

## Dictionary contains the most accurate computer terminology "Online"

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**Abstract:** The translation is a requirement of all individuals, and through our study in the bachelor's IT department stage information (college of computers and information technology in Taif University), there were many students who suffer in their studies Computer English- language translation of computer terminology through (google search engines) is correctly and is compatible with the translation used in computer books. Hence the idea of the project was launched Dictionary of Computer Terms, based on research and not based on the order of the alphabet, which includes computer terms translated into Arabic to make it easier to understand the terminology during the study. And can add some of the characteristics of this dictionary to make it a competitor to other dictionaries.

**Keywords:** Dictionary, Computer, Search, Technology, Education, and computer term.

### List of Acronyms (Abbreviations) and Symbol

Personal Computer.

Dictionary of Computer Terms.

Hyper Text Markup Language is language used to create and to identify the content of web pages.

Cascading Style Sheets is used to specify the design (layout) for each element separately from the structure of the document.

The Unified Modeling Language is a general- purpose modeling language in the field of software engineering.

Data Base is used to aggregation and storage of related data

Software Development Life- Cycle is a structure imposed on the development of a software product.

### 1.1 Introduction

This chapter introduces the ideas and the problems that the Dictionary contains the most accurate computer terminology tries to solve. Lack of precision and clarity in the translation of computer terminology are two main problems facing students. The project proposes a web site facility to be used in the translation process and to achieve a set of goals. It tries to translate clearly and accurately computer terms and in an easy way. It also can do the translation process in less time and effort. Translations can be updated from experts.

Where the researcher will search for the desired word and will find the exact translation, if not find the meaning to be able to communicate with the site or add a meaning of the word and then reviewed by specialists before putting it on the web site

## **1.2.Problem Background**

Translation of computer terms in some search engines We may not find a clear scientific translation or more accurate than we have created this web site.

To know the problems facing people and specialists in computer science about translating terms, a questionnaire is made for students who are in the field or wish to enter the field of computer and information technology. The result of the questionnaire is listed as follows:

- Many students and people who are specialized and interested in computer science field are faced with computer terms and they find difficulty in translating these terms.
- Difficulty in translating computer terms and expressions in correct way. The result of a questionnaire said that about 55% of voters faced this problem.
- It is about 54% of voters are confronted with incompatibility between translating engines (e.g. Google), translation from teachers and from computer books.
- As per questionnaire we found that about 79% of people agreed to use search engines (e.g. Google) but they are unsatisfied with the accuracy of results.
- From the questionnaire showed that some of the voters about 59% does not use website or application programs for translation.

## **1.3 Solution Statement**

Based on the problems listed in the previous section and the questionnaire, we suggest solutions including:

- 1- Developing an interactive web site specialized in translating computer terms as about 70% of voters strongly agree on that.
- 2- Sharing expertise in entering new terms that will aid the translation process to success. It can also increase the amount of terms as well as new ones in the web site.
- 3- Pronouncing words is a facility that can be supported by the site. It can be used as an excellent tool for learning. The correct pronunciation of the words. It is about 91% of voters strongly agreed about adding pronunciation to the web site.
- 4- The web site can have facilities for blinds to learn computer terminologies through Pronounce.

#### 1.4 Project Gap

The following figure shows project gap that focuses on four perspectives which are: computer dictionary, accessibility, usability and information technology.

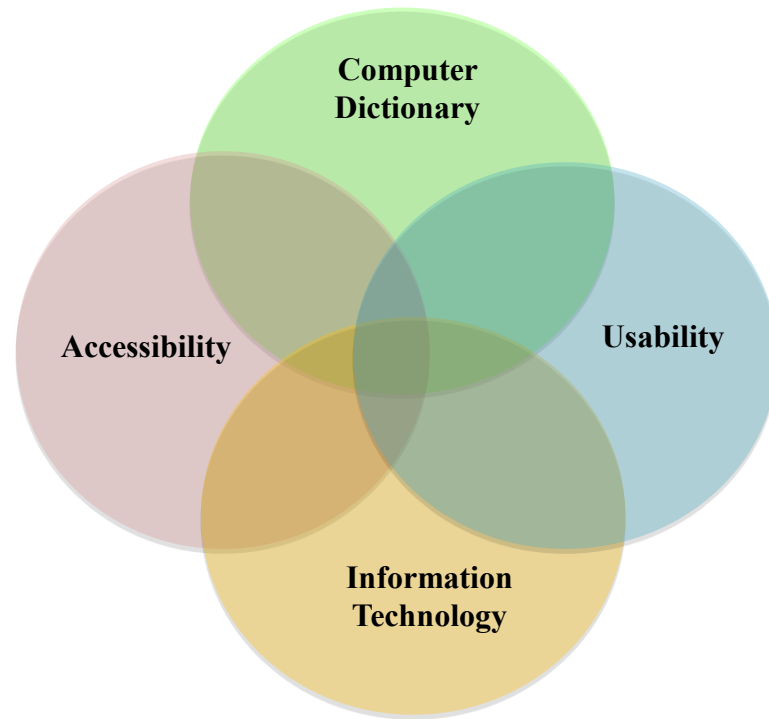


Figure 1.1: Project Gap

- **PC Dictionary:** The web site includes a dictionary with a huge amount of computer terms, which viewed and compiled and linked.
- **Usability:** The web site where it will be loved user has, the provision of communication and interaction with users after determining their level layers by specific criteria, and we will be able through the site to receive "feedback" to the user (By adding terms and modify them).
- **Accessibility:** the site allows the computer to translate terms from English to Arabic, and add audio tool to get to know the correct pronunciation of the term, and be a service for the blind as well as.
- **Information Technology:** This interactive site that contains the technology to all information (Computer Science, Information Technology, Computer Engineering), and avail itself of it academics, specialists and those interested in computer.

#### 1.5 Objectives

In this project, we aim to achieve the following objectives:

- To build a huge dictionary that contains the computer terms and their Arabic translation.

- To design a web site that provides a service to new students in the various fields of the computer, by reference to the dictionary and learning new words like cookies word is files in browser. The site can be considered as a reference to professionals and those who are interested in the field of computer. The site can aid in continuous development, and the strengthening of the language in terms of quality in the pronunciation of Computer Terms.

## 1.6 Project Contributions

New additions are summarized in:

- 1- The dictionary translates computer terminology from English to Arabic only.



Figure 2.1 Home page.

