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The Role of Metacognition in Enhancing Students' Competence in Translation

The Case of Third Year Translation Students at University Constantine 1.

*Thesis submitted to the department of foreign languages in candidacy for the degree
of doctorate of science
In applied linguistics and translation*

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Dedication

*To my dear parents for their whole hearted love and
immense encouragements*

To my brother Yacine for his continuous help and assistance

*To the living memory of my sister Robila who was most
eager than whoever to see this research completed*

*To my sisters Amina and Latifa whose love and kindness were
without measure*

To all my family, friends, colleagues and students.

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Abstract

This piece of research is an attempt to investigate the relationship between metacognitive knowledge of third year translation students in the university of Constantine-1- and their translation competence. The investigation, thus, is based on the main hypothesis that metacognitive knowledge is likely to exist on a par with a good performance in translation. In other words, students who are able to evaluate their aptitudes and competencies and to tell about the strategies they know or use and the factors pertaining to the development and acquisition of their translation skill are more liable to perform well in translation or are likely to be among the category of good achievers. To verify the plausibility of the advanced hypotheses, two questionnaires and a translation test are administered. The first questionnaire is undertaken before to the translation test, and the second one after completing one's translation. Although this research is meant to show the effect metacognition has on students' performance, it still insists on revising the way translation teaching is undertaken and stressing the importance of making students aware of the learning enterprise and of giving them the chance to self-monitor their own process of acquiring translation skill.

Key words: metacognition, awareness, translation competence, teaching translation.

LIST OF ABBREVIATIONS

CK : Conditional knowledge

CS: Conditioned stimulus

DK: Declarative knowledge

DTS: descriptive translation studies

ESIT: Ecole Supérieure d'interprètes et de traducteurs

FIT : Fédération Internationale des Traducteurs

ISIT : Institut supérieur d'interprétation et de traduction

PK : Procedural knowledge

SRL : Self-regulated learning

ST/ SL: Source Text/ Source Language

ThTs: Theoretical translation studies

TS : Translation Studies

TT/ TL: Target Text/ Target Language

UCS: Unconditioned stimulus

LIST OF FIGURES

Figure 1	Falvell's Model of cognitive monitoring.....	37
Figure 2	Brown's Metacognitive Model.....	40
Figure 3	Tobias and Everson's Componential model of metacognition.....	44
Figure 4	PACTE's model of translation competence acquisition.....	129
Figure 5	Pavlov's experiment on classical conditioning.....	142
Figure 6	Maslow's hierarchy of human needs.....	170
Figure 7	A three stage model of motivation.....	171

LIST OF TABLES

Table 1	Noël's classification of research areas on metacognition.....	24
Table 2	Piaget's stages of logical development.....	29
Table 3	The four stages of conscious competence learning.....	48
Table 4	Metacognition assessment tools.....	55
Table 5	Holmes/ Toury's map of translation studies.....	86
Table 6	Persas' comparison between novice and expert translators.....	129
Table 7	Meriam & Caffarella's four orientations to learning.....	150
Table 8	Weare and Gray's taxonomy of emotional competences.....	152
Table 9	Nisbet & Shucksmith's learners' super-skills.....	158
Table 10	Harter's dimension of intrinsic and extrinsic motivation.....	172
Table 11	Weiner's classification of causes of failure.....	174
Table 12	Variables pertaining to both motivation and metacognition and their function in their respective field of research.....	180
Table 13	Students' scores in the translation test.....	217
Table 14	Students' scores in each of the evaluation components apart.....	219
Table 15	Students' definitions of translation.....	228
Table 16	Students' results in the test examined against the type of definition they gave to translation.....	229
Table 17	Students' self-evaluation of their competence in translation.....	234
Table 18	A comparison between students' self-evaluation and actual marks obtained.....	236
Table 19	Students' justification for feeling unsatisfied with their competence in translation.....	240

Table 20	Students' self-evaluation of their progress in translation.....	244
Table 21	A comparison between students' evaluation of their own progress and their actual marks.....	246
Table 22	Students' evaluation of their inability to track their own mistakes.....	248
Table 23	Students' evaluation of the match between their own evaluation and that of their teachers.....	253
Table 24	Students' justification of their feeling of discrepancy between their own evaluation and that of their teachers.....	254
Table 25	A comparison between students' scores and their judgment of the discrepancy between their self-evaluation and that of their teachers.....	256
Table 26	Students' reaction to statement A (translation is no more than a mastery of languages).....	259
Table 27	A comparison between students' scores and their reaction to statements A.....	259
Table 28	Students' reaction to statement B (Translation problems are basically vocabulary ones).....	261
Table 29	A comparison between students' scores and their reaction to statements B.....	261
Table 30	Students' reaction to statement C (Translation is a natural talent and cannot be taught).....	262
Table 31	A comparison between students' scores and their reaction to statements C.....	263
Table 32	Students' reaction to statement D (After graduation we are normally expected to translate all types of question without difficulties)	265
Table 33	A comparison between students' scores and their reaction to statement D.....	265
Table 34	Students' reaction to statement E (A good translation is the one based on an exact rendition of the way something has been said in the SL)	266
Table 35	A comparison between students' scores and their reaction to statement E.....	267
Table 36	Students' reaction to statement F (A translator is not free to bring about any modification to the original form of the ST)	268
Table 37	A comparison between students' scores and their reaction to statement F.....	269
Table 38	Students' reaction to all statements as a whole.....	271
Table 39	Number of times the students have been reading the text.....	273
Table 40	Number of reading compared to students' marks.....	274
Table 41	Students finding difficulty with some words without the help of the dictionary	275
Table 42	Number of words students stumbled at without the help of the dictionary.....	278

Table 43	Students thinking or not the dictionary is enough o reach a good translation.....	279
Table 44	Students reporting a problem in their translation.....	285
Table 45	Students who have been successful in solving the translation problem.....	286
Table 46	Students finding solutions or not to translation problems compared to their self- evaluation of their own renditions.....	287
Table 47	Students' reaction to the question of how they did solve the problem.....	289
Table 48	Students' strategies for overcoming translational problems.....	293
Table 49	Students' self-evaluation of their actual translation in the test.....	296
Table 50	A comparison between students' prior evaluation and post-evaluation with their actual marks obtained.....	298
Table 51	Students 'reasons for not being satisfied with their translation.....	300
Table 52	Students' evaluation of their retention capacity.....	303

CONTENTS

INTRODUCTION.....	1
1-Rationale.....	1
2- Statement of the problem.....	5
3- Research hypotheses.....	5
4- The population under study.....	6
5- Means of research.....	7
6- Methodological procedure.....	11
7- Structure of the thesis.....	12
CHAPTER ONE: COGNITION AND METACOGNITION.....	14
Introduction.....	14
1-Cognition.....	14
1-1-Definition.....	14
1-2-Origin of cognitive psychology.....	15
2-Metacognition.....	19
2-1-Definition of metacognition.....	19
2-2- Noël’s classification of research on metacognition.....	24
2-3- Origin of the concept of metacognition.....	26
2-3-a- The Piagetian Theory.....	27
2-3-b- Vygotsky’s Theory.....	31
2-4- The difference between cognition and metacognition.....	34
3-Some Models of metacognition.....	36
3-1- Flavell’s Model of cognitive monitoring.....	37
3-2- Brown’s model of metacognition.....	40

3-3- Tobias and Everson’s model of metacognition.....	44
4- Difference between self-awareness and consciousness.....	46
5- Metacognition and conscious competence of learning.....	47
6- The contribution of metacognition to skills other than translation.....	50
6-1- The role of metacognition in skilled reading.....	50
6-2- The role of metacognition in skilled writing.....	53
7- Assessment of metacognition.....	54
7-1- The MAI inventory.....	57
7-2- Knowledge Monitoring Assessment Instrument.....	58
8- Implementing metacognition in instruction.....	61
9- Conclusion.....	68
CHAPTER TWO: TRANSLATION THEORY AND TRANSLATION PEDAGOGY	68
Introduction.....	68
1- Translation theory.....	68
1-1- History of translation theory.....	69
1-1-a- History of Translation Theory in The West.....	71
1-1-b- History of translation theory in the Arab Tradition.....	79
1-1-c- Translation in Algeria.....	81
1-2- Translatology or Translation Science: Beginning of Systematization in Translation Research.....	83
1-3- Modern Translation Theories.....	86
1-3-a- Equivalence-based Translation Theories.....	88
1-3-b- Contrastive-based Theories.....	90
1-3-c- Function-based Theories.....	92

1-3-d -Polysystem Theory.....	95
2 -Translation Pedagogy and Translation Didactics.....	97
2-1 -Translation Pedagogy.....	98
2-1-1 -Can Translation be taught?.....	100
2-2 -Didactics of Translation.....	101
3 -Translator-training institutions.....	104
3-1 -Historical Background.....	105
3-2 -Trends in translation teaching.....	109
3-2-1 -Pérèz’s seven major trends in translation studies.....	110
3-2-2 -Klaudy’s translation teaching approaches.....	111
3-2-2-a - The inductive approach.....	111
3-2-2-b -The deductive approach.....	112
3-2-2-c -The functional approach.....	112
3-3 -The role of Theory in Teaching Translation.....	113
4 -Translation and Language Teaching.....	120
5 -Translation competence.....	121
6 -The development and acquisition of translation competence.....	127
7 -Metacognitive aspects of translation competence.....	132
8 -Conclusion.....	134
CHAPTER THREE: LEARNING AND FACTORS PERTAINING TO THE	
LEARNING ENVIRONMENT	134
1 -Definition of Learning.....	134
2 -History of learning theories.....	137
3 -Modern Theories of Learning.....	139

3-1-Connectionism and trial and error learning.....	140
3-2-Classical conditioning.....	141
3-3-Operant conditioning.....	142
3-4-Constructivist Learning.....	145
3-5-Social Constructive Learning.....	147
3-6-Social and situated Learning.....	147
4-Factors contributing to learning.....	151
5-Categories of Learning.....	153
6- Learners’ contribution to the process of learning.....	157
7-Teachers’ contribution to the process of Learning.....	160
8-Learning Styles.....	165
9-Learning and motivation.....	169
10-Intrinsic and extrinsic motivation.....	172
11-Attribution theory of motivation.....	173
12-Self-efficacy and motivation.....	176
13-Motivation, metacognition and learning.....	177
14-Conclusion.....	181
CHAPTER FOUR:THE PILOT STUDY.....	182
Introduction.....	182
1-Description of the tools of research.....	183
2-Analysis of the pre-questionnaire.....	185
3-Analysis of the students’ translation.....	196
4-Analysis of the post-questionnaire.....	198
5-Concluding remarks.....	204

CHAPTER FIVE: THE ACTUAL INVESTIGATION.....	208
Introduction.....	208
PART ONE: ANALYSIS OF THE STUDENTS' TRANSLATIONS.....	209
1-1-Description of the translation test.....	209
1-2-Methodological procedure in correcting students' translation.....	210
1-3-Students' scores in the test.....	217
1-4-Interpretation of the test results.....	220
PART TWO: ANALYSIS OF THE PRE-QUESTIONNAIRE.....	223
2-1-Methodological procedure in administering the questionnaire as a whole.....	223
2-2-Description of the questionnaire.....	225
2-3-Analysis of students' answers to the first part of the questionnaire.....	225
PART THREE: THE POST-QUESTIONNAIRE.....	272
PART FOUR: GENERAL RESULTS.....	307
CHAPTER SIX: PEDAGOGICAL IMPLICATION AND SUGGESTIONS FOR FURTHER RESEARCH.....	314
Introduction.....	314
1-Overview of major results.....	314
2-Methodological remarks.....	316
3-Pedagogical implications.....	317
4-Suggestive models of activities.....	320
5-Suggestions for further research.....	324
CONCLUSION.....	326
BIBLIOGRAPHY.....	328
APPENDICES.....	

Appendix 1: Schraw and Dennison's Metacognitive Awareness Inventory.....

Appendix 2: The pilot Study.....

Appendix 3: The actual Investigation.....

Appendix 4: Students' answer to the open questions.....

1-Rationale

This piece of research is an attempt to analyze students' competence in translation and to determine the role metacognition has on their actual performance in this skill. Translation education has never ceased to investigate the specificity of translation and the way it is to be acquired by students. For a long time, translation was seen to be simply a language component whereby students are liable to put into use their knowledge and mastery of at least two languages. In other words, a mastery of languages directly triggers a competence in translation. This state of affairs, however, is now being revised and people are starting to realize that translation is something super-ordinate to the linguistic competence. This is evident through the performance of bilinguals lacking experience in translation. Bilinguals, in fact, tend to stumble at words and find it hard to find appropriate equivalents they claim they are on the tip of their tongue. They hesitate, they make false starts and they take wrong decisions when it comes to overcome translational problems although they are able to speak fluently the two languages in question. As such, their performance overall shows a lack of the requirements of the competence that make them able to ease the transfer they are supposed to make between the two linguistic or cultural systems.

The question now is what the nature of this transfer is, translators or students of translation are required to make? Translators, in fact, are known to be language mediators who ensure efficient communication between senders and receivers of messages encoded in different languages. To fulfill such a role, they must assume a responsibility that gives them credibility and sustains their efficiency. This responsibility is related to their ease and flexibility in moving between two different linguistic systems. This is rather seen as a cognitive agility in making sound decisions and reaching appropriate solutions for recurring problems. This is not possible without awareness on their part about the task they are undertaking, its nature and requirements.

Following this line of thought, Mona Baker was right to assert that in order to be a professional translator or to be recognized as such,

[T]ranslators need to develop an ability to stand back and reflect on what they do and how they do it. Like doctors and engineers, they have to prove to themselves as well as others that they are in control of what they do; that they do not just translate well because they have a "flair" for translation, but rather because, like other professionals, they have made a conscious effort to understand various aspects of their work (Baker, 1992: 8).

Students should know what translation is, how it is to be acquired and developed as a competence and what factors affect its different applicable approaches. For example, if translation is seen as a decoding process, students may find it hard to decide on problems pertaining to finding cultural equivalents and to producing the desired effect on the receiver. If it is, however, understood as a decision process whereby all factors likely to have an effect on the product are taken into account and carefully weighed up to give vision and aim for the translation task, students may achieve high levels of fluency and adaptability in their production. All in all, if we agree to define translation as a decision process, awareness here is to receive the greatest emphasis as is assumed in this research. Pym (2003: 489), for instance, is one of those who have insisted on considering translation to be an ability to:

-Generate a target text series of more than one viable term (target text₁, target text₂...target text_n) for a source text.

-Select only one target term from this series, quickly and with justified confidence, and to propose this target text as a replacement of a source text for a specified purpose and reader.

