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EDOLAS –POLE DE SETIF-

DISSERTATION
Submitted in Partial Fulfilment of the Requirements for the Degree of
MAGISTER
Langue de Spécialité: Business English

BY: Mrs. TIAIBA Imane

WRITING CHECK AND TRANSLATION SOFTWARE IN
BUSINESS WRITING: CASE OF THE PURCHASING AND
MANUFACTURING DEPARTMENTS OF ELECTRONICS
SMEs IN BORDJ BOU ARRERIDJ

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DEDICATION

Thanks to Allah, this work has finally seen light which I dedicate to the most loving people who surround me:

my loving parents Hafnaoui and Nacira;
my dear husband Abdeslem and his family;
my sweet sister’ Hiba Sara’;
my cute brothers Hillel, Tahar, A.Aziz and Assil;
my wonderful friend Yakout and her family;
my grandparents Rachida, Fadda and Ali;
my uncles, aunts, and cousins;
all my friends, students, colleagues and teachers.

I dedicate this work to the best gift from Allah, for whom I prayed days and nights, and counted the hours and minutes to see him between my arms.

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May Allah grant him health and happiness.

Finally, I dedicate my work to the mother that hosts all of us: my beloved country ‘Algeria’. May Allah protect it from all evils.
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ABSTRACT

The study entitled Writing Check and Translation Software in Business Writing: Case of the Purchasing and Manufacturing Departments of Electronics SMEs in Bordj Bou Arreridj is a fieldwork investigation and exploration about the way Business English is used in Small and Medium-sized Enterprises for electronic industries. The main thrust of this study is to unfold the kind of problems generated from integrating ICTs, mainly writing check and translation software, in business English writing. The study is motivated also by eliciting workers perceptions about the extent to which translation and writing check software would suffice their business English writing needs and therefore could substitute taking business English courses. A descriptive survey was conducted to collect data from a number of 21 workers in the purchasing and manufacturing departments in four different electronics SMEs in Bordj Bou Arreridj town, Algeria. Descriptive data depicted that using writing check and translation software in business English writing does not entirely suffice workers writing needs. In other words, it is not enough to depend on such software alone to do the job appropriately. Training in business English is needed first. Therefore, writing check and translation software cannot substitute taking business English courses but might reinforce them. The results of this study would be of great consideration for future research in the area and might serve as database for future software development for specific business writing. They can also serve as background to design special English courses for occupational purposes with the integration of ICTs to facilitate business English writing in the workplace.
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Introduction

The current research opens up a new issue about how Information and Communication Technologies (ICTs) are integrated in business English writing. The study is conducted with various workers in the departments of manufacturing and purchasing at some electronics and Medium-sized Enterprises (SMEs) in Bordj Bou Arreridj (BBA) town, Algeria. In the introduction, important areas are presented including: the background of the study, the statement of the problem, the aims of the study, research questions, hypotheses, means of research, ethical consideration, limitations, definition of the terms and the structure of the dissertation.

1. Background/ Context of the Study

The convergence of telecommunication and computer technology has given rise to what is generally called ‘Information and Communication Technology’ or ‘ICT’. Over the last twenty years, ICT has progressively been identified as a major contributor to the process of business development and improvement in general, and to that of communication in particular. The increasingly international nature of business made of moving towards a common language a necessity. English was a perfect candidate since it was already spoken as a first or second language by many people around the globe. ‘English is now the dominant or official language in over 60 countries and is represented in every continent’ (Crystal, 1997:106). Therefore, it can be understood that the English language is a vital means of communication for millions of people around the world.

The last three decades have produced a growing body of research that studies how organizations use ICT. By “ICTs” we mean all technologies that facilitate the handling of information and enable different forms of communication among human actors, between human beings and electronic systems, and among electronic systems (Hamelink, 1999).

‘Organisations wishing to develop international markets are under considerable pressure to work with English’ (Crystal, 1997). Algeria is no exception to this fact as it has become wide open to international markets. English is largely used in business communication with foreign suppliers of many Small SMEs operating in different industrial sectors.

ICTs is an essential element of success in today’s market. This fact is especially relevant for Small and Medium-sized Enterprises (SMEs), whose survival depends, among
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other factors, on the use they make of ICTs to develop new organizational models, compete in new markets or enhance their internal and external communication relationships. There are not only economic benefits which organisations can achieve from adopting and exploiting ICTs, but also the managerial knowledge, skills and experience of owner/managers of SMEs which have the potential to make a significant difference in exploiting new opportunities offered by ICTs (Matlay, 2000 cited in Ms Helen Shiels and Dr Ronan McIvor)

A major point in case is electronics SMEs that made of Bordj Bou Arreridj town an important pole for such kind of industry. Those SMEs are constantly using Business English in the departments of purchasing and production to write various emails, faxes, prepare products manuals among other activities. Thus, writing occupies a paramount territory in business communication within those companies. It has become, a trendy feature for electronics SMEs to integrate ICT in their work in general and in writing in particular. Some of those ICTs forms are translation and writing check software.

2. Statement of the Problem

Given the relevance of this topic, the present work studies the impact of the adoption of ICTs among electronics SMEs in Bordj Bou Arreridj(BBA). It was noted after having conducted some work field interviews and a pre-questionnaire with some employees working in the purchasing and manufacturing departments in certain electronics SMEs that there is a continuous need to correspond with foreign suppliers and to work with product manuals in English. The personnel working in those departments are usually technicians or engineers in the field of electronics. Some others of them have degrees in accountancy, management, business among other specialties. Those workers usually master Arabic being the mother tongue and have a good command of French being the first foreign language in Algeria, and higher studies are pursued in French. The other type of workers consists of English language specialists (usually they hold a BA in English) or they have studied general English at a private school. A gap of proficiency was noticed among those categories of workers when writing in English. The language specialists find difficulties with technical words when writing to the suppliers, whereas the others do not master English upon which much of the work depends especially when preparing manuals of machines or doing other writing tasks. In their attempt to bridge the gap, they resort to some ICT software of translation or writing
check. Sometimes bilingual dictionaries that help them decode or encode the meaning of the difficult words they encounter with English are also used. But those forms of ICTs or software are not adapted to their specific nature of work that is why they generate many problems and misunderstanding. They also need to correspond with suppliers in English, so the technicians use a specific form of English which is not highly formal or elaborated because they translate words and expressions or sometimes use specific abbreviations.

3. Aims of the Study

The present study examines how some software are integrated in business English writing in the purchasing and manufacturing departments at electronics SMEs in BBA.

The focal concern of the study is trying to bridge the gap between the technical and linguistic use of English in business writing with the adaptation of ICTs to the specific needs of the workers in the target field i.e., business English writing, and to determine what the perceptions of the electronics SMEs workers are in this regard.

By examining the nature of business writing, the technical register of language, the problems generated by non-adapted ICTs software, it is hoped that the findings and results of this study would lead to recommendations as to what is needed for positive change in the performance of workers. In the world of business, this will be of a great importance as effective writing means effective communication which would improve performance and profit in return.

In addition, the exploration of business writing in a real work field would extend new bridges between academic research and the work market to develop authentic teaching materials, and design business English courses and syllabi based on the needs of workers in their field of speciality by making best use of ICT writing software.

Another purpose this research may serve is to enable the development of adapted writing software with data base related to the specific linguistic and technical needs of the workers.

4. Research Questions

The study at hand is motivated by the following questions:

1. To what extent does integrating software in business writing facilitate the task?
2. Does the use of writing check and translation software in business writing suffice the writing needs of the workers in the purchasing and manufacturing departments at electronics SMEs in BBA?

3. Does the use of writing check and translation software in business writing substitute taking business English courses?

4. How can writing check and translation software be best used to facilitate business English writing in the purchasing and manufacturing departments at electronics SMEs in BBA?

5. Assumptions

Effective business writing would depend on the integration and adaptation of ICTs special writing check and translation software to the needs of workers at the purchasing and manufacturing departments of electronics SMEs in BBA. In other words:

1. If ICTs writing check and translation software are adapted and developed according to the linguistic and technical business English writing needs of the workers at the purchasing and manufacturing departments of electronics SMEs in BBA, then it would be possible to suggest recommendations to make their business English writing effective.

2. If business English writing courses are designed and developed with the integration of ICTs translation and writing check software according to the needs of workers in the purchasing and manufacturing departments of electronics SMEs in BBA, then it might be possible to suggest recommendations to make their business English writing effective.

6. Means of Research

The quality of any research depends to a large extent on the types and quality of the data collection tools to be used in this study.

To answer the research questions and achieve the objectives, a descriptive quantitative and qualitative approach will be used. Reasons for the choice of this approach are the following:

- A quantitative method is more accurate and lends itself to mathematical calculation.
General Introduction

- Its descriptive nature renders present circumstances and relationships as they are.
- In this type of research, results obtained through statistical techniques can also be used for prediction and estimation (White, 2001:11).

Furthermore, a descriptive survey was selected because it provides an accurate portrayal or account of the characteristics, for example behaviour, opinions, abilities, beliefs, and knowledge of a particular individual, situation or group.

A questionnaire was devised to meet the objectives of the study, namely to determine the perceptions and views of electronics SMEs workers of the purchasing and manufacturing departments with regard to the integration of translation and writing check software in their business English writing.

**Questionnaires:** one of the most common methods of data collection which is simple, cost effective and can be reliable to a large extent. The main advantages and disadvantages of questionnaires will be discussed in detail in the methodology chapter.

7. Ethical Considerations

Conducting research requires not only expertise and diligence, but also honesty and integrity. This is done to recognise and protect the rights of human subjects. To render the study ethical, the rights to anonymity, confidentiality and informed consent were observed. Written permission to conduct the research study was obtained from the University of Setif02. Subjects were informed about the purpose of the study, the procedures that would be used to collect the data, and assured that there were no potential risks or costs involved.

In this study anonymity was ensured by not disclosing the worker's name on the questionnaire.

8. Limitations

The present work is considered as a case study which can be complex in that they involve large amounts of data. This can become a downfall in that any attempts to summarize them can result in the leaving out of data through a process of subjective bias by the researcher. In addition, it is impossible to generalize from the results (Hayes, 2000).

Besides, due to resource constraints, the population of the study is restricted to a small number of electronics SMEs located in Bordj Bou Arreridj. Although, the town of BBA has a
good number of SMEs electronics; yet, a limited number of participants accepted to contribute. It was hoped that training could be taken in one of those electronics SMEs to have a full observation about the kind of writing that is used in the purchasing and manufacturing departments mainly business emails, and the way products manuals and enquiries about the functioning of some machines are made by the concerned personnel. Unfortunately, that was not possible because of the privacy of such documents and the competition between those SMEs that operate in the same field. Another major constraint to this study is that no other research tools were possible like interview recording. Again, this is due to the privacy of those SME. The lack of documents in the field of business English as it is broadly a new subject at the University of Farhat Abbas Setif 02 was one of the major hindrances. Besides, most available researches in the field of business English are either in the academic setting or they are practical teaching materials in business writing. Last and not least, time allocation was, undoubtedly, another handicap to this study.

9. Definition of the Terms

In order to avoid any kind of misunderstanding or misperception for the researcher and the readers, it is important to clarify the key terms of the study

- **Data**: Strictly speaking the plural of "datum", it is information in a form which can be processed by a computer. Data can be a text or sets of figures on which a computer program operates.

- **E-mail**: a system for sending and receiving messages electronically over a computer network, or between personal computers.

- **Hardware**: the physical elements of a computer system; the bits you can see, touch, drop, kick or fall over. Contrasted with Software.

- **Manufacturing Department**: a sector of the company that is responsible for the production of goods.

- **Purchasing Department**: a sector of the company that is most responsible to obtain goods and services for a company. The purchasing department often interacts with other departments in order to determine the needs of the organization.

- **Small and Medium-sized Enterprises**: Small and medium-sized enterprises (SMEs) are non-subsidiary, independent firms which employ less than a given number of employees. This number varies across countries. The most frequent upper limit
designating an SME is 250 employees, as in the European Union. However, some countries set the limit at 200 employees, while the United States considers SMEs to include firms with fewer than 500 employees.

- **Software**: the opposite to Hardware. A generic term describing all kinds of computer programs, applications and operating systems. Software is not tangible, being a set of instructions written in a programming language comprising a set of instructions that the computer executes.

### 10. Structure of the Dissertation

The remainder of this dissertation is organized as follows:

- Chapter one reports on the literature review about five main sections. Section one and two are devoted for a general study about business English and the writing skill. Section three deals with SMEs and ICTs whereas in section four ICTs integration in business writing is discussed. The last section introduces software engineering.

- Chapter two presents the research design and methodology used to investigate ICTs integration in business writing at the departments of purchasing and manufacturing in electronics SMEs.

- Chapter three depicts the data obtained from the research instrument with the analysis and interpretation.

- Chapter four provides a summary of the empirical findings and suggests recommendations, and general conclusion.

- Bibliography and appendices.
CHAPTER ONE
REVIEW OF LITERATURE

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Introduction

The 21st century has brought a swift boom in countless areas of human activity, among them technology, computer science, and business. As English became a lingua franca, language use in these specialized areas is receiving more and more attention from researchers in linguistics and business communication. The writing skill, mainly business writing or technical writing, occupies an important territory in business today. ICT is making inroads in business as well. The convergence of ICTs with business English writing has given birth to specific writing enhancement software which help in error checking and translating words from and to English, especially by non-native speakers (NNSs). Electronics SMEs workers at the departments of purchasing and manufacturing in Bordj Bou Arreridj tend to use some of the translation and writing check software in their business writing. The extent to which they make of those software differs greatly as little is known regarding the features of business English. Besides, not all writing problems could be solved by integrating those software. In this respect, some questions may be asked: How is business English defined? What characterizes business writing? What are ICTs? How are ICTs used in SMEs? How are ICTs writing software defined? What is software engineering?

The afore-mentioned questions will be answered in the present chapter that introduces a review of literature regarding business English in general and the writing skill in particular. Further, it sheds more light on ICTs definition and development, and the way they are adopted in SMEs. The last section considers the integration of ICTs software in business English writing and software engineering.

1. Business English and the Writing Skill

1.1 Research into the Language of Workplace English

In recent years, research into the language of workplace English has increased in quantity such that it is becoming an established and important area of applied linguistics. Swales (2000:65) observes that there has been a growth in research activity in workplace English over the last 15 years. Hewings (2002:209) demonstrates this growth with reference to the increasing number of business English articles published in the ‘English for Specific Purposes Journal’ (ESP), one of the principal journals in the general field of workplace
English and English for Academic Purposes (EAP). A major impetus for this research is the widely perceived need to develop materials for teaching which are based on authentic texts of the workplace. The pedagogic application research is noted by St John (1996), who argues that the field of business English has been under-researched and that there is insufficient research both to define and demarcate it satisfactorily and to underpin course design and teaching materials.

The term ‘workplace English’ is used to refer to discourse which is also known as ‘professional discourse’ (Gunnarsson et al., 1997), ‘institutional discourse’ (Agar, 1985; Ventola, 1990; Drew and Sorjonen, 1997; Iedema, 1997, 1998, 1999, 2000) ‘business discourse’ (Bargiela-Chiappini and Harris, 1997a); and ‘workplace discourse’ (Joyce, 1992; Berry, 1995, 1996; Willing, 1997). Bargiela-Chiappini and Nickerson (1999) point out that the basic difference between these descriptions is who the participants in the discourse are. They draw a distinction between business, institutional and professional discourse. They suggest that the label ‘institutional discourse’ is applied to interactions between lay and business people and that ‘professional discourse’ is often seen to include interactions between professionals and lay people, whereas ‘business discourse’ is talk and writing between individuals who are in the domain of business and “who come together for the purpose of doing business” (Bargiela-Chiappini and Nickerson, 1999:2). While Bargiela-Chiappini and Nickerson (1999) appear to suggest that distinctions between such terms as business, professional, and institutional discourse can be made, drawing these distinctions is not as straightforward as it at first may seem. For example, Iedema (1995, 1997, 1998, 1999, 2000) refers to the discourse he studies, which is generally discourse between business people for the purpose of doing business, as ‘institutional discourse’; Berry (1995, 1996), when referring to ‘workplace discourse’, covers texts written in “business and industry” (1995:57); and Joyce (1992:1) refers to workplace texts as those reflecting the day-to-day tasks of employees in various workplaces ranging from manufacturing to clerical ones. Berry, although discussing workplace discourse, also includes administrative texts produced in educational institutions in this category. Therefore, for many researchers the terms business, professional, institutional and workplace discourse seem to be almost interchangeable. These terms refer to texts which are constructed within a business, a workplace or an institutional environment and which are
concerned with matters related to the exchange of goods and services or information within a workplace environment. Such studies have paved the way to the appearance of what is known as ‘business English’.