- 2- Add three features to help people with special needs.
  - The pronunciation, the web site as ability to pronounce terms.
  - The user can zoom in and out the screen.
  - Change color of background based on the user's desire only to black color.
- 3- Interaction between specialists in the translation of computer terminology (feedback).

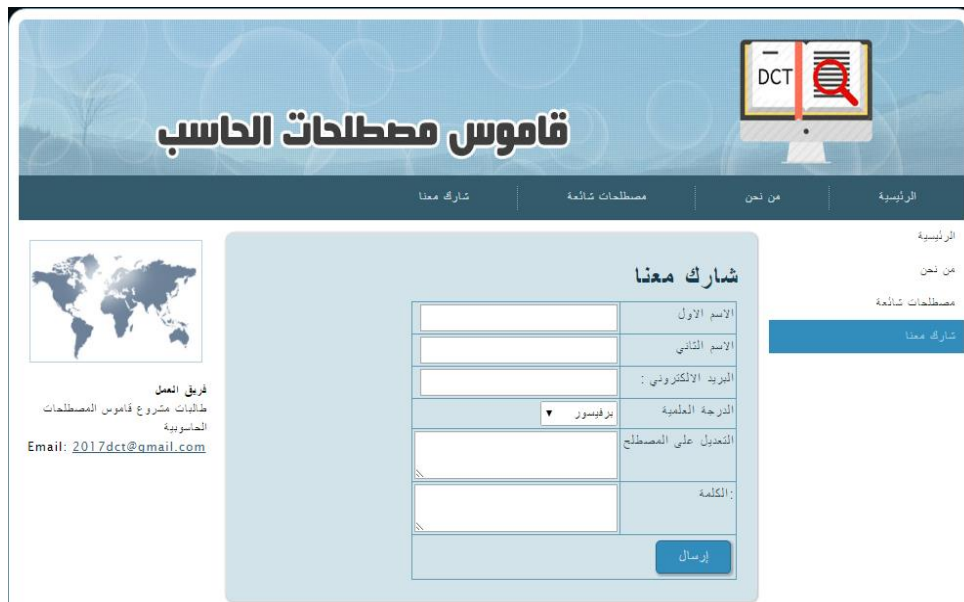


Figure 3.1 Contact us.

### 1.7 importance of the study

The benefits that can be gained from the project can be summarized as follows:

- 1- For helping the student to the correct translation without resorting to question who is a specialist in that.
- 2- It reduces the time it takes to translate computer terms.
- 3- For facilitating understand of the term and its meaning during the lecture.
- 4- It reduces the academic effort to deliver information during its explanation.
- 5- For helping the student interaction with the academic.
- 6- It reduces erroneous translation in the field of computer.

## Chap Chapter 2: Literature Review

### 2.1 Introduction

Introduces the set of terms and definitions related to the project. Besides, Theoretical background is such as definitions, enumerations, features, as well as defects are explored in section 2. Finally it shows a comparison between similar projects which tackled in last section.

### 2.2 Overview

The project aims to design and develop a dictionary for computer science terms. The dictionary should include a wide range of computer terms. These words are covered for different sections (Computer

Technology, Computer Science, Computer Engineering, and etc.).[1] This variety of sections helps to obtain a uniform and satisfactory for all groups in need and so interested translations.[1]

The motivation behind the project is that, the project aims to avoid all difficulties that are found in other translators through the dictionary comes with a set of features and advantages, such as: the possibility of hearing words, changing the background color of the page, changing the font size. These features can serve people with special needs.[2]

Another capability the project provides is the ability to send a reply to the amendment to the translation of words or addition after these changes are reviewed by the competent authorities [3]. This project will contribute to the solution circumflex difference translating computer terminology through other browsers search.[1]

Arabic words may have different meanings for different circumflexes. The user may prefer to search for the meaning of a word in his favorite browser. Unfortunately, every browser has its own different translations, especially for uncommon or new computer terms. This inconsistency of and the language problems motivated towards creation of the project. The dictionary tries to provide the computer community experts with official and standardized translation. The dictionary tries to cover this gap between browsers and tries to give an accurate and correct translation.[1]. The next section will give a theoretical background related to the technologies provided for the project.

## **2.3 Theoretical Background**

This section lists some common background information related to the project. It begins with definition of computer dictionaries and their types.

### **2.3.1 Computer Dictionary**

The dictionary can be defined as, a stock of words and their synonyms. It can be defined also as a word and its corresponding meaning in another language. The dictionary is often depends on the alphabetical search. The dictionary depends on the alphabetical search to find the requested word. Another definition as provided by [5] is "Electronic dictionary store by a group of computer terms is to find a word through the search instead of your search in alphabetical." [5]

#### **2.3.1.1 Classification of Dictionaries**

Dictionaries can be classified into different types on the basis of several criteria [5], varying from the nature of the lexical entry to the prospective user of the dictionary. Below are presented some main criteria for the classification of dictionaries.[5]

- 1- **Density of entries:** whether the word list is general or restricted and special? Does it also cover regional and social dialects, jargons, slangs and archaisms?[5]
- 2- **The number of languages involved:** monolingual, bilingual, multilingual etc.[5]
- 3- **The nature of entries:** whether lexical only or also encyclopedic, the degree of concentration on strictly lexical data.[5]
- 4- **Axis of time:** whether diachronic (dynamic) or synchronic (static).[5]
- 5- **Arrangement of entries:** alphabetical or semantic or causal.[5]
- 6- **Purpose:** whether normative or referential.[5]
- 7- **The prospective user:** whether meant for the general reader to find out general linguistic information or for special users to know some special aspects of the lexical unit say etymology etc.? Is it meant for the general language or only for the language of literature, there too, the language of some author, here again the language of some of his works?[5]
- 8- **Electronic dictionaries:** such as sites or programs and dictionaries in the form of a small device, or laptop [3].

## **2.4 Summary of Related Works**

There are some popular dictionaries that can be used online these dictionaries are:

- **Cambridge Dictionaries Online**

Most of us have heard of the Oxford English Dictionary, but did you know Oxford rival Cambridge actually has 4 dictionaries available online? Best of all use of these dictionaries is free, so check it out![13]

- **Dictionary.net**

Dictionary.net is a free online English dictionary which has a search box which returns word, and phrase definitions from a variety of dictionary tables; or use the word finder by clicking a letter and scrolling down the page.[14]

- **Application Tech Terms:**

TechTerms.com is a free online dictionary of computer technology terms. A goal is to make computer terminology easy to understand.[2]

- **Website Ojuba.org**

The website is provide translation of the terms based on characters on alphabetizing.[15]

- **Your dictionary web site**

Providing the definition of the term and the book that related of term.[16]

## 2.5 Comparison of Related Works

The following table 2.2 shows comparison between some well known dictionaries.