This ability, obviously, is not liable to develop randomly without careful consideration of the translation process and without due attention to the awareness students should develop of their translation mechanism. This awareness is, in other words, the knowledge they have of their

own knowledge of translation in order to be able to monitor and control their own process of translation and bring appropriate modifications and remedies to their endeavor whenever they sense a need for that. This superordinate kind of knowledge, in fact, may be factual, procedural or conditional as has been hinted at above and it refers to what Flavell prefers to call "metacognitive knowledge". In this respect, Ulrych (1995: 252) asserts that translators:

will therefore need not only language and content knowledge but also course specifically designed to enhance their socio-cultural awareness and encyclopedic knowledge. They also require the cognitive and metacognitive skills that will enable them to evaluate their expanding competence and to monitor their performance in relation to a broad range of text types and fields of discourse

As regards socio-cultural awareness and encyclopedic knowledge, they are especially enhanced through the use of special kind of texts that obey cultural and contextual norms and specialized domains. Certainly this area of competence is not easy to cater for, but what matters for us most is the development of learners' cognitive and metacognitive skills that ease the transfer process and help them develop their ability to monitor their own processing on one hand, and sustain their learning enterprise on the other hand. They are particularly required to develop a selective attention, a noticing capability and awareness of the different stages of the process they go through in completing their task. As learners, they also need to know the route they should take to develop their competence in this domain

In the literature on metacognition, a distinction is drawn between metacognitive knowledge and procedural knowledge or self-regulation. The first pertains to one's declarative knowledge of himself, the task, learning in general and whatever factors contributing to his success. The latter is related to one's knowledge of strategies and their application and is mainly related to one's ability to control and monitor his process through its different stages. In translation, students need to know something true about translation as a skill, to know about themselves as learners

and about their aptitudes and abilities overall as regards this skill, and something about the factors contributing to their success in a translation task. As for the domain of procedural knowledge, they need to be able to detect translation difficulties, they need to internalize a bulk of translation strategies and they should know when and where to make use of which strategy. Flavell's model of metacognition (1987), which was mainly a source of inspiration for the present research, consists of four components which are:

- a- Metacognitive knowledge having to do with person, task and strategy variables.
- b- Metacognitive experience related to the affective experience a person may have in relation with a specific cognitive task that is liable to make him reconsider his action and rethink his approach to the problem at hand.
- c- Goals which generally refers to the objectives the person has behind undertaking a specific cognitive task that are liable to make him activate his metacognitive knowledge and metacognitive experience to take the appropriate action.
- d- Action which finally brings about the appropriate strategy in consideration of all factors above.

According to Flavell (1987), these components interact together to bring a successful monitoring of one's cognitive action to attain the desired goal. In other words, a person with a clear objective in mind would activate appropriate metacognitive knowledge in his quest for a solution or outlet. This is liable to bring his metacognitive experience to the fore that would help him opt for the most appropriate action to attain his goal. Full details about Flavell's model of metacognition are provided in the first chapter of this thesis. In the present study, light is focused only on students' metacognitive knowledge as defined by Flavell. As for metacognitive experience, action and goals in the above model, they are considered implicitly especially in the translation test. No task, it is believed, can be undertaken without a goal in mind. Students' goal in undertaking a translation task may be understood to be related to their desire to acquire this

skill. Their action is directly related to the strategy they adopt towards any given translational problem at hand.

2-Statement of the problem and research questions

Our major concern in this piece of research is to analyze the effect if ever metacognition may have on the students' translation competence and to try to explain the nature of this effect and the way it may be improved.

Our research questions are, thus, as follow:

- 1- Are students of translation endowed with metacognitive knowledge?
- 2-What type of metacognition they mostly show (in regards with Flavell's metacognitive components concerning person, task and strategy variables)?
- 3-What is the nature of the effect- if ever- of this metacognition on the translation competence of students (as may be revealed in the test and the quality of their rendition)?

3-Research hypotheses

In the light of the questions asked above, the following hypotheses are postulated whose truthfulness is to be tested using appropriate methodological tools as will be explained underneath.

First hypothesis: Third year translation students at the University of Constantine would be revealed to have metacognitive awareness of many aspects pertaining to the task they undertake, i.e., translation (they know what translation is, how it is undertaken as a process and how to produce a good translation), about themselves as learners and potential translators (they know their strength and weaknesses and can give a true picture of their actual competence), and about

the way they can solve problems and overcome obstacles while translating (they know what strategies to use, when and how)

Second hypothesis: Third year translation students of the University of Constantine would be able to show equal awareness of person, task and strategy variables explained above.

Third hypothesis: Students who are metacognitively aware are probably more liable to produce a good and efficient translation.

4- The Population under Study

To verify the research hypotheses stated above, and to put in use the methodological tools we set for this research, the population chosen for this study is third year students of translation at the university of Constantine from the department of translation, enrolled for the academic year 2008-2009. Third year students are assumed to have acquired the essentials of translation competence through theoretical and practical modules. My own classes were more suitable for the present research as a matter of convenience and because I can have more details concerning their competence overall.

During this year, the number of students enrolled as third year students was about 350 distributed through 10 groups of approximately 35 students per group. The sample drawn from the total population included about 55 students taken from 03 groups I was teaching myself. This sample can be said to represent the fifth of the total population.

The results obtained from this research, in fact, stand for just this sample and cannot be generalized to the whole population unless validated by future research.

5-Means of Research:

The overall approach followed in this piece of research a descriptive and exploratory one. It is akin to a quasi experimental design, also referred to as experimental design without randomization, in that there are two variables one affecting or having an effect on the other. In our case, it is metacognition which is assumed to have a positive effect on translation competence. However, there is no manipulation of any variable in an experimental group that would be compared to a control group with no treatment. In other words, the whole sample functions as an experimental group whereby students' metacognition will be evaluated then its effect on their translation competence will be assessed. In a true experimental design, students metacognitively aware or those who are going to receive a training to become as such will be assigned to the experimental group and students with no metacognitive training will be assigned to the control group. In other words, students in the experimental group would be taught through a metacognitive approach and those in the control group would be taught with the usual approach which is supposed not to be metacognitive.

An experimental design has not been appropriate in our case because of the following reasons:

1- Students may receive metacognitive instructions from other teachers in other modules related to translation skill per se or to language components. Metacognition, though a fuzzy term, is a concept that may be put into use by anyone without even having heard of the term. Socratic dialogues used in educational settings since time immemorial and bearing the very spirit of a metacognitive-based instruction are a case in point. Thus, devising a special experimental group to separate the manipulated variable, especially with the present conditions offered to us, will not bring valid and plausible results as we will not be sure if the results obtained are emanating from the experiment or from another source. In other words, we will not know for sure if the

students who actually improved or whose translation competence was enhanced benefited from the experimental treatment or from another undetermined source.

2- Students' progress from a pre-experimental stage to a post-experimental stage cannot be a direct effect of the treatment they received. Their progress, in fact, can be said to be a natural evolution in their process of acquiring the translation skill. Besides, the effect the experiment aims to achieve may take a very long time to appear. Metacognitive awareness needs time and patience to be enhanced (Kuhn, 1989; Rogoff, 1990)

3- It is true that translation may be improved through a set of instructional activities, but we cannot confirm which aspect of the instruction was particularly helpful for students. After all, the instructional design may bring an effect on their motivation to learn better and this would give an impression for the teacher of a positive change in competence.

Thus, to verify the validity of the predictions stated earlier in the above hypotheses, two questionnaires and a translation test are devised. The first questionnaire is meant for the pre-test phase whereby the students are requested to provide answers for questions pertaining to metacognition in general without due consideration of the particular text they were given for translation. The second questionnaire is meant for the post-test phase whereby students are expected to answer questions on metacognition as a reaction to the translation test they have just undertaken. The two questionnaires refer respectively to part one and part two in the same questionnaire administered to students after they completed the translation test. This was one of the main modifications brought about in the pilot study whereby two long questionnaires proved strenuous for students to complete as two separate phases. It is also important to mention that Shraw and Dennison's questionnaire (1994) (c.f. appendix 1) served us a source of inspiration to devise appropriate questions which were adapted to the translation context.

5-1-The pre questionnaire

The pre questionnaire is specifically designed to check students' metacognition in general, i.e., without any particular reference to any specific translation task. In this questionnaire, students are requested to answer a total of eight (08) questions related to the following aspects:

a-Their definition of translation (Q1)

b-Their evaluation of their own competence in translation (Q2)

c-Their justifications for the deficiencies they have in their translation competence (Q3)

d-Their evaluation of their progress in translation, if ever, since their first academic year in this department (Q4)

e-Their ability to track their own mistakes in translation (Q5)

f-Their opinion about their teachers' evaluation of their translation against their own (Q6)

g-Their justification for the lack of congruency between their own evaluation of their translation and that of their teachers (Q7)

h-Their opinions about some statements claimed about translation (Q8)

5-2- The post questionnaire

This questionnaire is given to the students to answer after they have translated a short passage meant for testing their translation competence. It is specifically designed to check students' metacognition in relation to their actual and effective translation performance. In other words, it aims to verify whether the students' answers in the pre questionnaire correspond to their answers to questions directly related to their performance in the translation test. For example, they are once again asked to evaluate their translation to see if their actual evaluation match with their expectations set before. They are also asked to explain their strategies to overcome the translational problems they said they have met. Some questions, in fact, are general and not directly related to their reactions in the test they undertook. This is especially the case of

question 09 where they are asked to reveal their strategies in overcoming vocabulary problems. In this particular case, their answers are to be weighed against their own production in the translation test. All in all, this questionnaire is made of a total of thirteen (13) questions related to the following aspects:

- a-Number of times they have been reading the text (Q1)
- b-Their difficulties if ever with vocabulary items in the text (Q2)
- c-Number of these difficulties (Q3)
- d-Their opinion about the importance of the bilingual dictionary or its limitation (Q4)
- e-Their justification for the limitation of the dictionary (Q5)
- f-An example of a problem they have encountered in their translation of the text (Q6)
- g-Their evaluation of their success or failure to overcome this problem (Q7)
- h-The way they solved this problem (Q8)
- i-Their strategies in overcoming vocabulary problems in translation (Q9)
- j-Their evaluation of their own translation of the text (Q10)
- k-Their justification for the deficiencies in their translation rendition of the text (Q11)
- l-Their actual retention of some elements from the text (Q12)
- m-An example of these elements they said they retained (Q13)

5-3-The Translation Test

The translation test consists of a text of a medium length (of about 200 words) and treats a topic of a general domain of knowledge that may interest all people: "Water Crisis". It is also fairly accessible to anyone of them in terms of comprehension and translation difficulties.

Students are requested to produce a correct and fluent piece of discourse that may have the same communicative effect in the target language. They are, thus, supposed to respect the following criteria in their production: correct and faithful rendition of meaning, a correct

discourse in terms of observing grammatical rules of the target language, a cohesive and fluent discourse that flows logically to be processed with ease by the target reader.

As the text in question is informational (delivering a message of a general concern to (a) target reader(s)), the translational approach most suitable is the communicative one whereby all the criteria stated above are to be applied.

More details about these criteria are due in the analysis of the test results.

6- Methodological Procedure

The questionnaire was administered at the beginning of the second semester during the academic year 2008-2009. However, students were fairly introduced to metacognitive thinking all along the first semester to make them more cooperative later on and to stimulate their reflection about their learning process. We believe that an understanding of the objective of whatever activity the teacher initiates in the classroom is important to assure students' readiness to cooperate and to assimilate what they are presented with. Thus, students are always asked to reflect upon the problems they have encountered in their translation assignment and to speculate as well upon possible solutions they might bring to these problems. They are sometimes asked to make comments on their translations and the translations made by their classmates. Questions frequently asked before starting the translation correction are "have you met any problem translating this text? / What are they? Why are they problems for you? What can you do to overcome these problems?). While discussing the students' answers, students' ideas about what translation is and how it is to be learnt emerge clearly to the teacher who then tries to raise the students' awareness of the task they are undertaking and correct their misconceptions and fallacies about it.

The questionnaire was administered at the beginning of an ordinary tutorial session after they had translated a text they had been given to translate. Students were given directions on how

to answer the questionnaire and the teacher made sure everything was clear. Students were encouraged to answer in any language they wanted to ease the task for them. They actually spent approximately one hour (1h) in answering the questionnaire. They, however, spent approximately one hour and a half (1h30mn) in their translation of the text. The examiner made sure the students provided their own answers by encouraging them to work individually.

7- Structure of the thesis

This thesis is divided into six main chapters. The first chapter gives an idea about the field of cognition and metacognition. It introduces basic notions about the main concern of cognitive psychology explaining, thus, the logical development of the concept of metacognition and uncovering its fuzziness. It also explains some metacognitive models presented by many researches in many fields of study to justify the theoretical standpoint adopted in the present research. It also introduces the role of metacognition in learning and instruction and sheds light on its importance in translation. The second chapter deals with translation theories and translation pedagogy. It introduces the historical development of a theory of translation until it gained the status of an independent and self-contained discipline, and brings a summary of the different theoretical stand points about translation approaches and methodologies. It also explains the particularity of translation teaching and draws a distinction between teaching translation and teaching languages before it brings to the fore the issue of translation competence and how best it should be taught. The third chapter deals with learning to see what can be inferred to help enhance the translation students' acquisition process. Thus, it introduces major theories about learning and discusses their strengths and weaknesses. It explains the ways both teachers and learners may contribute to the process of learning and sheds light on major factors affecting learners and learning in general. The fourth chapter deals with the pilot study through which the tools of research have been tested and the hypotheses verified to bring appropriate

modifications to the investigation proper. Chapter five is then the investigation *per se* and is divided into four sections dealing respectively with: the analysis of the test, the analysis of the first part of the questionnaire, the analysis of the second part of the questionnaire, and the general results. The sixth chapter is basically concerned with the discussion of the general results together with pedagogical recommendations, implications and suggestions for undertaking future research. The dissertation ends with a conclusion bringing in a nutshell what has been reached in terms of results and answers to the research problems advanced so far.

Chapter1 : Cognition and Metacognition

Introduction

Metacognition, which is a key concept in the present research, is stemming from a more general field known as cognition. Cognition is, thus, an important topic to introduce and explain-broadly at least- before dealing with metacognition as such. This chapter, then, aims first of all to introduce the superordinate field of cognition in a way that lays the grounds for explaining the concept of metacognition and introducing basic issues related to it, such as consciousness, awareness, monitoring, control and self-regulation. Different metacognitive models proposed by their authors are introduced to clarify the concept and bridges between the different overlapping definitions, and explain the nature of actual divergences. As metacognition was exploited in many fields of interest, light is also to be shed on areas where it was already of use to take advantage of the results obtained and gain benefit of the conclusions drawn by different researchers. While discussing the diverging views concerning the nature of metacognition, as well as its components and conditions, special emphasis is put on the way it is assessed and also on its implications for practical and pedagogical implementation.

1-COGNITION

1-1-Definition

Cognition is the set of mental processes justifying any action we tend to do consciously or unconsciously. When we comprehend a given action or a piece of discourse, when we agree or disagree with a given issue, when we solve a problem or remember a piece of information that we decide to retrieve later on, when we think or recognize a given fact is true or false, or even when we decide to do or not to do

something, we go through different mental processes which justify these actions. Cognition is then the origin or the explanation of our knowledge of the world, and of ourselves in this world. Webster's New World College dictionary defines the word "cognition" as follows: "(1) *the process of knowing in the broadest sense, including perception, memory, and judgement. (2) the result of such a process; perception, conception, etc*". In other words, it refers to the different possible mental actions and their results. According to Encyclopaedia Britannica (2009) "*cognition includes all processes of consciousness by which knowledge is accumulated, such as perceiving, recognizing, and reasoning. But differently, cognition is an experience of knowing that can be distinguished from an experience of feeling or willing*". Consciousness is, thus, its key component, and knowledge is its essence and its very reason of existence as a discipline. Cognitive psychology is therefore the branch of psychology concerned with studying the mental processes related to remembering, comprehending, judging, reasoning, learning, perceiving sensory stimuli, solving problems, deciding and inferring conclusions. It is with no surprise that this field of study is found to be related to many other fields such as neuroscience, philosophy, linguistics, and artificial intelligence. It has also many implications and applications in different domains, as it can help enhance memory functioning, learning efficiency, decision accuracy, judgment impartiality...etc

1-2-Origin of Cognitive Psychology

Although our main concern is metacognition and not cognition as such, history of cognitive psychology appears to be of paramount importance in explaining the surge of metacognition as a concept and the fuzziness it triggered.

