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Implementing Pedagogical Translation in Teaching ESP Reading Skill

The Case of 1st Year Master Biology Students

Publically defended

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Dedication

This simple work, First and foremost, is dedicated to my beloved mother and father whose love, support, and patience help me a lot during my study

To my dearest brothers and my soul Randa

To my uncle Magid and his wife Najia, my aunt Fatiha and her husband Kamal, my second families in Ouargla

To all my colleagues and teachers

Mouna

Acknowledgement

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List of Abbreviations

ESP: English for Specific Purposes

L1: First Language

L2/ SL: Second Language

ST: Source Text

TALO: Text As a Linguistic Objective

TAVI: Text As Vehicle of Information

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General Introduction

1. Statement of the Problem

The use of the mother tongue is seen by technical language teachers as an ineffective aspect of L2 classroom, and deciding whether to use it or not is a real predicament, this is on one hand. On the other hand, students (who are not specialized in English) suffer from their lack of understanding especially scientific texts; even they feel too worried because their teacher uses only English. So, this study based on the students' difficulties in understanding scientific discourse and the attitudes of both teachers and students among the use of translation (of any kind) and the mother tongue.

2. Aims of the Study

The major aims of the study, as the title suggests, are to investigate the contribution of the mother tongue toward students' comprehension of technical texts and toward the teaching process on the other hand. It sheds light on the learning and teaching difficulties in subject-specialized classroom to find out the extent to which translation into the mother tongue can help both teachers and students to cope with these difficulties.

3. Research Questions

The main research questions dealt with under this study are:

- a) To what extent does translation into the students' mother tongue affect the reading comprehension of ESP learners?
- b) Does translation (of any kind) into the students' mother tongue help access to the realization of students' needs and objectives?
- c) Does translation (of any kind) into the students' mother tongue help in handling teaching and learning difficult situations?

4. Hypothesis

ESP (English for specific purposes) is not only language in use relevant to a particular group of learners; it is as well a part of language pedagogy. Many practitioners adopt the idea that teaching ESP through the use of the mother tongue may facilitate language learning. On the basis of this theoretical view, this study is an attempt to investigate the effects of using translation on the reading comprehension of ESP students at Kasdi Merbah University. Accordingly, it is hypothesized that ESP students understand technical texts easily if some translation through their mother tongue is provided.

5. Methodology

The nature of the study, the population involved, the techniques of data gathering, play an important role in determining the appropriate method that should be used. The nature of this study is to investigate the impact of translation on the reading comprehension of ESP students actually calls for an experimental and descriptive methods.

6. Materials

In order to collect data and test the hypothesis, four main tools will be used. A questionnaire will be given randomly to ESP students in order to know their views about the use of translation and Arabic in their classrooms, their needs, objectives, and difficulties in reading scientific texts. In addition, another questionnaire is addressed to teachers to know their arguments of the uses or the exclusion of translation and the mother tongue from/in L2 classroom as well ways of L1 uses. Also, two reading course are designed to biology students, followed with reading exercises. Then, some of these are selected to be analyzed to know the effect of our independent variable on the students reading comprehension after having

7. Procedures

To obtain an authentic data the designed questionnaires are submitted face to face to both teachers and students (ten teachers and thirty students). Also, the experiment in its turn is conducted through dividing thirty biology students into two groups: an experimental group and control group; the experimental group will receive oral translation when the practitioner explains the scientific reading passage, whereas the control group will be taught only in English. Then students will practice some reading exercises which will be analyzed analytically to see the difference between the students' performance and comprehension in the two groups. Finally, the collected data will be analyzed qualitatively and quantitatively.

8. Population and Sampling

The target population possesses the feature of being studying or teaching technical English module (ESP). Thirty students and ten teachers from different scientific branches are given questionnaires whereas the experiment is conducted with thirty biology students. The selection (of biology students) is based on the necessity of having a homogeneous classroom, in terms of their needs and objectives (one of the characteristics of ESP classroom) that are relevant in their future carrier, and the usefulness and importance of reading-based courses to this classroom.

9. Structure of the Dissertation

The present study comprises three chapters. Chapter one provides an overview of pedagogical translation and the use of the mother tongue in L2 teaching and learning context in general and ESP classroom in particular. Chapter two deals with reading skill. Chapter three is the practical part of the

research which is concerned with qualitative and quantitative analysis of the gathered data.

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Introduction

In this chapter is devoted to reading skill on one hand, and an it provides an overview of scientific English on the other hand trying to discuss different elements that has its due effect on students' reading comprehension. As well as, it stresses the main general principles in designing ESP reading course. Finally, it discusses translation as reading comprehension device.

1. Definition of Reading

According to Richard (1997), reading involves twofold interacts. The first is the reader who has background knowledge in mind or 'schemata', including culture, subject matter knowledge, and linguistic knowledge etc. Also, the reader owns set of characteristics that effect language learning, thus reading comprehension, as an example: self-esteem, inhibition, risk taking, motivation etc (Brown, 1987 as cited in Richard).

1.1. Interaction between the Reader and the Text

Researchers show that readers grasp the meaning of the text through making recourse to threefold schemata. First, content schema is type of information of the text that activates general cultural and social background, and experiences of the reader (Carrell & Eisterhold, 1983; Carrell, phais & Libretto, 1989,as cited in Richard, 1997). Second, formal schema involves general discoursal organization of the text. Third, linguistic schema helps the reader to decode the text in terms of words and sentences.

1.2. Interaction between the Purpose and the Way of Reading

Also, there is interaction between the purpose and the way readers read the text. In fact, the latter is selected on the basis of the former and the nature of the task. Thus, there are three types of how people read. Firstly, scanning involves careful searching for needed information without the necessity of looking at every word within the text. Secondly, skimming is looking over the text to have general idea of it. Thirdly, reading for detailed comprehension entails examining information or recognizing instances of language uses (Harmer, 2002).

2. Kinds of Reading

Harmer (ibid) differentiates two kinds of reading: extensive and intensive reading. Extensive reading usually takes place outside the classroom on the purpose of enjoyment. Whereas, intensive reading occurs inside the classroom (which is our case) and it involves careful examination of the reading text.

3. The Nature of Scientific Text

Comprehension of the text may change as the reader read repeatedly until she/he builds the final meaning of the text. Whereas, the text in it turn is not dynamic (unlike the readers' comprehension that may change). Texts display linguistic features that facilitate the reader's comprehension or hamper it (Richard, 1997). So, it is important to look at the nature of scientific texts.

3.1. Definition of Scientific English

Scientific English is a tool that enables scientists conduct their professional affairs. Such type of discourse defined as a means of communication, culture, type of writing, specialized compositional strategies, and uses of language (Stevens, 1977).

Scientific English in many respects is similar to general language since scientists use the same pronunciation system, common grammar, rules of spelling, and common non-specialized vocabulary. On other hand, English for Science displays certain features that guarantee its distinctiveness from other types of English, for example, Business English (BE), political English etc. These differences lie in lexical level, syntactic level, grammatical level, and discorsal level (Streven, 1976).

3.2. Communicative Purposes in Scientific English

Experts write their scientific text for many communicative purposes. The latter determined by the relationship between the sender and the receiver and the particular communicative situation goals that are the following:

- a) To publish their methods and findings to be extended by researchers;
- b) To write critical reviews those synthesize current knowledge in their field;
- c) To share their knowledge and its practical application with public; and

d) To teach what they know to future generation of scientists (Yore et al, 2006).

3.3. Kinds of Scientific Discourse

On the basis of the purposes mentioned above, it is possible to distinguish three types of scientific discourse. The first kind is that of discourse that characterized with high degree of abstraction and the use of standardized terminology since both the sender and the receiver are experts in the same domain. The purpose of such type of discourse is to develop and refine the general knowledge of the domain. The second type of scientific text is practically oriented discourse, which is similar to the first type in terms of the knowledge level of the sender and the receiver. Whereas, the purpose is to solve particular problems that are encountered in workplace situations. Hence, communicative devices are frequently used in respect to the related to this purpose. The third type is discourse of popular Science and domain-oriented didactics which is written by an expert to convey structured knowledge of the domain in order to enhance the receivers' knowledge in particular relevant area, since receivers have low degree of relevant knowledge (Yore et al, *ibid*).

3.4. Linguistic Features of Scientific English

In addition to features of communicative purposes of scientific discourse, there are lexical, grammatical and discursal features of language science. At the lexical level this type of discourse is characterized with high frequently use of dense items. Stevens (1977) in a survey article on the nature of scientific discourse focuses on scientific terms that originated from Greek and Latin. He identified three types of technical vocabulary in scientific English.

- 1) General English terms given scientific application, for example force, atom;
- 2) Words borrowed from other languages, such as cortex, nucleus, vertebra; and
- 3) Words constructed of prefixes and suffixes, for instance, ultraviolet.

These are “subject-specific” nomenclatures that have no one-to-one equivalent even explaining such “high-specialized” terms require a phrase, a sentence, and sometimes a paragraph. Although this type of vocabulary is of a high proportion in scientific English, scientists are also of a need of “subject-neutral”

terms, for instance, verbs of *warning* and *advising*: *avoid, check, prevent, remember*, etc; adverbs of *method*: *careful, continuously, finally*...to either give instruction to an act or report on the sequences of it. Also, the use of discourse markers is another feature of scientific English that are important in expressing movement and control the direction of discourse. Another language features are noticed at the grammatical level which is characterized with long complicated noun phrases, frequent use of “*logico-grammatical*” items, *passive voice, non-finite verb* and clause, objective subject and pronoun (Streven, 1976).