**Table 2.2: Comparison between some well known dictionaries.**

standard	Typeof dictionary	Specialization	Supports Arabic	Can Add or Edit data Feedback	Phonetics	Can Change background color
Dictionary.net	Based on search	No	No	No	Yes	No
Cambridge Dictionaries Online	Based on search	No	No	No	Yes	No
Application Tech Terms	Based on search	Yes Computer Science	No	Yes	No	yes
Website (ojuba.org)	Based on the order of the alphabet letters	Yes Computer Science	yes	No	No	No
Dictionary of computer Terms (DCT)	Based on search	Yes Computer Science	Yes	Yes	Yes, Can Talk	Yes

## 2.6 Relationship between Similar Projects and this Project:

All of the above types of popular online dictionaries are support of dictionary, mostly support the pronunciation of terms and easy to use, but the application Tech Term that supports feedback property and change the background color but did not support the Arabic language and the interactive website (DCT) support feedback and change the background color and ojuba.org website based on the order of the alphabet letters and supports Arabic Language but DCT is dictionary based on search.

## Methodology

### 3.1 Introduction

Shows Research Methodology and sample of research development methodology and system requirement.



## 3.2 Research Methodology

### 3.2.1 Research Tools (Initial Questionnaire)

Research tools used in this project is Initial questionnaire.

### 3.2.2 Steps to design the Questionnaire

The initial questionnaire contains two parts that are:

#### 3.2.2.1 Part 1: Demographic factors

Demographic factors which are age, gender, job of the people and interested in technology field.

#### 3.2.2.2 Part 2: Focus areas of the research study

The research study, which focuses on the perspectives that mentioned in the project gap is which contain on the following:

- **PC Dictionary:** Which focuses on how to translate computer terminology? The degree of difficulty of translator and also on the number of hours it takes in the translation and the difference between the translation of computer terms (Google search engines) and translation used in computer books and learning.
- **Usability:** Which focuses on ease of use of the interactive web site, and asking them about satisfaction them of the feedback through adding a new term meaning and modified for meaning term if it is wrong.
- **Accessibility:** Which focuses on access to an interactive web site by asking them about: the language required (for translation from English into Arabic only) and pronunciation of terms to add pronunciation to read the term to learn the correct pronunciation of the word, and be a service for the blind as well as.
- **Information Technology:** Which focus on asking people about their needs related to IT for designing an interactive web site or an interactive application.

### 3.2.2 Sample Research:

The questionnaire was send to the people who use the social networks, therefore the sample of the research was:

### Age of the people:

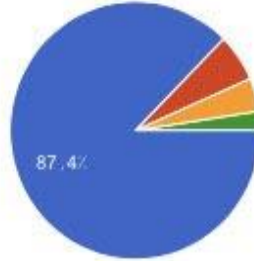


Figure 3.1: The age. ratio.

Figure 3.1 shows the proportion of the age of the people who use interactive website and the results are as follows:

- From 20 years to less than from 25 years is 87.4%
- From 25 years to less than from 30 years is 6%
- From 30 years to less than from 35 years is 4.2%.
- From 35 years and over is 3.4%.

### Gender of the people:

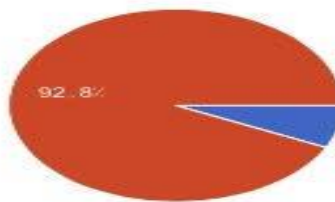
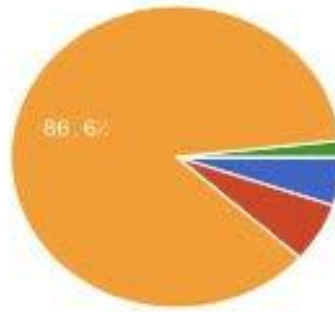


Figure 3.2: The gender ratio

Figure 3.2 shows the proportion of the gender of the people who use interactive website and the results are as follows:

- Male is 7.2%.
- Female is 92.8%

**Job of the people:**

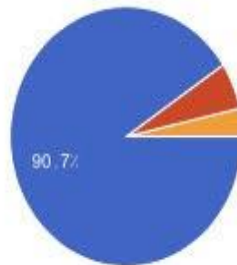


**Figure 3.3: The job ratio.**

Figure 3.3 shows the proportion of the gender of the people who use interactive website and the results are as follows:

- Administrative employee is 5.2%.
- Academic employees is 6.4%
- Student BA is 86.6%
- Master student is 1.7%.
- PhD student is 0.0%.

**Interested in technology field:**



**Figure 3.4: Interested in technology field ratio.**

Figure 3.4 shows the proportion of the Interested in technology field who use interactive website and the results are as follows:

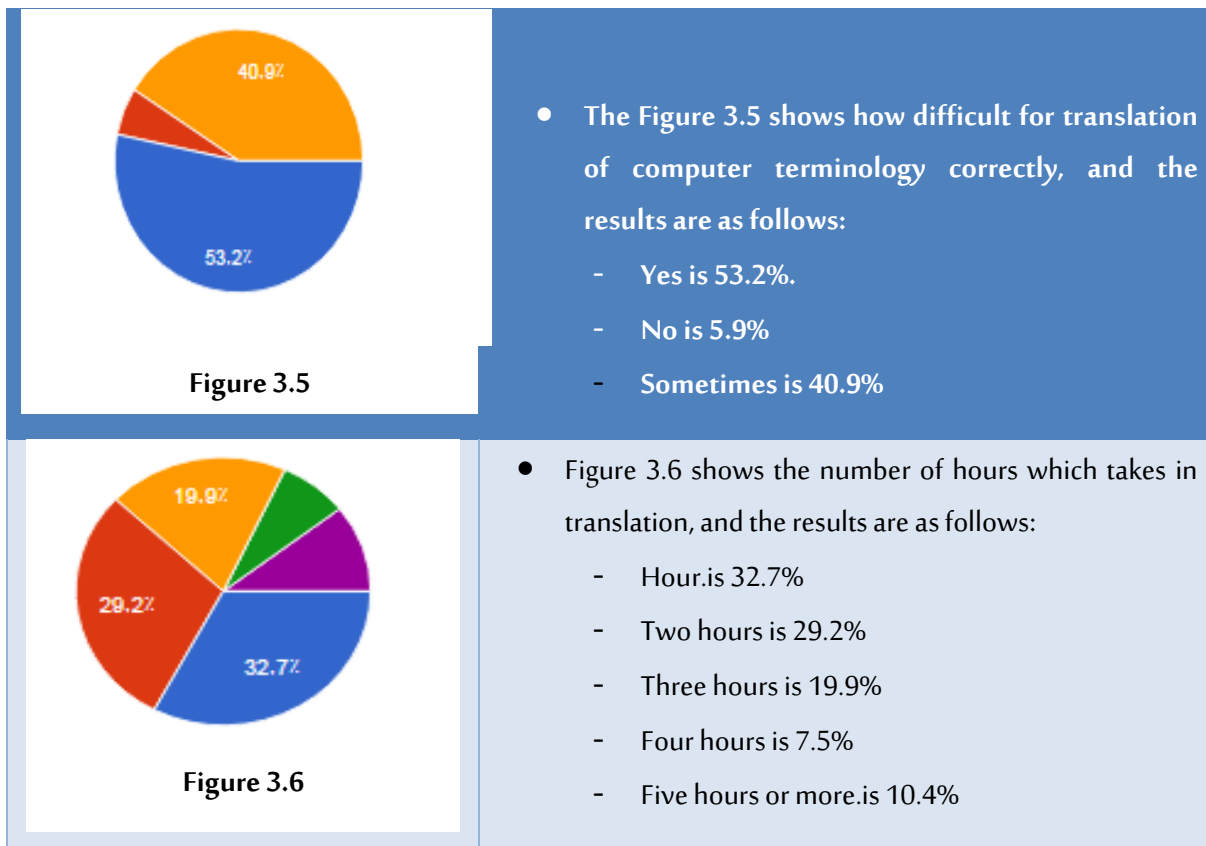
- Yes is 90.7%
- No is 5.8%.
- Do not knowing is 3.5%.

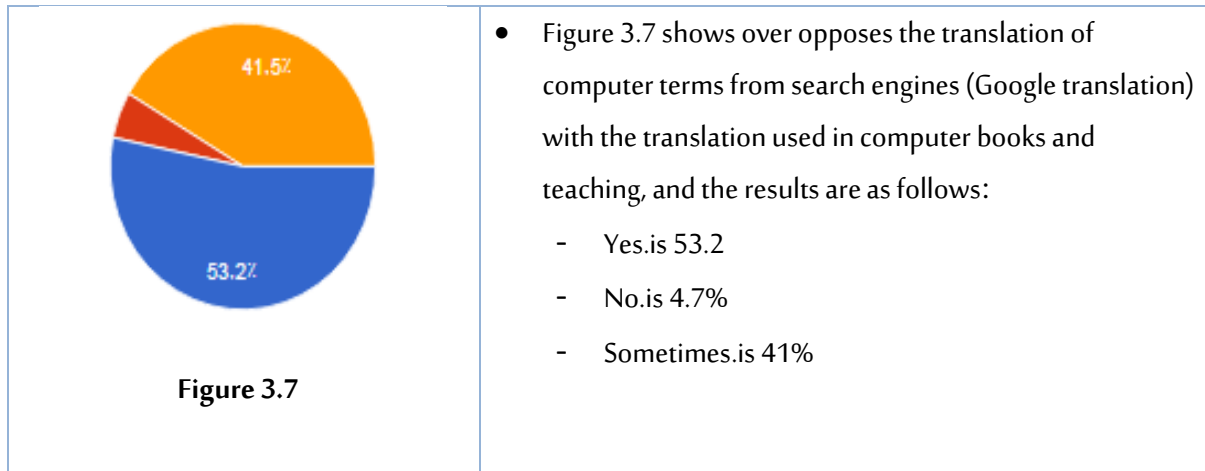
### 3.2.3 Results of the Questionnaire

The following are showing the results of the questionnaire in research study for each project gap perspectives:

#### 3.2.3.1 PC Dictionary:

The following are showing the results of the questions which focus on Computer dictionary:

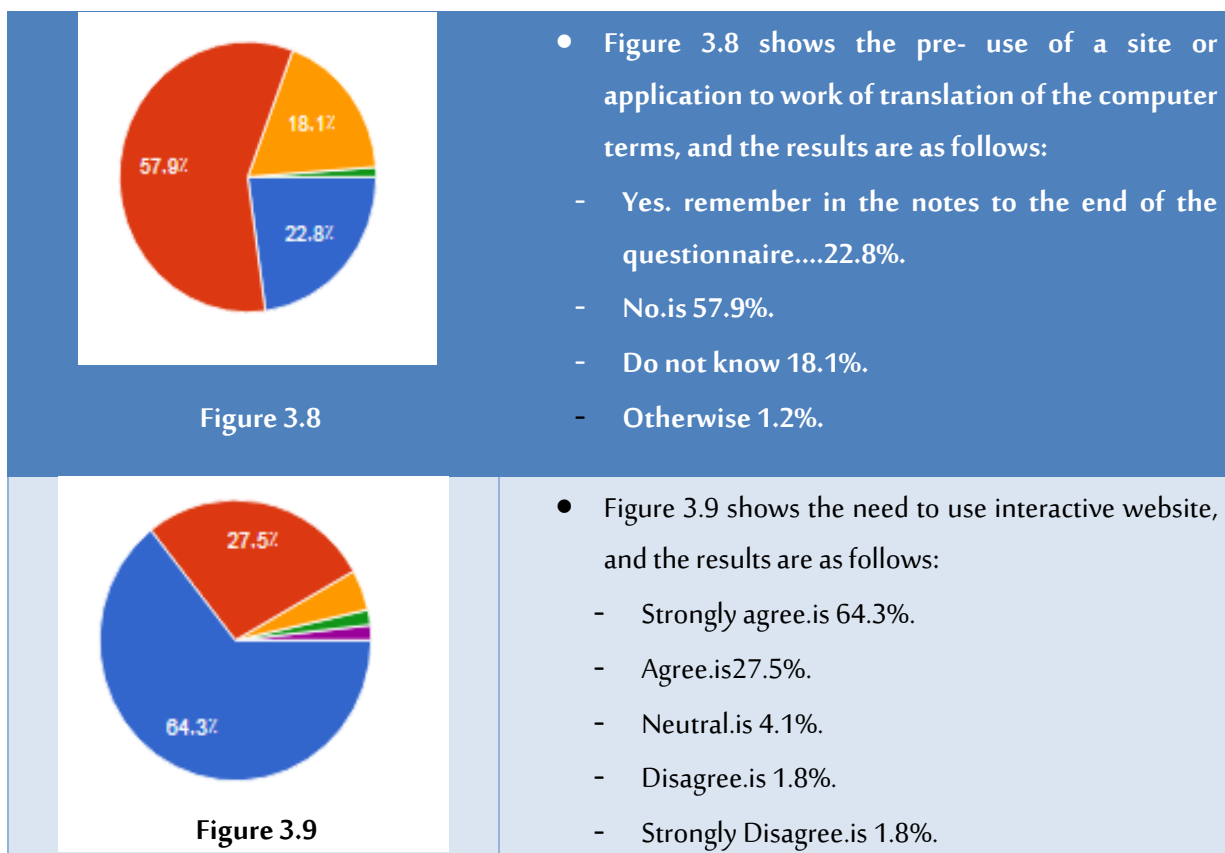


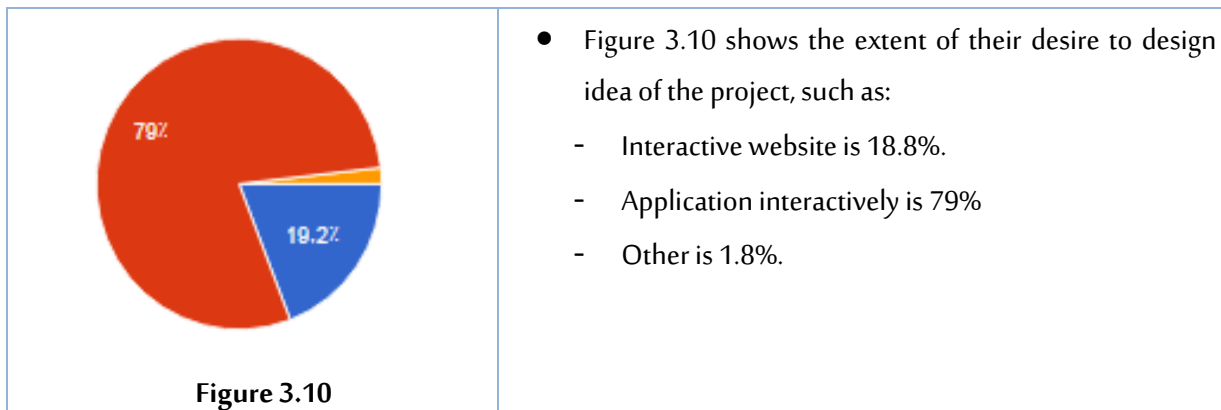


**Table3.1: show result about PC dictionary.**

**3.2.3.2: Information Technology:**

The following figures are showing the results of the questions which focus on Information Technology:

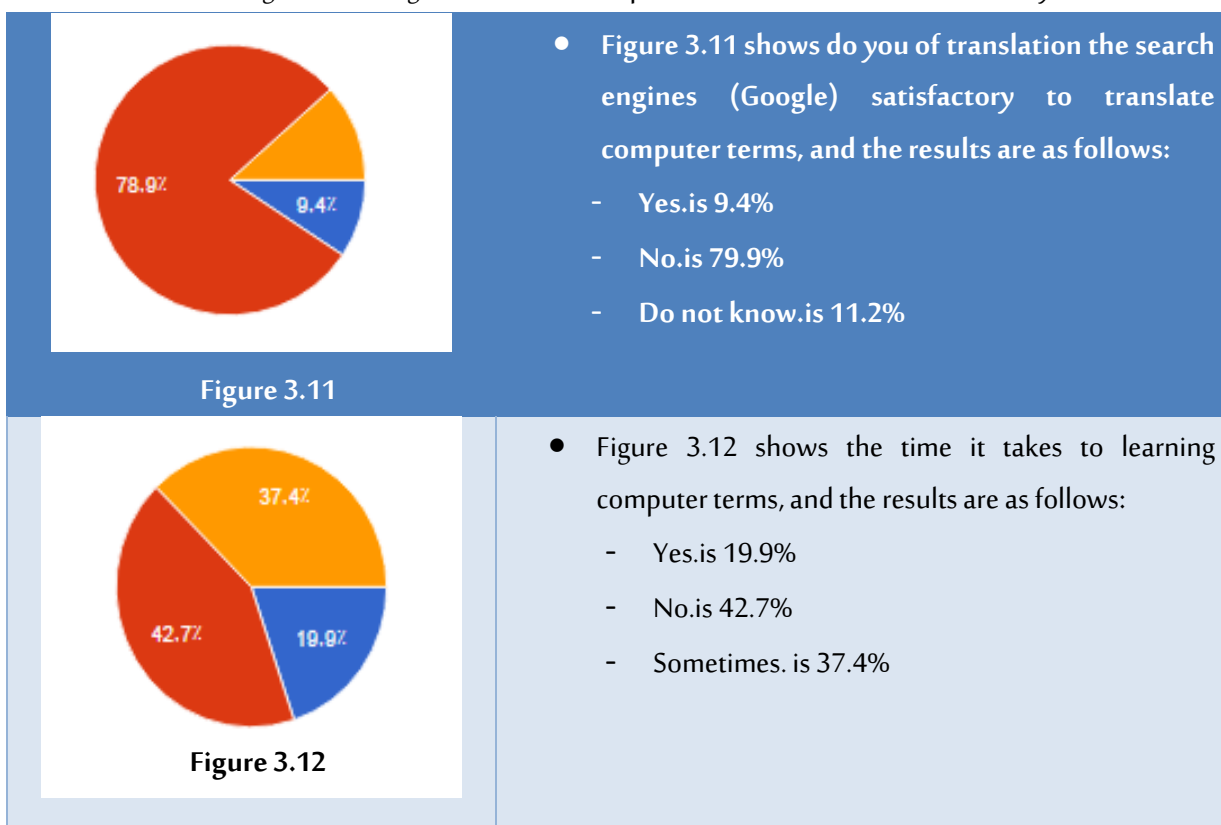




**Table3.2: Show result about Information technology**

**3.2.3.3 Accessibility:**

The following are showing the results of the questions which focus on accessibility:



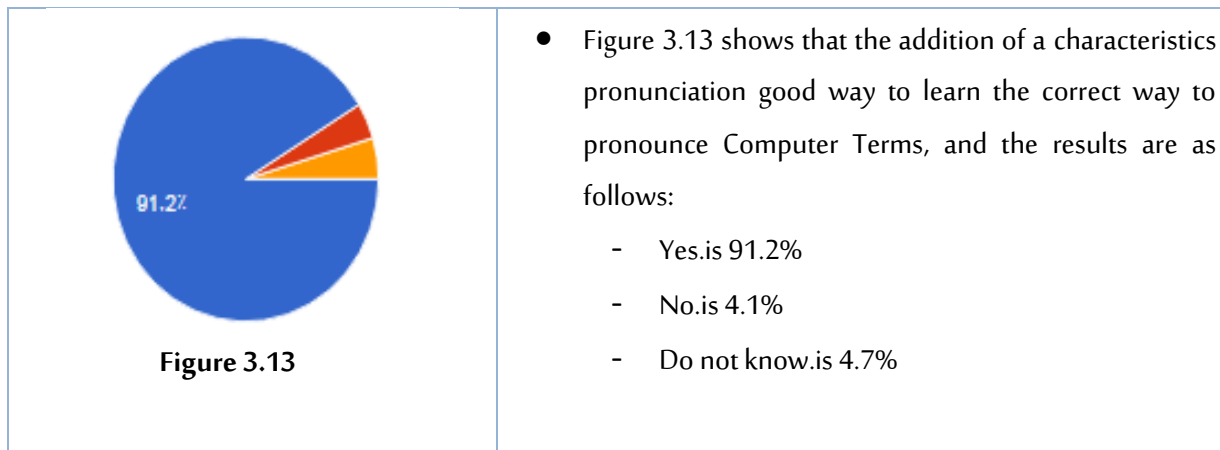
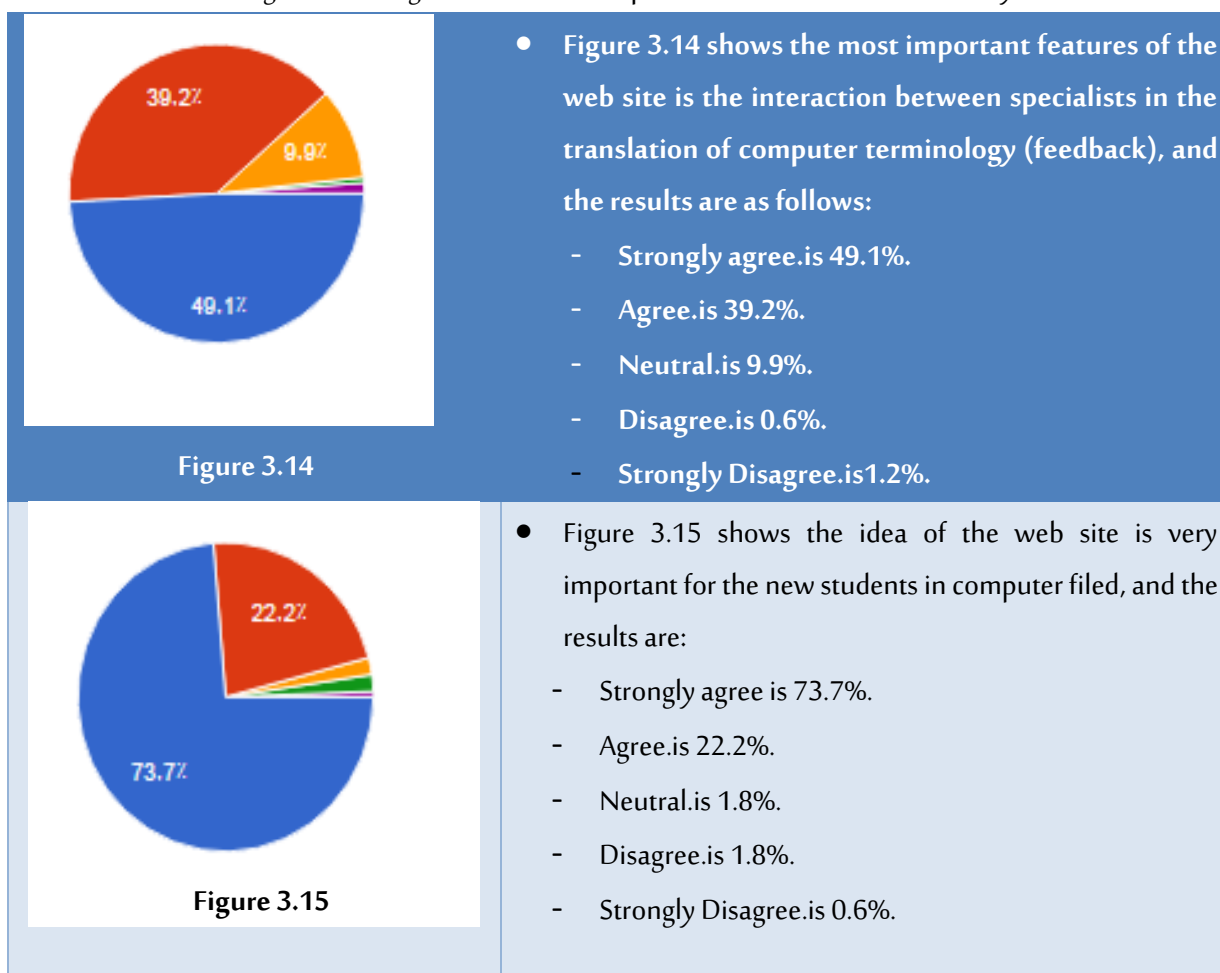


Table3.3: Show result about accessibility in website.

