHEET 1

ACTIVITY 1.1. Find the names of six types of computers.

T	I	A	R	B	E	G	I	B	Z	F	I	O	J	V
E	L	K	E	J	N	I	Q	E	M	D	B	P	L	T
L	V	O	T	T	O	R	C	E	A	R	Y	G	Z	J
B	F	V	U	O	H	D	E	S	K	T	O	P	X	W
A	D	C	P	D	P	D	U	Z	P	U	Y	L	I	D
T	H	I	M	T	T	K	O	O	B	T	E	N	I	M
X	S	K	O	I	R	L	A	P	T	O	P	R	F	J
T	P	T	C	G	A	W	W	B	W	P	B	O	T	V
V	S	E	J	D	M	I	U	K	R	Y	Z	N	L	A
L	N	J	W	V	S	D	K	E	H	T	C	V	J	W
V	L	F	S	M	J	E	P	M	K	C	A	B	H	V
B	O	H	M	D	D	G	U	E	U	O	K	Q	K	T
C	I	K	V	O	W	J	O	V	W	X	H	Y	G	A
K	O	Q	J	C	H	D	E	E	V	J	A	E	Q	V
C	T	T	H	S	J	V	O	X	F	L	O	L	E	V

Source: www.puzzlemaker.discoveryeducation.com



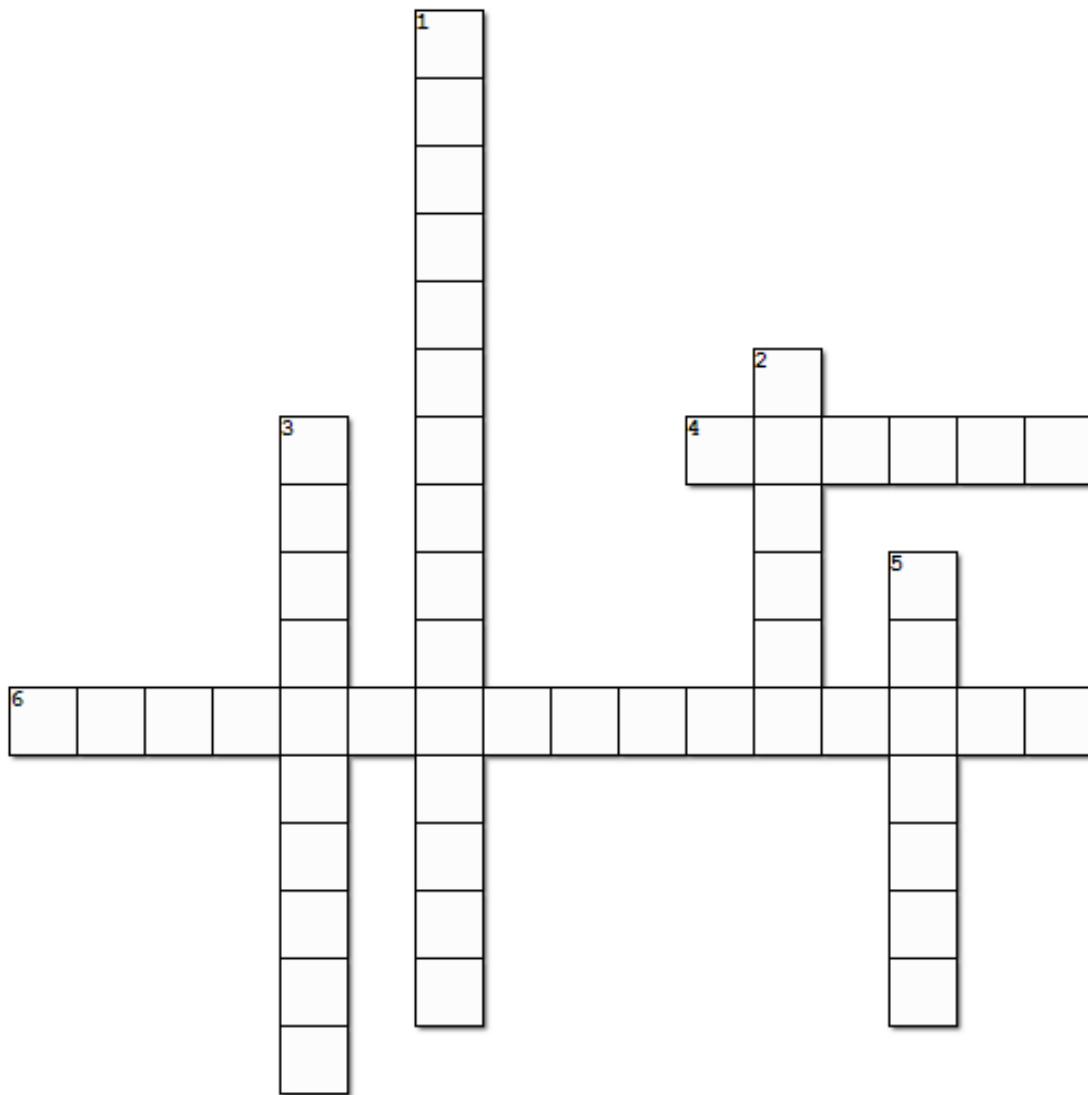
ACTIVITY 1.2. Match each item in Column A with its description in Column B. Then write sentences about each type of computers using the verb TO BE.