4. The Importance of Discoursal Features in Reading Comprehension

When students are aware of genre structure and its linguistic features, their reading comprehension will be better. Thus, the designers of reading comprehension courses focus on this respect in many teaching contexts (Chistie, 1992; Christie, 1990; Mohan, 1990; Tang, 1992; Martins, 1993, as cited in Richard, 2002). In addition, L1 reading research reveals that discourse knowledge is important for reading comprehension. Also, this idea is widely supported by social constructionist view.

5. Models of Reading

The interaction occurs when reading results research orientation towards creating different models that describe this complex process. In this respect, Barmett (Richard, 1997) lists three models that take place in both L1 and L2 reading:

- 1) *Bottom-up theory*: the reader starts dealing with units of the text to understand to understand it as a whole.
- 2) *Top-down theory*: the reader predicts what the text is about, and then he/she recognizes vocabulary and small units to confirm his/her guessing, that is to say, the reader identifies the context in his own schemata to process new information.
- 3) *Interactional school*: this view adopts both types of processing. There is mediation of types of processing which depends on the text, readers' prior knowledge, and motivation.

6. The Vocabulary in ESP Reading Comprehension

Richard (1997) states that readers who are unfamiliar with *functional words* that are used when describing a scientific functions, such as, a, an, the, though, by, or *content words*, for example, verbs, noun, adjectives, and adverbs) may cause inability of understanding the reading text. So, it is important to know that vocabulary helps the reader to get holistic mental image of the context of the text.

Although the teaching of ESP is not a matter of teaching technical vocabulary, nor the responsibility of an ESP teacher, the ESP practitioner should check the students' understanding of technical vocabulary as they are presented in their subject matter context (Duddly-Evans and Maggie, 1998).

The teaching of technical vocabulary in ESP requires twofold elements. First, the 'carrier content' is the domain related specific context in which language is presented. Second, the 'real content' is the language or the skill that is used in the exercise i.e. linguistic content carried out in that context;

Duddly-Evans and Maggie (ibid) state it clearly that translation of technical vocabulary in ESP into L1 can be used in ESP classroom since determining the equivalent terms of L2 technical vocabulary in the students' L1 makes the task of both the teacher and the students easier. In case, students are unfamiliar with the technical term even in their L1, or when there is no one-to one equivalent, the teacher need to introduce and explain terms, to translate it easily.

7. Approaches to the Teaching of Reading in ESP

7.1. TAVI Approach

Duddly-Evans and Maggie (ibid) classify ESP as macro skill. State that they agree with John and Davies (1983) who introduced a reading approach called 'Text As a Vehicle of Information' (TAVI) in contrast with Text As a Linguistic Objective (TALO). They summarize the key points: the primary importance of the students' task which is dealing with the language presented within the text and correlate what is mentioned with what is known; achieving at the macro-level understanding of the discourse; applying the information extracted from the text rather than focusing on linguistic form.

Table 6.1 TALO and TAVI

	TALO	TAVI
Principles underlying text selection	<ul style="list-style-type: none"> • texts illustrate syntactic structures • topics are of general interest • texts are specially written, modified or re-written • new vocabulary is controlled • texts are graded and short • texts are selected by teachers 	<ul style="list-style-type: none"> • texts are chosen for their value in relation to students' needs • a range of authentic texts are used • grading is through tasks and support • texts are of different lengths, getting longer • texts are selected not only by teachers, but also by learners and others
Preparatory activities	<ul style="list-style-type: none"> • almost none • some translation of vocabulary 	<ul style="list-style-type: none"> • always: important as direction finders, to awaken interest and to establish purpose
Working with the text	<ul style="list-style-type: none"> • focus on language and what is unknown • focus on detail and understanding all the sentences and words • questions on syntax 	<ul style="list-style-type: none"> • focus on information and what is known • guessing unknown words • focus on links between meaning (function) and form
Type of teaching/learning interaction	<ul style="list-style-type: none"> • teacher monologue • teacher-centred: teacher questions, student responds, teacher evaluates 	<ul style="list-style-type: none"> • students work in groups • reversal of roles: students ask questions, evaluate each other, reach agreement • model for self-study • learner and learning-centred*
Follow-up activities	<ul style="list-style-type: none"> • comprehension questions • grammar and lexis exercises 	<ul style="list-style-type: none"> • using the information: transfer, application or extension • applying techniques

Figure 06: TALO and TAVI (Duddy-Evans and Maggie, 1998)

7.2. The Balance between Skills and Language Development

To make sense of the text the reader need not only linguistic knowledge, skills and strategies are also important in decoding the text. Alderson (as cited in Duddly-Evans and Maggie, *ibid*) agrees that bad L1 reading results inefficient L2 reader. Moreover, good readers use their L1 reading skills, such skimming, scanning, understanding logical relations between sentences, identifying the main idea etc.

8. Reading Course Design

To keep both skills and language development in equal, students current situation analysis, the purpose of the reading material (in our case, it is the transformation of information), stimulating students' use of reading L1 and L2 all are to be taken in consideration when designing an ESP reading course.

8.1. Selecting ESP Reading Text

The criteria of text selection are based on two elements: 'carrier content' and 'real content'. The former should be appropriate to the students' conceptual level, up to date, valuable, and interesting to them. The latter also is of great importance. Thus, the material selector need to consider some of features related to it: meaningful, suites the students objectives (relevance), useable on the part of the students (exploitability), clear and easy to understand (accessibility) (*ibid*).

8.2. Using the Information Gathered

Activities are designed depending on the reading purpose and on the information being used. The first step hence is to identify the nature of the task and the skills that help the students in dealing with new information. Highlighting the latter is also good strategy to facilitate information processing (*ibid*).

9. Translation as Reading Comprehension Device in ESP

Mohmud (2006) acknowledges that translation into the learners L1 is an effective post reading procedure to check students' comprehension. The students' understanding of the reading text will be better reflected in paper since students read

the text carefully and examine its textual constituents, extract the main ideas and details.

On the other hand, the translated texts provide data for the teacher that reveal information about feature of interference, students' ideas, gaps, and linguistic problems.

So, translation is useful in reading since it is learning and communicative strategy. Translation confines the reader to the text so that he/she focuses on all levels of language (words, sentences, and discourse level) as a whole. As well as, this pedagogical device reflects the students reading comprehension ability. Coady (1997) states that raising student's reading comprehension lies on the translation. He recommends students to translate the ambiguous terms into their L1, so that meaning of the text will be enlightened, thus translation is an effective reading and teaching means.

Conclusion

With regard to what has been discussed, our conclusion stresses on: first, teachers should take into consideration the different variables that influence the readers' comprehension. Second, in ESP course the focus should be on all of the language levels in addition to the communicative aspect.

Introduction

In this chapter the definition of translation is provided shading the light on pedagogical translation and its history in the context of FL teaching and reasons of excluding it from that context on one hand. On the other hand, it stresses on defending the use of pedagogical translation through explaining the idea of coordinate and compounding bilingualism, and how translation is successfully revived. Moreover, it explains reasons of using L1 and situations of its uses. In addition, it discusses the relationship between ESP and the use of translation, specifically in teaching scientific discourse.

1. Definitions

Etymological speaking, the term translation is a Latin derivation of the root “translatum” from the verb “transferr”, which means to “carry across” Cook (2010) and House (2009) provides a popular definition of translation. For them, translation is the transfer of meaning of a text from one language to another.

Translation as an approach maintained its root while passing a long trip. During the trip of doing that, it had made use of different approaches that encompassed it, for example, discourse analysis. For House (ibid); translation is not only a matter of dealing with linguistic forms; it is expressing the meaning of a particular message; dealing with real communicative acts, language in use and hence culture. One can smell this from the following quotation: “translations mediate between languages, societies, and cultural barriers may be overcome.” (2009, p. 3). Also, Munday (2001) insists on the interdisciplinary and bilingual nature of translation. He says: “By its nature is multilingual and also interdisciplinary, encompassing languages, linguistics, communication studies, philosophy, and range of types of cultural studies” (p.1).

1.1. Translation and Translating

Roger (1991), Cook (2010), Munday (2001), and others state that translation is an umbrella term under which refers to two notions. It can mean a “product” or the result which is a translated text. Roger (1991) suggests the term “a translation” to refer to the products. Also, it can mean a “process” that is the act itself which Roger calls it “translating” (ibid). For House (2009), this process consists of two

phases: (a) interpreting the source text (ST) and identifying its equivalence, and (b) rendering it.

We have stated that translation is an “interlingual” process deemed “translation proper” by Jacobson (1959). Transformations also can occur from one language into another, or just one. The languages themselves can differ in terms of their types. So, on the basis of the number and the type of the language involved in this process categories of translation are classified.

Munday (2001), House (2009), and others identify three categories of translation: the first one is “interlingual”, a variety of a text is transformed into another one in the same language. The second is “interlingual”, the direction of transformation is from the SL to the TL. The third is “intersemiotic translation” or “transmutations”, when a verbal message is translated into a non-verbal one.

2. Pedagogical Translation

For many years ago, translation has been seen as having two roles: as a need for communication between two different speech communities and as a means of the teaching and learning foreign language. Using translation for the second purpose is called pedagogical translation (House, 2009), (Cook, 2010).

In this context, it is a way to involve the students’ own language; the language that is already known for them. Pedagogical translation takes place naturally when dealing or practicing a “new language” (Cook, *ibid*). Also, House (2009) states that translation refers two types of communication: either between languages or within languages, including paraphrasing, summarizing etc. Hence, translation is a dynamic motivational, compelling device for both teachers and students.

2.1. Pedagogical Translation vs. Non-pedagogical Translation

Klaudy draws the distinction between non-pedagogical translation and pedagogical translation on the basis of the function, object, and the addressee of the translation. Pedagogical translation is a means to an end; to improve the learner’s proficiency. So, it can be used to raise the student’s awareness, to practice the language, or to test language knowledge. Lesznyák adds that pedagogical translation

can be used to illuminate and memorize. Whereas, in non-pedagogical translation the focus is on transferring the content of the target, that is to say, the product which is the translated text as a goal of translation. Concerning the object, in pedagogical translation the text reveals information related to the learner's level whereas, in real translation information is concerned with whatever domain and facts. Also the addressee in pedagogical translation is definite, who is either language teacher or an examiner, whereas in real translation, the audience is larger; it can be general audience or specialized discourse community etc (as cited in Vermes, 2010).