### 3.2.3.4 Usability:

The following are showing the results of the questions which focus on usability:



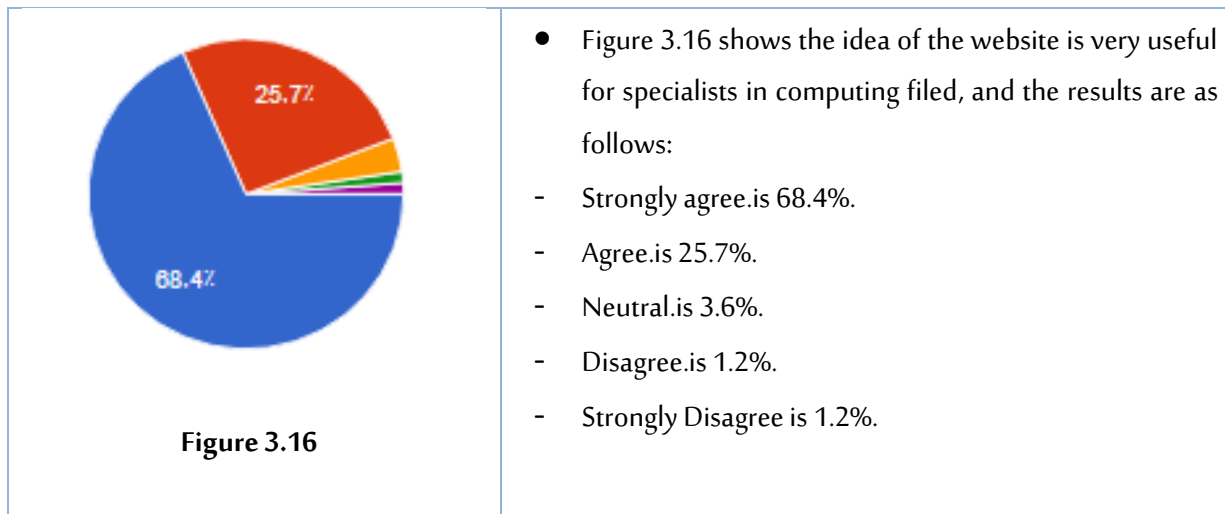


Table3.4: show result about usability in website.



Figure 5.3





Figure 5.7

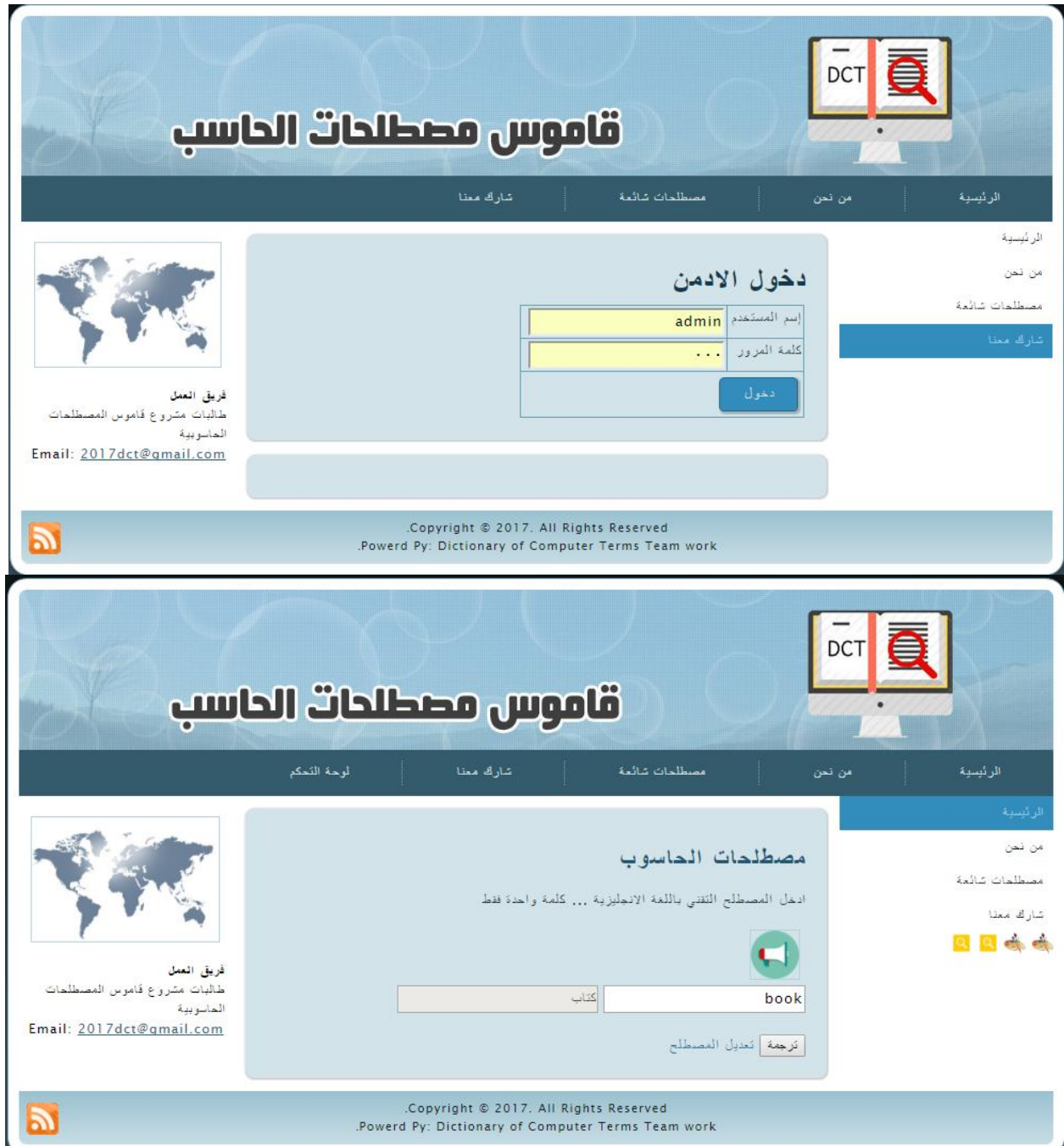


Figure 5.10

## **Conclusion and Future Works**

### **6.1 Conclusions& Summary**

#### **6.1.1 Summary**

In this project Dictionary contains the most accurate computer terminology, focus on designing and developing an interactive website for Dictionary of Computer Terms. Therefore, in this reports in the four chapters, we mentions different information related to theoretical Background and Literature Review, Research development methodology analysis And design.

#### **6.1.2 Conclusions**

Finally in this project, we believe that this website will help a lot of students in the computer filed to find the correct translation of computer terms, will also try to design a system that will be very accurate regarding the translation of the terms Computer.