A Item	B Description
DESKTOP COMPUTER	a portable computer that can be carried around easily.
LAPTOP	a portable computer with a touchscreen instead of a keyboard.
NETBOOK	a computer that uses digital and analog techniques.
HYBRID COMPUTER	a computer that fits on a desk and can't be moved from its place.
TABLET	a mobile phone that performs most of the functions of a computer.
SMARTPHONE	a small laptop that is suitable for word processing and internet-based applications access.

1. _____
_____.
2. _____
_____.
3. _____
_____.
4. _____
_____.
5. _____
_____.
6. _____
_____.



ACTIVITY 1.3. Complete the crossword below.



Source: www.worksheets.theteacherscorner.net

Across:

4. It has a touchscreen instead of a keyboard.
6. It can't be moved from its place.

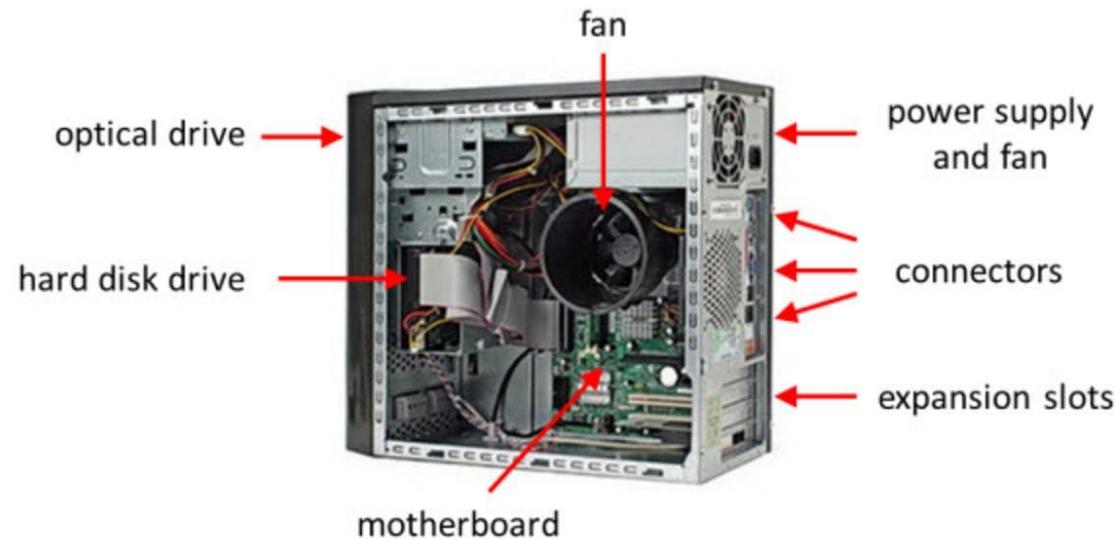


Down:

1. It uses digital and analog techniques.
2. It's a portable computer.
3. It's a mobile phone.
5. It's a small laptop.



UNIT 2: Internal Components of Computers



Source: <https://mellaharun.wordpress.com>



WORKSHEET 2

ACTIVITY 2.1. Choose the best option.

1. SD cards can be read in a computer's _____.
a. storage reader b. memory reader c. card reader

2. My new computer has a very _____ processor.
a. quick b. high speed c. fast

3. Add extra USB _____ to your computer.
a. ports b. doors c. windows

4. This wire's too short. I need an _____ cable.
a. extended b. extension c. extender

5. If the computer crashes, you can try pressing the _____ button.
a. restart b. recommence c. replay

Source: www.ltenglish.wordpress.com

**ACTIVITY 2.2.** Complete the sentences using the words below.

<i>optical drive</i>	<i>fan</i>	<i>power supply</i>	<i>connector</i>
<i>expansion slot</i>	<i>motherboard</i>	<i>hard disk drive</i>	

A _____ is an electro-mechanical data storage device that stores and retrieves digital data using magnetic storage and one or more rigid rapidly rotating platters coated with magnetic material.

A _____ is the main printed circuit board in general-purpose computers and other expandable systems.

A _____ is a device that terminates a segment of cabling or provides a point of entry for networking devices such as computers, hubs, and routers.

An _____ allows you to use CDs, DVDs, and Blu-ray discs to listen to music or watch a movie.

A _____ is an electrical device that supplies electric power to an electrical load.

An _____ a place in a computer where an expansion card can be inserted.

A _____ is a hardware device that keeps the overall computer or a computer device cool by circulating air to or from the computer or component.

Source: <https://quizlet.com>

**ACTIVITY 2.3.** Find the answers to these questions in the following texts.

1. What is one of the main causes of a PC not running at its highest potential speed?
2. What word in the text is used instead of “buffer”?
3. What device looks after cache coherency?
4. What is the main alternative to “write through cache”?
5. When does a write-back cache write its contents back to main memory?
6. When is data marked as “dirty” in a write-back cache?
7. What determines what data is replaced in a disk cache?