2.2. The Origin of Pedagogical Translation

The use of translation for the mentioned purpose goes back to Grammar-Translation Method which is advocated by German scholarship during the nineteenth century. Accordingly, reading and writing are the main skills. Also, the first language is maintained as reference system in the syllabus which was made up of linguistic units (vocabulary, grammatical rules) (J. Richard and T. S. Roger, 2001). The equivalences of these linguistic units are presented and explained deductively through the learners' mother tongue (Baker, 1998). These grammatical and lexical structures are illustrated within a text that the students are asked to translate into their mother tongue (House 2009).

Despite the pros and the cons, Grammar Translation method dominated the first half of the 19th century. For cook, it is used in teaching large classes and in designing self-study books, when the teacher is not totally communicatively competent; as well it stimulates students (as cited in Baker, 1998).

2.3. The History of Pedagogical Translation

2.3.1 Reform Movement

At end of the nineteenth century, a group of theorist, mainly phonetician, linguists, and language teachers criticized the Grammar-Translation method as being an unsuccessful. They supported a natural approach of language learning and teaching and aimed at reforming foreign language teaching. The idea of memory association is developed: information is better stored and retained when it is linked within the text rather than separated. For them translation is confined to one skill (typically written one). Whereas, the spoken mode of language is primary, and it

should never be neglected and the native speaker is the best source of acquiring second language. Moreover, they rejected the use of translation as a teaching technique in foreign language (Cook, 2010).

2.3.2. The Direct Method

Due to exclusion of the translation, hence the mother tongue the Direct Method seems to coin a phrase of the 19th and 20th century (Baker 1989). During the mentioned phase “Monolingual teaching” (Widdowson, 2003); “intralingual” (Stern, 1992); all of these are terms can be used interchangeably to label this teaching method that focus on only L2 as medium of explanation and communication within the classroom (cited in Cook 2010). Krashen and Terrell used the term Natural Approach which is mainly based on the use of communicative situations of the target language without referring to the learners’ mother tongue. The notion of exposure to L2 and the role of comprehension are the main focus of this method (J. Richard and T. S. Roger, 2001). This term includes the teaching methods that upholds the monolingual view of language teaching and learning such, “graded structures, situational teaching, audiolingualism, communicative language teaching, task based instruction, lexical syllabus”, and so on (Cook, 2010 p. 7).

This is considered the first revolution in language teaching and learning which was “form-focused” (Cook, *ibid*, p.22). This method still owns the characteristics of grammar translation method. Teaching a language is restricted only to grammar and the superficial aspect of language. The aim of several teaching methods and approaches such as, habit-formation teaching (audiolingual), situational is to develop accuracy (Cook, *ibid*).

2.3.3. Translation in Foreign Language Teaching

Cook, (*ibid*) acknowledges that translation is used in the heart of monolingual classes when the teacher fails to make it clear for his students, those in their turn insist to use bilingual dictionaries outside the classroom. Furthermore, no one can prevent them from translating in their minds (Widdowson, 2003).

2.3.3.1. The American Army Method

The American Army Method is a teaching method developed to train military people. There is a kind of collaboration work within the classroom, mainly: a trainer who is a native speaker, and a linguist whose task is to explain what is said by the native speaker. So there is co-presence of the target language and another language that the students already know.

2.3.3.2. Suggestopedia

In the 1970s The Bulgarian's Georgi Lozanove method Suggestopedia took place in foreign language classroom. The main principle of this method was to reduce the students' stress which was supposed to lead to learning success. It seems that this method made recourse to translation in designing bilingual materials that contain lists of vocabulary and texts that are learned in a relaxed atmosphere to reinforce the students' retrieval of information; so, teaching is based on direct instruction (Crystal, 1957 as cited in *ibid*).

2.3.3.3. Total Physical Response

Total Physical Response (TPR) is originated from James Asher's idea that learning second language looks like the child's language acquisition. The teacher's task is to use the target language in communicative situations to control and direct the students' behavior. He can make recourse to non-verbal aids or words in the student's native language to encourage student and stimulate them (J. Sárody, T.F.Beneze et al 2006). The students, in their turn, perform the instructions without speaking from verbal to non verbal language or vice versa. One views this as a kind of translation if the concept of translation is considered in its large concept as we have it above at the beginning of this chapter.

2.3.3.4. Community Language Learning

Community Language Learning method developed by Charles A Curran stresses on the idea of "counseling-learning". This idea implies that the skillful teacher should understand the problems that the students face and find solutions to them, also advise them how to overcome their learning difficulties to make it clear for the students how to use the target language communicatively, thus, it is student-

teacher centered. This method is based on the transcription of literal equivalents to the target language to explicit the meaning and to allow students to create their own combinations.

2.3.4. The Position of L1 in Language Learning Theories

L1 is taken into consideration when speaking about how we learn a language. According to the cognitive view of language learning, L1 can be used in foreign language classroom since learning is an intellectual process, and comparing the native and foreign language in terms of its structure and its features is a mental activity (House, 2009). In addition, from sociocultural perspective L1 helps in building the platform of L2 production (Anton and DiCamilla 1998; Swain and Lapkin 2000, as cited in Ellis 2008).

2.3.5. L1 in Second Language Acquisition (SLA)

Since pedagogical translation implies the use of the students own language which is usually their native language, the role of L1 was one of the hot issues in Second language Acquisition. For many years, there were debating about the nature of the role of L1.

For behaviorists many learning difficulties are due to the L1 since differences between the latter and L2 may cause negative transfer as well it can aid L2 learning. Hence, teaching pedagogy focused mainly on areas of interference. Due to that Krashen developed “contrastive analysis Hypothesis” that reveals the usefulness of the learner’s current knowledge. Then, the notion of interference was re-examined. Hatch (1983) finds out that there are other factors other than interference that produce errors. It is due to Chomskian Universal Grammar which implies that there are common features of all languages, thus interests are shifted from studying the area of differences to both similarities and differences. Therefore the learner is considered as an active processor, he uses strategies to both store and produce L2 knowledge. Thus, Corder (1978) reformulated *interference* into *learner strategy* that takes place to compensate the lack of linguistic resources of L2. He labels this intercession, a communicative strategy (Ellis, 1985).

2.3.6. Reasons of the Rejection

For many years translation has been seen as an inappropriate method in language teaching; i. e, inefficient way of testing skills and time-consuming. In addition it produces interference; it prevents students from thinking in foreign language; and the co-presence of L1 and L2 hampers L2 learning (Lado 1964; Bearrdsmore 1982; Faerch and Kasper 1983; Brown 2002; Malmkjaer, 1998 as cited in Lenardi, 2010). Moreover, House (2009), listed the main arguments of those disfavored translation in the following Quotation “ finally translation per se was claimed to be only an unnatural activity but highly specialized one, which far from being a help was a hindrance to the desired development of the four basic skills: listening, speaking, reading, and writing. It was seen as a specialized fifth skill, to be used only after learners had acquired a superior knowledge of the foreign language.” (p.61). So, it is assumed that the co-presence of the mother tongue and the target language has a bad effect on learning a foreign language and result compounding bilingualism.

For House (ibid), these arguments are neither valid nor proved in scientific research. Also, the readmission of translation takes place since there is a theoretical justification which was not set up by the Grammar Translation-Method supporters. Howatt (1984 p. 161) states that “the practice of translation has been condemned so strenuously for so long without any really convincing reasons that it is perhaps time the profession took another look at it” (quoted in Baker, 1989 p. 120). Bilingualization involves contact between the two languages (L1 and L2). This contact between languages was rejected since it was believed that this minimizes the natural development of the learning of the second one and produce transfer when the two language systems fuse into one system. This process is compounding bilingualism. Whereas, second language pedagogy sought to promote coordinate bilingualism, here the two language systems are kept apart.

2.3.7. Coordinate and Compounding Bilingualism

But, even if teachers attempt to make their students coordinate bilinguals, they pass through compounding process. Bilingualization is not only requiring an additional language besides the mother one, but also it is a learning process for Widdowson (2003) classroom procedures should promote this type of contact

between L1 and L2. Even coordinate bilingual passes interlanguage phase this type of learning is presented as

$L1 \rightarrow L1/2 \rightarrow L1+L2 \rightarrow$

Figure 01: Coordinate Bilingual Process (Widdowson, *ibid*, p. 150)

Whereas teaching procedures hold coordinate bilingual procedures is presented as the following

$L1 \rightarrow L2 \rightarrow L1+L2$

Figure 02: Teaching Procedures and Coordinate Bilingual Process (Widdowson, *ibid*, p. 150)

So, there is a difference between teaching procedures and the learning process.

Monolingual teaching never counts for the notion of ‘foreignness’ (which is relevant to our research context). According to Widdowson (*ibid*), there is a need of L1 when learning L2 since what is foreign is recognized by what is familiar. This is why L2 learners differ in their foreignness. Monolanguage teachers should take into account that L1 is a major factor in second language learning.

2.3.8. Second Revolution: Meaning Focus

In the 1972, findings from psycholinguistics and sociolinguistics seem to have its due place in foreign language learning and teaching. There was the development of Hymes’ notion of communicative competence which marked a major shift in the field to more stress on the underlying communicative strategy of the language learner and meaning. Different perspectives in this respect were stated related to learning ‘tasks’ that engage students in using the language to access to a particular communicative goal. In this respect, the role of comprehensible input is important since it activates ‘cognitive-language acquisition, to make the learner manipulates the language with the others effectively. Notions such the learners’ needs, autonomous learning, task-based learning/student-centered teaching, authenticity, and meaningful language all are key notions discussed in this period (Cook, 2010).