Cognitive psychology may be viewed as a very interesting and fascinating branch of study as it tries to disambiguate an area of knowledge and of ourselves in this world that has long stimulated our curiosity. It is also a field of study that can help us improve our capacity for gaining knowledge in all other domains. Being concerned primarily with the mind, cognitive psychology is a fundamental area that can explain how we can get more knowledge and control of all the phenomena surrounding us. Metacognition is just one station in the developmental course of cognitive psychology and sprung as a matter of fact from this development. It is no wonder, though, that the roots of such a concept were found in very early philosophical speculations.

History of cognitive psychology goes back to ancient Greeks with the interest Plato and Aristotle gave to the question of the nature and origin of knowledge, which ensued a long debate between proponents of empiricism (followers of Aristotle), who believed that knowledge comes from experience, and proponents of nativism (followers of Plato), who believed that knowledge is innate and pre-existent in our brain before our birth. This long-standing debate that was maintained by the seventeenth (Descartes and Spinoza), eighteenth (Berkeley, Locke and Hume) and nineteenth philosophers (Auguste Comte and John Stuart Mill essentially), was in its essence philosophical in nature, but incited nevertheless psychological speculations about human cognition.

In terms of scientific methodology, cognitive psychology lagged behind other sciences which developed remarkably such as chemistry, physics, astronomy, biology. This is because at that time cognitive psychology failed to apply the scientific method, a fact which was attributed to egocentrism, mysticism and confusion surrounding our understanding of our nature and the nature of our mind. It was hard to even assume the possibility to objectively observe a phenomenon that is part and parcel of the observer

himself. In simple words, the mind was a kind of a mystery that scientific researchers could not yet investigate.

It is until late nineteenth century that cognitive psychology started to be seen as a science (Anderson, 2000). The year 1879 was particularly seen as a focal point in the history of cognitive psychology when Wundt established the first psychology laboratory in Leipzig, Germany, and where introspection was used for the first time as a methodological tool to decipher the mechanism of the mind. Thus, it was believed that in order "*to develop a theory of cognition, a psychologist had only to account for the contents of introspective reports*" (Anderson, 2000:7). In a figurative way, Introspection was regarded as a way to look inward and to gain immediate access to one's mental state. In a way, it functions as a sixth sense enabling us to perceive not the world outside us, but that inside us.

In America, introspection was adopted by psychologists under a different disguise as it was "*casual and reflective rather than intense and analytical*" (Anderson, 2000:8). This was due to the general intellectual climate in America, which was largely focussed on pragmatism and functionalism (W.James, C.S.Peirce and, J.Dewey), especially as related to education, to the extent that interest in consciousness as such and the way it should be scrutinized were of minor importance.

Rejection of introspection as an irrelevant and unsatisfactory tool in understanding the functioning of the mind set the ground for behaviourism around 1920 (J.B.Watson), which held that psychology should be entirely concerned with external behaviour without any need to seek explanation of internal physiological phenomena, or to formulate hypotheses like the well known hypothetical construct of the mind.

Cognitive psychology first emerged in Germany, but the Nazi turmoil was an obstacle to its steady development. German psychologists had to immigrate to America where they marked their contribution in founding Gestalt psychology. Gestalt psychologists (K.Kofka, W.Kohler, and K. Lewin) were, in fact, interested in the human mind and behaviour as a whole. Their work was partly seen as a reaction to the structuralism of Wilhelm Wundt, in assuming that the human mind perceives the whole picture of anything before attempting to analyse its parts. In the area of problem solving, for example, it was strongly believed that the success of any operation related to solving a problem is dependent upon the ability one has to see its overall structure. This is enough reason to encourage learners to detect any relationship between elements of a problem they attempt to solve, and to uncover its gaps or incongruities.

Cognitive psychology, as one might note, was thus standing next to an impasse. Introspection was rejected because it was felt to be subjective, and behaviourism was deemed unsatisfactory because it could not explain the motives behind the observable actions. However, the preconised solution was found in Kant's "transcendental method", which was a basic research principle adopted as a strategy in cognitive psychology. This method, which is also known as "inference to best explanation" consists of observing actions or behaviour (effects) and trying to infer or speculate about what might have brought these sets of behaviour into being (causes) (Reisberg, 2001:11). This explains in part the course of action undertaken by Chomsky (1959) in his criticism to B.F. Skinner for his behaviourist approach to language. Chomsky's theory, in this respect, is seen as an attempt to explain an abstract construct whose existence is hypothesised and not directly observed. Chosmky's definition of language is based on his crucial dichotomy of competence/performance. Competence is a mental ability which exists in the mind of any native speaker and which allows

him/her to make use of his/her language. This mental ability is not directly observable but is manifested through the speaker's actual performance. So by observing the speaker's performance or actual use of language in terms of the sentences produced, the linguist is able to infer or make deductions about the potential mechanism behind this production. By the same token, much may be inferred about the mental processes undertaken by individuals. Piaget's theory of cognitive development is a case in point. Metacognition is in itself a psychological construct whose existence is justified through a set of voluntary and stimulated actions, which lend themselves to direct observations.

2- Metacognition

2-1-Definition of Metacognition

It is hard to obtain a clear and a final definition of metacognition as it has been used differently by different researchers. Some researchers even admit that it is a fuzzy term which has come to mean many things at different times and in disparate investigations (Shoenfeld, 1987; Romainville, 1993). This section is an attempt to explain this fuzziness and remove eventual confusions surrounding this concept.

The term "metacognition" is said to have been introduced parallelly in the cognitive psychology of 1960s (e.g. Hart, 1965) and in the post-Piagetian developmental psychology of the 1970s (e.g. Flavell). In cognitive psychology, Hart was particularly concerned with evaluating the accuracy of judgements made by people about their memory (i.e., whether the feeling of knowing they have is a good predictor of their correct recognition of the general knowledge materials they were presented with) (Schwartz and Perfect, 2002). However, most researchers would consider the first occurrence of the word metacognition to be made by Flavell in 1976 (Goh, 2008).

Flavell also coined previously (in 1971) the term "metamemory" on the cognitive area in which he was very much interested. The two terms, in fact, are related in that the first is broad while the latter is more specific. "Metamemory" is just one domain of metacognition next to "metacomprehension" and "metaperception" and other concepts with the prefix Meta. The prefix "meta" suggests the idea of going beyond something, a sort of higher level dominating, monitoring and controlling a lower one. Sometimes, metamemory acts not as a sub-component of metacognition, but as a complementary one in that it helps the individual gain control of his cognitive process, and to bring it to an end. In "Metamemory", as one may guess, a distinction is made between knowledge about the content of memory and knowledge about the processes used to regulate and monitor that memory. As for "metacomprehension", it is related to understanding at the broadest level that is necessary for an individual to self-regulate his comprehension process. In short, the cognitive activity upon which metacognition operates may be subdivided into different mental processes which are comprehension, memorisation, perception, problem solving (Romainville, 1993). When a person is reading, for example, and is trying to assimilate the content of what he reads, he has a general knowledge of what may ease or foster his assimilation process and what to do to overcome any possible obstacles coming in the way of his assimilation. Metacognition, then, is knowledge about cognition and cognitive processes whether they are concerned with memory, comprehension, problem solving or any task or activity that may necessitate or involve thinking and/or reflection. It has to do with the awareness we have about our own thinking and/or learning processes. This awareness may concern our knowledge of the learning situation we are trying to handle, or our capacity for monitoring or regulating our cognitive behaviour in a particular task we are trying to undertake. To put this in plain words, metacognition is a technical term

embracing any mental action we apply anytime and anywhere in terms of the abstract or procedural knowledge we have about what we should do when we try to solve a problem, and how to rely on our past experience of solving similar problems, or how to decide to adopt a strategy because it was helpful somewhere else before. We are behaving metacognitively in that we are thinking about what we are doing, and are regulating our cognitive behaviour to cope with a given situation on the basis of a preliminary reflection on our psychological or mental state or resources. Flavell summarizes this concept as being concerned the knowledge one has of his cognitive processes and the results they trigger,

‘For example, I am engaging in metacognition (metamemory, metalearning, metacognitive-attention, metalanguage or whatever) if I notice that I am having more trouble learning A than B; if it strikes me that I should double check C before accepting it as a fact; if it occurs to me that I had better scrutinize each and every alternative in any multiple-choice type task situation before deciding which is the best one; if I sense that I had better make a note of D because I may forget it.

(Flavell 1976:232 in Goh, 2008:193)

According to Flavell's definition, metacognition is seen to be intentional, conscious, purposeful and goal-directed. As such, it is judicious to relate it to critical thinking and to define it in association with similar and neighbouring terms as awareness, self-regulated learning or thinking about thinking. It is a mental skill that develops early in our life especially when children come to distinguish their own minds from the others' minds (Kuhn, 2004). Knowledge of the mind and of whatever aspects related to it constitutes a major part of the sum of knowledge we all naturally

acquire in the course of our life. In Flavell's words (1987: 21) "*as people grow up, an important part of what they learn or come to believe concerns the mind and other things psychological*". However, experience may impose some differences in the way people develop this metacognitive knowledge and may also bring to the fore some aspects of metacognition at the expense of others. This is mostly due to inter and intra individual differences in learning and knowledge acquisition processes. Despite the huge efforts made by researchers to attain a universal law of human learning, a lot of variables and determining factors impose themselves on this enterprise and make it hard to be explained in a once for all coherent and homogeneous framework. Thus, it is not possible to obtain categorical answers for issues related to the relation of metacognition to effective learning as this relation involves some parameters which are hard to delineate, and pertain to complex factors that are hard to isolate. To state Weinert's (1987) example, it is not always the case that metacognitively aware people are the most efficient learners, as this may involve factors related to either motivation, interest, task requirement, cognitive resources, social context, past experience, self-esteem...etc. In this respect, Weinert (1987: 13) encourages researchers of different related fields to combine their efforts in order to reach more plausible answers. He, thus, insists that "*cognition, metacognition, procedural skills, and motivational factors are important determinants of learning activity, but they must be differentially weighed depending on task types*"

In fact, as hinted at before, metacognition can be associated to many areas of concerns that it can hardly be classified within any precise theoretical framework. It is, most often associated with fields and concepts pertaining to executive processes, social cognition, consciousness, self-regulation, reflective self-awareness, self-efficacy, learning, cognitive development, theory of the mind (Flavell, 1987). This is

by itself a clear indication that this concept- probably under a different appellation- was already a preoccupation especially for those interested in cognitive development, reasoning and thinking skills.

From what has preceded, it is easy now to reach the conclusion made by Romainville (1993) which explains the reasons for which this concept caused much fuziness and confusion. In fact, Romainville analyzed the different definitions of the concept provided by different authors in the literature on the subject, and comes to shed light on sources of confusion related to those definitions. According to him, the most obvious reason is that most authors find it hard to make a clear cut between what is cognitive and what is metacognitive (c.f. further explained in the section below). Moreover, metacognition is concerned at the same time with knowledge of cognition and regulation of this cognition. This is the attitude adopted principally by Brown, 1983; and Gombert, 1999 in Romainville (1993: 20). For Brown and Gombert, metacognition is made up of two sub-domains:

a- The conscious introspective knowledge one has of his proper state and cognitive processes. This knowledge concerns the process itself, the object of reflection, or the result of such process or reflection (metacognitive knowledge). The object of reflection can be related to either general knowledge of cognition or to one's personal strategies and cognitive actions.

b- The capacity this individual has to deliberately control and plan and evaluate his own cognitive processes to achieve a given goal or objective. This component particularly enlarged the scope of research on metacognition and led researchers to investigate the effect of metacognitive training on enhancing performance in particular domains and cognitive activities. For example, one may try to verify the effect self-

questioning may have, as a control tool, on the improvement of one's capacity to solve a problem.

In short, metacognition is subdivided into components that are not easily distinguished from one another; the interaction between them is the essence of everything worth discussing about the concept. The metacognitive models proposed below and as suggested by their authors explain the intricacies of such interactions. But before reaching this section, it is preferable to draw on Bernadette Noël's (1991) major divisions of the field of research on metacognition. Then it would be judicious also to dig about the origin of the concept that is likely to offer explanations of its most recent development in the field of cognitive psychology and the attempts made for its application in the field of education.

2-2- Noël's classification of research on metacognition

According to Bernadette Noël (1991: 8), research on metacognition is focused on either of the followings: memory, comprehension, or problem solving. On the other hand, in each of these areas, this research is interested in either of the followings: the cognitive activity about one's mental processes, the cognitive activity related to aspects of learning in general, or the regulation *per se*. The interrelationships between these different areas and spheres on both sides make a total of nine metacognition-based research domains as has been suggested by Bernadette Noël and as summarized in the following table:

Modes \ objects	1-Memory	2-Comprehension	3- Problem solving
a- cognitive activity on one's mental process and its product	1	2	3
b-cognitive activity on properties or information pertaining to learning in general	4	5	6
c-Regulation	7	8	9

Noël's (1991: 8) classification of research areas on metacognition

As such, a research focussed on the learner's ability to state clearly his cognitive activity while undertaking a memorization task (e.g. I remember those words because I associate them with the names of persons I know) would be situated in box 1. If, however, the research is focussed on the knowledge one has of his ability to describe the factors making him able to solve a problem (e.g. if I summarize I will be more able to remember the main ideas than if I learn everything by heart), we would be driven to choose box 6. All in all, what Noël wanted to emphasize is that metacognition was often used to denote all these nine areas of research creating thus confusion among psychologists and educationalists of what metacognition might be really. These areas of research differ according to the object of their focus or the object upon which different mental processes will operate producing, thus, areas related to metamemory, metacomprehension and meta-resolution. They also differ according to modes or forms of the cognitive activity or the mental process in question. Hence, these mental processes may be concerned with the knowledge one has of his cognitive resources and his ability to cope with a given task or problem. They may also be concerned with the knowledge one has of the factors facilitating or hindering his learning process such as the knowledge of what might foster his memory or his comprehension ability. Last but not least, these mental processes may be concerned as well with the capacity one has to control and modify whatever aspect of the learning situation he judges important to achieve his goal. Noël was, in fact, inspired by Flavell's model of metacognition (c.f. section 3-1 below) in making the distinction between declarative, procedural and conditional knowledge (knowing what, knowing how, and knowing the overall conditions for the success of the cognitive enterprise).

2-3- Origin of the concept of metacognition

The term, as has been previously said, is Flavell's invention, but the origin of the concept can be retraced much earlier. Thus, some researchers were already interested in the phenomenon of knowing about knowing, or of being aware of what one knows and how s/he should monitor or control his/her knowledge, without even using the term metacognition. This also can explain in part the fuzziness of the term.