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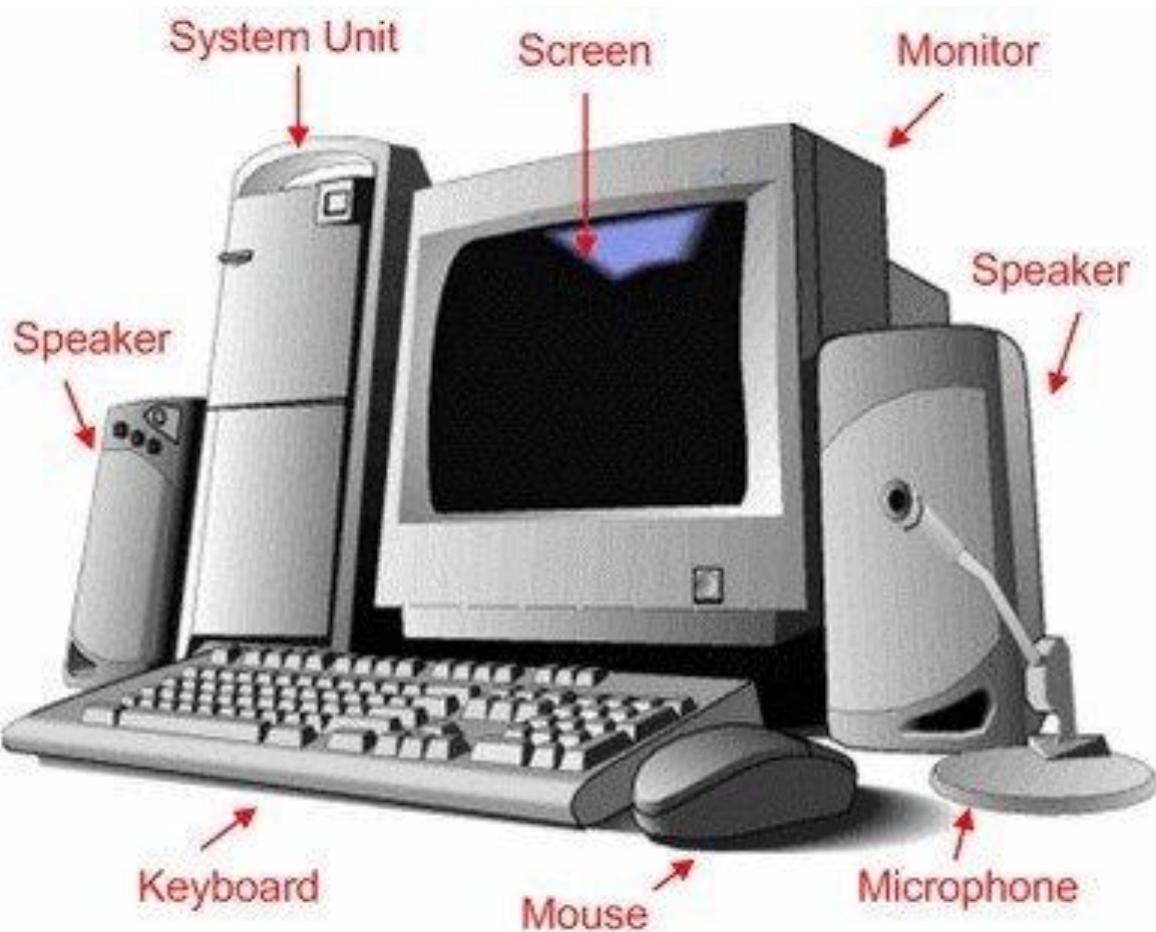
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Source: www.oup.com/elt

UNIT 3: External Components of Computers



Source: <http://xaikus.blogspot.com>



WORKSHEET 3

ACTIVITY 3.1. Match the verbs with the nouns.

1. move

a. the *monitor* height

2. position

b. the mouse to the side of the *keyboard*.

3. turn up

c. the *screen* for long periods of time

4. turn on

d. the *microphone*

5. adjust

e. the *speakers*

6. don't stare at

f. the *mouse*



ACTIVITY 3.2. Choose the best option.

1. To turn on the computer, _____ the "Start" button.
a. push b. press c. switch

2. Switch off your computer, and _____ it from the wall socket.
a. de-plug b. unplug c. non-plug

3. I have to _____ a computer screen for eight hours a day.
a. see b. stare at c. watch

4. The mouse moves on a _____.
a. mouse mat b. mouse carpet c. mouse paper

5. TV and computer screens are usually measured in _____.
a. feet b. centimeters c. inches

6. Before you start work, _____ the height of your monitor.
a. adjust b. change c. rearrange

7. To get sound from your computer, plug in a pair of _____.
a. smartphones b. speakers c. microphones

8. The screen on my laptop isn't very _____.
a. light b. white c. bright

9. A laptop computer with a screen you can write on is called a _____.
a. tablet b. table c. flat screen

10. When I've finished using my computer, I always _____.
a. close it down b. shut it down c. shut it off

Source: www.ltenglish.wordpress.com



ACTIVITY 3.3. Rearrange the letters to make things which are external components of computers.