Latter, attentions are paid to linguistic features and their role in meaning construction and communication (Long, 1991). Then Tasks are designed to promote

different areas of language learning considering the students prior knowledge. Fatherly, cross-lingual syllabus developed and concerned translation as a ‘real word task’. It helps in developing the students’ communicative skills since it deals with forms that convey communicative acts.

2.3.9. The Revival of Pedagogical Translation

There was a revival of the use of translation in foreign language teaching. For Duff (1989 as cited in Baker, 1989), Grammar Translation Method is confined and eccentric. Whereas, the use of translation has different implementations. Translation can be an integral part into direct method teaching. Also, it can be used to make learners focus on the text as linked entities, so that they be aware of the gist of the discourse and features of the genre that they exposed to as they are looking for stylistic and pragmatic equivalence.

3. Research on L1

There were different hypothesis about the value of using L1 in SLA. Research on the use of L1 in foreign language classroom considered the context in which the latter is used. Number of small-scales studies is conducted. Turnball and Arnett looked for studies on the use of L1 (2002) reveal that there is relationship between the students’ achievements and the use of TL. They recommended that LT should be used as maximal as possible since it is the source of exposure. Duff and Polio’s (1991) investigation the context of L1 and L2 use in foreign language classrooms at University of Southern California reveals huge variations among teachers. They also recognized that this variation is due to different variables such as the content of the lesson, departmental instructions, etc. Also, Kim and Elder (2005) recognized variations in L2 and L1 use by four secondary schools foreign language in New Zealand they reported that there is correlation between the teachers’ use of L1 and L2 and the pedagogical functions. Whereas, there is lacking in product-process research to clarify the effect of L1 and L2 uses in foreign language classroom on students achievement (as cited in Ellis, 2008).

4. Situations of L1 Uses

For many authors translation is considered as the fifth skill Malmakjaer (1998, p.8) states “It is misleading to suggest that translation is radically different

from the other language skills if it depends on and includes them” (quoted in Leonardi, 2010). He agrees with Leonardi who views translation as a skill that can be used to test competences and as a means rather than an end. In addition, Chambers (1991, as cited in Leonardi, *ibid*) lists situations in which translation is used. These are organizational instruction, activity instruction evaluation and correction, and disciplinary intervention. Also, Auerbach (1993) recognizes that students are positive when the teacher uses L1 in the teaching process especially in the following situations:

- (1) Language analysis and grammar explanations
- (2) Cross-cultural issues discussion
- (3) Classroom management
- (4) Instructions and feedback
- (5) Error explanation
- (6) Comprehension check (as cited in, Leonardi, *ibid*)

5. Reasons of using Translation in Foreign Language Classroom

There are causes why teachers and students use translation. It is realized that translation develops accuracy whereas focusing only on communication produce formal inaccuracy. Another advantage of translation exercises is that students are confined by an original text, thus they face up to the target language system, and here, they can do no recourse to avoidance strategies. Another advantage, translation makes students aware of differences between L1 and L2 and helps them to recognize that there is no one-to-one equivalence of linguistic expressions (Baker, 1989).

For Harmer (2001), students use their mother tongue when doing their classroom activity because they have linguistic gaps that prevent them from performing specific linguistic task. Translation is a natural mental activity: it is a tendency when learning a foreign language; students translate words or phrases unconsciously. Further on, the teacher provides a comfortable psychological atmosphere for the learners while using L1, hence he/she will be closer to them. Also the use of L1 is a good technique to cope with different learning style and abilities. Antón and DiCamilla (1999) hold that the use of L1 in FL can help students in doing class activities, to maintain common goals, to externalize their input (cited in Leonardi 2010).

Harmer (2007) discusses the role of the mother tongues and the use of students' mother tongue (which is Arabic in our case) in classroom management, since learners tend to translate into their mother tongue; the use of L1 is a learning strategy. For him, L1 can be used to check students' comprehension of instructions for an activity (feedback), to explain conceptual terms, or to help or encourage students individually.

For Ross (2000), the use of translation deduces L1 intervention and interference since students become aware of linguistic differences (at all language levels) between their own language and the target one. In addition, it promotes qualities of language learning which are accuracy, clarity, and flexibility.

Moreover, Ross (*ibid*) considers translation as the fifth skill since it involves dealing with language as it is socially embedded and a means of understanding communication between speakers who do not share the same mother tongue is promoted (*ibid*). In a same view, Leonardi (2010) considered translation as the fifth skill. For her it can be used to test competences. Also, Malmakjaer (1998) "It is misleading to suggest that translation is radically different from the other language skills if it depends on and includes them" (p. 8) thus it is time saving since it helps in developing the four skills at once.

Schweers (1999) L1 is used to validate the learners' previous experiences, to ensure the feeling of security, to allow them to express themselves. The mother tongue can helpfully be used to discuss cross-cultural. When contact with an individual; when tact and empathy are required on the part of the teacher, classroom management; when presenting grammatical rules to avoid unnecessary terms.

6. Translation in ESP Context

In ESP context, teachers try to combine a synthesis of methodologies, procedures, materials that help them in context-specific teaching. The ESP practitioner aim is to make students' practices more authentic, to promote their comprehension of specific discourse, to make the balance in their practice of linguistic, cultural, and social language that is relevant to the learners situations that they need to act in outside the classroom (Hutchinson and Watter, 1987)

One of the suggested procedures is the use of the L1 in teaching and learning of foreign language. In fact, before the late of the half of the nineteenth century people tend to learn foreign language by making recourse to their first language, even grammar, vocabulary are taught through translation. For instance, the main teaching technique of grammar translation method is studying the syntax and morphology of the foreign language and translating the student's native language into the foreign one, mainly with a focus on reading and writing (Baker, 1989).

From the late of the 1970s into the 1990s, some voices called for the need of translation in language teaching (Cook, 2010). Widdowson, in his *Teaching Language as a Communication* devotes a part to speak of translation in teaching written discourse. In his book *Exploration in Applied Linguistics* (1979) explains translation as communicative exercise in ESP context.

Widdowson supports a wide angle approach to language teaching which is language as communication. For him linguistic skills and communicative abilities are in association with each other, thus he calls for the need of integration rather than separation that should be taken into consideration in designing classroom materials and exercises. To make the learners comprehend discourse, the teacher should organize teaching units and teaching tasks as shift from one discourse to another. Thus exercises are effective stages that lead to the production of the second discourse.

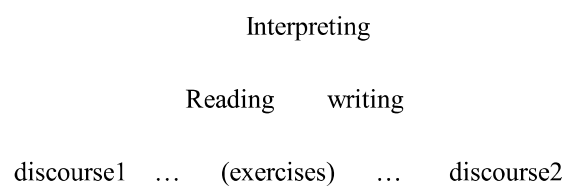


Figure 03: Discourse-to-discourse scheme (H. G. Widdowson 1978 p. 146)

One of the exercises that Widdowson suggests is based on the use of translation. The aim is to make the learners aware of what they are doing through associating their prior knowledge with current knowledge and engage them in processing the target language to explore and to extend this knowledge. He states that "Translation here, then, is an operation on language use and not simply on language usage and aims at making the learner aware of the communicative value of

the language he is learning by overt reference to the communicative functioning of his own language” (Widdowson, 1979, p.160).

The aim of ESP is to make the learner an effective communicator within the context that he will encounter outside the classroom, thus communication is key notion in class specific teaching. T. Hutchinson and A. Watters uphold that

ESP is not just a matter of Science words and grammar for Scientists, Hotel words and grammar for Hottel staff and so on. When we look at a tree, we see the leaves and branches, but there is much more to the tree than just these – much of it hidden from view inside and beneath the tree. The leaves do not just hang in the air: they are supported by a complex underlying structure. In the same way there is much more to communication than just features that we read and hear. We need to distinguish as Chomsky did with regard to grammar, between *performance* and *competence*, that is between what people actually do with language and the range of knowledge and abilities which enables them to do with the language and range of knowledge and abilities which enables them to do it (Hutchinson and Watters, 1981 quoted in Hutchinson and Watters p.1987).

How can translation as a classroom exercise help to access to the mentioned ESP objective? In fact it does do so. Translation involves dealing with real communicative acts that have “real functions”. Giving the learners communicative situations that are appropriate to them and asking them to translate is a good way of engaging them in understanding real life communication. Moreover it is a communicative task-based learning and translation in language teaching provides students an idea of how the structure of a message must be suitable with its communicative functions (House 2009).

7. L1 and Scientific Discourse

Widdowson (1979) investigated the nature of scientific discourse and identifies its correlation with pedagogical practice. He acknowledges that scientific discourse is not confined to the notion of ‘register’ rather it is concepts and communicative instruction take place within a particular area of inquiry called science and technology, in other word, it is a universal mode that is manifested by scientists. He fatherly adds “scientific discourse is a universal mode of communicating or universal rhetoric, which is realized by scientific text in different languages by the process of textualization” (p.52). He recommends that pedagogical

speaking teachers should make recourse to L1 and non-verbal means. That correspond the concepts and procedures of scientific disciplines. Exercises suggested by widdowson are presented in the following diagrams.