In fact, the origin of the construct of metacognition can be drawn from antiquity since the time Socrates used his famous dialogues (in Plato's works, e.g. "La République", "Le Banquet", "Le Phedon") for teaching matters. These dialogues, as we may know or guess, consisted of Socrates (or the teacher) asking his learners a series of questions that stimulate their thinking and lead them to reach the answers for themselves. The aim beyond Socrates's dialogues was to illuminate areas of ignorance or lack of comprehension in himself and his students and to overcome problems of illusionary knowledge whereby one believes he knows when, in fact, he does not (Martinez, 2006). Socratic dialogues are nowadays reintroduced in schools and universities to help students become autonomous and self-regulator of their learning process. Parallel to this is Bloom's taxonomy of learning (Moore and Stanley, 2010) in which Bloom defines the objectives of the educational curriculum in terms of a set of cognitive and metacognitive skills at the core of which is the evaluation of one's learning endeavor. This means that even the idea of implementing metacognition in education is not new as we might believe. Bloom's taxonomy is a classification system of cognitive thinking skills, which are built on one another (each skill is built on the one preceding it). According to this logic, the better knowledge you gain of lower skills the better mastery you achieve of the

higher skills. The six level of skills Bloom referred to, are: knowledge, comprehension, application, analysis, synthesis, evaluation.

However, the most obvious sources for the development of the concept of metacognition and the subsequent research it stimulated is often said to reside in the interiorization that Piaget and Vygotsky explained in their theories about cognitive development (Kuhn, 2004).

In what follows is a brief sketch of Piagetian and Vygotskian ideas concerning the acquisition of knowledge, and the development of cognitive abilities in children and adolescents. The reader is invited to draw conclusions pertaining to the relation of these theories to metacognition.

2-3-a- The Piagetian theory

Piaget was interested in how children and even adults learn and think. According to him, the child is born with an innate ability that makes him inquisitive and eager to discover his own mental resources and explore his environment in all its aspects. The result of this exploration is a mental representation of this reality that grows gradually in details and structure with age as the child becomes better equipped to think in a more sophisticated manner, on the basis of the knowledge he acquired earlier in life.

Hence, Piaget made use of two basic concepts, which are known as "assimilation" and "accommodation", to explain the individual's process of acquiring knowledge about any aspect of the world. According to him, we are born with few rudimentary mental structures or representations, called "schemas", which contain basic information concerning different aspects of the world surrounding us including objects, people or actions. Whenever we attempt to understand a new action or

phenomenon on the basis of our preexisting schemas, we are said to undergo a process of assimilation characterised by an overall state of equilibrium. Whenever we are facing a new situation for which we do not possess appropriate schemas, we are said to undergo a process of accommodation characterised by an overall state of disequilibrium, which we try to overcome. It is through the process of accommodation that an individual (a child for that matter) ends up by solving a problem (a contradiction which results from the disequilibrium issued from the first attempt at knowing, i.e., through assimilation). Accommodation represents a synthesis (assimilation: thesis; contradiction: antithesis; accommodation: synthesis) in that the individual has definitely adapted to the situation, the problem, or the object. The more we go through these processes of assimilation and accommodation, the more knowledge and experience we gain about our world and ourselves as manipulators of this knowledge and the more we grow cognitively more mature. This will add more knowledge or content to our preexisting schemas, which will be enriched and recycled again and again whenever a new experience is endured by an individual.

As for the cognitive development, Piaget describes the processes the child gradually undergoes to acquire rules or operations he needs to think correctly and to understand the way the world operates. According to him, children of the age 0-2 years old have no operations at all. It is till the age of 2 that they start to acquire these operations that would initially concern concrete objects before they become concerned with abstract phenomena at a later stage. At this stage, they are said to be unable to dissociate themselves from the world surrounding them. A clear indication of this is that they tend to talk to themselves while playing, using what Piaget calls "egocentric speech". They first try to gain knowledge of the world by trials and errors while

exploring their environment by seeing, hearing, moving, touching and tasting until they become aware of themselves as separate and autonomous beings, and develop socialized speech that makes them more able to listen to others and exchange ideas with them. Later on, they also gain a grasp of language that makes them able to think in terms of symbols. They are now more able to understand logical rules governing their world. However, this knowledge is first superficial in being concerned with the world as it appears not as it is really. For example, they are unable to adhere to rules of conservation and to understand that quantities remain the same even when they are arranged in different ways (number of counters laid out side by side in two rows is the same even when the second row is found to be more spaced than the first). When the child finally reaches the final formal operational stage or hypothetico-deductive reasoning stage beyond the age 11 (which is highly controversial, in that the stage of formal operation is indeed effective in middle adolescence 14-16), he becomes able to make logical reasoning concerning abstract entities that are not part of his immediate environment. He is, thus, able to follow an argument and answer syllogism and form his own hypotheses and test them. What is more, he can analyze his own thinking, regulate it and considers alternatives.

The following table summarises the different stages the child is said to go through in his cognitive development, according to Piaget in (Jarvis, 2005:21)

Approximate Age	Stage	Status of operations	Status of logic
0-2 years	Sensorimotor	No symbolic thought or operations	Prelogical
2-7 years	Preoperational	Symbolic thought but no operations	Semilogical
7-11 years	Concrete Operational	Operations can deals with physical objects	Logical
>11 years	Formal Operational	Operations can deal with abstract concepts	Fully logical

Piaget's stages of logical development

Thus, the child, in learning to become a logical thinker, develops an awareness of himself and of the mental abilities he is equipped with. He becomes more conscious of

the tasks he undertakes and more ready to act on his mental resources to achieve his goals. According to Piaget, the child gradually assimilates logical concepts related to egocentrism, animism, conservation and class inclusion. That is, he becomes able to perceive the object of the world from any viewpoint other than his own. He is able to distinguish between animate and inanimate objects around him. He can understand that objects remain the same in quantity even when they change their appearance. He also gains thorough understanding of subordinate and superordinate classes of objects surrounding him. In short, he is more aware of himself in his environment. What's more important is his cognitive development at the formal operational stage or "*the level of conscious products of the reflexive abstractions*" whereby the child acquires the ability "*to elaborate operations on operations...and becomes capable of varying models that might explain a phenomenon and checking the latter through actual experimentation*" (Brown et al, 1996: 152). This is exactly the level that offered a source of inspiration for those interested in metacognition. Thus, metacognition, as has been discussed by researchers, is an attempt to wake up this sleeping consciousness, if we may say so. It is this level of reflexive abstractness that is brought to the fore after it has been long automatized. That is whenever we reach this level of cognitive maturity and after we develop an acute sense of self-awareness and consciousness about our competence at this level, we tend to automatize this awareness and consciousness to ease our executive skills and facilitate our course of actions. Researchers interested in metacognition implementation are, in fact, preoccupied with the endeavor of bringing back this automatized self-awareness and this consciousness to the scene to overcome some contextual problems. Unconscious automatic skills are, in fact, the result of repeated rehearsal and long reinforced training and may prove advantageous in most cases of learning whereby they are liable to free the short term

working memory from extra load. However, the automatic mechanism may not be reliable in novel skills not quite analogous to those acquired before. Hofer and Pintrich in Kuhn (2000: 178) suggest that "*understanding knowledge as the product of human knowing is a critical first step in the development of epistemological thinking, which is metacognitive in the sense of constituting an implicit theory of how things are known and increasingly is becoming recognized as influential in higher-order thinking*". Hence, if educationalists insist on boosting their learners' self-regulative capabilities, they have to focus their lenses on their awareness of themselves and of their cognition.

2-3-b- Vygotskian Theory

Vygostky's ideas meet with those of Piaget's in what concerns the cognitive development of children which he considers to be characterised by different stages, corresponding to a change in the style of thinking. However, his ideas seem to diverge from those of Piaget in what concerns the role of society and culture in speeding and enhancing the learning process. It is in this respect that his theory of cognitive development is said to belong to social constructivist approach (Jarvis, 2005). According to him, learning is mediated by the child's culture. This mediation refers to the way culture interacts with individual development. According to Kozulin (1998) in Jarvis (2005), this mediation can take three forms which are psychological tools, technical tools, or other individuals. Psychological tools represent the higher mental functions enshrined in one's culture and transmitted to children by older members through especially instructional settings and situations of guided learning. The child, equipped with basic cognitive functions such as perception and focussed attention, gradually grows eager to possess higher functions such as thinking and problem

solving that he comes to internalize by interacting with his environment, and experiencing different situations of use with grown ups. Nevertheless, these psychological tools are said to differ from one culture to another making individuals different in their ways of thinking. Technical tools represent external material objects such as computers, abacus, rulers, printing presses, etc that the child may use in his interaction with his environment. Vygotsky insisted on the role of adults or experienced peers in orienting and speeding up the passage of the child to formal operational stage. According to him, knowledge exists initially on the intermental plane before it is transformed to the intramental plane. That is to say, it first exists between two or more people, during the interaction phase, before it moves to the mind of the individual child. In this respect, Vygotsky introduced his notion of zone of proximal development (ZPD) which explains the difference between what the child can understand by him/herself and on his/her own and what s/he can understand through his/her interaction with the others who provide him/her with the necessary guidance and support. It is this zone that explains the kind of aid and support we may implement in the educational setting for the child to succeed in his endeavor. This guidance, provided by adults or most able peers, is what Jerome Bruner (1990) in Woolfolk (2004) called scaffolding and may take the form of prompts, foregrounding crucial features of a problem, sequencing the steps to understanding, promoting negotiation, etc.

During this internalization of higher mental functions, language plays a major role as a psychological tool that helps the child develop his thinking. It allows him to express his ideas and ask questions. The child, thus, learns how to exteriorize his thought through what Vygotsky calls "egocentric speech", i.e, speaking aloud of what goes inside their minds. This is manifested in the child repeating the instructions, he

receives from the adults, many times for himself. Later, the child will learn to internalize his speech and manipulate his ideas silently. Vygotsky's idea of egocentric speech, or what is also known as private speech, is different from those developed by Piaget in this same respect. Hence, private speech, according to him, is not a sign of cognitive immaturity, but rather a guideline for moving children "*toward self-regulation, the ability to plan, monitor, and guide one's own thinking and problem solving*" (Woolfolk, 2004: 48). The child is not just a passive recipient of the adults' help and guidance. He has an active role to play in building his own stock of knowledge and making use of what he has internalized in new ways. This is what some developmentalists came to call "guided reinvention" (Tharp and Gallimore, 1991: 44). This explains in great part the passage the child makes towards self-regulated learning as "*through guided reinvention, higher mental functions that are part of the social and cultural heritage of the child will move from the social plane to the psychological plane, from the intermental to the intramental, from the socially regulated to the self-regulated*" (Tharp and Gallimore, 1991: 44)

Vygotsky 's contribution to metacognition becomes most apparent when his theory is put into practice in the educational field, especially as regards his notion of zone of proximal development. The educational system, according to him, has to offer appropriate settings to help the child or the adolescent to internalize the mental functions he was not able to show on his own without the assistance of a mentor or teacher. This setting, likewise the social setting Vygotsky described, should offer him the necessary help to become more independent and act on his own, the next time he is confronted with such a problem or is experiencing such a state of disequilibrium. Thus, the educational setting becomes a milieu where collaborative interaction is promoted and systematized in terms of appropriate instructional activities to reproduce

the ideal social setting liable to " *create zones of proximal development that operate initially only in these collaborative interactions. But, gradually, the newly awakened processes are internalized; they become part of the child's independent developmental achievement*" (Brown et al, 1996: 147). Furthermore, the teacher is encouraged to think aloud when solving a problem with his learners. He should also be encouraged to promote interactions between learners in the classroom so that their spoken reasoning would serve each other. This verbalization, on the part of either the teacher or the learners, will provide for the learners a major source for cognitive processing that they are going to internalize (Martinez, 2006). Shoenfeld (1987: 210) explained the utility of Vygotsky's ideas in teaching mathematics that he himself made use of in actual educational settings for teaching mathematics classes when attempting to enhance his students' self-regulation capability. During this attempt, he emphasizes that "*working alone, the child may function up to a certain level. Working in collaboration with more capable peers, or perhaps with adult guidance, the child may function at a somewhat higher level*". Attempts of this kind are always associated with metacognitive skills and self-regulated learning.

2-4-The difference between cognition and metacognition

We sometimes find it hard to distinguish between cognition and metacognition and tend to take the two terms for the same phenomenon. This distinction is relational rather than absolute according to Nelson (1999), as what is cognitive in one situation may turn out to be metacognitive in another situation depending on the object of reflection. There is no aspect, thus, of cognition that is always at the meta-level or the object-level. In fact, when we make efforts to comprehend a reading passage, we are here concerned with a cognitive strategy. When we are checking if we have really

assimilated the passage (monitoring understanding), we are here concerned with a metacognitive strategy. In another situation, when we are checking how confident we are in having succeeded to monitor our comprehension, the monitoring component (which represented a metacognitive aspect in the previous situation) becomes an aspect of cognition. So the difference here lies on the purpose of the action. In Flavell's (1987: 23) words, "*in the course of development one learns about cognitive strategies for making cognitive progress and about metacognitive strategies for monitoring the cognitive progress*".

Flavell (1979), however, further explained that cognition and metacognition differ also in terms of their content and function. In terms of content, metacognition comprises aspects of the mental world such as knowledge, skills and information about cognition, while cognition comprises things about the real world and the way they are mentally represented (objects, persons, events, skills to handle these entities, and information on the tasks). Metacognitive thinking therefore springs from the person's own internal mental representations of the reality including "*what one knows about that internal representation, how it works, and how one feels about it*" (Hacker, 1998). Cognitive thinking, on the other hand, springs basically from the person immediate world of reality.

Now, in terms of function, metacognition serves to regulate one's cognitive operation in solving a problem or executing a task, as when we attempt to block environmental distractions to increase our ability of retention or concentration, or when we try to apply an already known model to solve a recurrent and similar problem at hand. Cognition, however, serves to solve problems and to assure the functioning of the different cognitive processes we undertake.

Metacognitive and cognitive strategies may sometimes overlap when the same strategy is used cognitively or metacognitively depending on one's purpose of using such a strategy. For example, self-questioning can be used cognitively when attempting to gain knowledge from a reading task, or metacognitively when used to monitor what one has actually read. Favell (1976), in Brown (1987:66), does not hesitate to demonstrate the possible interchangeability between cognitive and metacognitive activities: "*asking yourself questions about the chapter might function either to improve your knowledge (a cognitive function) or to monitor it (a metacognitive function)*".

3- Some Models of Metacognition

As metacognition is a rich subject in theory, research and philosophy that have been exploited by many researchers of divergent interests and preoccupations, and the literature on the subject are abundant with metacognitive models suggested by its authors to solve specific problems and answer particular questions that are most related to their concern. Thus, what is universal and agreed upon among researchers about metacognition is that it is mostly concerned with "awareness". Whether this awareness concerns the self, the task, the process or the existing factors pertaining to the cognitive task in question or any other component, or all of these components is what makes the models suggested in the literature different from one another. This difference is also attributed to the field of interest as metacognition applied to memory would not have the same components as when it is applied to problem solving or a decision making task. Metacognition has been of concern in different domains, including reading comprehension, oral expression, writing, mathematics, biology, computer science, etc. Of course, the particularities of each of these fields would

dictate some necessary modifications and adaptations of such fundamental models. In what follows is a brief presentation of some of the most important models existing in the literature on metacognition, and which are of most use to our research.