1.1.1 Business English Background

In the West, in the middle 1900s, linguistics changed silently in the wave of economic and social changes, during which researchers started to concentrate their research focus on the application of languages in various contexts rather than on the regulation of language usages. At this period, ESP, namely English for Special Purpose, came into being with EST (English for Science and Technology) as an area of its activity. Contemporary business English originates from the Western countries in this era as a sub-branch of the so-called ESP described as a revolution of linguistics (Hutchinson & Waters, 1987; Ellis & Johnson, 1994). It is also a special branch of learning appearing in the background of economic globalization and trade internationalization. Currently, business English is becoming more and more important in academic position and has become the sub-branch of ESP with the fastest development.

ESP is an umbrella term embracing a number of sub-divisions of which two key ones in many definitions are EAP (English for Academic Purposes) and EOP (English for Occupational Purposes). Another perspective (Hutchinson and Waters 1987) is of English for Science and Technology, English for Business and Economics and English for Social Sciences, each with an EAP and EOP division. Business English itself has become an umbrella term encompassing what we can call English for Specific Business Purposes (ESBP). Where Business English courses require” the careful research and design of pedagogical materials and activities for an identifiable group of adult learners within a specific learning context” (Johns and Dudley Evans 1991) and are” designed to meet specific needs of the learner” (Strevens1988) they are clearly ESP and thus ESBP.

There is further proliferation of terms within Business English; some focus on people, some on purpose and some on jobs. So you may hear of Business for professionals, English for Professional Purposes, and English for Secretaries or Secretarial English. More interestingly is the choice between using the terms commerce, business, management, professional or executive. In the early 1960s and 70s the term commerce/commercial
dominated and primarily referred to written communication related to trade, and importing and exporting. Since then there has been a major shift from written to spoken communication.

1.1.2 Users of Business English

“English has become the international language of business. A firm conducting business in South Korea uses English; a Brazilian doing business with the Dutch uses English; the French in China often use English and an American and a German probably also employ English.” (Dudley-Evans & St John: 1998 -53). Thus, most English medium communications in Business are non-native speaker to non-native speaker (NNS-NNS), and the English they use is International English not that of native speakers (NS) of English-medium countries such as the UK and Australia (Dudley-Evans & St John). This is a point made in management books as well as language books, for instance Guy and Mattok (1993) use of the term ‘offshore English’ for the English spoken between Europeans who do not share first languages and have learned English for practical rather than academic purposes. (Dudley-Evans & St John:54)

1.1.3 How is Business English Defined?

Business English is difficult to define and limit linguistic terms (Dudley-Evans & St John:1998 -54). It is a form of English, lexically and statistically different from everyday English. It also differs in linguistic context as well as usage. Hutchinson and Waters elaborate that Business English is an established tradition of certain rhetorical principles. These principles are various, including ‘the stylistic devices, language usage, vocal delivery and other principles’. It is the process of adapting discourse for specific audience for specific purposes. In fact, this context is the determining feature of Business English. Requirement of the linguistic context creates a need for a particular choice of English in writing. According to Whitehead, Business English is the language of communication in international business and ‘it is ordinary English related to particularly to business use’. Similarly Jones and Alexander (1996) maintain ‘Although there is a certain amount of vocabulary that we can describe as special ‘business’ vocabulary, most so called business English is simply English used in business context. It is not a special language.

Pickett highlighted the fact that there is more than one face to business communication with some of it being ‘a lot nearer the everyday language spoken by the
general public than many other segments of ESP’ (1986:16). The diagrammatic representation he used suggests two particular aspects to business communication: communication with the public and communication within (intra) a company or between (inter) companies:

![Diagram of Business Communication Aspects]

**Figure 1.1: Aspects to Business Communication**

Business English is also regarded as the language of business communication. 'English is a major inter-national language of commercial communication. It is also the language of the internet and of global access to knowledge. Business English is quite simply the name given to the English used for dealing with business communication in English.' Fiona Talbot (2009:04)

According to Ellis and Johnson (1994:03), Business English implies “the definition of a specific language corpus and emphasis on particular kinds of communication in a specific context”. In contrast to the native and the established second language varieties, the use of English as a lingua franca (ELF) has been hotly debated but relatively little studied. English as a language of communication between speakers for whom it is an additional language is assuming an increasingly vital role outside countries where English has an official status (Ellis and Johnson, 1994).
For Marlene Ringler, Business English or English for Business Purposes is an approach to teaching English to non-native speakers of English (NNS) who wish to improve their level of fluency for purposes of greater language functionality in specific areas of business life including technology, marketing, manufacturing, management, finances, and business services. Topics included in a Business English curriculum may include areas as negotiations, meetings, socializing as well as writing discourse as emails and business plans.

1.1.4 Features of Business English

According to Shahid Abrar Ul-hassan,( 2005: 28) business English is a segment of the domain of English that can be characterized. It is part of English for occupational purposes (EOP) and broadly of ESP. General understanding of Business English is based on a number of facts. The following are the fundamental features of Business English.

- **Economy and clarity**: it requires language to be economic and clear. Certain terms have been evolved to save time in referring to concepts which people in business are well acquainted. Moreover, the jargon of business communication like words, terms and acronyms is even expressed in a particular stylistic and syntactical manner in order to create economy and clarity. It minimises both misunderstanding and cost.

- **Purposfulness**: communication in business always has a definite purpose that it of great validity. Many problems in communication are created by unclear or inappropriate purposes (Hartley and Clive:2002)

- **Social dimension**: communication is always influenced by the social context in which it takes place. Shahid Abrar Ul-hassan,( 2005: 28)

1.2 Writing Skill

Written communication is usually regarded as the most formal medium of communication. In business and organizational communication, especially, mostly written communication remains more formal than oral communication. However, this sense of formality, according to Smithies, should not make the message ‘a frozen depersonalized presentation’ (Shahid Abrar Ul- Hassan 2005)

Writing skills involved in the creation of a document are both linguistic and non-linguistic. The point of departure is that ‘writing is communicating’ (Turk and Kirkman, 1
Olshtain 207). Bovee and Till have proposed ‘audience centered’ writing. This will require that the audience remain the primary consideration at all stages of communication. This approach is the cornerstone of writing activities in organizational communication. They have described three stages of writing: planning, organizing and composing, and revising (90.92).

The process of writing starts when the need arises in a particular context and proceeds through these stages to the final encoding of the message into words. Each stage comprises a number of steps and is influenced by non-linguistic features of writing like graphs, pictures, layout and other. Lawrence believes that writing is semantic as well as cognitive. It would also extend the writing process beyond linguistic and non-linguistic skills.

Sternglass (1981) holds that different kinds of thinking are associated with different types of writing. Expressive writing focuses on some aspects of the writer’s personality. Expository writing conveys information from a writer to a reader. Argumentative writing stresses the reader. Writing therefore would give the senders a strategic edge to express their arguments when the receivers arguments attentively with greater possibility of a serious thought.

However, writing at the workplace can be sensitive both for the sender and the receiver of the message. Turk and Kirkman (1989) have discussed effective writing in technical and business communication. They stress forming correct attitudes to writing to make it effective and suggest fundamental steps. While writing, it is pertinent to recall our own experience as readers. They further emphasize the starting writing is a psychological situation and present ‘seven point plan’ which includes the stages: analyzing the aim, considering the audience, making a plan, discussing the synopsis, drafting the text, leaving the draft for someone and finally revising and editing. This approach is more likely to result in effective communication. Furthermore, Marzona and DiStefano (1981) have pointed out at least seven factors common to all writing. These integral steps are: motivation, topic identification, audience identification and consideration, identification of format, collection of information, putting thought to paper, and polishing. All these steps are essential to writing, but emphasis may shift from one to other in different writing situations. Effective writing, therefore, is often described as a sequenced process and can be challenging to the writing skills. Turk and Kirkman (1989) consider motivation as the initial factor to the sequence of writing process which Marzano and DiStefano (1981) did not include in the seven factors mentioned above.
1.2.1 Writing Process

Analysis of the writing process and strategies for skill development are of great consequence for writing. Description of the writing process will bring out that transforming thought into written communication is incredibly complex (D’Aoust). This complexity entails appropriate emphasis of the following three stages of the writing process.

(i) **Prewriting:**

Prewriting consists of various activities to lay the foundation for writing. In fact, prewriting is a critical stage of the writing process. According to D’Aoust, ‘prewriting activities facilitate the planning for both the product and the process’ (7). In the writing process, motivation is a primary factor and a crucial component (Mazrano and DiStefano 11, Turk and Kirkman36). Motivational problems can adversely influence the success of writing. In organizational writing, under the restrain of time and responsibility, unmotivated writings can lack effectiveness. As Maki and Schilling argue, organizational writing aims at informing the reader. However, it has the primary purpose to motivate people and to accomplish the given work (5). There can be a number of prewriting activities like brainstorming, clustering, free writing, discussing and debating, as well as drafting. However, prewriting activities do not hamper spontaneity. Prewriting activities stimulate the flow of ideas prior to the start of actual writing (D’Aoust 7).

(ii) **Writing**

Writing takes place while structuring prewriting ideas and expressions in appropriate order. At this stage, the writing process takes a difficult form. According to Maki and Schilling, writing an initial or first/test draft will give the writer a chance to pull together the fragments of preliminary writing. It is also a process to select the most suitable words for the expression. ‘The process of drafting is the process of discovering both what you mean to say and how to say it best to your reader’ (1981). However, at this stage, spontaneity and creative construction are usually thought to take precedence over the correctness of format and content.
Furthermore, a key factor to be considered is coherence in writing. In discussing writing skills, it should not be overlooked or taken as a natural consequence of writing. Lee (2002) emphasizes, ‘A pedagogical focus on coherence can shift students’ attention from sentence-level grammar to discourse features such as textual structuring and propositional unity, which are crucial to creating meaning in texts’.

(iii) Revising

To shape the test draft into a mistake free and meaningful piece of writing, it goes through various procedures of revision. The draft is to be revised in the light of self-responded feedback of the sender. It further requires linguistic craftsmanship or editing. In the process of polishing the first draft, expansion and reduction of the text are key skills (Marzano and DiStefano 132).

Expansion can be by adding new words, phrases, sentences, or ideas. On the contrary, reduction is decreasing the text size. The purpose of applying these skills is to reshape the written draft in line with the objectives of writing. Moreover, a fundamental prerequisite of organizational writing is brevity by means of economy of words and avoiding repetition as well as redundancy. Revising is not only re-viewing but also finalization of writing.

1.2.1.1 Essentials of Writing

Scott (1997) claims that there are four key variables, which can create a difference in writing. These include the length of statement, choice of words, use of words, and choice of the pronoun. He further mentions that writing style depends on how one makes one makes use of one’s basic education in English language. Organizational writing would require certain skills particularly in creating a document. These can be considered as the essentials of written organizational communication. Smeltzer and Leonard have elaborately discussed various dimensions of writing with reference to organizational communication. They have enumerated twelve principles to guide the writer in the selection and management of words for clarity, comprehension, and coherence. These are summarized as the following:

One: Choosing words precisely, as words have denotative and connotative meanings

Two: Using short, rather than long words. Simple words are easy to comprehend and less confusing.
Three: Using concrete rather than abstract words, as concrete words are more specific and develop the argument solidly. Abstract words can threaten some readers, begetting mistrust and confusion.

Four: Using words with economy is the central concept to business writing. Wordiness serves no purpose and costs time and money. Economy of words is a highly desirable feature of business messages.

Five: Avoiding clichés and gobbledygook, as hackneyed expressions yield dull messages and badly affect the expression of writing.

Six: Using positive words to convey courtesy. Positive word creates positive stimuli that will attract encouraging response and vice versa. Positive words are ambassadors of goodwill and establish credibility.

Seven: Using conversational style, as it involves everyday expressions of living language. Such a style is especially of great relevance in business writing. It creates a sense of concern and involvement.

Eight: Keeping sentences relatively short: short sentences are less prone to confusion and more understandable to the reader.

Nine: Preferring the active to the passive voice.

Ten: Developing effective paragraphs.

Eleven: Developing coherence.

Twelve: Editing and rewriting.

1.2.1.2 Mechanics of Writing:

The mechanics of writing, according to Olshtain, are ‘necessary instrument skill without which meaningful writing cannot take place’(2001:207). Mechanics are non-linguistic devices to organize and reinforce the meaning of writing. These devices include punctuation, spelling, and capitalization. For Sillars, ‘spelling and punctuation are of equal significance in business communication’. It is not only what is communicated that matters, but also how it is communicated (1994).

1.2.2 Business Writing

‘If you can’t produce well-written communications, it’s unlikely you’ll achieve business success. No matter what your industry, no matter what your job, no matter what
other business abilities are required to succeed in your career, you must be able to get your points across clearly and persuasively in writing’. (Jane and McGraw-Hill, 2003).

"Throughout the globe, the written word, in both paper and electronic forms, is seen less as strictly a way of archiving the business already completed and more as a vital, creative means of problem solving, collaborating, and actually doing business." (R. Inkster and J. M. Kilborn: 1999)

The Institute of Technical Communication (1998) states that business writing, technical or workplace writing is writing that “transfers information about a situation, product, service, or concept . . . to audiences of varying levels of technical knowledge, so that each member of the audience clearly understands the message. The word “technical” means skilled, specialized, and strict. Technical writing follows rules and protocols.

### 1.2.2.1 Purposes of Business Writing

"Business writing . . . is utilitarian, aiming to serve any one of many purposes. Here are just a few purposes of business writing:

- To explain or justify actions already taken: "Given that situation, we have determined that the best course of action is to reject all current bids and to seek others."
- To convey information, as in a research report or the promulgation of a new company policy: "Management wants all employees to know that the floggings will stop as soon as we have evidence of improved morale."
- To influence the reader to take some action: "I hope that you will find that our new, Web-based cash management services can reduce your capital requirements and save you money."
- To deliver good or bad news: "Unfortunately, the engine fire you reported occurred one day after the expiration of the warranty period."
- To direct action: "Your team should complete and deliver the product specifications by May 1." (Harvard Business Essentials: 2003)

Business writing also encompasses technical writing which is defined as "The goal of technical writing is to enable readers to use a technology or understand a process or concept. Because the subject matter is more important than the writer's voice, technical writing style uses an objective, not a subjective, tone. The writing style is direct and
utilitarian, emphasizing exactness and clarity rather than elegance or allusiveness. A technical writer uses figurative language only when a figure of speech would facilitate understanding." (Gerald J. Alred, et al., 2006)

1.2.2.2 Some Types of Workplace Writings

- **Business Letters** (most common – formal letter to an external recipient)
- **E-mail Transmissions** (A more informal business message than a business letter that is sent electronically to one or more recipients, within or external to the business).
- **Memoranda /memorandum** (A more informal style of a business letter that is usually sent to one or more business colleagues employed *within* the same business unit or company)
- **Reports** (financial, audit, or statistical report that identifies the specific problem and presents collected data, research, or recommendations for the change process (re-engineering process.)
- **Contracts** (binding agreements or *proposals* between two or more parties that can become legal documents if they include an offer that is accepted.)
- **Manuals** (a written set of instructions, procedures or policies)
- **PowerPoint** (a soft-ware generated, visual slide show, with animation options, that hosts a set of notes or bulleted points, an agenda, or other information that supports a discussion).

1.3 ICTs and SMEs

1.3.1 What Are ICTs?

In 1998, the Organization of Economic Cooperation and development (OECD) member countries agreed to define the ICT sector as a combination of manufacturing and services industries that capture, transmit and display data and information electronically. This definition, based on an international standard classification of activities (ISIC) was considered to be a first step towards obtaining some initial measurements of ICT sector core indicators. (Sheridan. R 2002: 81).

ICTs can be viewed as all form of technologies and products for a wide range of software, hardware, telecommunications and information management techniques, applications and devices, and are used to create, produce, analyze, process, package,
distribute, retrieve, store and transmit or receive information electronically in a digital form such as computers, email, internet, websites, social networking and other wireless communications devices, networks, broadband (a system that makes it possible for many messages or large amount of information to be sent at the same time and very quickly between computers or other electronic devices), and as well as the various specialised devices and applications associated with them, such as satellite systems and videoconferencing (Porter and Millar, 1985; Brady et al., 2002, Nicol, 2003).

For Ritchie and Brindley (2005) ICT is "the array of primarily digital technologies designed to collect, organise, store, process and communicate information within and external to an organisation and, in our case, SMEs". ICT covers technologies like the simple telephone, point-of-sale systems, stand-alone PCs, networked environments, Internet and credit card facilities.

ICT can fulfill a number of business needs such as strategic, operational or marketing needs, or a combination of all of them. The different needs of the business led to the categorization of the use of ICT, and Lucchetti and Sterlacchini (2004) categorize them into the following groupings: general-user, production-integration and market-oriented groups. The general-user group is where the basic technologies are used such as telephone, e-mail and Internet in order to carry out administrative functions of the SME, while the production-integration group is where ICT is tightly coupled with production of goods and functionality of the business. The market-oriented group is where ICT is used to market or communicate with the outside world. Different terms are used to express the grouping of the usage of ICT within an SME, but the above categorization expresses the general purpose of its use.