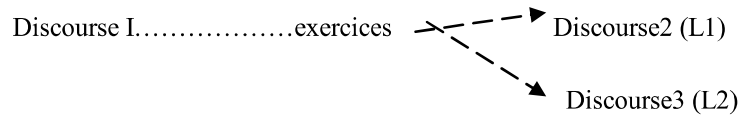


Figure 04: Discourse-to-discourse Schemes and the use of (L1) (Widdowson,1978, p.159)

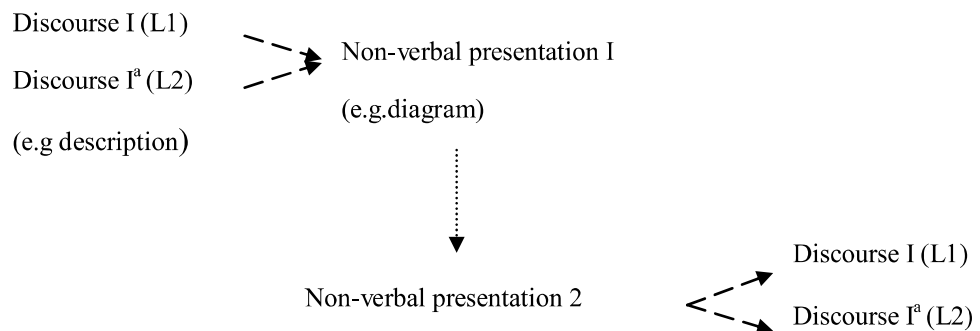


Figure 05: Discourse-to Discourse Scheme the use of Non-verbal Representation (Widdowson, ibid, p.160)

Conclusion

From this brief review of the history of pedagogical translation and its strong presence in Foreign language teaching, it seems that the rejection of translation was not justified scientifically. As well as, with regard to the mentioned justifications, we conclude that translation is one of the teaching variables that can be integrated a selected teaching approach.

Introduction

This research deals with the difficulties the students encounter when dealing with scientific texts, and how these can be handled through implementing translation into the mother tongue while explaining a reading text. So, to achieve the mentioned objectives, this chapter is concerned with the description of the students' and teachers' questionnaires. Then, it provides a detailed analysis of some reading exercises practiced by third year Biology students.

1. The Students' Questionnaire

1.1. Description of Students' Questionnaire

In this study, questionnaire adopted consists of set of close and open statements and questions and control question, to achieve an authentic data. It is submitted to (30) students who are selected randomly. This questionnaire comprises three sessions: Session One is concerned with general information; Section Two shows students' attitudes toward the use of translation, hence L1 in L2 classroom; and Section Three session devoted to students views about monolingual classroom.

1.2. The Analysis of the Students' Questionnaire

1.2.1. Section One: General Information

Question 01: How long have you learned English?

Suggestions	Number of Students	Percentage
8 years	6	20
6 years	6	20
7 years	3	10
4 years	14	46,66
9 years	1	3,33

Table 01: The Period of Learning English

Table (01) demonstrates how long students have been studying, of course, the learning period is one of the variables that first may influence the independent variable on one hand, and on the other hand it is criteria of using translation as a pedagogical technique. It should be revealed that students do not understand this question in the same way: some of them consider middle school courses as the starting point; others count only English courses during their high school study; even there are some students consider their private school course as part of

English experience. Accordingly, most of students (46, 66 %) have been studying English for 4 Years, and (20%) for 8 and 6 Years. Whereas, (10 %) of the students have engaged in learning English for 7 Years and the minimum percentage (3, 33 %) for 9 Years. Also, one student comments that “learning English is my own personal effort”.

Question 02: Are you satisfied with the teaching methods that are used?

Yes No

Suggestions	Number of Students	Percentage
Yes	13	43,33
No	17	56,66

Table 02: Students’ Satisfaction with the Running Teaching Methods

From table (02) it is deduced that most of students are not satisfied with the used teaching method since they claim that “our English courses do not help us to be effective communicators, the matter is not just learning some technical terms”. Other students feel bored when their teacher uses Arabic all the time. Whereas, (43, 33%) are satisfied with the teaching method since their teachers do translate into Arabic the necessary terminology to help their students in understanding the text.

Question 03: Why is learning English important?

- a) To publish in international magazines.
- b) To use the language in a communicative way.
- c) To understand new finding in your subject matter

Suggestions	Number of Students	Percentage
a)	4	13,33
b)	17	56,66
c)	9	30

Table 03: Whys of Importance

As can be seen in Table 03, most of the students (56, 66 %) see that English is important *to use the language in a communicative way*. Also, (30%) of the students select the third option which is *to understand new findings in their subject matter* and the rest (13, 33 %) chose the Objective (a) which is *to publish in international magazines*. Some students comment that “I need English in my job and more specifically I need to read about new

invents and world developments. So, generally speaking they need English in real world communication.

Question 04: Do you need what you are learning in your future carrier or job?

Suggestions	Number of Students	Percentage
Yes	26	86,66
No	2	6,66
No answer	2	6,66

Table 04: The Need of English in the students' future carrier

The results in Table (04) reveals that the majority of the students (86, 66%) need English in their jobs whereas only (6, 66%) answer *no*. As well as, (6, 66%) of the students substain.

Question 05: Do you need to read in English outside the classroom in your subject matter?

Suggestions	Number of Students	Percentage
Yes	27	90
No	3	10

Table 05: The Need of Reading in English outside the classroom

Table (05) reveals that most of the students (90%) read in English outside the classroom since one session in per week is not enough as well as some of the available references are written in English. Whereas, the minimum percentage (10%) of the students need not so.

1.2.2. Section Two: Students' Attitude toward the use of L1 in L2 classroom

Question 01: I think Arabic should be used in our classroom

Suggestions	Number of Students	Percentage
Yes	22	73, 33
No	7	23, 33
No answer	1	3, 33

Table 06: Students' View on Using Arabic in their Classroom

Table (06) shows that most of the students support the use of Arabic in Technical English sessions since they may understand the lesson easily, and acquire words and their equivalentents in Arabic. Thus, translation as a teaching technique promotes students in translating into and from to English or Arabic quickly when the teacher uses it. So, this is what they really need especially when they publish in international online magazines. Also,

students state that “We use Arabic unconsciously so we can’t exclude it from our classroom since it helps us in understanding the reading material easily”.

Question 02: I think Arabic can be used to

- a) Manage classroom interaction
- b) Explain instructions
- c) Translate and explain vocabulary
- d) Explain grammatical rules
- e) Contact with students

Suggestions	Number of Students	Percentage
a)	7	23,33
b)	12	40
c)	7	23,33
d)	5	16,66
e)	7	23,33

Table 07: Contexts of L1 one uses in L2 Classroom

Table (07) shows the different teaching contexts of L1 used in ESP classroom: (40%) of the students prefer their teacher to use Arabic in *explaining instruction*; (23, 33%) of the students view that Arabic should be used in *managing classroom interaction*. Similarly, (23, 33%) of the students argue with *translating and explaining vocabulary*. Yet (16, 66 %) of students see that L1 is needed *in explaining grammatical rules*.

Question 03: I translate even if my Teacher does not allow me to do so when I read scientific Text

Suggestions	Number of Students	Percentage
Yes	27	90
NO	2	6,66

Table 08: Students’ Preference for Translation into Arabic When Reading a Scientific Text

Results in Table (08) reveal that (90 %) of the students Translate event if they are not asked or allowed to do so, yet only (6, 66%) do not do so. It is supposed that translation into the mother tongue is a natural process that takes place unconsciously in the mind of a foreign language learner.

Question 04: I prefer using specialized bilingual dictionary (Arabic-English) when reading scientific text rather than monolingual specialized dictionary (English-English)?

Yes No

Suggestions	Number of Students	Percentage
Yes	26	86,66
No	2	6,66
No answer	2	6,66

Table 09: Students preference of using bilingual dictionary (Arabic-English)

Results in Table (09) reveal that most of students tend to use bilingual dictionaries (Arabic-English). Whereas, (6, 66 %) prefer monolingual dictionary. Similarly (6, 66 %) do not answer.

Question 05: Do you feel comfortable when teachers use L1?

Yes No

Suggestions	Number of Students	Percentage
YES	23	76,66
NO	7	23,33

Table 10: Being Comfortable when the Teacher Use L1

Table (13) shows that the majority of the students (76, 66%) feel comfortable, since their teachers make recourse to Arabic when teaching English. This means that the use of Arabic raises their self confidence, yet (23, 33%) of the students select the option *no*

1.2.3. Section Three: Students' Attitudes and Feelings Toward English Only Classroom

Question 01: Why is it difficult to comprehend your teacher when he explains in English?

Students' Difficulties	Number of Students	Percentage
Lack of linguistic competence	11	36,66
No answer	12	40
Not difficult	1	3,33
No problem	1	3,33
Inability in understanding the teachers' instructions	1	3,33
Inability of understanding the spoken language	1	3,33

Table 11: Difficulties in Comprehending the Teachers' Explanation in English

Table (10) demonstrates different areas of students' difficulties in understanding the teachers' explanation in English. (36, 66 %) of students assess their selves as *linguistically incompetent* since during the middle school English courses focus grammar and neglects the communicative strategies. (40 %) of the students do not answer; we suppose that they cannot

express their difficulties because they could not write their argument properly and correctly. Whereas, (3, 33 %) of student have no problem. The same ratio of the students (3, 33 %) suggests the teachers' instructions and spoken language as areas of difficulties.

Question 02: What are the main difficulties that you face when you read scientific texts in English?

Suggestions	Number of Students	Percentage
unfamiliarity with scientific vocabulary	19	63,33
No Answer	11	36,66

Table 12: Students' Difficulties in Reading Scientific Text in English

Results in Table (11) show that most students (63, 33%) are unfamiliar with scientific terms what disable them from having the general idea of the text whereas (36, 66 %) do not answer; our argument is that the students are enable to express their attitudes.

Question 03: When my teacher uses only English I get bored.

Yes No

Suggestions	Number of Students	Percentage
Yes	17	56,66
No	13	43,33

Table 13: Getting bored of Monolingual Teaching.

Table (12) reveals that most of students (56, 66 %) feel bored when the teacher neglects the students' mother tongue. Whereas, (43, 33 %) of them do not feel so, yet they comment that they feel bored sometimes.