3-1-Flavell's Model of Cognitive Monitoring (1979: 906)

Flavell's model includes four components which are:

- a- Metacognitive Knowledge
- b- Metacognitive Experiences
- c- Goals or Tasks
- d- Actions or Strategies

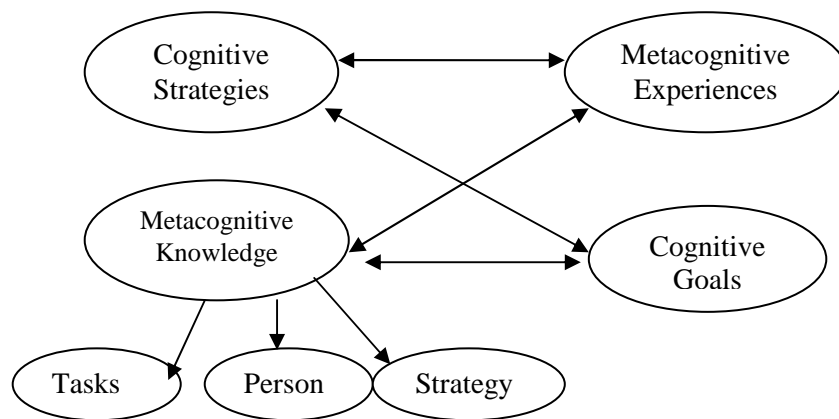


Figure1: Flavell's Model of Cognitive Monitoring in (Amado Gama, 2004:13)

Success of monitoring or regulating any cognitive enterprise depends on the actions of these components and the interactions between them. In what follows is a description of each of these components.

a-Metacognitive knowledge

Metacognitive knowledge is the knowledge one has of his own cognitive processes or that of the others as when he says "I cannot solve mathematical problems and I am good at remembering proper nouns". This knowledge may not always be accurate as people sometimes hold false ideas about themselves and the others and about learning in general. It may not always be activated when needed or may prove

inefficient when activated. Its retrieval or construction is sometimes done rather unconsciously as people are not always able to report about their strategies although they are observed to have followed some. Flavell relates this knowledge component to a set of factors or variables that are liable to be activated and are likely to determine the success or failure of cognitive processes. These factors are mainly related to three categories which are the *person category*, the *task category*, and the *strategy category*.

a-1- Person category concerns the knowledge one has of his own cognitive capacities and that of the others. Flavell distinguishes between:

a-1-1- Interindividual knowledge, that is knowledge one has of his own cognitive resources and capacities as when he says he cannot memorize proper nouns.

a-1-2- Interindividual knowledge, that is knowledge one has of the differences there are between individuals in the way they process information as when he says that he is better than his brother at memorizing vocabulary items.

a-1-3- Universal knowledge, that is knowledge one has about the general aspects of cognition and of its universal properties as when he confirms that human memory cannot retain more than seven chunks of information at a time.

a-2- Task category comprises information about the task in question and the demands of this specific cognitive task one is engaged in. In other words, what is the path one is likely to follow in accomplishing the task and how likely would it be successful. For example, one may know that very dense texts need constant verification of one's comprehension (Romainville, 1993:23).

a-3- Strategy category comprises knowledge about which strategies are effective to attain goals and sub-goals related to a specific task. For example, to know

that graphics are very useful to enhance one's memory performance and are more reliable than rote repetition.

b- Metacognitive experience

Metacognition can occur consciously, semiconsciously or unconsciously. The person is either aware of the process he is going through in attaining specific goals to accomplish the task in question, or he is unaware or just semi aware of that. In this latter case, retrieval cues are activated automatically and unintentionally as it often happens to all of us. When metacognition is deliberately activated, the result is a metacognitive experience. This is a cognitive or affective experience that accompanies the cognitive action as when we feel confused or puzzled after reading a passage, which would provoke a conscious consideration of the steps we are undergoing to complete the task. Or when we suddenly feel anxious and not understanding something we want to grasp, and not reaching the goal we set to attain. These experiences may occur before, during or after undertaking a cognitive task and are likely to happen in situations that require highly conscious and reflective thinking that push one to plan in advance and take minute actions and thoughtful decisions. These experiences may result in new goals and may incite the learner to revise his approach and bring appropriate modifications to his goals and plans of actions. They may also make him update his metacognitive knowledge base and activate his potential strategies. According to Papaleontiou-Louca (2003: pp15,16), metacognitive experiences "*may be more apt to occur when the cognitive situation is something between completely novel and completely familiar and when attentional and mnemonic resources are not wholly preempted by more urgent subjective experiences, such as pain, anxiety, or depression*". In fact, what makes these experiences especially metacognitive is that they are primarily concerned with a given cognitive or affective

endeavor at hand. These experiences are very beneficial to the cognitive enterprise as a whole. The learner adds by this token more elements related to real situations of comprehension, problem solving or any other cognitive activity to his store of metacognitive knowledge. This would add to his capacity to deal with novel tasks and to increase his capacity with attaining goals and objectives. This again may be paralleled to Piaget's famous ideas of assimilation and accommodation processes (c.f. Piaget's Theory).

c- Goals or Tasks

Goals, however, refer to the specific objectives and end-products of the cognitive activity such as comprehending a text for an up-coming quiz, which will induce the use of metacognitive knowledge and provoke a new metacognitive experience (e.g. remembering that outlining the main idea of a passage on a previous occasion had helped increase comprehension).

d- Actions

Finally, actions refer to the use of specific strategies or techniques that may assist in achieving one's goals.

3-2-Brown's Model of Metacognition (1987) in (Amado Gama, 2004: 15)

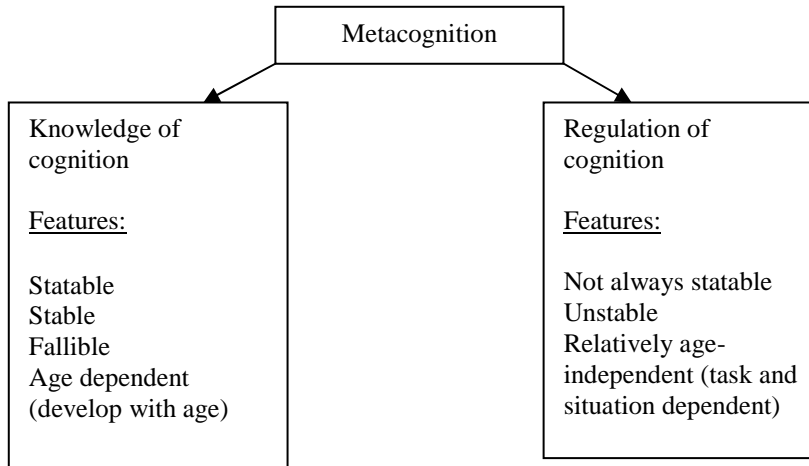


Figure2: Brown's Metacognitive Model

Brown's model of metacognition (1987) is composed of two major components:

3-2-1-Knowledge of cognition: or as is often referred to in the literature on the subject, "knowing that", and it refers to activities used to consciously reflect on one's cognitive abilities and endeavours. This kind of knowledge is often stable (it shows a certain degree of permanence), statable (it may be accessible or explicitated on request), fallible (it may be erroneous as it is particularly idiosyncratic), and age dependent as it tends to develop at a later stage in life. Furthermore, Brown (1978) in Noël (1991) made a clear distinction-as regards this component- between "knowing when you know", "knowing what it is that you know", "knowing what you need to know", and "knowing the utility of active intervention". The fact that we do not know that we do not know is referred to by Brown as "a secondary ignorance". Faced with a comprehension problem, a learner has to know not only that he has a problem of comprehension, but he must also know what or where the problem is. The learner should also be able to identify his needs in terms of information and resources liable to bring his task successfully to an end. Last but not least, the learner should be aware as well of the efficiency of the strategies he decides to opt for to attain his goal.

3-2-2- Regulation of cognition: or "knowing how" refers to activities of self-regulation while the task is in process. These activities include planning, predicting, scheduling, trying strategies, evaluating oneself before, during and after undertaking a cognitive endeavour. This kind of knowledge is unstable, not necessarily storable (as it is sometimes unconscious especially when it is the result of an automatic adaptation to previous cognitive experiences), and relatively age independent, but task and situation dependent.

Brown introduced the concept of "autopilot", which explains why metacognitive learners are sometimes unable to describe their cognitive processes. Thus, expert learners monitor their learning process and evaluate their progress to the extent that these activities become unconscious, and they therefore proceed as if they are in automatic pilot (Amado Gama, 2004).

Cavanaugh 1982 in Romainville (1993: 24) insists that from an experimental point a view, because of the intricate relation between metacognitive knowledge and regulation, it is difficult to explain individuals' performance; and to know for sure whether a weak performance is due to a deficiency in metacognitive knowledge, or to its absence all together. Two hypotheses are possible in this case to explain the nature of the relationship between knowledge of cognition and regulation. The first hypothesis proposes that it is metacognitive knowledge that enhances processes of regulation. The second hypothesis postulates just the opposite. That is, it is regulation that enhances one's knowledge about cognition. Thus, when we undertake controlling actions to regulate our cognition, we come to know about the nature of our mental abilities and by this token we accumulate the required knowledge to act better on an upcoming occasion.

Most of research on metacognition is concerned with the investigation of the relation between metacognitive knowledge and cognitive performance. In other words, are learners with metacognitive knowledge more cognitively mature than their siblings without an adequate metacognitive knowledge? Many researchers hold diverging views concerning this issue. According to Fischer and Mandl (1984) and Cavanaugh (1982) in Romainville (1993: 28), knowledge of oneself and one's capacities and cognitive resources is liable to lead to efficiency in cognitive performance. According to them, the more a learner comes to know the variables related to person, task and strategies, the more his learning is efficient as may be evidenced through appropriate regulation of his cognitive ability. Thus, the learner's self-report and verbalisations of his own cognitive endeavor are good predictors of his cognitive efficiency. By the same token, enhancing the learner's awareness of his cognitive states and processes may lead to his cognitive maturity.

On the other hand, Flavell and Wellman (1977), in Romainville (1993), suggest that metacognitive knowledge can only have a substantial influence on the cognitive performance of learners under some conditions only such as a high level of motivation. Two reasons may be said to be at the origin of metacognitive knowledge failing to have a plausible effect on the learners' cognitive performance. On one hand, an overlearned strategy which becomes automatic with time may make the learner do without the activation of this metacognitive knowledge. That is to say, the automatic process is sooner activated before the learner even feel the need to have recourse to his metacognitive knowledge. However, Brown (1987) bridges the link between the ability to explicitate or verbalize one's cognitive processes and the efficiency of cognitive activities by comparing novices to experts. Experts were found to be able to talk about their strategies better than novices, which sustains the idea of a strong link

between metacognitive knowledge and actual performance efficiency. On the other hand, the learners may possess this metacognitive knowledge, but are unable to make an adequate use of it. Thus, a learner who undertakes an easy task or who underestimates his chances of success with the problem at hand may not activate or may not feel the need to activate his metacognitive knowledge.

3-3-Tobias and Everson's Hierarchical Model

Tobias and Everson presented the metacognitive components they proposed in a pyramidal form to stress the importance of their order of occurrence, which explains the effect of each component on the one above it in the pyramid.

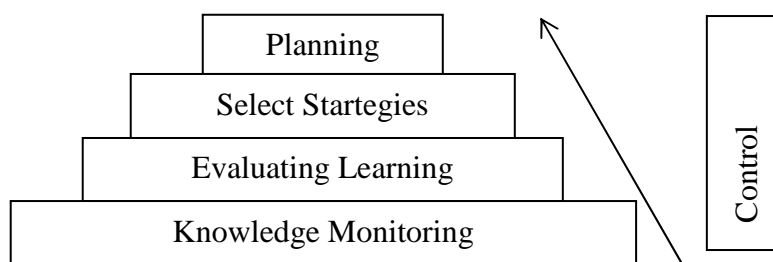


Figure3: Tobias and everson's componential model of metacognition in (Amado Gama, 2004:

16)

According to Tobias and Everson (2002), Knowledge Monitoring is the most important metacognitive skill which would trigger the other skills above it. It is the ability to know what you know and what you do not know. Students should exactly know what they know and what they do not know to be able to go further with their learning by going through the other skills in the pyramid, i.e., evaluating their learning, selecting appropriate strategies to achieve their goals, and making plans for effective control of their learning. According to Tobias and Everson (2002:1) "*learners who accurately differentiate between what has been learned previously and what they have yet to learn are better able to focus attention and other cognitive resources on the material to be learned*". For example, if a student knows which part

of the material he has already acquired and which part he needs yet to acquire is more able to plan his learning, and allocate more time for the unfamiliar part than to the familiar one.

In this context, it is time to draw the distinction between monitoring and control, once for all, as it is a recurring distinction in many metacognitive domains and models. Thus, metacognitive monitoring is the subjective assessment one has of his own cognitive processes that one uses to regulate his behaviour. In the above example, the student learning the new material monitors his degree of learning as regards the familiar/unfamiliar parts to decide on the time he is going to allocate for each part and the mental resources he is going to put in use. Reder and Schunn (1996:45) explain further this distinction by specifying that monitoring presupposes "*awareness of the component steps in cognitive processes as well as awareness of various features of these steps including their duration and their successfulness*". Control, on the other hand, denotes cognitive processes responsible for selecting appropriate strategies and modifying behaviour to achieve a given task. The basic assumption underlying an eventual relationship between monitoring and control is that the monitoring component acts as a guide for the efficiency of the cognitive behaviour aimed at a specific goal or objective. That is to say, a successful monitoring guarantees a successful action in terms of completing, or undertaking a cognitive task. However, some researchers questioned this relationship and went to suggest that control of cognitive processes does not always occur as a result of explicit monitoring. Sometimes the control action is just effectuated through an implicit or unaware monitoring (Reder and Schunn, 1996). In this respect, Kentridge and Heywood (2000: 309) do not hesitate to remark that "*awareness may not be necessary for, and may not necessarily accompany changes in the automatic processing of a task*". To illustrate

this point, they reported an experiment carried out by Lambert and Sumich in Reder and Schunn (1996), in which subjects implicitly learned the relationship between the semantic category of words acting as cues and the location of the triggered target that appear on the screen and that they were asked to report. Thus, they learned that words for animate objects triggered targets on the same side of the screen as the word was presented while words for inanimate objects triggered targets on the opposite side of the screen. The subjects, however, were not aware of the word-location relationship they have learned. Their knowledge of this relation was only revealed through the measurement of their reaction time to locating targets whose words deviated from the learned rule. Other tools such as open-ended questions or forced choice of the actually used rule did not reveal these results.

4- The difference between self-awareness and consciousness

Metacognition has always been associated with the terms self-awareness and consciousness that have often been used interchangeably as if they mean exactly the same thing. Chris Mathe (2000) explains the difference by drawing on the explanations of consciousness and self-awareness provided respectively by Dennet (1978) and Neslon (1992). Thus, consciousness refers to what one has actually access to, whereas self-awareness refers to one's knowledge about one's physical and mental states or one's inner reality. In brief, consciousness is related to access to knowledge, and self-awareness is related to access to knowledge about oneself. The first belongs to the 'object' or immediate level, while the second belongs to a 'meta' level or some abstract and higher level. In other words, when attention is focussed outward towards the environment, we are concerned with consciousness. However, when attention is focussed inward towards the self, we are concerned with self-awareness. In this last

situation, the organism becomes aware when it is experiencing some mental states, emitting behaviour or processing information.

A more simplistic explanation of the distinction between awareness and consciousness is that the former refers to one's knowledge about what is happening around him. A person is aware that he is sitting not standing, seeing different objects around him, speaking with his peers, listening to people and hearing the noise outside around him...etc. In short, awareness is the actual functioning of the mind through the different senses that make him in contact with his environment. Consciousness, on the other hand, is a more complex sort of awareness in that it results from the mind operating on its proper functions. As such, whereas the simple act of perceiving a given object around us denotes a state of awareness, a reflection about this act of perception is consciousness. By this token, awareness is understood to be part of consciousness and one of its basic ingredients. It is easy then to understand the expression "conscious awareness" often used in different studies dealing with metacognition. Conscious awareness, then, refers to one's ability to think or reflect upon his knowledge. A learner is aware of his abilities and of the different factors contributing to his learning, but he is conscious of this awareness in being able to describe his strategies allowing him to put this knowledge into use. He might be aware that paraphrasing is crucial for retention, and becomes conscious of this state of affairs when he succeeds to exert control on those strategies as a sign of grasping their mechanism.