1. itmnoor _____

2. sskreap _____

3. ousme _____

4. nmphiooecr _____

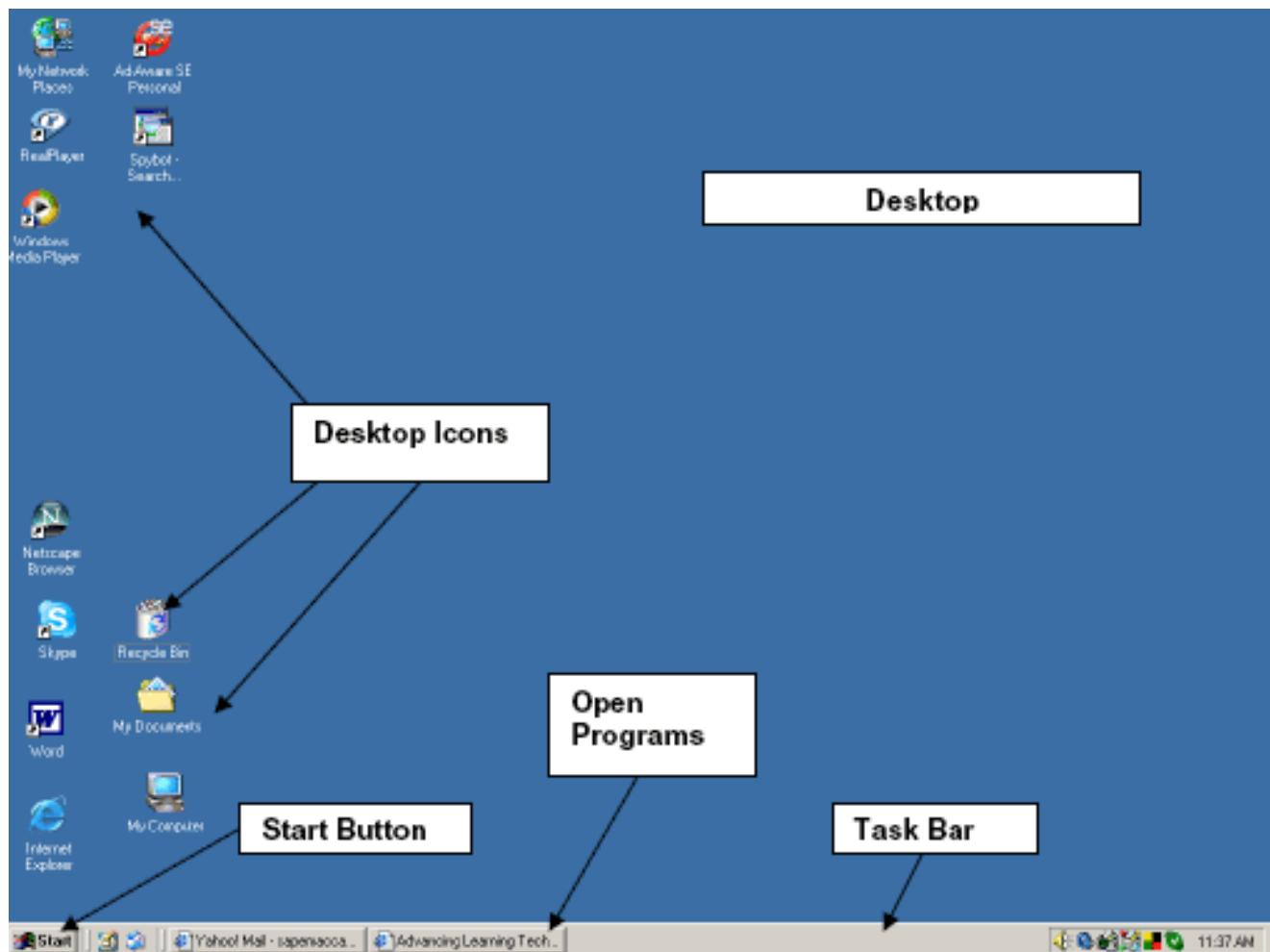
5. necesr _____

6. akybrdeo _____

7. itnu ysstme _____



UNIT 4: Desktop and Icons



Source: www.en.copian.ca



WORKSHEET 4

ACTIVITY 4.1. Define in few words the new vocabulary.

1. desktop

2. shortcuts

3. icon

4. start button

5. taskbar

6. folder

7. window

8. scroll bars



ACTIVITY 4.2. Write T or F to show whether each statement is true or false.