1.3. Discussion of the Students' Questionnaire

The analysis of the Questionnaire shows that

1- Most of the tested students who are studying technical English related to their domains welcome the use of translation in the teaching and learning context although most of them have been studying English at least for *four years* as it can be seen in Table (02).

2- (43, 33%) Students are satisfied with the teaching method; the main reason is that their teachers use some oral translation into the mother tongue from time to time (when it is needed). Accordingly students communicate within an enthusiastic way and this is what the rest of the percentage (56, 66%) really need. In addition, English is important in the students' future carrier to all of the students (see Table 04 and 05) and the majority of them (56, 66 %) need to use English in real life communication. Moreover, reading is important to promote their linguistic and communicative competence on one hand and to be familiar with new findings in their subject matter on the other hand.

4- Also, it is clear that most students argue the use of Arabic in the classroom when explaining ESP reading course (Table 06) because they believe that the presence of the mother tongue is necessary in understanding concepts, vocabulary, grammatical rules, and instructions (Table 07). Also, the use of the students' mother tongue ensures students' feeling of comfort what increase their motivation and self confidence (Table 09). In addition, most students (90 %) translate into the mother tongue, so it is a *reading strategy* and *learning style* (Table 08). Moreover, (56, 66 %) see that reading without translation into Arabic is a difficult task (Table 12).

5- Section Three shows that most of students disfavor English only method since they face difficulties in understanding the teachers' explanations and scientific reading texts especially when they are unfamiliar with scientific terms, that is to say, they lack linguistic knowledge. To bridge the gaps translation is an effective technique that deals not only with linguistic aspect of the language, also it deals with communicative acts. Moreover, students feel bored when the teacher uses only English as a medium of instruction what effects classroom discussion because the foreign language speaker tend to use Arabic as a speaking strategy to avoid communication break downs when they lack language knowledge.

2. The Teachers' Questionnaire

2.1. Description of the Teachers' Questionnaire

The adopted questionnaire consists of set of different types of questions: close, open question, and control question to ensure its validity and to obtain authentic data. It includes three sections: Section One devoted to general information concerning the teachers' background, their tasks, and the teaching objectives, etc to compare it with Section Two. The latter in its turn is concerned with the teachers' view on L1 and translation and it uses in the teaching situations. Section Three shows View of monolingual teaching, students' reading comprehension difficulties, and the impact of this technique on ESP students.

2.2. Section One: General Information

Question 01: Are you English teacher or subject-specific teacher?

Teachers' Suggestion	Number of the Teachers	Percentage
English teacher	04	40
subject-specific teacher	06	60

Table 14: English Teacher or Subject-specific Teacher

Table (20) shows that most (60 %) of the technical English teachers are subject specific teacher. While (40%) of the teachers are specialized in English (one of them is an ESP practitioner).

Question: Why is teaching English important?

Teachers' Suggestion	Number of the Teachers	Percentage
1. The language of research	2	20
2. Most of new international references are in English	4	40
3. English is needed in the students' carrier	4	40

Table 15: The Importance of Teaching English

Table (02) shows that teachers view English as an important language for threefold reason. First, the majority of the teachers (40%) state that English is needed in the students' future carrier. Similarly, (40%) see that English is the language of new international references. Whereas, (20 %) of the teachers view that English is the language of research.

Question 03: What do your students need English for?

Teachers' Suggestion	Number of the Teachers	Percentage
1. to publish in international magazine	2	20
2. to communicate with their stuff in work situations	4	40
3. writing scientific articles or reports	2	20
4. Translate scientific text	2	20

Table 16: Teachers View of the Students Needs

Results in Table (03) confirm the students' answer (see Students' Questionnaire, Table 06) especially Suggestions 1 and 2 which demonstrate that English is needed in writing scientific articles and reports (20 %). The same ratio of the teachers sees that students need to translate scientific reports when they conduct their research papers.

Question 04: What are the main teaching objectives of your classrooms?

Teachers' Suggestion	Number of the Teachers	Percentage
To be familiar with technical terms	3	30
To improve techniques and methods for understanding scientific text	4	40
Use written and spoken language effectively.	3	30

Table 17: Teaching Objectives of Technical English Classrooms

Table (04) reveals that most of the teachers see that the first objective is to understand scientific text, this mainly through having reading courses. In addition, (30 %) state that the teaching objective of the reading course is to learn some scientific terms. Similarly, (30 %) see that technical English course generally focus on using both spoken and written language. The researchers agree that Translation helps both teachers and students access to all of the mentioned objectives and needs.

Question 05: What is the aim from your task when teaching reading?

- a) Understand scientific texts
- b) Understand and use scientific language communicatively

Teachers' Suggestion	Number of the Teachers	Percentage
a)	2	20
b)	8	80

Table 18: The Teachers' Task in English Session

Results in Table (05) demonstrate that the majorities (80%) of the teachers have principle of *Understanding and using scientific language communicatively* in their English course; therefore they focus on interaction with the scientific discourse and on the students' reading skills. Whereas, (20 %) of the teachers' task is to *Understand scientific text*. So, in both of the two cases teaching specialized English is reading-oriented syllabus.

Question 06: Do you have any idea about methods in teaching English for specific purposes (ESP)?

Yes No

Teachers' Suggestion	Number of the Teachers	Percentage
Yes	4	40
No	6	60

Table 19: The Teachers Ideas about the Teaching Methodology

As it can be seen from Table (06), the majority of the teachers (60%) have no idea about the teaching methodology since they are subject-specific teachers. However, (40%) of the teacher have studied some teaching methodology during their high education since they are specialized in teaching English as a foreign language (see Table 1). the researcher supposes that those who lack principles of teaching methodology make recourse to translation as problem solving technique when they find it difficult to deal with a particular situation.

2.3 Section Two: Teachers' Uses of translation into the Mother Tongue in ESP Classroom

Question 01: Are you for or against using the students' mother tongue (L1) in foreign language classroom?

For against

Teachers' suggestion	Number of Teachers	Percentage
For	6	60
Against	4	40

Table 20: Against and for the Use of the Mother Tongue in Foreign Language Classroom

Results in Table (07) reveal that the majority of ESP practitioners (60%) argue with the use of the mother tongue since it helps them in avoiding misunderstanding on the part of the students. Yet, (40%) of teachers are against the use of the mother tongue in foreign language classroom their main arguments are: “translation minimizes the students’ acquisition of the target language, even they make no effort in acquiring the new language, and it reduces their motivation”.

Question 02: Do you think that translation (of any kind) should be used in teaching reading comprehension of scientific texts?

Yes No

Justify your choice

Teachers' Suggestion	Number of the Teachers	Percentage
Yes	6	60
No	4	40

Table 21: Teachers' Views on the Use of Translation in Reading Comprehension of Scientific Text

Table (09) shows that most of the teachers select (60%) option *yes* their main arguments are: Scientific discourse generally holds difficult scientific terms, thus translation is an important solution to solve this ambiguity. Whereas, (40 %) of teachers translation may miss specificity in the meaning of the target language. Some words have multiple meaning. Some students are not competent in English. I want my student to acquire only the target language. Students L1 is totally different from the language.

Question 03: Do you think that English should be the dominated language in the classroom?

Yes No

Teachers' Suggestion	Number of the Teachers	Percentage
Yes	10	100
No	0	0

Table 22: the Domination of English in Foreign Language Classroom

Table (10) reveals that that all the teachers (100%) without exception argue that English should be the dominated language within the classroom. This percentage ensures that the teachers are aware of exposing the students to the language they are learning. This means that translation and the mother tongue are used occasionally when they needed; we agree with teachers about this degree of L1 use, and our intention is see its effect when both teachers and students intend its existence.

Question 04: Do you think that Arabic should be used in the classroom?

Yes No

Teachers' Suggestion	Number of the Teachers	Percentage
Yes	10	100
No	0	0

Table 23: The Use of Arabic in Foreign Language Classroom

Table (11) shows that all the teachers (100%) argue with the use of the students' mother tongue when they teach English, that is to say, even those who disagree with the use of translation as a teaching technique on one hand and as it require the use of students' L1 in other hand make recourse to Arabic in some situation. So, Arabic is used in anyway.

Question 05: What is your aim of using the students' L1

- a) To interact easily
b) To explain abstract concepts

Teachers' Suggestion	Number of the Teachers	Percentage
A	3	30
B	10	100

Table 24: Teachers' Aims of Using Students L1 what is your aim of using the students' L1

Table (13) display that all the teachers (100%) resort to L1 *to explain abstract ideas* since it is the easiest way to save time and ensure the students' understanding. Yet (30%) of the teachers select Option *b*.

Question 06: I think Arabic can be used to

- a) Manage classroom interaction
- b) Explain instruction
- c) Translate and explain vocabulary
- d) Explain grammatical rules
- e) Contact with students

Teachers' Suggestion	Number of the Teachers	Percentage
A	3	30
B	2	20
C	4	40
D	0	0
E	3	30

Table 24: Teaching Contexts of Using the Students' L1

Table (14) displays the teaching contexts of the L1 uses: most of the teachers (40%) resort to translation *to translate and explain vocabulary*; (30%) of the teacher view that it is useful in managing classroom interactions; the same ratio (30%) see that it is needed when contact with students; and (20%) use it to explain instructions

Question 7: Does translation of (any kind) into the students' L1 reflect their reading comprehension level?

Yes No

Teachers' Suggestion	Number of the Teachers	Percentage
Yes	9	90
No	1	10

Table 25: Translation as a Feedback Activity

From Table (16) it is clear that the majority of the teachers (90 %) view that translation can reflect the students' reading comprehension level, yet only (10 %) select option *No*. this percentage ensure that translation provide teachers with information about the students level, language problem, thus It is a feedback activity for both teachers and students.