5- Metacognition and conscious competence of learning

It is not clear who first introduced the concept of conscious competence learning model, but Howell made use of it in 1982 when discussing issues on communication

skills in his book “Emphatic Communicator”. Howell (1982) described the learning process we all tend to undergo, to successfully acquire any skill or develop whatever competence through four stages that result from the interaction between two criteria with their corresponding two states. These are: consciousness (conscious/unconscious) and competence (competent/incompetent), as shown in the following table:

		Competence	
		incompetence	Competence
Csciousness	conscious	Conscious incompetence	Conscious competence
	unconscious	Unconscious incompetence	Unconscious competence

The four stages of the conscious competence learning

a- *Unconscious incompetence*: this is the stage prior to learning *per se*. It is characterized by unawareness on the part of the learner about his ignorance. The learner does not know about his ignorance and he does not have a mastery of the skill in question and does not either know what he does not know exactly.

b- *Conscious incompetence*: at this stage the learner comes to realize his ignorance or wakes up from his long standing illusion of knowing. It is at this stage that the learner ever thinks of being engaged in learning. He would have never thought of the idea and of the need to learn if he had not noticed his lack of knowledge.

c- *Conscious competence*: this stage takes place during ongoing learning whereby the learner is not yet accustomed with the new rules or structures he is acquiring. He tends to think before he acts and is very attentive to whatever action he undertakes or decides to undertake. For example, a language learner at this stage is found to be strictly adhering to grammatical rules when attempting to communicate or use language in any of its aspects. He seems to think of the rules before uttering any

sentence. He stutters and makes a lot of false starts and shows marks of hesitations as an indication of his deep awareness about his cognitive endeavor.

d- *Unconscious competence*: at this stage, the learner has already mastered the skill in question and has developed an automatic mechanism making him able to respond significantly without having to think about what he is doing. Again with the example of the language learner stated above, the learner now reaches the stage when he can use the acquired language fluently and correctly without having to bother about rules. Obviously, he has internalised this system of rules in a way that allows him more ease and immediate access that does not require much time as before.

This model of conscious competence learning brings to the fore the concept of metacognition at especially its first and third levels, whereby the learner does not engage or feel the need to engage in learning unless he is aware of his incompetence and the need to change this state of affairs. This first stage of unconscious incompetence may be equalled to what Bernadette Noël (1991: 10) names as secondary ignorance or "ignorance secondaire" which denotes the learner's unawareness of his lack of knowledge, and what exactly he does not know. Holts (1964: 28-29) in Noël (1991:11) sustains this idea and insists on its impact on the learning enterprise all together:

être un bon étudiant, c'est apprendre à être conscient de sa propre intelligence et du degré que peut atteindre sa propre compréhension. Un bon étudiant peut parfaitement dire qu'il ne comprend pas, simplement parce qu'il exerce un contrôle constant sur sa compréhension. L'étudiant médiocre ne sait pas, la plupart du temps, s'il comprend ou s'il ne comprend pas.

At the third level, the learner comes to control his learning by consciously reflecting on his actions and decisions. He makes use of his store of metacognitive knowledge related to the rules and routines he already acquired. He accordingly activates appropriate strategies on the basis of the feeling he had during monitoring, and makes decisions, or decides revisions throughout. Once this is done during a long and sufficient time, the conscious mechanism gives way to routine loops to take place whereby the learner would rather take immediate actions without conscious control, and without being able to report about those actions.

6- The contribution of metacognition to skills other than translation

As has been stated in the introduction of this chapter, light is to be shed on existing research about metacognition in relation with other field of interest. As the present research is focussed on the role of metacognition in translation performance, it is judicious to bring to light its contribution to reading and writing skills, as being the two major skills in the service of the translator. In fact, they represent the encoding and the decoding processes of the translational operation. Without efficient reading and writing processes, the source message would never get transferred to the target language. In what follows is an attempt to give hints of what can metacognition do to enhance students skills in reading and writing, of course in relation to what has been done so far in this two fields.

6-1-The role of metacognition in skilled reading

The role metacognition plays in reading is not contested in itself as this relationship has fairly been confirmed by research in the field. What is to be explained is the nature of this relationship and the factors underpinning its mechanism. For

example, Bialystock and Ryan (1985: 207) suggested that “[t]ypically, children who do well in metalinguistic tasks also learn to read quickly and easily, although it is not clear how to interpret such correlations”. Reading is a cognitive skill involving mental processes at the micro and macro levels. The reader is supposed to grasp the overall organizational structure of the text as well as the smallest units of meaning encapsulated in words and phrases grouped together. While processing the text in this way, and attempting to understand the author's intended meaning, the reader is obliged to make constant use of his background knowledge concerning the current content and his past experience related to his capabilities as a reader. To coordinate his efforts at these interrelated levels, the reader should remain attentive and ready to make decisions whenever a reading difficulty arises. He should know when to skim and when to reread a portion of a text, when he can rely on inference and when not, what to discard and what to retain in memory. All these decisional operations are known as monitoring skills and they constitute the very essence of metacognition in calling for a meta-level knowledge, on the part of the reader, concerning himself, his cognitive resources and the task in question. Thus, when attempting to enhance students's metacognitive skills in this area, the following activities may be of capital importance: *"establishing the purpose for reading, modifications in reading due to variations in purpose, identifying important ideas, activating prior knowledge, evaluation of the text for clarity, completeness and consistency, compensation for failure to understand, and assessing one's level of comprehension"* (Brown and Baker, 1984 in Brown 1987:66). These activities, according to Brown, were already in use even before the term metacognition was coined. Writings on the reflective reading and learning to think were already familiar as early as 1909 with the work of Baldwin on his reading questionnaire investigating the learners' reading habits. Dewey (1910) and Thorndike

(1917) were also known for their extensive work on the thinking process of their readers.

Brown (1985) and Baker and Brown (1984) in Griffith and Ruan (2005:6) proposed a model of metacognitive skill in reading on the basis of that already proposed by Flavell(1979) and discussed earlier in a previous section. According to them, metacognition consists of two components which are "knowledge of cognition" and "regulation of cognition".

Knowledge of cognition is the knowledge the reader has about his own cognitive resources, about what a reading task may require. In this respect, the reader should know what strategy is in need to overcome a given comprehension problem. He should also know how to use it. And once his choice of the appropriate strategy is made, he should also know when and why to adjust his reading speed in order to achieve his reading goal. This knowledge component is overall stable and stable in that it remains relatively constant during the reading task and can be reflected upon and discussed with others. However, it is age-dependant but may develop with experience. It is also fallible in that learners may be wrong about some of their assumptions and beliefs concerning this area of knowledge.

Regulation of cognition is the set of mechanisms the skilled reader put to use before, during and after undertaking the task and when trying to overcome a comprehension problem. It involves predicting outcomes, scheduling strategies, adjusting one's decisions on the basis of the results obtained, planning new actions, testing and evaluating their effectiveness to revise them for more efficient use. This component is not stable and differs among readers of different ages and academic levels. According to Flavell (1979), young children (preschoolers and elementary schoolers) do not possess the appropriate metacognitive skills. In fact, their knowledge

about their ability to retain some vocabulary items in a text does not match with their actual performance. This component is also often not stable in that learners are not necessarily able to bring these strategies to the level of conscious awareness. They know how to do something, but they cannot reflect upon their actions and report them to the others. This brings us to note that metacognition is not always conscious. As stressed by Rozin (1976) in Brown (1987: 71): "*conscious access to the routines available to the system is the highest form of mature human intelligence*".

The role of the teachers, in this respect, is to make their learners able to tune their strategies to the text comprehension requirements. Students should be trained to be more strategic by being able to make the most appropriate choice as regards the intentional application of a strategy among many others to attain a given goal. Paris et al (1994) in Griffith and Ruan (2005) made a distinction between a strategy and a skill by emphasizing that a strategy becomes a skill when used unconsciously and automatically, and a skill becomes a strategy when applied deliberately and intentionally.

6-2- The role of metacognition in skilled writing

Writing involves somehow the same set of cognitive and metacognitive skills involved in reading as it also necessitates that the writer plans his actions and monitors and revises his strategies to meet his goals. However, the writer's goals are adapted to meet the requirements of a reader not an author.

Results of studies concerning the role of metacognition in L1 and L2 writing have shown that there is a link between metacognition and performance (Kasper, 1997). Teachers of writing can rely on contrastive rhetoric to make the students aware of the preferences operating in different cultures as regards text organization, which

may have an impact on their written renditions (Raimes, 1991). Students' metacognitive awareness can also be enhanced, in this respect, using different techniques ranging from self-questioning, goal-setting and mental imageries. These are basically the same techniques used also for the reading skill with slight modifications pertaining to the nature of the task in question. In setting the goal for the written activity, for example, the student is encouraged to think of a possible reader for whom he is writing the assignment and try, thus, to meet his expectations. Jacob and Paris (1987) in Griffith and Ruan (2005) insist that teachers should show their students what strategies to use for problem solving during reading or writing activities, and to understand the nature of the task they are undertaking, its requirements and the different conditions of its realisation. These aspects correspond well to awareness of declarative, procedural and conditional knowledge.

This strategic training to develop students' capabilities for autonomy and self-regulation in these skills should be started with earlier. Metacognition, according to Block, does not bring its desired effects if not enhanced earlier in the educational life of students. The risk is that students may come to feel satisfied with their weaknesses and develop a defensive attitude to change. In Block's words, *"if these students' metacognition are not developed early, most will even develop more elaborate camouflages of their reading failures"* (Block, 2005: 85).

7-Assessment of Metacognition

Researchers are still trying to find suitable methods and instruments to measure metacognition. The construct proves difficult to be assessed for many reasons that are going to be explained in another section below. In what follows is a table that summarises the most common instruments and tools that have been adopted by

researchers in this field, and gives descriptions, advantages and limitations related to each of these instruments. The table has been adopted -with some modifications- from Amado Gama's own synthesis (2004). The tools described in the table are not exhaustive as there are other tools that we are to describe below, but they represent the ones that have mostly been discussed, criticised, and analysed for remedy by researchers seeking reliability and validity for their methodological instruments.

Method	Description	Advantages	Sources of errors and limitations
Concurrent Think-aloud	The learner says out loud everything he thinks and everything that occurs to him while performing a task	Gives rich data about processes that are "invisible" to other methods.	Automated processes remain inaccessible; young children do not sustain verbalisations; reporting may be disruptive of processing; produces masses of data that need careful analyses.
Post-performance interviews	These are interviews in which the learner has to recall what he did and thought during a learning experience.	Provides data from responses to specific, direct probes.	Lack of awareness of processing for those processes that are automated; failure to remember cognitive events given the interval between processing and reporting; lack of verbal fluency and variation adult-child use of language; investigator needs to be attentive for not cuing particular responses.
Cross-age tutoring	Ask subjects to tutor younger children to solve a problem to observe which strategies and behaviour they will encourage to teach.	Non-verbal data; avoid subject guessing what the investigator wants to hear and answering accordingly.	Useful in the investigation of specific strategies (e.g. awareness of usefulness of text reinspection strategy)
Self-report inventory	Self questionnaire using Likert or continuous scale with multiple items.	Structured and convenient; easy to apply and score	Answers may be given to please the investigator; difficult to answer about at least partially automated processes.

Vennman (2005) in (Whitehead et al, 2009) reviewed the most important methodologies used to assess metacognition in terms of their possible contributions and difficulties. These methodologies included prospective and retrospective self-

report measures (questionnaires and interviews), concurrent self-report measures (think-aloud) and systematic observations.

Self-report measures (retrospective questionnaires and interviews and think alouds) suffer from a threat to their validity as they require a level of fluency and verbal mastery whose existence cannot be ascertained in all subjects especially when dealing with children.

Think-alouds represent an overload to the subjects' working memory which is likely to distort or cut off their performance as they would not be able to remember exactly what they did or thought. So even with an appropriate level of fluency and verbal mastery- if they can be assumed to exist- subjects are not likely to adequately report on their own mental processes without errors of omissions or inventions (Nisbett & Wilson, 1977). This is basically related to the issue of conscious and unconscious metacognition. There is some evidence in the research literature on the subject that supports the existence of implicit processes of metacognition which are not available to conscious awareness. Flavell et al (1966), for example, in one of his famous experiments on children's memory, confirmed that among the children who were actually observed to have made lip movements during the experiment –as an indication of their use of rehearsal strategy- 25% reported that they did not do so, which means that they were not aware of the strategy they had actually used.

Now, as regards systematic observational methods, they may be said to have some advantages over the self-report measures described earlier. Through systematic observational methods, the examiner is able to record what the subjects actually do instead of recording what they recall or believe they have done. Besides, the behaviour observed would be directly linked to the immediate context of use in which the subjects are involved.

To go a little into details of how metacognition is actually assessed, here is presented two of the basic methodological instruments used and refined by most researchers in the field.

7-1-The MAI inventory

Metacognition Awareness Inventory was proposed by Shraw and Dennison in 1994. It is a kind of questionnaire made up of 52 items regarding knowledge of cognition and regulation of cognition, and is subdivided into eight component processes corresponding to eight scales with at least four items per scale. The items included in the questionnaire are in the form of statements in the affirmative that the subjects are requested to respond to and rate according to a scale, the right end of which indicates the statement is false and the left end of which indicates the statement is true. These statements describe, in an assertive form, the subjects' knowledge related to one of these eight subcomponents explained below. Some examples of these questions are introduced parallel to the definition of the components cited hereafter. For full details of the totality of questions, the reader is invited to have a look at the appendix 1.

Knowledge of cognition or about cognition is made of three components which are:

a- Declarative knowledge which concerns knowledge about one's skills and mental resources and overall abilities as a learner (e.g. I learn more when I am interested in the topic)

b- Procedural knowledge which concerns knowledge about how to use the strategies one knows (e.g. I am aware of what strategies I use when I study).

c- Conditional knowledge which concerns knowledge about when and why one is to use those strategies or learning procedures (e.g. I use different learning strategies depending on the situation)

As for regulation of cognition, it is made up of five subcomponents responsible for monitoring and control of those strategies one knows about to reach the intended goal and bring one's action to the desired outcome. These subcomponents are:

a- *Planning*: in terms of goal setting and resource allocation especially before undertaking the task in question (I ask myself questions about the material before I begin)

b- *Information management*: in terms of elaboration, organization, selective focussing or whatever technique one uses to ensure a better use of the strategies to process information, and attain efficient results (e.g. I consciously focus my attention on important information).

c- *Monitoring*: in terms of assessing one's learning or online strategy (e.g. I consider several alternatives to a problem before I answer).

d- *Debugging*: in terms of correcting one's errors and problems of comprehension (e.g. I ask others for help when I don't understand something)

5-Evaluation: in terms of analysing one's course of action and its efficiency especially after finishing the task or employing a given strategy (e.g. I ask myself if I have considered all options after I solve a problem)

7-2-Knowledge Monitoring Assessment Instrument

This model has been proposed by Tobias and Everson (1996) in Amado Gama (2004), and as its name reveals, it focuses on the knowledge monitoring component of

metacognition (c.f. Tobias& Everson's Model of Metacognition). This assessment model has been widely used across many disciplines; using many categories of subjects differing in age, aptitude, social and economical status...etc. It has been proved of wide applicability (domain independent). This model concentrates on two parts of the cognitive process of subjects, and so is undertaken in two phases. The subject is first asked if he really knows something or not, then proceed to challenge his knowledge through a specific question or task to check if he was really right in his own assessment. For instance a subject may be asked if he knows the meaning of a word, and then would be requested (later on) to give a definition or a contextual example of this word.