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Appendix:

The following figures shows testing questionnaire

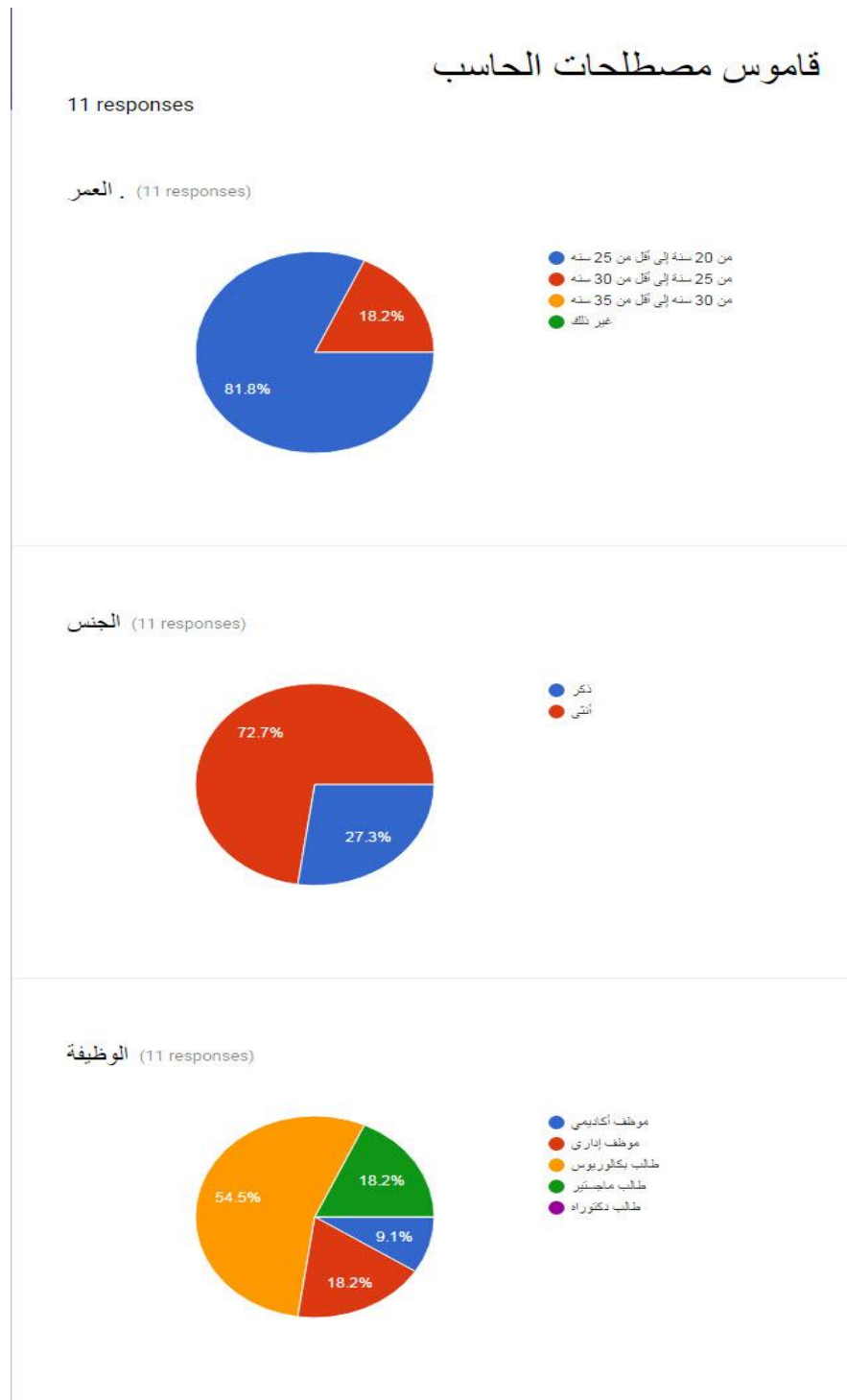


Figure 12



Figure 13



Figure 14



Figure 15

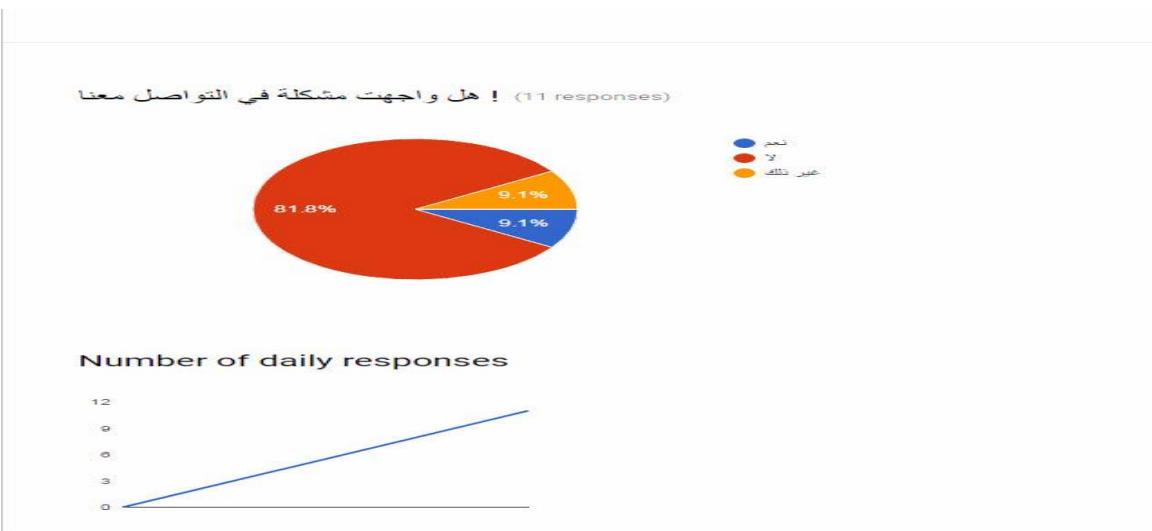


Figure 16



## قاموس مصطلحات الحاسب

الملخص: إن الترجمة هي من متطلبات جميع الأفراد، ومن خلال دراستنا في مرحلة البكالوريوس قسم تقنية معلومات (كلية الحاسبات وتقنية المعلومات)، كان هناك العديد من الطالبات اللاتي يعانين في دراستهن للحاسب باللغة الإنجليزية من ترجمة مصطلحات الحاسب من خلال محركات البحث (قوقل) بشكل صحيح ومتوافق مع الترجمة المستخدمة في الكتب الحاسوبية. ومن هنا انطلقت فكرة مشروع قاموس مصطلحات الحاسب المبني على البحث وليس مبني على ترتيب الأحرف الأبجدية الذي يتضمن مصطلحات الحاسب وترجمتها إلى اللغة العربية ليسهل فهم المصطلحات أثناء الدراسة، ويمكن إضافة بعض الخصائص لهذا القاموس لجعله منافسا للقواميس الأخرى.

الكلمات المفتاحية: قاموس- ترجمه- مصطلحات الحاسب الالي - مصطلحات- بحث - تعليمي - تكنولوجيا.