1.3.2 What Are SMEs?

There is no one way of defining Small and Medium-sized Enterprises (SMEs), but generally, authors use the number of the employees as an attempt to define it. Southern and Tilley (2000) define SMEs as businesses that employ 150 people or fewer and are not a subsidiary of a public limited company. Taylor and Murphy (2004) and Martin and Matlay (2001) agree and acknowledge that each individual SME is different and should be treated as such.
1.3.3 Importance of ICTs in Business

Before going into the main subject of this study, i.e., the integration of ICTs in business writing, particularly by electronics SMEs, it would be useful to consider and revisit the trends and factors that converged to make the ICT sector the critical driver of the global business that it, undeniably, is today.

According to a study made by Economic and Social Commission for Asia and the Pacific (2007), the global ICT sector has been, and continues to be, shaped by a number of powerful interrelated forces. Chief among these forces are:

- Technological developments;
- Convergence of telecommunications, broadcasting and multimedia;
- Globalization and internationalization of markets; and
- Emergence of broadband services.

a) Technology: The key technological development which has occurred is the emergence of the digital packet switched network architecture, which effectively replaced traditional circuit switched networks. This dramatically reduced cost, improved quality and enabled the development of a wide range of innovative applications.

The establishment of the Internet Protocol (IP) as the global open network service standard, in particular, facilitated the blending of different services (e.g., telephony, data, interactive video) via one infrastructure.

The delivery of services over IP is now a leading driver of change and innovation, the result of which is that new participants in the ICT sector now exclusively build IP networks.

b) Convergence: The deployment of digital packet switched technology also fuelled the convergence of telecommunications, broadcasting and multimedia. Previously, each sector was treated as distinct, and therefore regulated separately.

As digital technology emerged with increasingly open interfaces between different applications, the distinctions between each sector have rapidly eroded. Cable companies can now provide internet telephony while telecommunications companies can provide internet services. Newspapers can now also be read online. In the digital world, the “network” is not confined to specific applications. The digital network is a ubiquitous platform, capable of transporting all digital data with equal ease. The network is “blind” to distinctions between voice, computer data, video, or transactional data. All are simply digital data. The Internet is
virtually substitutable for all forms of existing media and is a competitive threat to every
provider of telecommunications, broadcasting, operating software and data communications.
As a result of convergence, different content services (voice, radio, television, etc.) can now
be delivered by practically anyone to anyone anywhere in the world.

c) Globalization: Globalization is the process in which the world is treated as one
market without regard to national boundaries. Over the last decade, globalization and
ICT have gone hand in hand – the rapid spread of the use of ICT is both a result and a
driver of globalization.

ICT is a key enabler of globalization. The specialization of production through
advances in manufacturing techniques has lowered costs and shortened economic distances.
In addition, the systematic rationalization of procedures and documentation and the wider and
easier dissemination of market information have broken down the factors that have made
markets distinct.

At the same time, globalization has fuelled the demand for ICT. As new markets open
up, buyers and sellers have turned to ICT for new financial instruments and services and
faster and cheaper ways to facilitate cross-border transactions.

d) Broadband: The emergence of the Internet has also seen the emergence of new,
high-bandwidth networks and new network paradigms that are rapidly displacing the
traditional, narrowband public switched telephone network (PSTN) model.
Broadband services enable high-capacity communications services characterized by
both high data transmission speeds and high volumes of data.
Broadband services offer significantly faster data rates and “always on” connection to
the Internet.

The growth of high-speed broadband infrastructure, either wired or wireless, coupled
with technological advancement in equipment, by the global proliferation of small mobile
devices and other intelligent terminals that can be used to communicate and gather converged
data, voice and video information and services anywhere anytime, make the lives of people
more convenient. These forces have resulted in spectacular developments in nearly all fields
of human endeavor, creating opportunities for countries, corporations and individuals to be
creative, to flourish, and to lead even more meaningful and productive lives.
1.3.4 ICTs Adoption by SMEs

Advances in computer technology, starting in the 1980s, have generated new affordances of information access, evaluation, use, and production of new knowledge. Because of computer and communication technologies, such as the internet, there is an intense focus on information use and knowledge generation in the workplace (Avdjieva et al., 2004) and a correspondingly increasing demand for information-literate and information and communication technology (ICT)-literate new hires: workers who can skillfully handle information in the context of technology. Accordingly, more is expected from a college graduate with respect to decision-making and problem-solving in an information-centric environment (Braun, 2004; Feast, 2003).

The role of small and medium-sized enterprises (SMEs) in national competitiveness and development, as well as in generating jobs and revenues for countless citizens, is well documented. Their meaningful and useful access to Information and Communications Technologies (ICT), particularly the Internet, will significantly enhance this critical role and will drive demand for and innovation in the ICT sector even more.

The Internet has revolutionized, and continues to profoundly affect, the way one does business. It is now a critical (if not the main) tool and venue for conducting commerce. As a tool, it allows buyers and sellers nearly unlimited access to information, goods and services. As a venue, it does away with the limits of geography, the time zones and, in some cases, the need for a physical office. With its tremendous potential, it has become commonplace for businesses and consumers to utilize the Internet for a variety of transactions ranging from emails to actual online purchases.

Prior research has focused on the following: media choice—how people make choices about the different media they use in their communication with others; media effects—how technologies can impact group interaction processes and group outcomes and the interaction between ICTs and group/individual interaction. (Jan-Oddvar Sørnes et al:2004)

However, it is important to take into account that to adopt ICT systems and elements and strategies, the benefits must outweigh investment and maintenance costs. Consequently, commercial issues and potential returns must drive adoption. Beyond a certain level of ICT adoption and diffusion, not all SMEs will necessarily catch up with large firms simply because ICT may not bring large benefits, and SMEs will stay with traditional business
processes. Other aspects that should also be considered are the availability of ICT competencies within the firm as well as the availability and cost of appropriate interoperable small-firm systems, network infrastructure and ICT-related support services (Leenders and Wierenga, 2002; Prasad et al., 2001; Roberts, 2000).

The adoption of continuous training solutions can play an important role in increasing the awareness of the huge potentialities of ICTs for concrete situations; in this way employees, managers, and entrepreneurs can acquire a learning culture, integrating the training in their work activities and understanding in depth the potentialities of communication and information tools (Brady et al., 2002; Magretta, 1998; Smith and Blanck, 2002).

Furthermore, by bearing in mind that the introduction of ICTs in SMEs can bring a real modification in the way of working, the introduction of ICT-based processes should take into account the specific culture of the company: the background of the entrepreneur and/or the managers is important as well as their openness to innovation orientation (Argyres, 1999; Tzokas and Saren, 1997; Wei and Morgan, 2004).

The following figure illustrates the introduction of ICTs to SMEs can be adequate.
1.3.4 Benefits of ICT to SMEs

All over the world, ICT has empowered individuals with unprecedented access to information and knowledge, with important consequences in terms of providing education and access to markets, of doing business, and of social interactions, among others. (Klaus Schwab:2008)

In the knowledge society, firms need to develop competitive advantages based on an adequate and intensive use of information and communication technologies (ICTs), which is an essential element of success in today’s market. This fact is especially relevant for small and medium sized enterprises (SMEs), whose survival depends, among other factors, on the use they make of ICTs to develop new organizational models, compete in new markets or enhance their internal and external communication relationships.( Virginia Barba-Sánchez et al: 2007)
ICTs have a valuable potential for developing SMEs through more effective use and better integration of ICTs in business processes while assisting them to make more efficient decisions relevant to their performance. ICTs have the potential to generate a step change among SMEs and make them more competitive, innovative and generate growth.

For SMEs in particular, the use of ICTs can provide several significant benefits, among them:

- Increasing productivity in the production process;
- Enhancing and increasing the efficiency of internal business operations; and
- Connecting SMEs more easily and cheaply to external contacts, whether locally or globally.

Concrete examples of how ICTs can benefit SMEs, include the following:

- Improve inventory management systems;
- Decrease wastage in production processes;
- Improve communication between different departments within the firm;
- Improve accounting and budgeting practices;
- Reduce communication costs and geographic barriers with global suppliers and clients;
- Expand client base through e-marketing (e.g., web sites, portals and mailing lists);
  - Link to local and global supply chains and outsourcing opportunities;
- Share and learn new business practices;
- Facilitate capacity-building of owners and employees through e-learning platforms;
- Simplify government services such as business registration and filing taxes;
- Introduce new methods of payment through e-commerce.

On the whole, ICT applications can provide several benefits across a wide range of intra- and inter-firm business operations and transactions. Certainly, ICT applications can contribute to improve information and knowledge management inside the firm, can reduce transaction costs and can increase the speed and reliability of transactions for both business-to-business and business-to-consumer transactions. In addition, they are effective tools for improving external communications and quality of services for established and new customers. More specifically, SMEs can obtain a wide range of benefits from the use of ICT (Cela, 2005).
Moreover, Internet and e-commerce enable SMEs to gain access to new customers and to expand their markets geographically, even if they physically have to remain in local and regional markets because of lack of information and marketing capability. Through their websites, SMEs can attract potential investors and customers by providing information on their technologies, products, services and financial positions. Furthermore, the Internet can help knowledge-based small businesses convey their ideas to the whole world, allowing even micro-enterprises with ideas and technologies to remain small and profitable, or even to generate substantial global sales by exploiting their intellectual property over the Internet. (ESCAP:2007)

1.4 ICTs in Business Writing

‘Modern technology is changing the format of written correspondence, and this is a category that can be broken down in a number of ways.’ (Dudley Evans & St John 1998:64)

It has been a trendy feature for SMEs to integrate ICTs in their business writing, yet there is little academic research in this field with regarding the problems generated from this integration. Most previous researches focused on the use of ICTs in management, e-commerce and such related domains. Others highlighted the importance of ICTs in teaching and e-learning. Among the ICTs forms used in SMEs are writing check and translation software on which more light will be shed next.

1.4.1 Translation and Writing Check Software:

Software engineering has been growing everywhere. Day by day, new research groups arise, many companies emerge, and hundreds of students become new software engineers. Academics, practitioners, and clients are creating and practicing models and methods, which in turn are used for teaching.

Necessity for machine-assisted translation (MAT) has become obvious in multinational companies, professional societies, in government agencies, among other fields. Amount of text is rapidly growing and need for fast translation is increasing. Answering to needs of information society, business, education, science and culture, it is necessary to make on one side overview of MAT tools in order to proceed with further concrete activities regarding organizational, professional and educational changes, creation of language resources.
1.4.1.1 Translation Software

Translation software has been the subject of many authors in recent years. For instance, Somers (2003) presents an overview about the different software packages that translators must deal with in their everyday work, although he does not describe any specific tool in particular, unlike Dohler (1997) and Nogueira (2002). Austermühl (2001) gives more details about certain CAT (Computer Assisted Translation) tools such as Trados, as well as he provides a useful list of internet resources in each chapter of his book. Marcin Milkonski (2011) states that ‘In large computer-aided translation (CAT) projects, especially in software localization, one of the main problems is to maintain the consistent style of the translated text’. However, these studies lack a realistic professional approach because they are mainly focused on CAT tools, without mentioning other tools commonly used.

Computer-Assisted Translation (CAT) software is helpful to translators, since it speeds up the translation process either with the help of translation memories when working with very repetitive texts or using translation software for texts written using controlled language (Nyberg, Mitamura and Huijsen, 2003).

1.4.1.2 Electronic Tools for Translators

First of all, it is necessary to consider the software licenses restricting the use of a program and its cost. According to Pablo Muñoz Sánchez (2010) there are principally two categories of licensing schemes: open-source/free software and closed-source/proprietary software. Here are the major types:

- **Commercial**: Commercial software is computer software sold for commercial purposes generally in retail shops or on the Internet.

- **Free**: Free software, as defined by the Free Software Foundation, is software which can be used, copied, studied, modified and redistributed without restriction. Although this type of software is usually available at no cost, *free* should be understood as free (of freedom) and not as free of charge.

- **Freeware**: Copyrighted computer software which is made available for use free of charge and for an unlimited time.
• **Shareware:** As opposed to freeware, the user has to pay after some trial period which is usually no longer than 30 days.

### 1.4.1.3 Translation Software

The best software allows to translate from an assortment of documents. It should offer a variety of languages to choose from, a plethora of supported formats and files, and provide a user-friendly interface. Below are the criteria TopTenREVIEWS (a website that ranks the best translation software) used to evaluate each aspect of the product.

- **Effectiveness**

  Accuracy is vital when translating business documents or emails for clientele. Sometimes, a small portion of children’s story like “Little Red Riding Hood” is entered into each software program to test the accuracy of the product in order to look at the syntax errors and the incorrect word order that could cause a miscommunication.

- **Features**

  The most excellent software includes a variety of features that enhance the product and translation experience. Popular features include program integration, instant translation while browsing the internet and an integrated spell-checker.

- **Ease of Use**

  Good types of software provides instant translations of a language of any choice. A user-friendly interface with straightforward navigation is crucial when translation is needed quickly. The installation process must be simple and program integration should be hassle-free.

- **Available Languages.**

  The best software has the ability to translate several languages from countries across the globe. Several products offer multilingual products that contain several languages on one program. Other products offer English and one language of one’s choice for translation. The number of available languages needed depends upon the reason required.
• **Supported Formats and Files**

The greater the number of formats and files a software supports, the more efficient it becomes.

• **Help and Support.**

Telephone and email support are important for quick inquiries about the software or any troubles that one you encounter. Manufacturers should also provide customers with user guides, user forums and a FAQs (Frequently asked questions) section for immediate technical support.

A combination of all these factors will create a translation software that offers fast and accurate translations in several languages and the ability to translate several programs, formats and webpages.

1.4.2 **Writing Enhancement Software**

Good writing enhancement software enables to correct one’s mistakes. Here are the criteria we used for rankings:

• **Editing Tools**

Grammar check software should be designed to perform a basic grammar check that will consider writing components such as subject-verb agreement, the proper use of adjectives and adverbs, and the matching of verb tenses in compound clauses. It should flag the improper use of the possessive form of nouns and pronouns, along with sentence fragments. The software should also check for proper punctuation and spelling. The best spell-checkers will check your work both online and in a word processor, and are regularly updated to recognize common proper nouns, names and abbreviations. Good grammar check software should also feature built-in style checkers. After all, different styles should be used for different kinds of documents.

• **Performance**

How the software performs determines how beneficial it is. The most practical products for everyday use are those that provide a quick check and give the option to incorporate edits with a simple click of a button.
• **Reference Tools:**

In addition to grammar checking, the best software packages include a built-in dictionary and thesaurus. They also include templates for commonly written documents, such as documents that may be prepared in the workplace or for the classroom. Since many individuals who rely on grammar and spelling tools write English as a second language, they can benefit from a good text translator if it is part of the software package.

• **Help and Support**

Any software one purchases today should include contact information, whether it is a phone number, email address or live chat. The software should also include online help tools such as tutorials, online forums and a detailed online manual. The company’s website should also include answers to frequently asked questions.

Writing enhancement software doesn’t take the place of human editors, but the best packages can proofread writing with a high level of accuracy. Since perfection cannot be expected in a machine, writing must be reviewed with one’s eyes to discern between relevant edits and those that aren’t. Nevertheless, writing enhancement software should help spell words correctly, use proper punctuation and recognize proper sentence structure. The figure below shows an example of a writing check software.
Software engineering has been growing in the world. Day by day, new research groups arise, many companies emerge, and hundreds of students become new software engineers. Academics, practitioners, and clients are creating and practicing models and methods, which in turn are used for teaching.

One of the first phases in the software development process is the requirements elicitation (RE). RE encompasses the tasks of eliciting, analyzing, and specifying the functional, behavioral, and quality system properties (Castro-Herrera et al., 2009).

Textual descriptions—formal or informal—written in natural language (NL) are a common source for the RE process (Mich et al. 2004). NL is flexible, universal, and widespread. During the processes of requirements elicitation and analysis, intelligent text analysis can be understood as some computational support for automatically or semi-automatically process all the information gathered. According to Casamayor et al. (2011), such a process
includes classifying, prioritizing, determining the quality, translating to more formal specifications, and other analysis tasks.

1.5.1 Conceptual Framework

1.5.1.1 Requirements elicitation process

RE is primarily concerned with the communication between the analyst and the stakeholder (customer, end-user, domain expert, and so on,) as a way to gather the essential and relevant domain information. Such information is considered the basis for the requirements elicitation process. The RE process has several activities, including: understanding the domain, capturing and classifying requirements, establishing priorities, resolving conflicts, and negotiating system requirements (Robertson & Robertson 2006).