2.4. Section Three: The Impact of L1 on ESP Students

Question 01: Do you notice that your students are more comfortable when you use L1 in the classroom?

Yes No

Teachers' Suggestion	Number of the Teachers	Percentage
Yes	9	90
No	1	10

Table 26: Being Comfortable When Using L1 in the Classroom

Results in Table (18) reveal that all the tested teachers argue that the use of students' L1 realizes the students feeling of psychological relaxation, even no one (00%) rejected its effect on the students' psychological status.

Question 02: Do you think that translation (of any kind) motivates students to read scientific text?

Yes No

Teachers' Suggestion	Number of the Teachers	Percentage
Yes	10	100
No	0	0

Table 27: Translation as Motivation Raising Device

Table (19) demonstrates that the majority of the teacher (90%) notice that students' motivation is raised when they occasionally use L1 in the classroom. Such good circumstances are as a result of feeling of relaxation (see Table 18). Whereas, only (10%) of the teachers select *no* option.

Question 03: Do you think that translation makes students aware of linguistic feature of scientific discourse?

Yes No

Teachers' Suggestion	Number of the Teachers	Percentage
Yes	7	70
No	3	30

Table 28: Translation as an Awareness Raising Device

As it can be seen from Table (20) most of the teachers (70%) view that translation makes students aware of the linguistic features of scientific discourse, since translation is language oriented activity. Whereas, (30%) of the teachers see that it contributes nothing in acquiring discourse features of the nature scientific texts.

2.5. Discussion of the Teachers' Questionnaire

From the analysis of the teachers' Questionnaire, the following points are deduced:

1. Translation into Arabic is used (in any way) in foreign language classroom and even teachers (40%) who rejected this technique fell in the trap of the use translation into Arabic when they answered some of the controlling questions in this questionnaire, for example, Question all of the teachers use Arabic to explain abstract concepts (see Table 24).
2. Translation is a linguistic and communicative-oriented activity, thus it helps access to the students' needs and teaching objectives which are listed in Table 2 and Table 3, thus it has twofold implications. First, rendering from or into L1 diverts students to make connection between the two language systems. Thus they will be aware of the differences and similarities of both of the two languages at various linguistic levels, for example, they know what is optional and what is obligatory in specific language. Second, Translation involves communicative acts that have real functions, so it is a good way to engage the students in understanding real life communication, the teacher can use authentic materials, such as, sample of daily reports, weekly reports of a company, scientific reports.
3. Translation support ESP teachers in doing their task on one hand: making the course explicit for the students; dealing with some teaching difficult situations (mentioned in Table 24); providing feedback, and assessing the students. On the other hand, the use of translation has an effective impact on the students: when the teacher uses L1 the students' motivation is raised and their relaxation is realized (see Table 26 and 27).

3. The Analysis of the Students' Reading Exercises

3.1. Description of the Experiment

The present Analysis is complementary to the previous questionnaires. It casts around the students' practice of reading exercises to assess their understanding, and hence the effect of the use of the mother and translation in teaching ESP reading materials.

To ensure the credibility and reduce bias, blind experiment trial is realized. Also, the reading exercises were not given to the same group of students (the researcher preferred to have two different groups) to ensure the reliability of the experiment. If it had been the same group, students would have remember some features of the reading course or it's explanation so we can't rely on the results to conclude whether it's effective to use L1 in teaching translation. For example, if a group of students take a biology test just before the end of semester and one when they return to school at the beginning of the next, the tests should produce broadly the same results.

The objective of the following reading exercises is to see the effect of the uses of students' L1 and translation when explaining the course on biology students' reading comprehension of scientific texts. The role of the text is to provide the learners the carrier content context, to consolidate language knowledge and vocabulary; it is also a vehicle of information. Also, it compresses ranges of questions that are asked to assess students' understanding. These should reflect the target situation performance and the purpose of the text. The types of the questions do not require long written production from the part of the students, so that the analysis of their exercises would be objective and quicker.

The researcher agrees with widdowson's (1978) idea of designing a reading course: The topic is selected in relation to the students' subjects in their educational curriculum making recourse to what they already know to carry their subject matter knowledge over the learning of foreign language.

3.2. Activity 01: Read the text and answer the following questions

- 1) What are the enzymes?
- 2) What is the function of the catalyst?
- 3) What happens during the enzyme catalyzed?

Questions	Experimental group		Control group	
	Number of accuracy	%	Number of accuracy	%
Q1	14	46,66	15	50
Q2	15	50	15	50
Q3	10	33,33	12	40

Table 29: Manipulating Information from the Text

Table (01) shows the students' answer of the three above WH question. The aim of the first activity is to have general idea about the text. As it can be seen the students' answers are virtually the same ratio.

Section 02: Students' Understanding of Concepts and Terms

Activity Two: Give the definition of the word Proceed

Items	Experimental group		Control group	
	Number of accuracy	%	Number of accuracy	%
Proceed	7	23,33	1	3,33

Table 30: Students' understanding of the Item *Proceed*

Table (02) reflects that (23, 33 %) of the students of the experimental group defined the item *proceed* as a verb that mean *continuing or doing chemical reaction*, except one student whose answer is "proceed is a verb to do enzyme reaction" which cannot be wrong but less appropriate.

Question 02: Is this statement *true* or *false*?

- a) The catalyst speeds up the chemical reaction by reducing the amount of energy

	Experimental Group		Control Group	
	Number of accuracy	%	Number of accuracy	%
True	12	40	1	3,33
False	3	10	14	46,66

Table 31: Students Understanding of Statement a

The correct answer of the above is option *true*. Table (02) reveals that most of the students (40 %) in the experimental group identified the correct answer since they understand the term *reducing* which is identical to meaning of the term *lowering* in the text (look at the appendix). Whereas, students of control group have one way to answer this question: They compare the above sentence with the similar one in the text, therefore the word *reducing* does not exist in the text, most of them (46, 66 %) select the inaccurate option.

3.3. Activity 03: Extract from the text action verb and compound noun.

Students' suggestions	Experimental Group		Control Group	
	Number of accuracy	%	Number of accuracy	%
Action verb	12	40	4	13, 33
Compound noun	15	50	10	33,33

Table 32: Students Identification of Action verb and Compound Noun

Table (04) shows that the students of the experimental group perform better than the students of control group. With regard to the justification of this difference comes as fellow:

1-The first understand well the question, thus most of them suggest the correct answers, as an example of action verbs: *speed up, lower, proceed*, (40%) and compound nouns: *enzyme-catalyzed reaction, enzyme-substance complex* (50%).

2- Whereas, students of the control group most of them suggest incorrect action verbs, for example, *catalyzed* which is a noun. Their suggestion has a relation with its explanation during the course which is *a substance that makes chemical reaction happen faster*. The word *reaction* is a bit similar to the word *action* in terms of its pronunciation, although the word *action* explained as *event* and the word *reaction* is

defined as *chemical change* So, they linked this word *catalyzed*, since their reading strategy is based on looking at what is similar and different between what is asked and what is mentioned in the text or said when explaining it.

3- on the other hand, students of first group (experimental one) do not interfere meanings of elements within the text in such way, since Arabic is used to solve such ambiguity and to ensure that they understanding one term without making resort to what is similar to it, for instance, the word reaction is defined as *تفاعل كيميائي* catalyze as *محفز كيميائي* etc.

3.4. Activity 04: Map the text

Experimental Group		Control Group	
Numbers of correct answers	%	Numbers of correct answers	%
10	30,33	3	10

Table 33: Students' Translation into non-verbal Presentations of the Text

Table (05) reveals that most students of the Experiment group provides a reasonable non-verbal presentation of the text that reflects their understanding of the scientific text: they made the relationship between the main ideas of the text, for instance, they recognize the effect of the substance *catalyze* on the substance *enzyme* the role of each of them etc. while, only (10%) of the control group students provide an acceptable mapping of the text.

Conclusion

Conjointly, the analysis of results obtained through the questionnaires and the students' reading exercises provide sufficient indicators that the majority of ESP students and teachers agree with the use of translation when reading scientific texts. Additionally, the analyses of the gathered data reflect clearly the advantages of translation into the mother tongue as a teaching technique and ensure its positive effect on the students.

General Conclusion

The present research was mainly developed to assess the students' understanding of a reading scientific text when some support through the use of translation into the mother tongue is provided to know: How translation helps in achieving their needs and objectives; how it helps in dealing with their reading difficulties; how it affects the teaching and learning environment in general. Throughout the chapters some concepts which are relevant to the topic are discussed.

The results of the analysis went hand in hand with the hypothesis which emphasizes the usefulness and effectiveness of pedagogical translation and the mother tongue in teaching ESP students. The findings reveal that most students have some difficulties in reading scientific text and prefer the use of translation and the mother tongue to handle these situations. Moreover, from the analysis of the students reading exercises, it is clear that the experimental group is better than the control one, since translation encourages them to think and use their linguistic knowledge, that is to say, it promotes their thinking in the target language.

To test huge number of people at least 4 or 8 sessions are needed. So, because of time constrains and during the period of some objective difficulties ducting this study. As the majority of the universities and institutions were in strike, the experiment is limited in two reading sessions. Another difficulty is the lack of sources that directly related to the topic. in spite of all of these limitations, the research was carried out and achieved each of the mentioned objectives.

The findings of this research can be generalized and applied to any ESP students or even EFL students if the implementations of pedagogical recommendations are taken into account by both teachers and students.

Also, this study is the first step to deal with one of the teaching variables (L1) that is discussed in ESP context, since L1 is part of students' identity and learning style, especially in reading. Seeking for farther development in the teaching and learning process, further researchers can continue this study, focusing on other variables.