1. _____ A desktop is what you see when the computer is turned off.
2. _____ To make a window larger and fill the screen, click on the minimize button.
3. _____ When you open a folder or file by clicking twice on it with your mouse, its contents will appear in a window.
4. _____ The start button lets you close programs and files on your computer.
5. _____ To bring back the window, click on its button on the taskbar.
6. _____ To move between windows, click on a window or on the button on the folder.
7. _____ Icons look different for each type of file or program.
8. _____ A folder erases files such as documents or pictures.
9. _____ To close a window, click on the close button.
10. _____ The title bar displays the size of the folder, document or program.
11. _____ To hide a window, click on the minimize button in the top left-hand corner.
12. _____ You can use shortcuts to find files and programs on your computer.
13. _____ The menu bar has commands where you choose what to do with your folder, document or program.
14. _____ You can use the scroll bars to move around the screen.
15. _____ The taskbar shows which programs and folder or documents you have close.
16. _____ The tool bar has shortcuts to the commands in the start button.
17. _____ The active window has a highlighted title bar and is in front of the other windows.
18. _____ The open windows are displayed as buttons on the taskbar. The active window button will be a different color.
19. _____ You can't have more than one window open at a time.
20. _____ A taskbar is a bar at the edge of the display of a graphical user interface that allows quick access to current or favorite applications.

Source: www.downloads.bbc.co.uk

ACTIVITY 4.3. Choose the best option.

Source: www.ltenglish.wordpress.com

UNIT 5: Digital Devices



Source: www.vectorstock.com

WORKSHEET 5

ACTIVITY 5.1. Match the names with the pictures.

Digital Devices

Match the names with the pictures.

- game consoles • gamepad • CPU (Central Processing Unit) • external drive • headset • joystick • keyboard • laptop • loudspeaker • microphone • mobile phone • mouse • mp3 / iPod • PDA • printer • scanner • screen • tablet (iPad) • webcam • USB / flash drive •

1 	2 	3 	4 
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5 	6 	7 	8 
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9 	10 	11 	12 
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
13 	14 	15 	16 
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
17 	18 	19 	20 
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Source: www.en.islcollective.com

**ACTIVITY 5.2.** Work in pairs.

Speaking and listening - Elementary to Intermediate

Let's talk about *TELEVISION***Conversation cards**How often do you watch TV?
How many hours per day?What kind of TV programs
do you like to watch?Do you ever watch English
channels? Which ones?Do you have cable TV at
home?
If not, why not?TV antenna, satellite dish or
cable TV. How does the TV
signal reach your home?TV commercials: useful or a
waste of time?
What do you think?Is watching TV good or bad
for you?
Explain.Could you live without
television?
Explain.Do you have a TV in your
bedroom?
Why or why not?When and where do you
usually watch TV?
Give times and places.Do you watch TV while
eating breakfast, lunch or
dinner?Have you ever visited a TV
studio?
Tell about it.Have you ever been on TV?
In which show?
If not, would you like to?What's your favourite TV
programme?
Name and describe it.How many channels can you
watch on your TV?
What's your favourite?Do you ever watch reality
TV shows? Do you like
them? Why (not)?Do you watch soap operas on
TV? Do you like them?
What's your favourite?You can improve your
English by watching TV. Do
you agree? Explain.**Rank the following activities**

1 (love it) to 9 (don't like it)

go shopping

go to the cinema

listen to music

play computer games

play sports

read books

surf the Internet

take a nap

watch TV

Compare answers with your
classmates and make a
whole-class Top 5.**Match**

1. Pirates of the Caribbean	a. animated cartoon
2. Big Brother	b. news
3. Friends	c. movie
4. The Blue Planet	d. soap opera
5. Ready, Steady, Cook	e. documentary
6. Tom & Jerry	f. reality TV show
7. News Flash	g. music programme
8. Neighbours	h. sports programme
9. Top of the Pops	i. sitcom
10. Match of the Day	j. cooking show

ACTIVITY 5.3. Choose the best option.

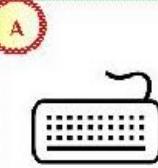
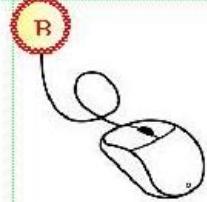
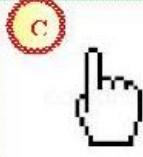
Source: www.ltenglish.wordpress.com

UNIT 6: Internet Vocabulary

Source: www.tes.com

WORKSHEET 6

ACTIVITY 6.1. Match the words with the pictures.

... Antivirus ... At sign ... Blog ... Chat room ... Computer ... Cookies ... Cursor ... Cyberspace ... Download ... E-mail ... Instant messaging ... Internet ... Internet address ... Keyboard ... Laptop ... Monitor ... Mouse ... Password ... Pop-up ... Server ... Spam ... Username ... Virus ... Web site	                       
A. Keyboard B. Mouse C. Cursor D. Monitor E. Laptop F. Internet G. Computer H. Cyberspace I. Internet address J. web site K. Instant messaging L. chat room M. E-mail N. Username O. spam P. virus Q. password R. blog S. pop-up T. antivirus U. download V. cookies W. server X. at-sign	

 Source: www.isl.collective.com



ACTIVITY 6.2. Fill in the blanks with the words in the box.