The RE process needs the usage of two kinds of languages: NL and Controlled Language (CL). According to Berry (2003), the vast majority of requirements are written in NL. The analysts should identify the concepts used by the domain expert and the relationships among them. These concepts and relationships are considered the basis for the common language understanding used by the requirements analyst and the domain expert. According to Li et al. (2003), NL is highly informal in nature, because speakers and writers frequently create new forms and combinations of a language in either oral or written discourses. Meanwhile, CL is used in this context for improving the clarity of expression of the source text and the quality of the analysis process (Mitamura & Nyberg 1995).

The definition of a CL based on some subset of the natural language is important to establish a controlled vocabulary and grammar. A CL restricts the translation so that only a predefined vocabulary is used. With this vocabulary, an analyst can write and standardize rule-based readable texts. Based on the foregoing, a machine translation system may take advantage of less-complex and less-ambiguous texts (Mitamura & Nyberg 1995).

1.5.2 Corporate Technical Document

Corporate technical documents comprise a kind of documents used by organizations for communicating policies, rules, processes, business processes, among them, to their employees and people who interact with them. These documents from an
organization/company/corporation can comprise procedure manuals, regulations, corporate policies, rules, and statutes.

A manual is a set of written instructions that describes how procedures are defined, developed, and managed by the members of an organization. These procedures involve technical, administrative, and operational activities.

Procedural information is the most important information type included in procedure manuals (Karreman & Steehoud-er 2003). According to Ummelen (1997), procedural information includes actions, conditions for actions, and results from actions. This information is characterized by action verbs and imperatives, short action sentences, step-by-step presentations of items, direct style texts, and if-then constructions.

Documents of procedures, called procedure manuals, are designed to define, deploy, execute, monitor, and maintain several rules an organization or enterprise must comply. Managing policy, administrative, and corporate technical documents has recently studied by several researchers (Dinesh et al. 2007; 2008). A procedure manual aims to explain either the structure/operation of a device (e.g., engine), or the operation of a process (e.g., medical treatment of patients). These explanatory documents contain information primarily declarative, in terms of definitions and descriptions of system components, their relationships, the general principles of operation, and the context in which it is used.

1.5.3 Discourse Analysis

The RE process involves a variety of discursive practices, specific to stakeholders, which can be analyzed by using methods of linguistics discourse analysis and corpus linguistics. One focus of these methodologies is based on the usage of language for the construction, interpretation, and exploitation of documents.

1.5.3.1 Specialized Discourse Analysis

Specialized text analysis requires a special process in the framework of discourse analysis (Biber 2006; Nickerson 1999). One way to address discourse analysis comes from the gender point of view.

According to Swales (1990) and Yates & Orlikowski (1992), Parodi (2008) defines genders as variations of a language which operate by means of a set of linguistic features
present in a text. Likewise, they are linguistically confined under their communicative purposes, participants involved (writers and readers), production contexts, usage contexts, and discourse organization modes, among others.

The genre theory (Nickerson 1999; van Nus 1999) focuses on written practices of members of specific communities and also on the design of information and business records.

Specialized texts—generated from a specialized organizational discourse—are produced by specialists who have mastered the cognitive and conceptual organization of matter. According to Cabré (1999), the specialized discourse is derived from variables related to the subject and perspective of a topic, and the intent and level of expertise of the issuer or producer of the text.

1.5.3.2 Rhetorical Analysis of Discourse

Rhetorical analysis (RA) is concerned with the way to construct discourses; some priority to the communicative intent of each gender is given (Azaustre & Casas 1997).

Gender analysis is discussed in terms of rhetorical moves (Swales 1990; 2004). These moves refer to the functional parts or sections of a genre. This approach for studying a particular genre comprises the analysis of a text and its description in terms of either segments or rhetorical structures. This kind of analysis forms the skeletal structure of the discourse, and influences and restricts the discourse contents and style (Askehave & Swales 2001).

1.5.4 Corpus Linguistics

According to Parodi (2008), the corpus linguistics constitutes a set of methodological principles for studying any language domain. Corpus linguistics allows the description, analysis, and teaching of several types of discourse, from corpus preprocessed with the assistance of information technologies. Sets of linguistic features—which operate by gender—can be identified from representative corpus composed of a set of specific texts. Based on these texts, prototypical regularities that characterize a particular genre, in a higher level of abstraction are projected.

Thus, a corpus is a comprehensive collection of texts that are collected as sets of linguistic data that reflect the actual use of a language (Wynne 2005). Corpus-based approaches have been widely used to explore both written and spoken texts in recent years.
(McCarthy & Handford 2004). Such approaches are focused on the investigation of word usage, frequency, collocation, and concordance (O’Keeffe 2003). The main goal, according to Biber (2006), is analyzing the actual patterns of use in natural texts based on a large and principled collection of natural texts as the basis for analysis.

Conclusion

To sum up, key aspects related to the topic of the study have been described. These aspects are the nature of business English and business writing, general study about ICTs and SMEs, the adoption of ICTs by SMEs, translation and writing check software and software engineering.

This review will inform the investigation of the way ICTs translation and writing check software are integrated in business English writing in electronics SMEs at the purchasing and manufacturing departments. The next chapter will discuss research methodology.
CHAPTER TWO
RESEARCH METHODOLOGY

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Introduction

Methodology can be described as the framework associated with a particular set of paradigmatic assumptions that can be used to conduct research (O’Leary, 2004:85). In the previous chapter, a literature study was conducted with the aim to explore the way some ICTs software are integrated in business English writing. In this chapter, therefore, the research methodology used in the study is described. The research methodology focuses on the manner in which the research was planned, structured and executed in order to comply with scientific criteria (Mouton & Marais: 1996). For Leedy (1993), research methodology forms an integral part of any research that is undertaken. Methodology, thus, assists in explaining the nature of the data, and highlights the methods employed that will lead to the generation of appropriate conclusions through applicable data processing.

This chapter first outlines the overall approach adopted. The theoretical background is presented to justify the choice behind it and establish a link between what was done by the researcher. The research questions are then revisited, and the population and sample are described. Besides, a comprehensive review of the data collection process and instrument is presented. Also, an explanation of the statistical procedures used to analyze the data is provided.

The chapter ends with a discussion about possible limitations to the approach chosen.

2.1 Research Design

Research design is defined as a plan or blue print according to which data is collected to investigate the research hypothesis or question in the most economical manner (Huysamen (1993) in De Vos & Fouche, 1998:76). Mouton (1996:107) adds to this by defining research design as being a set of guidelines and instructions to be followed in addressing the research problem. This includes the owner of the research, the selection and design of a particular method, the participants and considerations of reliability and validity.

The particular design type chosen is the “descriptor” of the manner in which the study is developed and gives an indication of the way the research findings will be presented to others (Henning et al., 2004:32).
Depending on the nature of the study, the researcher may use either qualitative or quantitative research methodology, or both of these methods. For the purposes of this study, a combination of the qualitative and quantitative methods was applied. According to Crotty (1998:216), the research method can be either qualitative, quantitative, or both, regardless of the type of research that is engaged in. The author further stresses that “as researchers, we have to devise for ourselves a research process that serves our purpose best, one that helps us more than any other to answer our research question”.

This study utilized a modified exploratory single site case study approach incorporating both qualitative and quantitative data.

2.1.1 Case Study Design

2.1.1.1 Grounds for Usage

Case study method enables a researcher to closely examine the data within a specific context. In most cases, a case study method selects a small geographical area or a very limited number of individuals as the subjects of study.

A case study research design was regarded to be suitable for this study as it leads to detailed insights, discoveries, and interpretations of electronics SMEs workers perceptions about the integration of ICTs software in their business English writing.

It is assumed by Cohen et al (2000:181) and Flyvbjerg (2004:420) that case studies provide a comprehensive examination of a single example and in so doing they deliver a unique illustration of real people in real situations. Moreover, case-based research leads to detailed data about the phenomenon being studied; no matter what particular research methods have been used (Henning et al., 2004:32-33). A case study is particularly useful when one is trying to provide a wealth of details and a nuanced view of participants’ experiences in a particular context, especially, when the research rests on the premise that the research participants’ perceptions cannot be understood by theory alone, as it does for this research (Flyvbjerg, 2004: 421-423).
2.1.1.2 Strengths and Challenges of Case Studies

a) Strengths

The specific strengths of case studies are that:

- They provide illustrations of effects of phenomena in real-life contexts,
- They allow for the presentation of research in a more publicly accessible format that is capable of serving multiple audiences and contribute to the learning processes of others who can use them to aid in their understanding of the issue that is illustrated.

b) Challenges

Some challenges are posed by the use of case studies.

- Case studies can be complex in that they involve large amounts of data. This can become a downfall in that any attempts to summarize them can result in the leaving out of data through a process of subjective bias by the researcher.
- Additionally, it is argued that the biggest downfall of the case study is that it is impossible to generalize from the results (Hayes, 2000).

2.1.2 Single-Site Study

This research is a single-site study based on integrating ICTs software in business writing at electronics SMEs by the workers of the departments of purchasing and manufacturing in Bordj Bou Arreridj, Algeria.

The following considerations led to the choice of a single-site for the study:

- Fewer samples studied in depth tend to generate more useful data in a quantitative study as opposed to larger samples, which can only be studied superficially.
• Financial and time constraints were also taken into consideration. With a
  single-site, less travel was required, which reduced both the time and
  financial resources required.
• Ease of access to participants was also considered.

2.1.3 Explorative Research Design

Polit & Hungler (1995:11) suggest that explorative research is done in order to
investigate the dimensions in which a phenomenon manifests itself. Neuman (2003) indicates
that an exploratory design is employed when the study topic is either new, or when relatively
little has been written about it, as is the case with the focus of this particular study. According to Rubin & Babbie (2001:92), the exploratory design is linked to the purpose of the study, with the main aim to explore a topic and to provide a certain level of familiarity with it.

Explorative research is done for the following reasons:
• To satisfy the researcher’s curiosity;
• To have better understanding of the phenomena;
• To test the feasibility of more extensive research; and
• To develop methods to be employed in the subsequent research.

Quite recently, considerable attention has been paid to business English writing which is relatively a new subject in Algeria. However, very few publications are available in the literature that discuss the issue of ICTs integration in business English writing.

2.1.4 Descriptive Research Design

The exploratory design in this study was further employed in order to explore the needs of respondents with the aim to direct the study towards a descriptive design. The main purpose of the study remains descriptive in nature. Bless and Higson-Smith (1995) validate the intention of the researcher when stating that a descriptive research design will be utilized when the researcher is interested in determining the opinion of a group of people towards a particular issue at a particular time. Neuman (2003:21-22) views the descriptive design as representing “a picture of the specific details of a situation, social setting or relationship”. 
In this study, the researcher is interested in determining the perceptions and opinions of electronics SMEs workers with regard to the integration of ICTs software in their writing.

2.1.5 Interpretive Research Design

Interpretive research attempts to interpret and understand the meaning-perspectives of the participants, i.e. in the search for patterns of meanings-in-action and for building up new theories (Patton, 1990). In this study the data obtained (questionnaires) were analyzed and interpreted using the interpretive research methods.

This research is explorative in nature. Besides it adopted an interpretative research approach (Erickson, 1986, 1998; Gallagher, 1991) with a case-based design (Merriam, 1988; Yin, 1994).

2.1.6 Quantitative and Qualitative Research Paradigms

2.1.6.1 Quantitative Research

According to Leedy (1993), quantitative research pertains to cold research that manipulates and controls variables. For Mouton & Marais (1996), the quantitative approach displays the following characteristics:

- It displays a higher level of formalization and control,
- The range is defined in a more exact manner,
- It is relatively close to physical science.

Quantitative research employs numbers (statistics) in order to describe the characteristics of the unit of analysis. The research describes variables and the relationship between these variables. Theoretical explanations and concepts are essential in the planning of the research design, since it represents the basis of variables and its interdependency (Neuman, 2003)

De Vos et al. (2002:79) define quantitative research as “an enquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers,
and analyzed with statistical procedures”. The researcher needs to consider the differences between qualitative and quantitative approaches, and to decide upon the applicability of either one of the approaches, or a combination of the two. In this regard, De Vos et al. (2002:81) conclude that there is general agreement amongst most authors that human science in reality employs both qualitative and quantitative methodology – “sometimes consciously, sometimes unconsciously”.

In the present research, information obtained from the questionnaires were quantified in order to have a relatively common picture with a sense of objectivity regarding electronics SMEs workers perceptions about ICTs software integration in business English writing.

2.1.6.2 Qualitative Research

Qualitative research focuses on the qualitative aspects of human nature in order to describe, explain, predict and control behavior. According to Rubin & Babbie (2001), the qualitative method pursues a deeper understanding of the human experience, especially when observations and theories cannot easily be reduced to numbers.

The method of qualitative research is inductive as opposed to deductive. Rubin & Babbie indicate that inductive research involves the developments of generalizations from specific observations. A quantitative approach therefore enables the researcher to observe subtle events that may be difficult to measure through other methods.

The qualitative research paradigm is founded on the following assumptions:

- humans are complex and experience life in individual ways,
- truth is subjective and depends on the context,
- the researcher can investigate life experiences and perceptions of other people by observing them or communicating with them,
- the researcher is an instrument of the research and cannot be entirely objective; bias is acknowledged and reflexivity is used,
- a valid sample can be obtained if the researcher selects informants who are living the experience under study and continues with data collection until data saturation occurs,
- qualitative research involves being with people in their normal environment,
• qualitative research involves description of human experience derived from analysis of data (LoBiondo-Wood & Haber 1998:255-257).

As far as the case of this research is concerned, the qualitative method manifests itself in the inductive way of interpreting the last section (section four) of the questionnaire which involves some open-ended questions. This will enable the research to make some generalizations.

2.2 Research Questions

The study at hand is motivated by the following questions:

1. To what extent does integrating ICTs in business writing facilitate the job?
2. Does the use of writing check and translation software in business writing suffice the writing needs of the workers in the purchasing and manufacturing departments at electronics SMEs in BBA?
   2.1 Can the use of writing check and translation software in business writing substitute taking business English courses?
3. How can writing check and translation software be best used to facilitate business English writing in the purchasing and manufacturing departments at electronics SMEs in BBA?

2.3 Research Setting

The study took place in a number of electronics SMEs in Bordj Bou Arreridj town, Algeria. There are many companies or SMEs that operate in the field of electronics industries and this made of BBA an important economic pole for such kind of industry. The study was conducted with workers from the purchasing and manufacturing departments. At first, the researcher consulted the trade department in this town to have an idea about the total number of companies in this field for the sake of sampling. There are more than 65 enterprises operating in electronics. But about 09 only are regarded as SMEs that have manufacturing and purchasing departments with more than 150 workers. The other enterprises are meant for importing and selling only. Thus, at first written permissions were sought from the University of Setif 02 and sent to 09 companies. Only four companies accepted the request but without
allowing the researcher to have a training and recorded interviews nor to examine some documents.

2.4 Participants

As already stated, the participants were 21 workers from the purchasing and manufacturing departments of 04 different electronics SMEs. The workers were divided as what follows:

<table>
<thead>
<tr>
<th>Type of workers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Technicians/engineers in electronics</td>
<td>12</td>
</tr>
<tr>
<td>Language specialists (have BA in English)</td>
<td>05</td>
</tr>
<tr>
<td><strong>Other types of workers</strong></td>
<td></td>
</tr>
<tr>
<td>BS in management</td>
<td>01</td>
</tr>
<tr>
<td>BS in commerce</td>
<td>01</td>
</tr>
<tr>
<td>BS accountancy</td>
<td>01</td>
</tr>
<tr>
<td>BA in Translation (Arabic-French-German)</td>
<td>01</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>21</td>
</tr>
</tbody>
</table>

Table 2.4: Participants in Research

2.5 Development of the Data Collection Instrument

Due to research constraints mentioned before, the only possible research instrument in this study was the questionnaire. At first, a pre-questionnaire (see appendix A) was used to synthesize the research problem to show that the problem was not formulated from scratch. Then a formal questionnaire (see appendix C) was administered to obtain data. The researcher also depended on some personal connections to have some informal interviews with workers who refused any kind of recording to those interviews. That is why the interviews were
marginalized and not taken as a second formal research instrument. The ethical considerations of the research were observed.

It is worthy to note that the questionnaire was administered in Arabic to enable the participants express themselves better and to avoid any kind of misunderstanding owing to the fact that the participants are not highly specialized in English. A copy of the translated questionnaire was attached (see appendix 4).

2.5.1 Questionnaires

A questionnaire was chosen as data collection instrument. A questionnaire is a printed self-report form designed to elicit information that can be obtained through the written responses of the subjects. The information obtained through a questionnaire is similar to that obtained by an interview, but the questions tend to have less depth (Burns & Grove 1993:368).

Research findings recommend that a questionnaire should contain both open and close–ended questions, but close–ended questions should predominate. The ideal situation is a section of close–ended questions suitable for statistical processing by a computer and a section with open questions that is to be processed manually (White, 2005:131).