Abstract

This study is qualitative and quantitative accomplished to afford an illustration about the difficulties met by first year master in the department of biology, Kasdi Merbah University, Ouargla, when they read scientific texts in English. It aims at highlighting the role of the translation into mother tongue L1 in teaching English for Specific Purposes (ESP), i.e. finding out the extent to which anomalies result from the students' reading comprehension are solved through the integration of the mother tongue. The research data were gathered through a questionnaire and a reading comprehension test to check the hypothesis of this study which is: ESP learners manipulate technical texts at ease if some occasional, purposeful, and careful applications of translations (of any kind) into the students' mother tongue are provided for them. After analyzing the data obtained, results reveal that translation into the mother tongue has an important impact on the learning and teaching context in general and on teaching reading comprehension in specific. On the basis of the result achieved, some recommendations are suggested to teachers and learners.

ملخص

تركز هذه الدراسة على الشقين النوعي والكمي في محاولة منّا لتوضيح الصعوبات التي يواجهها طلبة سنة أولى ماستر ، بجامعة قاصدي مرباح، ورقلة، عندما يقرأون النصوص العلمية باللغة الإنجليزية (في قسم الأحياء (البيولوجيا ، (ESP) ويهدف البحث إلى تسليط الضوء على دور الترجمة إلى اللغة الأم في تدريس اللغة الإنجليزية لأغراض خاصة ، أي معرفة إلى أي مدى يمكن أن نتجنب الخطأ في القراءة والفهم لدى الطلاب من خلال دمج اللغة الأم. وقد تم تجميع البيانات البحثية من خلال استبيان واختبار القراءة والفهم للتحقق من فرضية هذه الدراسة وهي: يمكن للمتعلمين من التحكم في النصوص التقنية بسهولة إذا ما قدمنا لهم أحيانا بعض الشروح ESP خلال الانجليزية للأغراض الخاصة من أي نوع

Pedagogical Recommendation

To wind up, some pedagogical recommendations may have practical implications to help students cope with reading difficulties and teachers in doing their tasks.

Besides the positive effect of translation, the students should be aware of the context of elements within the text. Thus, they are requested to use contextualization strategy after they translate specific item to grasp its appropriate meaning on one hand and to avoid word for word translation which may lose the meaning of the text.

The role of the teacher, henceforth, should not be restricted to equip students with L1 equivalences but to explain and make analogies between the key items (whether words, expressions, phrases, concepts) within the same language and between SL and Target one, in order to make students aware of the exact meaning of items and whether they differ or resemble those in L1. In addition, L1 should be used just from time to time; it is important in foreign language classroom to create an English environment, that is, the L2 should be more dominant. Also, teachers have to consider the students' learning style preferences of teaching methodology to motivate them, for instance, they prefer the use of the mother tongue when explaining grammatical rules, whereas teachers are not aware of the students' opinions (compare Teachers' Questionnaire Table 24 and Table 07 in The Students' Questionnaire).

3. Plant Reproduction (flowers)

Flowers are the reproductive structures of angiosperms; they lead to the formation of seeds and fruits. They are involved in sexual reproduction in higher plants. Flower is composed of four basic floral organs: sepals, stamens, and pistils (carpels). Sepals constitute the calyx, and petals constitute the corolla. Stamens constitute the male gametophytes, and pistils constitute the female gametophytes. The male gametophytes are sperm-containing pollen grains, which form within the chambers another at the tips of stamens. The female gametophytes are egg-containing structures called embryo sacs. Embryo sacs develop inside structures called ovules, which are enclosed by the ovaries. Receptacle is the stem apex to which flower is attached.

Activity one: Read the text and answer the following questions.

1) What is the function of flowers?

.....

2) What are the components of flowers?

.....

3) What is the difference between stamens and pistils?

.....

4) Where do embryo sacs grow?

.....

Activity two: Are these statements *True* or *False*?

1) Flowers are not involved in sexual reproduction in higher plants?

2) Flower has three fundamental floral organs.

3) The petals constitute the calyx.

4) The ovules are enclosed petals.

Activity Three: chose one of the right answer

1) Flowers are involved in sexual reproduction in Animals

Plants

Humans

2) Stamens constitute the male Sporophytes

Phytotypes

Gametophytes

3) Embryo sacs develop inside structures called organs

ovaries

ovules

Activity 4: give the meaning of each word into Arabic

Sepals

Petals

Embryo sacs

Corolla

Calyx

Activity five: Find in the text

Synonyms of

Named

Constitute

Surrounded

Joined

opposites of

Lower

Outside

Secondary

Separated

Activity six:

1) Extract from the text passive verbs

.....

2) Find in the text words that contain affixes

.....

3) Find in the text compound nouns

.....

4) Give from the text adjectives that describes flower

.....

5) Give from the text some features of scientific language

.....

.....

.....

4. Enzymes

Enzymes are proteins that function as biological catalyst. a catalyst is a substance that speed up the chemical reaction by lowering the amount of energy necessary for chemical reaction to proceed. In an enzyme-catalyzed reaction, the reactant (the substance being acted upon) is called substance. During a reaction, the substance combine with a special region of the enzyme called active site to form a temporary enzyme-substance complex, which lowers the activation energy of the reaction rapidly.

Activity one: Read the text and answer the following question.

1) What are the enzymes?

.....

2) What is the function of the catalyst?

.....

3) What happens during the enzyme catalyzed?

.....

Activity Two: Give the definition of the following words?

Proceed:

Reactant:

Activity three: Are these statements *true* or *false*

1) A catalyst is an organ that speeds up the chemical reaction.

2) The catalyst speeds up the chemical reaction by reducing the amount of energy.

3) Before a reaction, the substrate combines with a special region of the enzyme.

Activity four: fill the gaps with the following words: protein, enzyme, and catalyst.

1).....a substance produced by all living things which helps a chemical change happen or happen more quickly without being changed itself.

2).....a natural substance that is essential part of humans and animals eat to help them grow and stay healthy.

3).....a substance that makes a chemical reaction happen faster.

Activity four: Transform the text into a diagram.

Find in the text the synonyms and the opposites of the following words

Link =

Called =

Exist =

Shape =



Opposite of:

Separate #

Slowly #

Raise #

Activity six:

1) Give from the text words that contain affixes

.....

2) Give from the text regular and irregular verbs

.....

2) Give from the text verb of status and verb of action

.....

3) Give from the text compound nouns

.....

.....

4) What does the pronoun *which* refers to in the text?

.....

.....

The Students' Questionnaire

Dear Students,

The student of 2nd year Applied Linguistics and ESP (Master level) are doing an investigation on: The role translation in teaching reading comprehension in for ESP students. You are kindly invited to answer these questions. Your honest answers will be of great help to us. Please answer or put a cross (x) in the appropriate box.

Section One: General Information

1. How long have you been learning English?

.....

2. Are you satisfied with the teaching methods that are used?

Yes No

Why.....

3. Why learning English is important to you?

- a) To publish in international magazines
- b) To use the language in a communicative way
- c) To understand new findings in you subject matter

4. Do you think that you need what you are learning in your future carrier or job?

Yes No

5. Do you need to read in English outside the Classroom in your Subject Matter?

Yes No

Section Two: Students' Attitude toward the use of L1 in L2 classroom

1. I think Arabic should be used in our classroom

Yes No

Why.....

2. I think Arabic can be used to

- a) Manage classroom interaction
- b) Explain instructions
- c) Translate and explain vocabulary
- d) Explain grammatical rules
- e) Contact with students

03. I translate even if my Teacher does not allow me to do so when I read scientific Text

Yes No

4. I prefer using specialized bilingual dictionary (Arabic-English) when reading scientific text rather than monolingual specialized dictionary (English-English)?

Yes No

5. Do you feel comfortable when teachers use L1?

Yes No

Section Three: Students' Attitudes and Feelings toward English Only Classroom

1. I understand my teacher when he/she explains the reading text in English only

Yes No

2. Why it is difficult to comprehend your teacher when he explains in English?

.....

3. What are the main difficulties that you face when you read scientific texts in English?

.....

4. When my teacher used only English I get bored

Yes No

Thank you for your contribution

Teachers' Questionnaire

Dear Teachers

We, the student of 2nd year Applied Linguistics and ESP (Master level) are doing an investigation on: The role of translation in teaching reading comprehension for ESP students. You are kindly invited to answer these questions. Your honest answers will be of great help to us. Please put a cross (x) in the appropriate box.

Section One: General Information

1. Are you English teacher or subject-specific teacher?

.....

2. Why is teaching English important?

.....

3. What do your students need English for?

.....

4. What are the main teaching objectives of your classrooms?

.....

5. What is the aim from your task is when teaching reading?

- a) Understand scientific texts
- b) Understand and use scientific language communicatively

6. Do you have any idea about methods in teaching English for specific purposes (ESP)?

Yes No

Section Two: Teachers' Uses of translation into the Mother Tongue in ESP Classroom

1. Are you for or against using the students' mother tongue (L1) in foreign language classroom?

For against

2. Do you think that translation (of any kind) should be used in teaching reading comprehension of scientific texts?

Yes No

Justify your choice

3. Do you think that English should be the dominated language in the classroom?

Yes No

4. Do you think that Arabic should be used in the classroom?

Yes No

5. What is your aim of using the students' L1

a) To interact easily

b) To explain abstract concepts

6. I think Arabic can be used to

a) Manage classroom interaction

b) Explain instruction

c) Translate and explain vocabulary

d) Explain grammatical rules

e) Contact with students

7. Does translation of (any kind) into the students' L1 reflect their reading comprehension level?

Yes No

Section Three: The Impact of L1 on ESP Students

1. Do you notice that your students are more comfortable and secure when you use L1 in the classroom?

Yes No

2. Do you think that translation (of any kind) motivate students to read scientific text?

Yes No

3. Do you think that translation makes students aware of linguistic feature of scientific discourse?

Yes No

Thank you for your contribution

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