Of course, the same subject is asked many questions of the same sort described above to determine his awareness of his own knowledge that would be presented in the form of a statistical profile based on the following probable outcomes of the subject to the self-assessment question he was asked:

- The subject stated he knew and indeed performed accordingly: (a) (++)
- The subject stated he did not know but succeeded when challenged: (b) (-+)
- The subject stated he knew but failed when challenged: (c) (+-)
- The subject stated he did not know and indeed performed accordingly: (d) (--)

The first two cases represent successful knowledge monitoring. The last two cases represent failed knowledge monitoring.

Actual Performance	Subject's assessment	
	Know	Do not know
Know	(a) (+ +)	(b) (- +)
Do not know	(c) (+ -)	(d) (- -)

The number of times each of these four cases occurs is counted to obtain four categories of result labelled (a), (b), (c), (d).

The knowledge monitoring assessment score is then obtained using the following formula:

$$((a+d) - (b+c)) / (a+b+c+d).$$

The resulting number is always comprised between (-1) and (1). A score of (1) is obtained when the subject never fails in her knowledge assessment. A score of (-1) is obtained when the subject consistently fails in her knowledge assessment. A score of (0) is obtained when the subject fails as often as she succeeds.

In the present research, both models (Shraw and Denison's and Tobias and Everson's) were a source of inspiration. In fact, Shraw&Denison's inventory questionnaire gave us an idea about the different sorts of questions touching upon the various metacognitive components of learners to be investigated. Tobias and Everson's model suggested the idea of checking learners' metacognitive knowledge in general against their actual reaction when confronted with a real problem. However, the scale suggested in the literature was not possible to reproduce here because of the specificity of the present research. Thus, metacognition in this study is investigated in relation with the translation skill and not as an isolated phenomenon. In this respect, the questions suggested by Shraw and Dennison should be adapted to touch upon translation competence. Most of these questions, however, cannot be adapted to this aim as they are essentially focused on the general universal aspect of metacognition. Tobias and Everson's model, on the other hand, is focuses on the monitoring aspect of metacognition; whereas, the present research is meant to draw a metacognitive profile of translation learners as regards their declarative, procedural and conditional knowledge pertaining to translation. Besides, the nature of the present research is mainly qualitative and so the scale was of no typical use.

8-Implementing metacognition in instruction

Despite diverging views concerning the exact nature of the relation of metacognition to cognitive efficiency and self-regulated learning, research in metacognition reached some clear, plausible and encouraging results about the role of metacognition in enhancing the learning process, assisting learners in overcoming obstacles standing in their way and slowing down their process of knowledge acquisition, and helping them to be self-independent and autonomous by being able to transfer their actual cognitive and metacognitive potential to other related situations of use. This state of affair led Campione (1987:118) to affirm that *"the frequency with which metacognitive deficiencies have been cited as a factor in poor academic performance has led, not surprisingly many psychologists engaged in instructional research, to include metacognitive skills as a part of their overall training packages"*. Huge efforts were made to meet the different needs of learners in different domains of knowledge, and a strong emphasis was put on the particularities of individual learners and of instructional settings and basic academic goals and orientations. According to the available literature on this subject, the instructional work, which has been conducted so far, included both interventions in the form of providing learners with knowledge about the processes in question or providing them with instructions about how to use these processes. This goes hand in hand with what Moore and Newell (1974) and Rozin (1976) in Campione (1987) suggested respectively as regards the efficient way to use metacognition in instruction. For Moore and Newell, learners understand routines when actually using them appropriately. For Rozin, an essential condition for understanding is that knowledge of either the process or the task should be available to consciousness. Moreover, attempts were particularly made to make the learner able to generalize and transfer what he knows or comes to know to new situations of use.

According to Campione (1987:123), if the learners are not able to apply what they know or comes to know in a given task situation to novel but related tasks, "*the instructional effects, although theoretically interesting, remain of dubious practical significance*". The aim is, in fact, to make learners act on their own even when their teachers' prompts are withdrawn. This may be achieved by either providing them with knowledge about the effectiveness of the strategies they are taught to use or to train them to use those strategies in different contexts till they come to realize their utility. Learners should be made aware of the importance of those strategies and how and when to use them. Besides, metacognition should not be understood as being a magical tool, capable on its own to realize miracles and transform students automatically into autonomous being. To be activated and put into the service of the learners, there are other factors related to the general setting and to learners themselves that should be taken into account. These factors range from motivation, self-efficacy, self-attribution to other elements pertaining to the task and its context. Self-regulation, according to Zimmerman (1995:221) is not a universal ability found constant in all individuals, "*but [is] rather a complex interactive process involving not only metacognitive components but also motivational and behavioural components. Like other forms of human functioning, SRL is affected profoundly by variations in social-contextual variables, such as task features and setting conditions*"

Nevertheless, Flavell (1987) particularly described the inherent need for metacognition in any thinking organism. For him, it is a *sine qua non* for ordinary human beings endowed with the faculty of mind, inspired by the events surrounding them and armed with the will to make change and prosper by carefully planning their actions and making sound and weighed decisions. According to him, metacognition is successful with an organism that is endowed with some characteristics such as a strong

thinking ability, a “faillible and error prone” nature requiring much monitoring and regulation, and a desire to communicate and make one’s path of action clear for oneself and the other organisms. In his own words, the organism further needs:

Fourth, in order to survive and prosper, [...] to plan ahead and critically evaluate alternative plans. Fifth, if it has to make weighty, carefully considered decisions, the organism will require metacognitive skills. Finally, it should have a need or proclivity for “inferring and explaining psychological events in itself and others, a penchant for engaging in those metacognitive acts termed social cognition. Needless to say, human beings are organisms with just these properties.” (p.27)

Angelo and cross (1993), for instance, suggested a battery of interesting activities to attain these objectives. In this respect, the authors insisted that it is important to target instruction towards the development of more effective and adequate learning strategies. Learners should be made aware of their cognitive resources and should be made able to evaluate and weigh them against actual cognitive endeavours. Among the techniques Angelo and cross suggested we may note the following:

- One-sentence summary whereby the students are asked to summarize a presentation or a given course component in one sentence.
- Word journal whereby students are asked to describe the content of a short text or presentation with one word before they are asked to justify their choice for that particular word.
- Concept maps which provide the students with a jumbled list of terms or concepts and have them diagram the relationships among those terms.

-Annotated portfolios whereby the students provide a sampling of their work along with brief analyses of how each demonstrates their grasp of given concepts.

These suggested techniques are not exhaustive and may be extended to cover every area where cognition is involved including memory, problem solving, analysis and critical thinking, synthesis and creative thinking, study skills, awareness of oneself as a learner, awareness of attitudes and values, etc

Below are some of the most effective teaching techniques and self-directed strategies that have been suggested by educators and researchers other than Angelo & Cross.

8-1-Reflective questions and reflective prompts

In Scardamalia and Bereiter (1985), these are meant to encourage critical and reflective thinking by inciting learners to proceed logically in their reasoning. Questions are rather general in nature and are used to direct learners in the way they should relate each step in the process to the next one. For example, a teacher may ask the learner to guess what he should do next (what next?). This question would encourage the learner to think of a logical sequence in the process he is undertaking. Prompts, however, are more focussed and reinforce learners' understanding of what they are doing and help them generate inferences. For example, a teacher may reformulate or paraphrase a student question to help him understand the problem and find a solution on his own. So, a question such as "should your goal be reformed?" is so general and cannot incite the learner to think, whereas a question such as "what aspects of your goal settings would you change?" is more specific and stimulates thinking.

8-2-Metacognitive Scaffolding

Scaffolding means helping the students bridge the gap between what they can do on their own and what they can do with the guidance of others. Scaffolding may take the form of models, hints, cues, partial solutions or whatever can guide the learner to achieve what he cannot on his own. Teachers using scaffolding activities want to make their learners more independent and self-regulating beings. These activities, that basically develop learners' higher level cognitive strategies, would be internalised with time and become part of the learners' already existing schema.

8-3-Modeling

Teachers, in this context, may serve as a model to their learners by externalizing their thought processes while undertaking a specific task. Peer-modeling is another variation of this same technique whereby a student is doing that job instead of the teacher. It is believed that a learner observing his teachers or peers effectuate a task can learn how to do it himself.

8-4-Self-questioning

Students are encouraged to ask themselves questions about their learning process and the progress they achieved so far in the realisation of a given task. Examples of such questions include "have I left anything important? Did I try all the strategies I know? What can I do to solve this problem?...etc". Self-questioning should be extensively used to become an automated and unconscious skill.

8-5-Thinking aloud and self-explanations

Thinking aloud consists of externalizing one's thought processes for the others. A teacher doing so may serve as a model for his learners to imitate him in the way he

tackles the problem, answers a question or conduct an experiment. Learners can be encouraged to act as such with their peers. Think-aloud modelling may be in the form of self-questions (e.g. "did I carefully check my work?") or self-instructional directive statements (e.g. "that's not what I expected. I'll have to retrace my path")

Self-explanation is the process of clarifying an exercise, a text, an example, etc to oneself. It is based on examining the explanations students give while trying to understand an example. This process of explaining *"is a mechanism of study that allows students to infer and explicate the conditions and consequences of each procedural step in the example, as well as apply the principles and definitions of concepts to justify them"* (Chi et al, 1989: 151) Students who tend to self-explain when they study, learn more according to some previous studies (ibid).

8-6-Self-assessment

It is desirable to encourage learners to evaluate their strengths and weaknesses to explicitly explain what they know and what they do not know. Another variation of self-assessment is evaluating the production of one's peers and to make connections to one's own work and experience. Self-assessment would yield better results if enhanced on a regular basis as a routine. However, to bring its desirable result, *"students need a safe environment that allows risk-taking to provide honest answers to self-assessment questions. Without this honesty, self-assessments have little value"*. (Bauserman, 2005:168). Moreover, Kiger (2001) in Bauserman (2005) warns teachers against careless oversuse of this activity. In trying to make it into a routine, teachers should be cautions not to turn it into a tedious activity for learners instead of a support for their metacognitive development.

8-7-Graphic organizers

Some graphic organizers include flow charts, tree diagrams, concept maps, Venn diagrams, compare and contrast matrices, problem/solution outlines...etc. They all enhance learners' ability to analyse the material they are tackling and find paths to overcome recurrent problems.

Besides, Schraw (1998: 121) also developed a regulatory checklist for students to use in monitoring their own metacognitive control in order to enhance their independence, improve their strategic skills and raise their awareness. This checklist includes the following elements:

a-Planning

- 1-What is the nature of the task?
- 2-What is my goal?
- 3-What kind of information and strategies do I need?
- 4-How much time and resources will I need?

b-Monitoring

- 1-Do I have a clear understanding of what I am doing?
- 2-Does the task make sense?
- 3-Am I reaching my goals?
- 4-Do I need to make changes?

c-Evaluating

- 1-Have I reached my goal?
- 2-What worked?
- 3-What didn't work?
- 4-Would I do things differently next time?

The educational system is able to take a lot of measures to make students better learners and to increase their metacognitive awareness. All learners can benefit from metacognition and improve their thinking and reasoning skills. According to Kuhn (1989) and Rogoff (1990), this is possible if three conditions are fulfilled. Students, in fact, should spend enough time applying those skills in meaningful contexts. They also need observe experts use those skills. They require as well gaining access to an expert's reflection on how well he is doing with the acquired skills.

9- Conclusion

This chapter was rather meant to introduce metacognition in its general framework and to remove ambiguities surrounding this concept. Many explanations were offered as regards its utility in cognitive psychology and educational settings. The most important metacognitive models bearing a relation with the present research were introduced and explained to be able to decide on a clear theoretical standpoint. Light is also shed on possible applications of this concept in the instructional field to show its importance in the learning enterprise and in developing learners' independence and autonomy overall. More details on this last issue will be the major concern of a forthcoming chapter to show the intricacies of learning and how it can be enhanced. The relation of metacognition -or its neighbouring concepts- to the field of learning will be given due attention to see what can be done in teaching translation competence.]

CHAPTER2 : Translation Theory and Translation Pedagogy

Introduction

This chapter aims to discuss the nature of translation as a discipline or a distinct branch of study and to give a general sketch of the development in translation theory since its appearance and recognition as a useful practice during old times. Major theories and theoreticians are thus introduced to discern any logic or systematic character in this development. The issue of the relationship between theory and practice or the question of what utility can theory bring to actual translation performance will also be tackled. In addition, issues on translation pedagogy and translation didactics are introduced to understand the purpose beyond this institutionalisation of translation training and to relate it to the history of the discipline dealt with previously. To understand how to teach or how to acquire translation competence, one must develop an awareness of the particularity of such a discipline or practice and to understand the major controversies raised against it, throughout history. This awareness is the product of a full and deep understanding of all factors contributing to translation and interfering in the way it is perceived by given societies or cultures during different historical times. This is particularly what this chapter tries to bring about.

I- Translation Theory

I-1- History of Translation Theory

It is very crucial to know when and how theorizing in translation began and what were its itineraries and paths of exploration to understand its role in translation teaching, which is one domain of its application besides translation performance as such. Translation theory is the conceptual framework that guides and inspires teachers and educators in their job of putting into practice a set of techniques and strategies they

believe are most appropriate to adequate performance. In plain words, our actions translate well our beliefs. Actions here represent translation performance or practice, whereas beliefs represent the conceptual framework or theory per se guiding or monitoring this practice. Translation history may be regarded as part of this theory and its source of inspiration as it brings about the essential elements shaping this kind of linguistic performance. For Steiner, the role of the history of translation is crucial and very interesting as constituting meaningful data for analysis:

[I]t would be possible, and fascinating, to assemble what records there are of the development of commercial, legal, and diplomatic translation, to study the interpreter and his functions in economic and social history. Schools for translators, such as are believed to have flourished in Alexandria in the second century A.D. or in Baghdad, under the leadership of Hunain Ibn Ishaq, during the ninth century, would be worth analysing and comparing.

(Steiner, 1975: 272)

This historical background is not only recommended for scholars or academics seeking to explain the phenomenon of translation or to theorize about it, it is also important for translation learners who need to know their exact role in their society and assimilate their present and actual position in the evolutionary scale of their roles throughout history. In this particular respect, Malmkjaer & Mackenzy insist on the importance of acquiring such knowledge for developing students' translation competence and preparing them for their future professional career:

By reading the history and theory of translation students can, for example, be made to realize the significance of their role for society and how it has changed and developed over the ages, from that of a mere servant, to that of a

rhetorecian, an evangeliser, a scholar, a communicator and finally that of a professional supplying a service in the translation industry.

(Malmkjaer & Mackenzy, 2004: 33)

In what follows is an attempt to review the major trends in the development of a theory of translation and discuss some of the emerging problems and their impact on applied translation theory.