For this study, both open and close–ended questions were included. The three first sections contain close-ended questions while the last section consists of open ended questions.

2.5.1.1 Advantages of Questionnaires

Using a questionnaire for conducting a survey has the following advantages:

a) Simplicity
   • In handling large sample sizes or large geographic areas;
   • Data entry and tabulation can be easily achieved with many computer software packages (SPSS);
   • Most people are familiar with questionnaires.

b) Cost effectiveness
   • The number of questions is increased compared to face-to-face interviews.

c) Reliability
• Questionnaires reduce bias as uniform questions are presented;
• Questionnaires are less intrusive than face-to-face surveys;
• The research instrument does not interrupt the respondents.

2.5.1.2 Disadvantages of Questionnaires

There are disadvantages to using questionnaires for conducting a survey (Kane 1985). These include:
• The inability to explore responses;
• Questionnaires are structured instruments;
• Little flexibility for the respondent with respect to the response format;
• Not using visual communication;
• Lack of personal contact may have an impact on sensitive issues.

2.5.1.3 Types of Questionnaires

There are four commonly used questionnaires, namely:
- Group-administered questionnaires
- Internet-based questionnaires
- Individually administered questionnaires

Of the four types of questionnaire given above, the third one was applicable to this study.

2.5.1.4 Development of the Adopted Questionnaires

Items for the questionnaires were generated from previous literature that identified business English and the writing skill, and the adoption of ICTs in business writing by the workers of electronics SMEs at the purchasing and manufacturing departments in BBA. Questionnaires items were developed from the researchers’ critique of these papers.
The literature was also consulted to determine how to construct a questionnaire and in seeking examples of those who described their journey in this role, Dörnyei (2003) gives a concise and clear description of how to construct, administer and process a questionnaire.

Dörnyei described the steps involved in developing a questionnaire including:

1. Consultation of the published literature on the investigated issue,
2. Discussion of the draft of the questions giving consideration that each question will provide answers to the research question or problem, and trying to avoid seeking irrelevant data,
3. Construction of a first draft
4. Seeking experts’ opinions to determine face and content validity,
5. Organization of a pilot study of the questionnaire, and finally
6. Based on the outcomes of the pilot study, a reexamination and revision of the questionnaire.

The following factors were considered important in questionnaire design and item generation:

• Provision of space for the participants to add their own comments.
• Use of appropriate, comprehensible and unambiguous wording.
• Possibility of use of Arabic for open-ended questions

Reliability and validity are important aspects of questionnaire design. According to Suskie (1996), a perfectly reliable questionnaire elicits consistent responses. Although it is difficult to develop, it is reasonable to design a questionnaire that approaches a consistent level of response.

Leary (1995) offers seven guidelines for designing a useful questionnaire:

1. Use precise terminology in phrasing the questions.
2. Write the questions as simply as possible, avoiding difficult words, unnecessary jargon, and cumbersome phrases.
3. Avoid making unwarranted assumptions about the respondents. Conditional information should precede the key idea of the question.
4. Do not use double-barreled questions. (questions that ask more than one question but provide the respondent with the opportunity for only one response)
5. Choose an appropriate response format.
6. Pretest the questionnaire.

Robson (1993) indicates that a high reliability of response is obtainable by providing all respondents with the exact same set of questions. Validity is inherently more difficult to establish within a single statistical measure. If a questionnaire is perfectly valid, it must measure in such a way that inferences drawn from the questionnaire are entirely accurate. Suskie (1996) reports that reliability and validity are enhanced when the researcher takes certain precautionary steps:

Have people with diverse backgrounds and viewpoints review the survey before it is administered. Find out if:

- each item is clear and easily understood
- they interpret each item in the intended way
- the items have an intuitive relationship to the study’s topic and goals, and
- your intent behind each item is clear to colleagues knowledgeable about the subject” (p. 59).

Considering these principles, the researcher conducted a pilot study that seemed necessary. In addition, the questionnaire was administered in Arabic which is the mother tongue of the target participants. A translated copy is included in appendix (03)

2.5.1.5 Sampling Procedure for the Questionnaires

Brynard and Hanekom (2005:43) explain that in research methodology, ‘population’ does not refer to the population of a country, but rather to the objects, subjects, phenomena, cases, events or activities specified for the purpose of sampling.

Sampling is the process of selecting a number of study units from a defined study population. Generally, quantitative research focuses on large population that, for practical reasons, it is only possible to include some of its members in the investigation. Often, however, some studies involve only small numbers of people and thus all of them can be included. In the case at hand, 21 workers from 4 different companies were included. The
selection of this number was due to the companies and participants who accepted to answer the questionnaire.

2.6 Research Instruments Pilot Testing

2.6.1 Why Conducting a Pilot Test?

The importance of conducting a pilot test is well documented (Dillman, 2000; Gliner & Morgan, 2000; Thomas, 2004). Thomas (Ibid.) states, “This step [pilot testing] is so critical that if you don’t have time and resources to conduct a pilot test on all pieces of your research project, then you probably should not be doing the project” (108).

Pilot testing involves trying out the research instruments “or fine-tuning a questionnaire or an interview” with persons knowledgeable in the subject being studied (Gliner & Morgan, op. cit.:353).

A pilot test differs from a pilot study. Gliner & Morgan state that a pilot study occurs when “formal data are collected and analyzed”. A pilot study requires approval from an institutional review board because the data collected is used in a study. A pilot test does not require review and approval from an institutional review board because the data collected will not be used in the study. The data from the pilot tests in this study were only used to improve the data collection tools, and were not incorporated into the final results.

2.6.2 Pilot Test Implementation

The pilot test was done with two participants: a technician worker and a research methodology teacher.

2.6.2.2 Pilot Test Results

The pilot test resulted in the following:
• Comments from a technician worker led to the clarification of some questions and addition of other choices in the answers.
• Comments from research methodology teacher allowed the researcher to introduce minor modifications to the initial questionnaire at the levels of wording and organization.
  ➢ Correction of some grammar; spelling and vocabulary errors in section.
  ➢ Some questions are to be reformulated.

2.7 Administration of Instruments

White (2005:132) maintains that research questionnaires should generally have two sections:

• A biographical section where respondents respond to questions regarding personal issues which are of importance for the research.
• The main section, where respondents respond to questions/statements directed at the issues being investigated. No unnecessary information should be collected.

The questionnaire used to collect data from the participants is developed and divided according to the relevant literature. It includes the following sections:

• Section One: General information about the informants

This section consists of information regarding

  o the use of English at work with the specification of the department (purchasing or manufacturing),

  o and the type of workers (technicians, engineers, language specialists or other types) as well as the workers level in English.

The categorization of workers’ types, departments and level seemed to the researcher a necessary first step before going in deep analysis.

• Section Two: Business English Writing

The second section contains questions about
• Section Three: ICTs in Business English Writing

The third section is devoted for determining

- the types of ICTs software used at work,
- writing check software used by electronics workers,
- the types of translation software used by electronics workers,
- the availability of private translation and writing software in electronics SMEs,
- the availability of training by electronics SMEs to use translation and writing software,
- the workers of electronics SMEs views about integrating ICTs translation and writing software,
- the workers of SMEs views about taking business English courses compared to using translation and writing software,
- the types of translation problems faced by electronics SMEs workers when using translation software,
- and the effect of writing and translation mistakes on the performance of electronics SMEs workers.

• Section Four: Evaluation and further suggestions

The last section includes open-ended questions which aim at identifying the workers perceptions, views and suggestions concerning the best way to solve their business English writing problems through the integration of ICTs software of translation and writing check.
2.8 Limitations of the Study

The major drawback of the present study concerns the quantitative nature of the survey. It is worthy to note that ICTs software integration in business English writing is a complex and new phenomenon and that it is not easy to gather information about this complex phenomenon on the base of questionnaires only. Therefore, future studies need to undertake more qualitative interpretative research. In addition, the results are not generalizable as the participants in this study may not be representative to the electronics SMEs workers. Future researchers might collect more in-depth information through interviews and the examination of some authentic written documents and the business emails to explore how best workers can integrate ICTs in their business English writing.

Conclusion

The researcher used a descriptive survey design. Questionnaires were administered by the researcher herself to collect the data from a convenient sample of 21 workers in the purchasing and manufacturing departments of electronics SMEs in BBA. The questionnaires had both closed and open-ended questions.

In this chapter, the research process that worked as a motto for this study was discussed. The research design, pilot study, data collection instruments, participants, research questions, research setting and the limitation of the study as well as strategies used to ensure the reliability and validity of the study were presented.

The results of the data collected through the questionnaire are presented and interpreted in the next chapter.
CHAPTER THREE

DATA ANALYSIS

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Introduction

The main purpose of this research is to explore how effective business English writing can be with integrating writing check and translation software in business writing in the purchasing and manufacturing departments of electronics SMEs in Bordj Bou Arreridj, and to determine what the perceptions of the workers are in this regard because in business effective writing means effective communication which would improve performance and profit in return.

In this chapter the results of the data analysis are presented. The data were collected and then processed in response to the problems posed in chapter one of this dissertation.

There were fifty questionnaires sent to five different electronics SMEs in Bordj Bou Arreridj. However, only twenty one useful questionnaires from four companies were sent back. Others were either left blank or not returned at all. The response rate, therefore, was 42%. This low rate is due to the research limitations mentioned so far in chapter two. However, the answers of the involved respondents were of great help to answer the research questions.

The questionnaire is made up of four sections, three of which are concerned with quantitative data related to general information about the participants, business English writing and integrating translation and writing check software in business English writing.

The last section of the questionnaire is meant for evaluation and further suggestions with more focus on qualitative data.

3.1 Analysis of the Questionnaire

Descriptive data can often be presented as histograms or line graphs (Oliver, 2004:148). In this study, however, integration of quantitative data analysis was done textually with tables and graph illustrations for each question.

3.1.1 Quantitative Data Analysis.

Section One: General information about the Participants

Q 3.1: Do you have the capacity to work with English?
Table 3.1: Workers Capacity to Use English

<table>
<thead>
<tr>
<th>Answers</th>
<th>Yes</th>
<th>%100</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>21</td>
<td>%100</td>
</tr>
</tbody>
</table>

The table shows the following evidence:

All the participants included in the questionnaire answered YES. No one answered NO. The evidence explained that English plays an important role for those workers especially that the workers in those departments need to correspond with foreign suppliers who are usually from Asia like Korea and China. Also, the selection of participants was based on those who do need English in their work.

Q 3.2: In which department do you work?
Table 3.2: Workers’ Departments

<table>
<thead>
<tr>
<th>Departments</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchasing</td>
<td>09</td>
<td>%42.85</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>12</td>
<td>%57.15</td>
</tr>
<tr>
<td>TOTAL</td>
<td>21</td>
<td>%100</td>
</tr>
</tbody>
</table>

As it is shown in Figure 3.2, of the workers included in the study, there were nine who work in the purchasing department and twelve in the manufacturing department. This depicts two facts. First, within SMEs, there are usually more workers in the department of manufacturing than in the one of purchasing. Second, English use is greater in the department of manufacturing with regard to the purchasing department. Besides, Electronic industries (which are related to technology) are one of ESP reasons of appearance Hutchinson, T. & Waters, A. (1987).

Q 3.3.1: Are you a) a technician/engineer b) English language specialist?
c) Other case? Please specify?

Table 3.3.1: Workers Types.

<table>
<thead>
<tr>
<th>Type of workers</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technicians / Engineers</td>
<td>12</td>
<td>57.14%</td>
</tr>
<tr>
<td>Language specialists</td>
<td>05</td>
<td>23.80%</td>
</tr>
<tr>
<td>Other types of workers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS in management</td>
<td>01</td>
<td>04.76%</td>
</tr>
<tr>
<td>BS in business</td>
<td>01</td>
<td>04.76%</td>
</tr>
<tr>
<td>BS in accountancy</td>
<td>01</td>
<td>04.76%</td>
</tr>
<tr>
<td>BA in Translation (Arabic-French-German)</td>
<td>01</td>
<td>04.76%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>21</td>
<td>100%</td>
</tr>
</tbody>
</table>

The participants in the study were grouped as follows: twelve were engineers/technicians in the field of electronics, five of them had BA in English, one worker has a BS in management, one has a BS in business, one has a BS in accountancy and one has a BA in translation (Arabic, French, and German).

As can be read from this ranking, the great majority of workers were non-specialized in English, yet they do need it at work as shown previously in figure 3.1. Besides, the variety of workers makes perceptions about ICTs writing check and translation software different as well as business English writing needs. This embodies the heart issue of this research that is the gap of proficiency between those who are specialized in the English language and those who are not.
Q 3.3.2: If you are non-specialized in English (worker with a bachelor in commerce, management, translation, accountancy or technician/engineer) do you have any degree in the English Language?

Table 3.3.2: Non-specialized Workers Degree in English.

<table>
<thead>
<tr>
<th>Answers</th>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>06</td>
<td>37.5</td>
</tr>
<tr>
<td>NO</td>
<td>09</td>
<td>56.25</td>
</tr>
<tr>
<td>No answer</td>
<td>01</td>
<td>6.25</td>
</tr>
<tr>
<td>TOTAL</td>
<td>16</td>
<td>100</td>
</tr>
</tbody>
</table>

Among the questioned workers who were non-specialized in English i.e. those who had diplomas in accountancy, business, management, translation and engineering, only six out of sixteen have pursued training in the English language. This depicts why most of those...
workers have difficulties in their business writing and why they resort to using software of translation of writing check.

![Figure 3.3.2: Non-specialized Workers Degree in English.](image)

**Q 3.3.3**: If yes, where did you study it?

**Table 3.3.3: Workers Place of Training in the English Language.**

<table>
<thead>
<tr>
<th>Answers</th>
<th>Yes</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>In a private school</td>
<td>04</td>
<td></td>
<td>66.66</td>
</tr>
<tr>
<td>At university</td>
<td>01</td>
<td></td>
<td>16.66</td>
</tr>
<tr>
<td>Through the net</td>
<td>00</td>
<td></td>
<td>00</td>
</tr>
<tr>
<td>Other cases</td>
<td>00</td>
<td></td>
<td>00</td>
</tr>
<tr>
<td>No answer</td>
<td>01</td>
<td></td>
<td>16.66</td>
</tr>
<tr>
<td>TOTAL</td>
<td>06</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>
From this figure, it can be seen that among the electronics SMEs workers who had a degree in the English language, four of them got it from a private school, one from university and one did not specify. This illustrates that either business English is not integrated in the curriculum of Algerian universities or no conventions are made between what university teaches and what the work markets expect. This is due to the francophone and Arabic nature of the Algerian university (studies are pursued in French or Arabic). That’s why private schools remain the preferable direction to those workers wishing to improve their level in English.

**Figure 3.3.3: Non-specialized Workers Place of Training in the English Language.**

**Section Two: Business English Writing**

Q 3.4: How important is it for you to write Business English at work?
Table 3.4: Importance of Business Writing at Work.

<table>
<thead>
<tr>
<th>Answers</th>
<th>16</th>
<th>76.19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very important</td>
<td>16</td>
<td>% 76.19</td>
</tr>
<tr>
<td>Important</td>
<td>02</td>
<td>% 09.52</td>
</tr>
<tr>
<td>Not important</td>
<td>03</td>
<td>% 14.28</td>
</tr>
<tr>
<td>TOTAL</td>
<td>21</td>
<td>% 100</td>
</tr>
</tbody>
</table>

Figure 3.4 illustrates the importance of business English writing at work. Sixteen of the respondents stated that it was very important for them to work with English. Two believed that it is important and three answered that it was not important. It can be understood from this table why this study is very significant due to the importance of English in this work field.

Q 3.5: Which writing tasks do you need to perform most in English at work?
Table 3.5: Types of Writing Tasks Performed by Workers.

<table>
<thead>
<tr>
<th>Answers</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Emails</td>
<td>21</td>
<td>%100</td>
</tr>
<tr>
<td>Reports</td>
<td>06</td>
<td>%28.57</td>
</tr>
<tr>
<td>Invoices</td>
<td>07</td>
<td>%33.33</td>
</tr>
<tr>
<td>Order forms</td>
<td>08</td>
<td>%30.09</td>
</tr>
<tr>
<td>Product manuals</td>
<td>06</td>
<td>%28.57</td>
</tr>
<tr>
<td>Other documents</td>
<td>00</td>
<td>%00</td>
</tr>
</tbody>
</table>

Electronics SMEs workers had to perform many writing tasks; yet the importance of those tasks varied greatly. All of them regarded writing emails the most important one. Eight thought that writing order forms was another crucial task. Seven of them answered that writing invoices was also necessary to be in English when contacting foreign suppliers. Six of them reckoned that among the tasks they had to do in English is writing product manuals. No other documents were mentioned apart from the list above.