Instant messaging	cursor	login	log off	post
intranet	upload	netizen	netspeak	wiki

THE INTERNET

1. This is a _____ website. The users are allowed to add, delete or edit its contents.
2. _____ is a great when you need to reach someone quickly.
3. You need to _____ your avatar here.
4. James spends most of his days on internet. He's a _____.
5. Where's this _____? I don't know where I am on this page.
6. I want to _____ now. It's enough work for today.
7. _____ is used commonly among teenagers nowadays. It's just squeezing the language into letters, not a proper use of English language.
8. There isn't any _____ button on this site. How can I enter it?
9. All my friends _____ their opinions on current stories on social media.
10. Our company uses a special _____ system. You can't enter it without a password.

Source: www.photocopiables.com



ACTIVITY 6.3. Match the words with their meanings.

1. WWW	a. a place when you talk by talking. _____
2. E-mail	b. a secret word that only you and your parents know. _____
3. Internet address	c. a letter you send though your computer. _____
4. URL	d. a hidden program that can hurt your computer. _____
5. Chat Room	e. advertising that comes to your e-mail address. _____
6. Virus	f. a name you choose by yourself that isn't your real name. _____
7. Password	g. an internet address (Uniform Resource Locator) _____
8. SPAM	h. a process of file transfer from the internet. _____
9. Blog	i. a place on the Internet you can visit. _____
10. Screen name	j. an interconnection of computer information systems available via the Internet (World Wide Web) _____
11. Internet	k. another way to say URL. _____
12. Web-site	l. the world that only exists in the computer and your head. _____
13. Cyber space	m. a worldwide system of computers. _____
14. Username	n. another way to say "username". _____
15. Download	o. a journal you keep on the Web: short for Web log. _____

Source: www.vauxhallhigh.com

UNIT 7: Keyboard Parts and Functions



Source: www.informationq.com

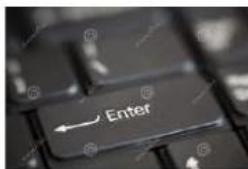


WORKSHEET 7

ACTIVITY 7.1. Match the pictures with the commands.



To type capital letters



To insert blank space



To delete characters



To type symbols



To start a new line



ACTIVITY 7.2. Write T or F to show whether each statement is true or false.

1. _____ A keyboard is for putting information such as letters, words and numbers into your computer.
2. _____ Pressing the Shift key lets you type numbers.
3. _____ Press the number keys for symbols and press the symbol keys for numbers.
4. _____ For capital letters, press up the shift key and hold and then type the letter
5. _____ The Caps Lock key lets you write in capital letters.
6. _____ The keys are the individual buttons you press when you type.
7. _____ The cursor tells you where you are going to start typing on the desktop.
8. _____ The space bar puts a space between numbers.
9. _____ The keys that surround the letters, numbers and symbol keys on the left, right and bottom of the keyboard, help you to choose where and how you type.
10. _____ The Enter key moves your cursor down a window.
11. _____ The Shift keys are on the left and right of the keyboard, with the arrow pointing upwards.
12. _____ The letter keys are in the center of the keyboard.
13. _____ Press the letter keys for symbols.
14. _____ For symbols at the top of a number key, press down the shift key and then type the symbol.
15. _____ The symbol keys to the right of the letters include symbols such as the question mark and full stop.

Source: wwwdownloads.bbc.co.uk

**ACTIVITY 7.3.** Match the two columns to learn about shortcuts.**SHORTCUT**

1. Ctrl + X
2. Ctrl + C (or Ctrl + Insert)
3. Ctrl + V (or Shift + Insert)
4. Ctrl + Z
5. Alt + Tab
6. Alt + F4

7. Windows logo key + L
8. Windows logo key + D
9. F2
10. F3
11. F4
12. F5
13. F6

14. F10

15. Alt + F8
16. Alt + Esc
17. Alt + underlined letter
18. Alt + Enter
19. Alt + Spacebar

20. Alt + Left arrow
21. Alt + Right arrow

FUNCTION

Stop or leave the current task. _____

Take a screenshot of your whole screen and copy it to the clipboard. _____

Go forward. _____

Move up one screen. _____

Move down one screen. _____

Close the active document (in apps that are full-screen and let you have multiple documents open at the same time). _____

Select all items in a document or window. _____

Delete the selected item and move it to the Recycle Bin. _____

Refresh the active window. _____

Redo an action. _____

Move the cursor to the beginning of the next word. _____

Display the shortcut menu for the selected item. _____

Select more than one item in a window or on the desktop, or select text in a document. _____