It can be deduced from the aforementioned results that what made business writing a difficult task for those workers is the fact that they have to write different genres; yet most of them lack knowledge and training in the English language as mentioned earlier (see figure 3.3.2).
Q 3.6: What type of problems do you face when writing business English?

Table 3.6: Business Writing Problems.

<table>
<thead>
<tr>
<th>Types of problems</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meaning transmission</td>
<td>06</td>
<td>28.57%</td>
</tr>
<tr>
<td>Mistranslation of technical words or phrases</td>
<td>09</td>
<td>42.85%</td>
</tr>
<tr>
<td>Grammatical mistakes</td>
<td>09</td>
<td>42.85%</td>
</tr>
<tr>
<td>Spelling mistakes</td>
<td>04</td>
<td>19.04%</td>
</tr>
<tr>
<td>Others</td>
<td>00</td>
<td>0%</td>
</tr>
<tr>
<td>No answer</td>
<td>02</td>
<td>9.52%</td>
</tr>
</tbody>
</table>

The electronics SMEs workers at the departments of manufacturing and purchasing faced different writing problems in business English. However, the greatest problem was equally distributed between mistranslation of technical words and phrases (09 respondents), and grammatical mistakes (09 respondents) as shown in figure 3.6. Six of the electronics
SMEs workers found difficulties in transmitting meaning. Four others said that spelling mistakes handicapped their business writing. Two of the workers did not specify any answer.

The evidence depicted is that the two major problems shown in figure 3.6 are usually generated from using standard ICTs translation software where the workers cannot make the correct choice of the target meaning. The same thing goes with meaning transmission. When the worker has little or no knowledge about English he or she tends to translate words in his or her own mother tongue and thus gets wrong meaning. Even spelling mistakes occur due to the poor mastery of English. In general, most of the problems can be attributed to the poor command of English.

**Figure 3.6: Business Writing Problems.**

Q 3.7: Did you take any Business English Writing courses based on your needs analysis before?
Table 3.7: Availability of Business English Courses Based on Workers’ Needs.

<table>
<thead>
<tr>
<th>Answers</th>
<th>Yes</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>05</td>
<td>23.80</td>
</tr>
<tr>
<td>No</td>
<td>16</td>
<td>76.20</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>100</td>
</tr>
</tbody>
</table>

There were no available business English courses based on electronics SMEs workers needs for sixteen of the participants, whereas five of them confirmed the existence of such courses. This explains why those workers face different problems which were stated earlier in previous figures.

Section Three: ICTs in Business English Writing

Q 3.8: What ICTs forms among the followings do you use at work?
Table 3.8: Types of Software Used at Work.

| Types of ICT software used at work |   | %  
|-----------------------------------|---|---
| Writing check software            | 06 | 28.57
| Electronic dictionaries           | 11 | 52.38
| Webpages                          | 07 | 33.33
| Emails                            | 21 | 100
| Translation software              | 03 | 14.28
| Others                            | 00 | 00

Various ICTs software is applied by electronics SMEs workers in the purchasing and manufacturing departments. In general, all of the workers stated that they used emails. Eleven used electronic dictionaries and seven used webpages for different tasks. Moreover, six workers said that they used writing check software while three of them used translation software. No other software was mentioned.

The evidence outlined within figure 3.8 is that workers are largely dependent on ICTs especially emails due to the facilities and speed they offer in communication. That is why this era of study attracts a lot of research in the last years. Most of ICTs software used at work are related to the writing skill and this also illustrates the importance of this skill and the significance of the present study.
Figure 3.8: Types of Software Used at Work.
Q 3.9: Which writing software among the followings, do you use to check your mistakes?

Table 3.9: Writing Check Software Used by Electronics Workers.

<table>
<thead>
<tr>
<th>Type of writing check software</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitesmoke</td>
<td>01 % 04.76</td>
</tr>
<tr>
<td>CorrectEnglish</td>
<td>05 % 23.80</td>
</tr>
<tr>
<td>Microsoft Word</td>
<td>06 % 28.57</td>
</tr>
<tr>
<td>Grammarly</td>
<td>00 % 00</td>
</tr>
<tr>
<td>WordPerfect</td>
<td>01 % 04.76</td>
</tr>
<tr>
<td>Writer’s Workbench</td>
<td>02 % 09.52</td>
</tr>
<tr>
<td>Grammar Expert Plus</td>
<td>00 % 00</td>
</tr>
<tr>
<td>Right Writer</td>
<td>01 % 04.76</td>
</tr>
<tr>
<td>Editor</td>
<td>01 % 04.76</td>
</tr>
<tr>
<td>clear edits</td>
<td>00 % 00</td>
</tr>
<tr>
<td>Others</td>
<td>Google Translator 02 % 09.52</td>
</tr>
<tr>
<td></td>
<td>Electronic Dictionary 01 % 04.76</td>
</tr>
<tr>
<td>Nothing</td>
<td>04 % 19.04</td>
</tr>
</tbody>
</table>

After the electronics SMEs workers answered that they used different ICT software, they further reported the type of writing check software that they included to check their business English writing. The researcher suggested to them a number of writing software that were ranked as the best ones by TopTenREVIEWS (a website that ranks the best writing check software). Six of the workers answered that they used Microsoft Word which is available in all their computers as software in windows. Two of them said that they used Writer’s Workbench. One worker reported that he/she used WordPerfect. Another one used Editor. In addition, one worker declared that he used Right Writer. There were two
other workers who added **Google Translator** and one who said **Electronic Dictionaries**. Four of them replied nothing.

The evidence presented in figure 3.9 is that apart from **Microsoft Word** software and what the researcher suggested, electronics SMEs workers had little and different access to other writing check software which means that there is no common software to their business writing used by all of them.

![Figure 3.9: Writing Check Software Used by Electronics Workers.](chart.png)
Q 3.10: Which translation software among the followings do you use in your Business English Writing?

Table 3.10: Types of Translation Software Used by Electronics Workers

<table>
<thead>
<tr>
<th>Types of translation software</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Babylon</td>
<td>02</td>
<td>% 09.52</td>
</tr>
<tr>
<td>Power translator</td>
<td>00</td>
<td>% 00</td>
</tr>
<tr>
<td>Promt</td>
<td>00</td>
<td>% 00</td>
</tr>
<tr>
<td>WhiteSmoke</td>
<td>00</td>
<td>% 00</td>
</tr>
<tr>
<td>Translate personal</td>
<td>01</td>
<td>% 04.76</td>
</tr>
<tr>
<td>Promt Personal</td>
<td>00</td>
<td>% 00</td>
</tr>
<tr>
<td>lingvoSoft translator</td>
<td>01</td>
<td>% 04.76</td>
</tr>
<tr>
<td>IdiomaX</td>
<td>04</td>
<td>% 19.04</td>
</tr>
<tr>
<td>Ace Translator</td>
<td>00</td>
<td>% 00</td>
</tr>
<tr>
<td>Google Translator</td>
<td>14</td>
<td>% 66.66</td>
</tr>
<tr>
<td>Translate</td>
<td>02</td>
<td>% 09.52</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reverso</td>
<td>01</td>
<td>% 04.76</td>
</tr>
<tr>
<td>On Translator</td>
<td>01</td>
<td>% 04.76</td>
</tr>
<tr>
<td>No one</td>
<td>01</td>
<td>% 04.76</td>
</tr>
</tbody>
</table>

As for translation software the electronics SMEs workers reported the following results: fourteen of them used **Google Translator**, four used **IdiomaX**, two used **Babylon**, two used **Translate**, one used **Prompt Personal**, one used **lingvoSoft translator**, one added **Reverso** and the other said **On translator**. One worker said nothing.

It can be read from the following figure that the majority of workers prefer using **Google Translator** for its easy access and use though it is standard and not specialized in technical writing.
Figure 3.10: Types of Translation Software Used by Electronics SMEs Workers
Q 3.11: Does your company adapt/ use any private type of translation and writing software?

Table 3.11: Availability of Private Translation and Writing Software in Electronics SMEs.

<table>
<thead>
<tr>
<th>Answers</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>NO</td>
<td>21</td>
<td>100</td>
</tr>
<tr>
<td>Name of Product if YES</td>
<td>00</td>
<td>00</td>
</tr>
</tbody>
</table>

When the electronics SMEs workers were questioned whether their companies adapted any private translation or writing check software, all of them said NO. This evidence accounts for the two previous questions about why workers tend to use standard or different writing check and translation software mentioned in figure 3.9 and 3.10.
Q 3.12: Were you trained by the company to use any translation or writing check software?

Table 3.12: Availability of Training to Use Translation and Writing Check Software.

<table>
<thead>
<tr>
<th>Answers</th>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>05</td>
<td>23.80</td>
</tr>
<tr>
<td>NO</td>
<td>16</td>
<td>76.20</td>
</tr>
<tr>
<td>TOTAL</td>
<td>21</td>
<td>100</td>
</tr>
</tbody>
</table>

Five of Electronics SMEs workers reported that they were trained by their companies to use translation and writing check software, while sixteen of them replied NO. This small rate shows that electronics SMEs do not pay much importance to such writing check and translation software mentioned formerly.

Q 3.12: Do you think that integrating ICTs in translation or writing would:

a) Facilitate Business English Writing

b) Create other errors

c) Have nothing to do

d) I don’t know.
Table 3.13: Workers Views about Integrating Translation and Writing Check Software in Business Writing.

<table>
<thead>
<tr>
<th>Answers</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitate Business English Writing</td>
<td>11</td>
<td>% 52.38</td>
</tr>
<tr>
<td>Create other errors</td>
<td>07</td>
<td>% 33.33</td>
</tr>
<tr>
<td>Have nothing to do</td>
<td>00</td>
<td>% 00</td>
</tr>
<tr>
<td>I do not know.</td>
<td>02</td>
<td>% 09.52</td>
</tr>
<tr>
<td>Not enough</td>
<td>01</td>
<td>% 04.76</td>
</tr>
</tbody>
</table>

Eleven of electronics SMEs workers thought that integrating translation and writing check software in business English writing facilitated the target writing while seven of those workers believed that ICTs created other errors. Two of the electronics SMEs workers said that they do not know, whereas one worker added that it is not enough to integrate those software alone.

This evidence shown in figure 3.13 highlights the importance of ICTs translation and writing check software for electronics SMEs workers in their writing as they became largely dependent on them. The results also add to the significance of the study at hand.
Q 3.14: Do you think that integrating writing and translation software in Business English Writing would substitute/obviate taking courses or training in Business English?

Table 3.14: Workers Views about Business English Courses Vs Translation and Writing Software.

<table>
<thead>
<tr>
<th>Answers</th>
<th>YES</th>
<th>NO</th>
<th>I don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answers</td>
<td>05</td>
<td>13</td>
<td>03</td>
</tr>
<tr>
<td>Percentage</td>
<td>%23.80</td>
<td>%61.90</td>
<td>%14.28</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage</td>
<td>%100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thirteen of electronics SMEs workers thought that integrating writing check and translation software in their business English writing could not substitute taking business English courses to solve their writing problems. However, five of them believed that writing
check and translation software sufficed their writing needs. Three of them stated that they did not know.

The assistance offered by translation and writing check software might have saved workers time and efforts to the extent that they considered them as a substitute to business English courses which either do not meet their writing needs or take much time from them.

![Figure 3.14: Workers Views about Business English Courses Vs Translation and Writing Software](image)
Q 3.15: Which problems do you face when using standard translation and writing software?

Table 3.15: Problems Generated from Using Translation Software

<table>
<thead>
<tr>
<th>Types of translation problems</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammar mistakes</td>
<td>04</td>
<td>19.04</td>
</tr>
<tr>
<td>Semantic mistakes</td>
<td>10</td>
<td>47.61</td>
</tr>
<tr>
<td>Irrelevant translation</td>
<td>04</td>
<td>19.04</td>
</tr>
<tr>
<td>Many choices of translation</td>
<td>07</td>
<td>33.33</td>
</tr>
<tr>
<td>No answer</td>
<td>01</td>
<td>04.76</td>
</tr>
</tbody>
</table>

Many problems are generated from using standard translation software. Ten of electronics SMEs workers reported that they faced semantic mistakes (with meaning). Seven of them said that they were overwhelmed with many choices of translation when using translation software. Four of the workers stated that sometimes they got irrelevant translation to their field and four others said that they encountered grammar mistakes. Only one of the workers did not specify any answer.

As the primary purpose of written communication is the transmission of meaning, the biggest problem encountered by electronics SMEs workers in this regard lies in the same column (semantic mistakes). This is due to the fact that standard software offers many choices and it is up to the user to choose what is relevant to his/her writing tasks.
Q 3.16: Do writing and translation mistakes affect your performance?

Table 3.16: Effect of Writing and Translation Mistakes on Workers Performance.

<table>
<thead>
<tr>
<th>Answers</th>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES very much</td>
<td>11</td>
<td>52.38</td>
</tr>
<tr>
<td>Somewhat</td>
<td>04</td>
<td>19.04</td>
</tr>
<tr>
<td>No.</td>
<td>01</td>
<td>04.76</td>
</tr>
<tr>
<td>No answer</td>
<td>05</td>
<td>23.80</td>
</tr>
</tbody>
</table>

The performance of electronics SMEs workers was greatly affected by the mistakes generated from using translation and writing check software. This is what eleven of them reported. Four of those workers said that their performance was partly (they answered somewhat) affected by these types of mistakes. One worker stated that his performance was not affected at all and five other workers did not give any answer.
In the world of business poor performance means poor profits or much time wasted. The negative effect of ICTs on business writing is of great importance. Thus, one of the major thrust of this study is to solve the business English writing problems.

3.1.2 Qualitative Data Analysis

Section Four: Evaluation and Further Suggestions

This section is concerned with open-ended questions with more emphasis on qualitative data. The answers of the respondents are reported in table 3.17. No answers are referred to as (00).
Table 3.17: Summary of Workers Evaluation and Further Suggestions.

<table>
<thead>
<tr>
<th>Section four</th>
<th>Q 3.17: What do you suggest to solve your Business English Writing problems at work?</th>
<th>Q 3.18: How can writing check and translation software be best used at work?</th>
<th>Q 3.19: In which Business English Writing tasks do you think you need to be trained?</th>
<th>Q 3.20: Do you think that developing writing check and translation software based on your Business English Writing needs analysis would facilitate your work?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>2</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>3</td>
<td>Training</td>
<td>00</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>4</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>Yes very much</td>
</tr>
<tr>
<td>5</td>
<td>Training courses</td>
<td>00</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>6</td>
<td>Continuous training</td>
<td>00</td>
<td>00</td>
<td>Yes very much</td>
</tr>
</tbody>
</table>
### Table 3.17: Follow up

<table>
<thead>
<tr>
<th></th>
<th>Continuous training</th>
<th>Specialists are more knowledgeable.</th>
<th>00</th>
<th>With training this will facilitate the job.</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Training</td>
<td>00</td>
<td></td>
<td>Daily Reports and emails</td>
</tr>
<tr>
<td></td>
<td>Integrating programs or software at work</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>8</td>
<td>Training course</td>
<td>I don’t know</td>
<td>00</td>
<td>Not enough</td>
</tr>
<tr>
<td></td>
<td>Training courses in English</td>
<td>00</td>
<td></td>
<td>Writing emails in general</td>
</tr>
<tr>
<td></td>
<td>Using developed programs and tools in the language laboratories</td>
<td></td>
<td></td>
<td>Sure</td>
</tr>
<tr>
<td></td>
<td>Choosing rich programs for teaching English in private schools</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Formation and Training</td>
<td>Training</td>
<td>00</td>
<td>Of course</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 3.17: Follow up

<table>
<thead>
<tr>
<th></th>
<th>Follow up</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Training</td>
<td>Training</td>
<td></td>
<td>Yes because it is of great importance</td>
</tr>
<tr>
<td>13</td>
<td>Error evaluation in the software</td>
<td>Training</td>
<td></td>
<td>Yes very much</td>
</tr>
<tr>
<td>14</td>
<td>Preparing training in business English</td>
<td></td>
<td>Writing letters</td>
<td>Yes it facilitates the job</td>
</tr>
<tr>
<td>15</td>
<td>Training in English</td>
<td>Looking for suitable software</td>
<td>Writing in English</td>
<td>Yes very much</td>
</tr>
<tr>
<td>16</td>
<td>- Taking courses in business English before graduation from university.</td>
<td>Including Business English in the curriculum of the students</td>
<td>Daily and weekly reports</td>
<td>Yes with 30%, but with 70% No. I think it leads to laziness and dependence instead of being autonomous.</td>
</tr>
<tr>
<td></td>
<td>- Focusing on English before and after graduation.</td>
<td></td>
<td>Writing emails</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Integrating some software to solve the problems of writing and communication</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Table 3.17: Follow up.