Cycle through items in the order in which they were opened. _____

Perform the command for that letter. _____

Display properties for the selected item. _____

Open the shortcut menu for the active window. _____

Go back. _____

Delete the selected item without moving it to the Recycle Bin first. _____

Open the next menu to the right, or open a submenu. _____

Open the next menu to the left, or close a submenu. _____



22. Alt + Page Up Move the cursor to the beginning of the previous word. _____

23. Alt + Page Down Move the cursor to the beginning of the next paragraph. _____

24. Ctrl + F4 Move the cursor to the beginning of the previous paragraph.

25. Ctrl + A Cut the selected item. _____

26. Ctrl + D (or Delete) Copy the selected item. _____

27. Ctrl + R (or F5) Paste the selected item. _____

28. Ctrl + Y Undo an action. _____

29. Ctrl + Right arrow Switch between open apps. _____

30. Ctrl + Left arrow Use the arrow keys to switch between all open apps. _____

31. Ctrl + Down arrow When a group or tile is in focus on the Start menu, move it in the direction specified. _____

32. Ctrl + Up arrow When a tile is in focus on the Start menu, move it into another tile to create a folder. _____

33. Ctrl + Alt + Tab Resize the Start menu when it's open. _____

34. Alt + Shift + arrow keys Display the address bar list in File Explorer. _____

35. Ctrl + Shift + arrow keys Refresh the active window. _____

36. Ctrl + arrow keys Cycle through screen elements in a window or on the desktop.

37. Ctrl + arrow key (to move to an item) + Spacebar Activate the Menu bar in the active app. _____

38. Ctrl + Shift with an arrow key Show your password on the sign-in screen. _____

39. Ctrl + Esc Select multiple individual items in a window or on the desktop.

40. Ctrl + Shift + Esc Select a block of text. _____

41. Ctrl + Shift Open Start. _____

42. Ctrl + Spacebar Open Task Manager. _____

43. Shift + F10 Close the active item, or exit the active app. _____

44. Shift with any arrow key Lock your PC. _____



45. Shift + Delete Display and hide the desktop. _____

46. Right arrow Rename the selected item. _____

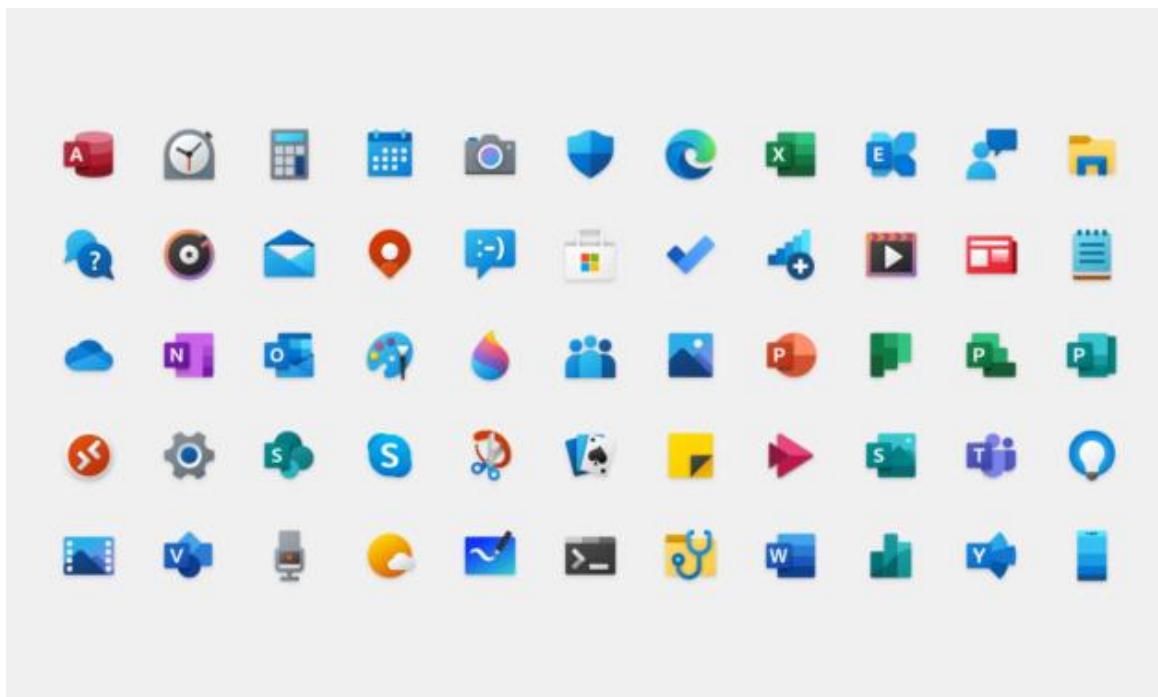
47. Left arrow Search for a file or folder in File Explorer. _____

48. Esc Switch the keyboard layout when multiple keyboard layouts are available. _____

49. PrtScn Turn the Chinese input method editor (IME) on or off. _____

Source: www.support.microsoft.com/

UNIT 8: Apps and Features



Source: www.geekwire.com

WORKSHEET 8

ACTIVITY 8.1. Choose the best option.



7. You can choose a _____ to move from one slide to another.

a. changing effect b. moving effect c. transition effect

8. You can include moving pictures in your presentation. These are called _____.

a. films b. movies c. animations

9. You can choose a _____ for your presentation.

a. color pattern b. color arrangement c. color scheme

10. You can give your presentation over the internet as an _____.

a. online broadcast b. online show c. online spectacle

11. It's usually clearer to present statistics in the form of a table or _____.

a. chart b. figure c. track

12. I keep all my digital photos in a _____ called "Photos".

a. folder b. packet c. box

13. Is it possible to open Microsoft Excel _____ in Word?

a. texts b. files c. pages

14. In Microsoft Word, to start typing a new letter, open a new _____.



- a. document
- b. page
- c. paper

15. When you _____ a document, it's sent to the recycle bin.

- a. destroy
- b. erase
- c. delete

Source: www.ltenglish.wordpress.com



ACTIVITY 8.2. Define in few words this apps.