<table>
<thead>
<tr>
<th></th>
<th>Taking special training in business English</th>
<th>We should not depend on writing check and translation software in business English</th>
<th>Writing business letters.</th>
<th>Yes. it facilitates the job and avoids errors.</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>- Training in business English.</td>
<td>Developing writing check and translation software in the field of work in order not to have many choices in translation because this will not help the ones who do not have initiation in English.</td>
<td>Emails between the company and the suppliers</td>
<td>Sure it would facilitate the job especially for those who did not take any English courses. At least it would help in understanding the general meaning and maybe it would be possible to respond to the general meaning without entering in details.</td>
</tr>
<tr>
<td>19</td>
<td>Special training</td>
<td>It is not possible to improve the software</td>
<td>There is no task</td>
<td>Yes it would facilitate the job.</td>
</tr>
<tr>
<td>20</td>
<td>Training</td>
<td>I don’t know</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Table 3.17: *Follow up.*

| 21 | Taking training and business English courses. | In my own opinion and according to what I knew through my educational career, integrating writing check software usually leads to errors. The best way is to master English. Software cannot substitute man. | I welcome any task that would improve my level in the English Language. | I don’t think so. As I said before, software cannot substitute man. The best way is mastering English and practicing it. |
Q 3.17: What do you suggest to solve your Business English Writing problems at work?

Of the twenty one respondents, nineteen answered this question which shows that the electronics SMEs workers have a deep concern about the problems they face at work. The great majority (seventeen) of them suggested that training in English is the best way to solve this problem. Some specified business English. As can be seen they used the word training instead of courses and this shows that they need practical courses that are based on real work field needs and not just theoretical matters. They further suggested that training should be continuous which refers to evaluation and feedback of the courses.

Other noteworthy suggestions made by the respondents were integrating writing check and translation software with error evaluation in the software, and taking courses in business English before graduation from university. This latter is an important step in paving the way for students to be prepared for their work field.
Q 3.18: How can writing check and translation software be best used at work?

Nine of the electronics SMEs did not answer this question. Two said that they did not know, and another said that the specialists knew better referring to practitioners or software developers. One added that it was not possible to improve software. Three of the respondents thought that training should be made to use writing check and translation software. Another respondent thought that in order for the writing check and translation software to be used in the best way, the most suitable software to the nature of work should be included. Two of the
workers reckoned that software could not substitute man meaning that training is always needed to improve performance.

Furthermore, a critical answer to this question was that writing check and translation software should be developed in the field of work in order not to have many choices in translation because this will not help the ones who do not have initiation in English. This means that the development of such software should be made according to data based on workers’ needs in the work field.
Q 3.19: In which Business English Writing tasks do you think you need to be trained?

Thirteen of the respondents did not specify any type of tasks whereas the great left majority said business emails. Two other workers added reports. The evidence shown from
this analysis is that the electronics SMEs workers needs are not only in terms of vocabulary or jargon but also in the business writing genre.

Q 3.20: Do you think that developing writing check and translation software based on your Business English Writing needs analysis would facilitate your work?

As for this last question, four of the respondents gave no answers. The great majority of answers were YES, SURE, OF COURSE which illustrates that they do agree with the idea of developing writing check and translation software based on their business English writing needs analysis would facilitate their work. One of the respondents believed that it was
not enough whereas two others thought that software could by no means substitute man and training in business English is the best way to do their target tasks more adequately.

Figure 3.20: Developing Writing Check and Translation Software Based on Workers Writing Needs Analysis
Conclusion

This chapter illustrated the analysis of data obtained from the survey made with electronics SMEs workers at the purchasing and manufacturing departments in BBA.

The questionnaire included both close-ended and open-ended questions which implied using both quantitative and qualitative analysis. All questions were analyzed one by one and the responses were displayed in tables and graphs. As Wiener & Bazerman (2000) explain, the purpose of a graph is to show how statistics compare with one another and since graphs present statistics visually with bars, the analyses results and interpretations of the questionnaire are displayed in bar graphs, in percentages, as well as tables.

Chapter four will present a comprehensive summary of the results of the data analysis obtained in Chapter three, recommendations for further research, guidelines and proposed actions, implications for practice and implications for further research.
CHAPTER FOUR
CONCLUSIONS AND RECOMMENDATIONS

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4.2 Recommendations and Implications for Further Research ..................................................... 99
4.3 Limitations .................................................................................................................................. 101
Conclusion ........................................................................................................................................ 102
General Conclusion ......................................................................................................................... 103
Introduction

The study was set out to explore how effective business English writing can be with integrating ICTs writing check and translation software in the purchasing and manufacturing departments of electronics SMEs in Bordj Bou Arreridj, and to determine what the perceptions of the workers are in this regard. It has identified general literature on this subject related to the nature of business English and business writing, a general study about ICTs and SMEs, the adoption of ICTs by SMEs and ICTs translation and writing check software.

The main thrust of the study was trying to bridge the gap between the technical and linguistic use of English in business writing with the adaptation of ICTs to the specific needs of the workers in the target field. In addition, the exploration of business writing in a real field work would extend new bridges between academic research and the work market to develop authentic teaching materials, and design business English courses and syllabi based on the needs of workers in their field of speciality by making best use of ICT writing software. Another purpose that this research might serve is to enable the development of adapted writing software with data base related to the specific linguistic and technical needs of the workers.

The study sought to answer these questions:

1. To what extent does integrating ICTs software in business writing facilitate the job?
2. Does the use of writing check and translation software in business writing suffice the writing needs of the workers in the purchasing and manufacturing departments at electronics SMEs in BBA?
   2.1 Does the use of writing check and translation software in business writing substitute taking business English courses?
3. How can writing check and translation software be best used to facilitate business English writing in the purchasing and manufacturing departments at electronics SMEs in BBA?
4.1 Descriptive Findings

Based on the objectives formulated in the introduction, the literature study done in Chapter One, the methodology followed in Chapter Two and the descriptive research carried out in Chapter Three, one could infer and conclude as follows:

1. To what extent does integrating ICTs software in business writing facilitate the job?

Integrating software in general is a trendy feature of the 21st century and no one can deny their importance in facilitating business writing. In fact, ICTs play a crucial role in saving time and costs within electronics SMEs in BBA. However, the extent to which ICTs facilitate the business writing depends on three factors:

   a. Electronics SMEs workers competency in using software.
   b. Electronics SMEs workers proficiency and training in business English.
   c. The use of adequate software to the electronics SMEs workers needs.

2. Does the use of writing check and translation software in business writing suffice the writing needs of the workers in the purchasing and manufacturing departments at electronics SMEs in BBA?

   a. Does the use of writing check and translation software in business writing substitute taking business English courses?

According to the perception of electronics SMEs workers in the purchasing and manufacturing departments, the use of writing check and translation software in business writing does not entirely suffice their writing needs. In other words, it is not enough to depend on such software alone to do the job appropriately. Thus, training in business English is needed first. Therefore, the use of writing check and translation software in business writing cannot substitute taking business English courses.

3. How can writing check and translation software be best used to facilitate business English writing in the purchasing and manufacturing departments at electronics SMEs in BBA?
Conclusions and Recommendations

Training in business English with the integrating writing check and translation software would facilitate the writing tasks at work, according to the perceptions of electronics SMEs workers in the purchasing and manufacturing departments. This would require conducting needs analysis, technical register analysis and genre analysis of the workers most important writing tasks and some documents and emails as well. Besides, results obtained from this analysis may also serve as data base to develop adapted writing check and translation software.

4.2 Recommendations and Implications for Further Research

On the basis of the promising findings presented in this paper, further study of the issue would be of interest to extend knowledge about how effective business English writing in a workplace setting would be with the integration of ICTs translation and writing check software.

Firstly, since business English can be regarded as a broadly new subject in Algeria where little research is conducted, it is recommended that this subject should be included at the university curriculum of technical studies.

Secondly, new bridges or conventions should be extended between academic research namely universities or faculties situated close to industrial poles and workplaces such as the case of BBA which is regarded as an important pole of electronic industries. In the case at hand, the researcher faced difficulties to get access to the target SMEs due to the absence of such conventions.

Thirdly, the present study was mainly concerned with opening up a new issue in business English by exploring the perceptions of a sample of electronics SMEs workers about integrating ICTs translation and writing check software in business English writing. However, training in business English and course design should not be built upon those perceptions. Rather, Course design ought to be developed according to needs analysis of the concerned workers with the involvements of all stakeholders (researchers, teachers, managers, suppliers).
Fourthly, as ICTs are making inroads to all subject of knowledge, making use of writing check and translation software in business English course design should be taken into consideration. Numerous studies have investigated the impact on students’ attitudes from using computer based editing software when completing their English assignments. Generally, use of computer software has been found to help students concentrate on content (Daiute, 1983). The ease of editing computer documents can encourage more editing and experimentation. Fisher (1983) and Gula (1983) state that students not using computer editing software perceive revision as difficult and therefore avoid it. The specific application of computers for finding errors in students’ writing has been investigated in numerous studies. Observed benefits and advantages of such systems include:

1. Analysis of writing can help to improve students’ knowledge of conventions in such areas as spelling, punctuation and grammar (Wresch, 1988).

2. Such use of software can encourage students to be more independent of the instructor (Wresch, 1988).

3. Students prefer critical feedback that is impartial, such as that produced by a computer, as opposed to feedback from instructors that is often seen as biased or unfair (Frase et al., 1985).

4. Students improve their editing and writing skills significantly more than other students not using computer based feedback systems (Reid, 1986).

Fifthly, one major contribution of this study to academic research could be the use of data obtained from the scrutiny of authentic technical documents and business emails, genre analysis which is discussed in terms of rhetorical moves (Swales 1990; 2004), rhetorical analysis of discourse (according to Azaustre & Casas RA is concerned with the way to construct discourses; some priority to the communicative intent of each gender is given 1997), corpus linguistics (for Wynne 2005 a corpus is a comprehensive collection of texts that are collected as sets of linguistic data that reflect the actual use of a language) in order to design and develop adapted software according to electronics SMEs workers writing needs.

Therefore, in order to bridge the gap between the technical and linguistic needs in a workplace setting, efforts should collaborate to make use of obtained data from academic
research not only to design teaching materials and therefore courses in business English, but to develop adapted writing check and translation software for business English writing. This work, however, cannot be done by linguists alone but it needs the collaboration with technicians and engineers in the field of software development.

4.3 Limitations

The study has offered an evaluative perspective on an important issue in business English which is electronics SMEs workers’ perceptions about integrating ICTs writing check and translation software in business English writing. As a direct consequence of this methodology, the study encountered a number of limitations, which need to be considered.

1) On the one hand, data obtained from the survey are based on self-reports, and the researchers do not have any means to confirm that the respondents indeed use ICTs as frequently as they perceive themselves to do.

2) Besides, perceptions are never static, and a study of this nature may not capture the whole picture. That is why its findings should be viewed as exploratory and preliminary.

3) A crucial limitation of the present study concerns the focus on quantitative nature of the survey. The research does not study the topic in particular depth. Thus, it has to be stressed that ICTs integration in business English writing is a complex phenomenon and that it is not easy to gather information about this complex phenomenon on the base of questionnaires. Therefore, future studies need to use other research instruments. Future researchers might wish to collect more in-depth information through interviews, document analysis and so on.

4) The findings of the study are limited to the group of participants namely electronics SMEs workers in the purchasing and manufacturing departments in BBA, Algeria. As such, the findings would not be applicable and generalizable.

5) Finally, the researcher acknowledges the absence of the perceptions of managers (principals) of the companies as they are the one responsible for funding any type of software or training in business English.
Conclusion

In this chapter, research questions were answered according to the formulated objectives, the relevant literature and the research methodology introduced earlier in previous chapters. In addition, the main empirical findings were presented. Besides, recommendations and implications for further research were discussed. Moreover, major limitations to the study were pinpointed.

In the general conclusion, the pith of all discussion related to the present study will be summarized.
**General Conclusion**

The overarching aim of the present study was to extend new bridges between academic research in ESP and EOP namely business English. This can be done in order to solve language problems in real workplace.

Many issues need to be considered when enhancing links between academic research in ESP and EOP. One of which is the integration of software in business writing since this has become a trendy feature of the era of technology.

Recently, the Internet (and computers generally) are used in the teaching and learning process. Computers have been referred to as ‘cognitive tools’ (Wolff, 1999), which does not necessarily mean that they can think, but that they can be considered as a tool in human cognitive functioning. What is important, however, is not only the computers (i.e. the hardware), but also the technologies and their features (i.e. software), which can be adapted to the needs of the teachers and learners. This should be taken into consideration as well when designing courses in business English.

As for the perceptions of electronics SMEs workers about integrating ICTs writing check and translation software in their business English writing, they showed that overcoming problems generated in business writing needs many considerations.

For effective business English writing at work, ICTs need to be integrated in both teaching business English either in the curriculum of universities or in private schools. Besides, the design of courses in business English writing should not remain the task of language teachers but also the task of software engineers based on the linguistic and technical needs of workers in a specific field such as the one of electronics. This need is dictated by the demands of the work market which is highly affected by ICTs.
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## APPENDIXES

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Appendix A

A Pre-questionnaire to Formulate Research Problem

Dear workers in electronics SMEs in BBA,

You are kindly requested to answer the following questionnaire which aims at exploring the way English is used at work and business correspondences, and the role of ICTs in facilitating communication using English. This questionnaire is a part of a research proposal for a Magistere degree in Business English. Your answers will remain anonymous and will be used for research purposes only.

Your help will be highly appreciated.

1. Do you use English at work to correspond with foreign companies?
   - YES…………..
   - NO…………..

2. Which department of your company uses English most?
   - Sale
   - Purchasing
   - Manufacturing
   - Other case ?............ Please specify ............

3. Have you studied English before?
   - YES
   - NO

3.1 If yes, where?
   - At university
   - In a private school
• Through internet
• Another way ?.......... Please specify?..................................

4. Do you integrate ICTs at work when using English ?

• YES
• No

4.1 If yes, say what type of ICTs are used ?

• Cellphones
• the internet
• email
• Translation software
• Other cases?

Please specify ?.............................................................................

5. Do you face any difficulty when communicating in English at work ?

• YES……
• NO……

5.1 If yes, say when ?

• When writing an email
• When reading email
• When writing Order Form
• When asking for the Price
• When negotiating the price
• When enquiring about the mode of a machine or device functioning
• When writing or translating product manuals
• When reading manuals
• When communicating with foreigners in the company
• Other cases?.............

Please specify?..................................................................................................

6. What kind of problems do you face when using English at work?

• The difficulty of understanding the technical terms
• The inability to translate some phrases in the messages and product manuals
• Cultural differences between users of the English language
• The absence of standardized formats for messages used to communicate
• Other reasons?.................... Please specify?.................................

..........................................................

7. How do you prepare your products manuals?

• With the help of an official interpreter
• By using a translation software
• By using the internet
• Other ways?................. Please specify?.........................

8. Have you ever been trained to use ICTs or specific software?

• YES
• NO

9. Does your company use any websites or social networks in its business deals?

• YES
• NO

10. Do you think that the integration of ICTs in business writing facilitate the use of English?

• YES
• NO
11. If you encounter a problem in understanding or writing the words you

• Resort to a program interpreter such as Google Translator?
• Use a bilingual dictionary?
• Use a mono English dictionary?
• Ask a certified translator?
• Use an Internet site?
• Other cases?....... Please specify ? ................................................

12. Do you think that creating special programs with database of the English used at work would facilitate the difficulties in your company?

• YES.
• NO
• I DONT KNOW ..........................

13. Do you have other suggestions to activate the role of information and communication technology in order to facilitate communication in English?

..........................................................................................................................
..........................................................................................................................
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..........................................................................................................................
..........................................................................................................................

14. Can you provide me with any documents in English? Emails, faxes, orders, manuals or others if possible?

..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
15. Are you ready to receive any course or training in English with the integration of information and communication technology, if any?

- YES
- NO
- I DONT KNOW

Thank you very much for your help
Appendix B

A Translated Copy of the Pre-questionnaire.

استبيان اولي

يرجى قبولني أن اضع بين أيديكم هذا الاستبيان الذي يهدف إلى اكتشاف مدى استعمال اللغة الإنجليزية في العمل والمراسلات في شركتكم ودور تكنولوجيا المعلومات والاتصال في تسهيل التواصل باستخدام اللغة. هذا الاستبيان هو جزء من مشروع بحث علمي لرسالة ماجستير في اللغة الإنجليزية تخصص لغة الاختصاص ( Business English / Anglais des Affaires ) بجامعة سطيف 02. اجاباتكم ستبقى سرية ومجهولة المصدر وستستعمل لغرض البحث العلمي فقط.

مساعدتكم الكريمة ستحظى بالتقدير والامتنان للحصول على المعلومات اللازمة للبحث العلمي.