1. Microsoft Word

2. PowerPoint

3. Instagram

4. Maps

5. Google Chrome

6. Gmail

7. Windows Media Player

8. Zoom



9. WhatsApp

10. Facebook

11. Duolingo

12. Microsoft OneDrive

13. Google Play

14. Amazon

15. YouTube

**ACTIVITY 8.3.** Complete the reading activity.

SOCIAL MEDIA

I – Reading Comprehension

The digital landscape has put increased pressure on teenagers today, and we feel it. There are so many social media channels: Facebook, Twitter, Instagram, Snapchat, Tumblr, you name it. I made a conscious decision to avoid Snapchat and Instagram because of the social pressure I saw them putting on my 14-year-old little sister. If my mum turned off the WiFi at 11pm, my sister would beg me to turn my phone into a hotspot¹. She always needed to load her Snapchat stories one more time, or to reply to a message that had come in two minutes ago because she didn't want her friend to feel ignored. If I refused, saying she could respond in the morning, I'd get the "You're ruining my social life" speech. Even as a teenager as well, I sometimes find this craze a little baffling.

A new study has found that teenagers who engage with social media during the night could be damaging their sleep and increasing their risk of anxiety and depression. Teenagers spoke about the pressure they felt to make themselves available 24/7 and the resulting anxiety if they did not respond immediately to texts or posts. Teens are so emotionally invested in social media that a fifth of secondary school pupils will wake up at night and log on just to make sure they don't miss out. Perhaps the worst thing about this is that teenagers need more sleep than adults do, so night-time social media use could be detrimental to their health. A lack of sleep can make teenagers tired, irritable, and depressed.

During the summer holidays, I lost my phone. And for the week that I was phoneless, it felt like a disaster. I love my phone. It gives me quick access to information and allows me to be constantly looped in with my friends, to know exactly what is going on in their lives. So when I didn't have my phone for a week, I felt a slight sense of FOMO, or if you're not up to speed with the lingo, fear of missing out. By the end of the week, I'd got used to not having a phone and I'd quite enjoyed the break from social media. But there was still a lingering sense of sadness at the back of my mind that there would be conversations I had missed, messages that had been sent, funny videos shared and night-time chats that I would probably never get to see.

By June Eric Udror

in <http://www.theguardian.com/commentisfree/2015/sep/16/social-media-mental-health-teenagers-government-pshe-lessons>

¹a place where a wireless Internet connection is available

**ENGLISH WRITTEN TEST
class 10A JUNE 2016**

1. Read the text and in note form write down (12p)

- a) four things teens usually use social media for.
- b) the effects of night-time social media use on teens.

2. Complete the sentences according to the text. (24p)

- a) June kept away from a couple of social networks since ...
- b) June's sister would ask June for her phone when ...
- c) It is very important for her sister to reply to every message at night so that ...
- d) She would accuse June of messing up her social life whenever ...
- e) For teens not being able to reply instantly to a message ...
- f) Some teens are so obsessed with social media that ...

3. True or False? Quote from the text to justify your answers. (18p)

- a) June doesn't understand her sister's obsession with social media at times.
- b) Teenagers feel pressured to be constantly online.
- c) June simply hated it when she was unable to log on for a week.

4. Identify the phrasal verb in the first paragraph and explain its meaning. (6p)

5. What do the following mean? (10p)

- a) 24/7
- b) FOMO

6. Find the words in the text which mean the same as (15p)

- a) greater than before (paragraph 1)
- b) exaggerated enthusiasm (paragraph 1)
- c) harmful (paragraph 2)
- d) easily annoyed (paragraph 2)
- e) connected with (paragraph 3)

7. What do the underlined words in the text refer to? (15p)

- a) we
- b) them
- c) that
- d) this
- e) their



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*En tus aulas con fe y esperanza
un futuro lograremos construir
abnegación, servicio, confianza
de un mañana que está por venir.*

*Engranaje que impulsa la fuerza
la energía que invita a creer,
algoritmo que combine y ejerza
innovando la ciencia, el saber.*

*Tu nombre resuene lejano
Tu imagen se levante joh Azuay!
Construir el camino temprano
Tecnológico del Azuay.*

*En tus aulas con fe y esperanza
un futuro lograremos construir
abnegación, servicio, confianza
de un mañana que está por venir.*



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Imagen que simboliza Conocimiento y Crecimiento, compuesta por las plumas del búho (ave de la sabiduría y conocimiento) propuestas de manera ascendente, formando una abstracción de una llama que pretende reflejar la luz del conocimiento, difundiéndola a la sociedad, iluminándola en su camino.