1. هل تستخدمون اللغة الإنجليزية في شركتكم للتواصل مع الشركة الأم أو أجنب؟
   - نعم
   - لا

2. في أي مصلحة من الشركة تستخدمون اللغة الإنجليزية أكثر؟
   - مصلحة الانتاج
   - مصلحة الشراء
   - مصلحة التسويق
   - مصلحة أخرى ما هي؟

3. هل درست اللغة الإنجليزية من قبل؟
   - نعم
   - لا

4. هل تستخدمون تكنولوجيا المعلومات والاتصال في عملكم عند التواصل باللغة الإنجليزية؟
   - نعم
   - لا

1.3 أن كان نعم؟
   - الجامعة
   - مدرسة خاصة
   - عن طريق الإنترنت
   - طريقة أخرى؟ ما هي؟

1.4 إذا كان نعم حدد الوسائط المستعملة
   - الهاتف النقال
5. هل تواجه صعوبات عند التواصل باللغة الإنجليزية في العمل؟
  - نعم
  - لا

1.5 إذا كان نعم حدد
  - عند كتابة بريد إلكتروني
  - عند قراءة بريد إلكتروني
  - عند كتابة نموذج طلبية
  - عند كتابة طلب السعر
  - عند مناقشة السعر
  - عند طلب استفسار عن طريقة عمل ماكينة أو جهاز
  - عند كتابة دليل استعمال جهاز
  - عند قراءة دليل استعمال جهاز
  - عند التواصل مع أجانب في الشركة
  - حالات أخرى

6. ما هو نوع الصعوبات التي تواجهها عند استعمال اللغة الإنجليزية في العمل؟
  - صعوبة فهم المصطلحات التقنية
  - عدم القدرة على ترجمة بعض العبارات في الرسائل ودليل الاستعمال
  - اختلافات ثقافية بين مستعملي اللغة الإنجليزية
  - غياب نماذج موحدة للرسائل
  - سبب آخر حددته

7. كيف تحضرون دليل استعمال منتجاتكم؟
  - عن طريق ترجمة الدليل الموزع من الشركة الأم باستعمال مترجم متخصص
  - عن طريق استعمال مترجم الي
  - عن طريق استعمال الإنترنت
  - طريقة أخرى.... ما هي؟

8. هل تلقبت تكوينا في استعمال تكنولوجيا المعلومات والاتصال؟
  - نعم
  - لا

9. هل تستخدم شركاتكم مواقع إنترنت أو شبكات تواصل اجتماعي في تعلامتها التجارية باللغة الإنجليزية؟
  - نعم
  - لا
10. هل تعتقد ان ادراج تكنولوجيا لاتصال والمعلومات تذلل الصعوبات الموجودة في اللغة الإنجليزية؟
- نعم
- لا

11. إذا واجهت مشكل في فهم او كتابة عبارة هل؟
- تلجأ إلى برنامج مترجم مثل Google Translator
- تستعمل قاموس مزدوج
- تستعمل قاموس إنجليزي/انجليزي
- تسأل مترجم معتمد
- تستعمل موقع إنترنت
- حالات أخرى؟……..ماهي...........................

12. هل تعتقد ان ايجاد برامج خاصة تحتوي على قاعدة بيانات للإنجليزية المستعملة في العمل من شأنه تذليل الصعوبات المواجهة في عملكم؟
- نعم
- لا
- لا ادري

13. هل لديك اقتراحات أخرى لتفعيل دور تكنولوجيا المعلومات والاتصال في تسهيل التواصل باللغة الإنجليزية؟

...............................................................................................................................
...............................................................................................................................
...............................................................................................................................

14. هل يمكنك تزويدنا باي وثائق باللغة الإنجليزية أمكن؟
- ايميلات، فاكسات، طلبيات، دليل استعمال، غيرها ان وجدت?
- نعم
- لا
- لا ادري

15. هل لديك نية او استعداد لتلقائي تكوين في اللغة الإنجليزية باستخدام تكنولوجيا المعلومات والاتصال؟
- نعم
- لا
- لا ادري

شكرا جزيلا على مساعدتكم
Appendix C

Electronics SMEs Workers Questionnaire:

You are kindly requested to answer the following questionnaire which aims at exploring the way ICTs are used in Business English writing. This questionnaire is a part of a research for Magister degree in Business English. Your answers will remain anonymous and will be used for research purposes only.

Your help will be highly appreciated.

Section One: General information about the informants

1. Do you have the capacity to work with English ?
   a) YES ..... b) NO

2. In which department do you work?
   a) Purchasing b) Manufacturing

3. Are you a) a technician/engineer b) English language specialist c) other case..... Please specify ?.................

3.1 If you are non-specialized in English (worker with a bachelor in commerce, management, translation, accountancy or technician/engineer) do you have any degree in the English Language?
   a) YES.... b) NO....

3.1 If yes, where did you study it?
   a) In a private school b) at university c) through the net d) others?
   Where? .................
Section Two: Business English Writing

4. How important is it for you to write Business English at work?
   a) Very important
   b) Important
   c) Not important

5. Which writing tasks do you need to perform most in English at work?
   a) emails
   b) reports
   c) invoices
   d) order form
   e) Product manuals
   f) Others? ................
      Please specify ? .................................................................

6. What type of problems do you face when writing Business English?
   a) Meaning transmission
   b) Mistranslation of technical words or phrases
   c) Grammatical mistakes
   d) Spelling mistakes
   e) Others? ............... Please specify ? ..............................................

7. Did you take any Business English Writing courses based on your needs analysis before?
   a) YES                      b) NO
Section Three: ICTs in Business English Writing

8. What ICTs software among the followings do you use at work?
   a) Writing check software
   b) Electronic dictionaries
   c) Webpages
   d) Emails
   e) Translation software
   f) Others? .............. Please specify ? ..............................................................

9. Which writing software among the followings, do you use to check your mistakes?
   a) Whitesmoke          g) Grammar Expert Plus
   b) CorrectEnglish      h) Right Writer
   c) Microsoft Word      i) Editor
   d) Grammarly           j) clear edits
   e) WordPerfect         k) No one
   f) Writer’s Workbench  l) others? ........

                         Please specify ?
                         .................................................................................................

10. Which translation software among the followings do you use in your Business English Writing?
a) Babylon  

b) Power translator

c) Promt

d) WhiteSmoke

e) Translate personal

f) Promt Personal

g) lingvoSoft translator

h) IdiomaX

i) Ace Translator

j) Translate

k) Google translator

l) No one

m) others? Please specify?

11. Does your company adapt any private type of translation and writing software?

a) YES  b) NO  c) if yes, what is its name? 

12. Were you trained by the company to use any translation or writing check software?

a) YES  b) NO

13. Do you think that integrating ICTs in translation or writing would:

a) Facilitate Business English Writing

b) Create other errors

c) Have nothing to do

d) I don’t know.

14. Do you think that integrating writing and translation software in Business English Writing would substitute/obviate taking courses or training in Business English?

a) YES  b) NO  c) I don’t know

15. Which problems do you face when using standard translation and writing software?

a) Grammar mistakes
b) Semantic mistakes

c) Irrelevant translation

d) Many choices of translation

e) Others? ….. Please specify? …………………………………………………

16. Do writing and translation mistakes affect your performance?

a) YES very much  b) a little  c) not at all

Section Four: Evaluation and further suggestions

17. What do you suggest to solve your Business English Writing problems at work?

…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………

18. How can writing check and translation software be best used at work?

…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………

19. In which Business English Writing tasks do you think you need to be trained?

…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………
20. Do you think that developing writing check and translation software based on your Business English Writing needs analysis would facilitate your work?

Thank you very much for your collaboration.
A Translated Copy of the Electronics SMEs Workers Questionnaire

يشرفني أن أضع بين أيديكم هذا الاستبيان الذي يهدف إلى اكتشاف مدى استخدام تكنولوجيا الاتصال والمعلومات في الكتابة والتواصل باللغة الإنجليزية الخاصة بالأعمال (لغة الاختصاص أو (Anglais des Affaires). في شركات الصناعات الإلكترونية ببرج بوعريريج. هذا الاستبيان هو جزء من مشروع بحث علمي لنيل شهادة الماجستير في مدرسة الدكتوراه تخصص لغة الأعمال بجامعة سطيف. اجاباتكم ستبقى سرية ومحفوظة في إطار ما يسمح به البحث العلمي. سأكون في غاية الامتنان لمساعدتكم ومشاركتكم البحث.

الجزء الأول: معلومات عامة حول المستجيبين

1. في أي مصلحة تعمل؟
   - مصلحة الشراء
   - مصلحة الإنتاج

2. هل لديك القدرة على استخدام اللغة الإنجليزية في العمل؟
   - نعم
   - لا

3. هل متخصص في اللغة الإنجليزية؟
   - تقني سامي
   - مهندس
   - حالة أخرى

4. إذا كنت تقني أو مهندس، هل لديك أي شهادة أو تكوين في اللغة الإنجليزية؟
   - نعم
   - لا

(If اجابة نعم، في مدرسة خاصة، في الجامعة، من خلال الإنترنت، حالة أخرى)

الجزء الثاني: الكتابة الخاصة بلغة الاختصاص (Anglais des Affaires/ Business English)

(Make a translation of the entire document, including any tables or figures, into English.)
5. هل يكتسي التواصل بالإنجليزية كتابياً في عملك اي أهمية؟
- نعم مهم جداً
- نعم مهم
- لا ليس مهماً

6. ما هي المهام التي عليك كتابتها باستخدام لغة الاتصال الإنجليزية؟
- بريد الكتروني
- تقارير
- قوائم الشراء
- طلبات
- دليل استخدام المنتجات
- حالات أخرى?

7. ما هي أنواع المشاكل التي تواجهها عند التواصل كتابياً باستخدام لغة الاتصال الإنجليزية (Anglais des Affaires)?
- فهم المعنى
- سوء ترجمة الفروض والعبارات التقنية
- أخطاء نحوية
- أخطاء إملائية
- حالات أخرى?

8. هل سبق أن أجريت تكويتاً مبنياً على دراسة الاحتياجات الخاصة بكم في لغة الاتصال الإنجليزية (Anglais des Affaires / Business English)?
- نعم
- لا

الجزء الثالث: إدراج تكنولوجيا الاتصال والمعلوماتية في كتابة لغة الاتصال (Anglais des Affaires)

9. ماذا تستخدم في عملك من بين برامج الكتابة التالية؟
- برنامج التحقق من الكتابة
- القواميس الإلكترونية
- صفحات الويب
- البريد الإلكتروني
- برامج الترجمة
- حالات أخرى؟ ما هي؟
10. أي من برامج تفقد الكتابة هذه تستعمل لتفقد الأخطاء؟

- g) Whitesmoke
- h) CorrectEnglish
- i) Microsoft Word
- j) Grammarly
- k) WordPerfect
- l) Writer’s Workbench

لا استعمل أي برنامج (h) Right Writer (i) Editor (j) Clear Edits (k) Right Writer (l) لا استعمل أي برنامج

- حالات أخرى ما هي؟

11. أي من برامج الترجمة هذه تستعمل في كتابة لغة الاختصاص؟

Anglais des Affaires /Business )

- g) Babylon
- h) Power translator
- i) Promt
- j) WhiteSmoke
- k) Translate personal
- l) Promt Personal

لا استعمل أي برنامج (g) lingvoSoft translator (h) IdiomaX (i) Ace Translator (j) Translate (k) Google translator (l) لا استعمل أي برنامج

- حالات أخرى ما هي؟

12. هل تستعمل شركتكم أي برنامج خاص بتفقد الأخطاء الكتابية أو أخطاء في الترجمة؟

- لا
- نعم

- أن كان نعم ما اسمه؟

13. هل تلقتم أي تكوين من طرف الشركة لاستعمال برامج تفقد كتابة أو ترجمة لغة الاختصاص؟

Anglais des Affaires)

- نعم
- لا

14. هل تعتقد أن إدراج برامجيات تكنولوجيا الاتصال (مثل برامج تفقد الكتابة أو الترجمة) في ترجمة أو كتابة لغة الاختصاص الإنجليزية يؤدي إلى:

- تسهيل كتابة لغة الاختصاص والتواصل بها
- خلق أخطاء ومشاكل أخرى
- لا يؤدي إلى شيء
لا أدرى

15. هل تعتقد أن إدراج برامج الترجمة وتفقد الكتابة في التواصل بلغة الاختصاص الإنجليزية يعني أن اخذ توقيت أو دروس في لغة الاختصاص (Anglais des Affaires)؟

- نعم
- لا

- لا أدرى

16. ما هي المشاكل التي تواجهها عند استخدام برامج عامة للتواصل بلغة الاختصاص الإنجليزية؟

- أخطاء إملائية.
- أخطاء في المعنى.
- ترجمة خاطئة أو سيئة.
- خيارات كثيرة في الترجمة.

17. هل تؤثر أخطاء الكتابة والتراجم سلبًا على عملكم؟

- نعم كثيراً
- نوعاً ما
- لا تؤثر

الجزء الأخير: التقييم العام والاقتراحات المستقبلية

Business English /Anglais des Affaires

18. ماذا تقترح لحل مشاكل الكتابة والتواصل بلغة الاختصاص الإنجليزية (Business English /Anglais des Affaires)؟

19. كيف يمكن تحسين استخدام برامج تفقد أخطاء الكتابة والتراجم في التواصل بلغة الاختصاص الإنجليزية (Business English /Anglais des Affaires)؟

20. ما هي الأنشطة الكتابية (حسب احتياجاتكم في العمل) التي تريد التدرب أو التكوين فيها؟

21. هل تعتقد أن تطوير برامج تفقد كتابة وترجمة خاصة بلغة الاختصاص والتي تكون مبنية على قاعدة بيانات حسب تحليل الاحتياجات الخاصة بالعمل سيسهل العمل ويجنب الأخطاء؟

شكراً على مساعدتك
ملخص

" إدراج برامج التحقق من الكتابة والترجمة في كتابة لغة الاختصاص الإنجليزية: حالة مصلحتي الشراء والانتاج للشركات الصغيرة والمنسوطة للصناعات الإلكترونية ببرج بو عريريج " هو عبارة عن تحقيق واستكشاف ميداني حول استعمال لغة الاختصاص الإنجليزية في العمل وال التواصل كتابيا. تهدف هذه الدراسة إلى إبراز مدى تأثير برامج التحقق من الكتابة والترجمة لتفقد الأخطاء وتصحيحها في تحسين القدرة على التواصل كتابيا في لغة الاختصاص. كما تهدف الدراسة أيضا إلى استطلاع رؤى وتصورات العمال في مصلحتي الشراء والانتاج حول التأثير الإيجابي لهذه البرامج ومعرفة إلى أي مدى تفي باحتياجات العمال في التواصل كتابيا وتغني عن الاعتماد على دورات تكوينية في لغة الاختصاص. وتحقق هذه الأهداف، فنستطاع مع عدد من العاملين في مصلحتي الشراء والانتاج في اربع شركات صغيرة ومتوسطة للصناعة الإلكترونية في مدينة برج بو عريريج. بُينت نتائج البحث أن إدراج برامج تفقد أخطاء الكتابة والترجمة في كتابة لغة الاختصاص الإنجليزية تُسهّل العمل نسبياً لكنها لا تغطي كل احتياجات العمال في هذا النطاق. بمعنى آخر، استعمال البرامج وحدها غير كاف. وبالتالي فإن إدراج هذه البرامج لا يغني عن التكوين في لغة الاختصاص، وما يكمن أن يدعمه. من جهة أخرى فإن نتائج هذه الدراسة تُعتبر أهمية بالغة لمشاريع بحث مستقبلية في مجال تطوير دورات تكوينية نماذج على الاحتياجات الخاصة للعمال حسب مجال عملهم. كما يمكن استعمال نتائج البحث كقاعدة بيانات لتطوير برامج تُفيد كتابة وتترجمة حسب الاحتياجات اللغوية والتقنية للمعامل. من بين النتائج التي خلص فيها البحث أيضا هو ضرورة إدراج لغة الاختصاص الإنجليزية في المناهج الجامعية للشعب التقني مثل الإلكترونية منها وذلك تمييزا لاستعمالها في مجال العمل.

Summary

This study is a fieldwork investigation and exploration about Business English in Small and Medium-sized Enterprises for electronic industries in Bordj Bou Arreridj. The main thrust of this study is to unfold the kind of problems generated from integrating ICTs, mainly writing check and translation software, in business English writing. The study is motivated also by eliciting workers perceptions about the extent to which translation and writing check software would suffice their business English writing needs and therefore could substitute taking business English courses. A descriptive survey was conducted to collect data from a number of workers in the purchasing and manufacturing departments in four different electronics SMEs. Descriptive data depicted that using writing check and translation software in business English writing does not entirely suffice workers writing needs i.e, it is not enough to depend on such software alone to do the job appropriately. Therefore, those software cannot substitute taking business English courses. The results of this study would be of great consideration and might serve as database for future software development for specific business writing. They can also serve as background to design special English courses for occupational purposes with the integration of ICTs to facilitate business English writing in the workplace.