I-1-a- History of Translation in the Western Tradition

Translation by being logically a language communication phenomenon existed since the first time man on earth felt the need to communicate with people speaking different languages. The myth of the tower of Babel in the Old Testament is often referred to when attempting to trace the historical source of translation. According to Wilss (1982: 27)

The Babel story can be seen as the spark which set off a discussion of translation theory and method which has repeatedly had to deal with the question of the preconditions, possibilities, and limits of translation from a theological, philosophical, aesthetic, psychological, and ethnographic point of view. Since then translation theory never ceased to bring different view points which were not developing in a straightforward and linear way but were rather swinging between extreme polarities and bringing sharp opposition to one another.

The first who is said to have theorized about translation is Etienne Dolet (1509-1546) in Das (2005), whose referential book on the theory of translation "La manière de bien Traduire d'une langue en autre" explains five fundamental principles that any translator should respect. These are:

- a- A total grasp of meaning intended by the original author and removal of source text obscurities if any.
- b- A perfect mastery of the two languages involved.
- c- Avoidance of word-for-word renditions
- d- Adherence to common usage when selecting appropriate forms in the TL.
- e- A careful choice of words and word order to produce the intended tone.

(Bassnett, 1991)

Before Dolet, translation was seen throughout the everlasting debate between pro-words and pro-sense in translation (word-for-word and sense-for-sense translation) which is still of a major concern up to the present time and which forms the basis of any attempt to understand the major trends or approaches to translation. An account of the history of translation based on this major dichotomy is obviously most fruitful as was done by Susan Bassnett (1991). However before Bassnett, George Steiner (1975) attempted to describe the development of translation theory through different periodic spans. These were four major periods that can be explained briefly in what follows:

a- The first period extends from the statements of Cicero and Horace around 46 B.C. and 26 B.C respectively, up to the publication of Alexander Fraser Tytler's *Essay on the Principles of Translation*, in 1792. Theory of translation at that particular period was directly emanating from practice.

b- The second period extends to the publication of Larbaud's *sous L'Invocation de Saint Jérôme*, in 1946. This period was characterized by the emergence of new terminology and methodology related to translation. The question of the nature of translation was associated to theories of language and mind, and there was a deep concern with understanding the comprehension process and meaning, which gave translation a philosophical dimension.

c- The third period begins with the publication of the first papers on machine translation in 1940's. This period was characterized by the enrichment of translation by the contribution of structural linguistics and communication theory. Attempts were made at applying linguistics and statistics to translation. During this period, international journals and bodies of translation started to proliferate.

d- The fourth period started in 1960's and was characterized by the enlargement of the scope of translation as a discipline to include hence forward other neighbouring disciplines such as classical philology, comparative literature, lexical statistics, ethnography, sociology of class-speech, formal rhetoric, poetics,...etc with the aim of being better equipped to understand translation as a process involving languages.

However, Steiner's account is said to be diachronical and as such misses the particularity of this development in the history of translation discipline and goes against the very flexible nature of human culture. According to Darwish (1998: 23), “*no historical study of translation can be complete without considering the contribution of other nations and cultures*”. A clear-cut division in the development of the theory of translation or any other discipline is illusionary and even impossible. Translation development should better be viewed through the most important lines of approaches that it was associated with in different periods of time and an explanation of this association and a justification of the reasons beyond its very existence. Translation history can be described as the bulk of events occurring in different regions of the world and through different periods of time that shaped this practice in terms of the pursued approach and the produced effect. It is no wonder that translation did not follow the same line of development in all cultures as every culture was shaped most of the time by different historical and political events. As such, translation history is an attempt to retrace the different interactions occurring especially between languages and cultures in

different periods of time and different regions of the world. It summarizes "*the observations made by those who were involved in translation processes and by people whose brief it was to comment on the finished product or the context of the translation activity*" (Long, 2007: 63). A complete theory of translation, according to Louis Kelly in Venuti (2000: 4), is made up of three components which were emphasized at the expense of each other during different historical periods. These components concern (1) specification of the translation function and goal, (2) the description and analysis of the translation operations, and (3) the critical comments on the relationships between these goals and operations. For example, during the 1970's, translation theory was mainly concerned with the linguistic description and analysis of major operations involved in the production of a set of equivalence typologies which were highly praised and valued at that time especially in the field of training. There are many factors that may have contributed to this shift in emphasis, which can be linguistic, cultural, literary or social. For Toury, these factors are even liable to affect the translator's cognitive aptitude in making him opt for different strategies. Thus, "*translators performing under different conditions (e.g., translating texts of different kinds, and/or for different audiences) often adopt different strategies, and ultimately come up with markedly different products*" (Toury, 2000: 199).

However, the most determining factor affecting translation, according to Venuti (2000) is a theory about language. This theory has mostly fallen into two basic categories in being either instrumental or hermeuneutic. Therefore, when assumptions about language were instrumental focussing on the role of language in representing the empirical reality in terms of thought and meaning, translation theory was based on the communicative role of texts in reproducing objective information. When assumptions about language were hermeuneutic focussing on the role of meaning in shaping reality

according to the change in social and cultural conditions, translation theory was based on the social functions and the effects of those produced texts on receivers (Kelly, 1979 in Venuti, 2000: 5, 6).

Among the most prominent translation authors who have traced the history of translation on the basis of approaches pursued by translators according to some social and cultural constraints is Susan Bassnett (1991) whose book *Translation Studies* presents, in part, a historical sketch of translation from antiquity up to the twentieth century and explains the most important shift of emphasis from one given approach to another. The following brief review is mostly inspired from this source unless otherwise specified.

Translation is often said to be a Roman invention, and this assumption is often wrongly associated with the claim accusing the Romans of lacking a sense of imagination and creativity to produce artistic works of their own. However, the Romans had rather an acute sense of what a literary system might be, that goes beyond the linguistic boundaries. Their interest in the Greek literary work was viewed by them as a continuation of their own models. The source of such an accusation, then, emanated from the Romans adopting archaic renditions in their translation of Greek source texts. However, their purpose was not an informational reproduction of the original, for the Roman reader could read the Greek ST without difficulty. Their purpose was mainly to enrich their own native language and literature. As such they found time and room to consider the aesthetic aspects of their source texts instead of considering exaggerated and futile notions of fidelity related to the notion of fluency in the target language. This kind of translation, as practiced by Schleimacher and some of his contemporaries afterwards, was offering its product "*not for the monolingual reader who has no access whatsoever to the original, but rather for the educated reader who was able to read*

original and translation side by side and in doing so, to appreciate the difference in linguistic expression as expressing the difference between two language games" (Lefevre, 1992:5). It is during this period that the first sparks of the debate between word-for-word and sense-for-sense translation was brought to existence by Horace and Cicero. In short, then, translation in the Roman time was meant to enrich language and culture and brought with it a clear distinction between a word-to-word rendition and a sense- to-sense rendition with a sound justification of when to use each of them.

Later this distinction took a new dimension with the translation of the Bible. Bible translation was struggling between paying attention to words in order not to sound heretical and paying attention to style in order to spread the word of god to laypersons. In fact, *"the problem of the fine line between what constituted stylistic licence and what constituted heretical interpretation was to remain a stumbling block for centuries"* (Bassnett, 1991:46). Attempts to disseminate the words of god to all people, using the vernacular, was met with harsh attack from the church and was prohibited most of the time. However, still many attempts at the Bible translation were made throughout the fifteenth and the sixteenth century and were seen to be an insistance for existence. Most of them came to being to replace the previous burnt or prohitied versions. The first English version of the bible was done by Wycliffe's between 1380 and 1384. It was then followed by the Tyndale's version in 1525, the Coverdale's translation in 1535...etc.

The educative role of translation- which is by large, its most important role- existed long before the fifteenth. Translation has always served the purpose of spreading knowledge and making it accessible in the language one knows. Translation was even associated with developing one's oratorical style. In the medieval and the Roman time, translation was seen as a means to develop the students' imaginative powers (Bassnett, 1991). Paraphrasing within the same language and from Greek to Latin was

recommended by the great theoretician Quintilian (first century AD) to increase students' awareness of the structures and forms of texts in their course of acquiring the basics of rhetorics, which was seen as a prerequisite for philosophical thought. This sort of activity, later on, gave rise to what is now known as '*vertical*' and '*horizontal*' translations. By vertical translation is meant translation done from a prestige language to a vernacular form of that language. This was the result of a development of some new European languages that strived to gain a position similar to that gained by Latin at a given point in time. By horizontal translation is meant the translation done between two languages of the same rank or value. It is just the kind of translation we know and practice today. The vertical and horizontal translations operate with different techniques. While the vertical translation comes nearer to word-for-word translation and interlinear glosses, the horizontal translation comes nearer to sense-for-sense translation, discussed earlier, by making use of borrowing, adaptations, reworkings and close correspondences (Bassnett, 1991:53).

In the 17th century, imitation of ancient masters was valued by writers as a source of instruction in their attempts to formulate rules of aesthetics. Translation was done, therefore, massively to bring the classical works into being. This was especially the case of France in the period 1625-1660 during which Greek works especially Aristotelian entities were rendered into French, which gave a push to the evolution of French theater and French literary works which gained importance and were themselves translated into English (Bassnett, 1991: 59). At that same time in England, a warning was launched against literal imitation and non-respect of the spirit of literary works. Sir John Danham (1615-1669), for example, argued that the translator is equal to an original writer but operates at different social and temporal contexts and has the duty of recreating the core of the work he meticulously extracts from the original (Bassnett, 1991: 59). John

Denham's translation endeavor may be seen as a reaction to the widespread appeal to stick to the original and obey rules of faithfulness. John Dryden's formulation of the three basic types of translation in his preface to *Ovid's Epistles* in 1680 summarizes this prevailing approach. According to Dryden, there are basically three dominant approaches to translation:

- (1) Metaphrase, a word by word or a line by line rendition
- (2) Paraphrase, also called "translation with latitude" and this is a sense-for-sense rendition
- (3) Imitation, this is a loose rendition where the translator feels completely free to detach himself from the original whenever he judges it appropriate to do so.

Dryden takes a middle position in favoring paraphrase as the most appropriate and reliable approach in most cases focussing all the same on the importance of acquiring an acute linguistic ability in the two languages in order to be endowed with the prerequisite skills and spirit of rendering works of art.

Throughout the 18th century, translation continued on this same line drawn by Dryden and the others who cherished recreation as a mode of reproduction. Translators, though, were more concerned with theories of imagination than the moral duty of the translator. In 1791, Alexander Fraser Tytler, explained what a translation should fulfill to be successful. In his book "The Principle of Translation", Tytler insisted that a translation should equal the original in:

- a- Rendering its complete thought
- b- Adopting its same style and manner
- c- Ensuring its same ease of comprehension for the target reader.

In the late 19th century, and even up to the 20th century, the notion of "translation as a minority interest" emerged as an expansion of the earlier notion of preserving properties

of the original and valorizing them as they are for the target reader (Bassnett, 1991: 69). It is in this respect that translation was seen as a form of a negotiation between languages and cultures. In Michel Ballard's words (1995 : 233), "*la traduction est une forme de négociation entre les langues et les cultures; les problèmes d'indentité (est pas seulement celle du texte) et d'hégémonie sont essentiels aux forms qu'elle prend: depuis le gommage de l'altérité jusqu'à son integration*".

I-1-b- History of Translation in the Arab Tradition

The long-standing debate between literal and free translation or word-for-word and sense-for-sense translation was also manifest in the Arab tradition. Translation was undertaken in the Abbassid period in Baghdad during the reign of the Caliph Al Ma'mün in the tenth century who established Beit El Hikma (House of Wisdom) to encourage translators bring more works of art and science to the Arabs. He is known through history to have paid a translator (Issac Ibn Junain) gold for the weight of the manuscripts he translated to render Greek philosophical and scientific treaties into Arabic. The Toledo School in the 12th century was the beginning of a prosperous period of translation that markedly contributed to the European Renaissance which was largely based on the translation already made by the Arabs.

Translation in the Arab tradition has known basically two approaches or schools of thought. The first method the Arab translators proceeded with at the beginning was word-for-word, also known as Yuhanna Ibn al-Batriq and Ibn Nà'ima's method, by which they sought to find equivalents for individual words in the target language. Of course, this method failed and soon brought its negative effects as it was impossible to find equivalents for most Greek words, especially that they were dealing with new domains of knowledge unfamiliar to the Arabs at that time. The Greek grammar was

also impossible to cope with as tracking words in a linear fashion produced anomalous sentences in the target language, in terms of syntax and even idiomaticity. Thus, this approach was replaced by the sense-for-sense approach, also known as Hunayn Ibn Ishaq and al Jawhari's method, by which the translator proceeded by assimilating the meaning of the whole sentence before expressing this meaning in the target language (El-Khoury, 1988; Baccouche, 2000). It is this approach that helped shape the Arabic-Islamic culture which was manifest in the Arabs' reliance on neologisms rather than transliteration (Munday, 2001). Arabs' interest in translation was mainly for scientific achievement and for the dissemination of knowledge. As such, their translation was characterized by much adaptations and additions as they also brought their contributions to what they translated. Even their choice of the works to be translated explains well their approach and attitude towards translation. Arabs at that time were more concerned about science including mathematics, medicine, chemistry, astronomy, philosophy than they were about literature. However, they were less or not at all concerned about the translation of literary works as they considered themselves self-satisfied in this area. They were also careful in translating philosophical works as they needed sound methodological ways of reasoning to face religious conflicting views that were paving their way in the Muslim community at that time (El Khoury, 1988).

In the twentieth century, Arabic nations renewed their needs for translation to prepare for a New Renaissance they very much missed. A massive movement of translation was undertaken in Egypt, Syria, Lebanon and Tunisia, but was never of the same spread and quality as the one witnessed in the high times of the Abbasid period and during the Arabic Renaissance. Taïeb Baccouche (2000) explains that this is mainly due to the fact that translation in the past was done on the basis of a self-contained and finished product that was rendered quickly and meticulously into Arabic, while in the

twentieth century, translators were working under very harsh time constraints as the subject of their translation was in a permanent development and expansion. Thus, it is difficult to cope with the rapid flow of such massive and flexible body of knowledge in terms of translation. Besides, attempts made by some nations were hampered by the period of colonizations during which French and English were imposed as means of intercultural communication and education. Translators, therefore, surrendered in front of such harsh conditions!

Translation in the Arab world overall was not followed systematically and was undertaken nearly haphazardly and on an individual basis, in the absence of a collective Arab plan of action. This translation movement, according to Mohammed Shaheen (1991: 67-69), was characterized by what follows:

- There was no consideration of the relation between need and production as many books were translated, not because they were needed by their respective societies or nations, but because they were successful and received much attention in the West.

- There was no equilibrium in the selection of subject-matter as the books selected for translation did not touch all subject matter of interest and were disproportionate from one field of study to another.

- This translation movement did not receive equal attention in all Arab countries and was not as productive as was the case in other foreign countries.

I-1-c- Translation in Algeria

Algeria was not an exception to this increasing concern about translation and to this weak attitude towards promoting the translation movement. During the French occupation, translation was part of the educational programme adopted by French-Muslim secondary schools since 1850, to prepare bilinguals who were supposed to

teach Arabic after graduation using Grammar Translation Method exercises. Translation played its role of mediation during that period as the French occupiers needed to assure communication with the natives. Besides, those schools were a substitution to the coranic schools and medresas which were established as informal institutions at that time to assure the learning of Arabic and Coran for the natives and by the natives (Aissani, 2000). Even that Aissani Aicha does not state in her article the motives behind this French initiative, it is easy to deduce the fact that it was an attempt to bring any efforts, on the part of Algerians to contribute to the upraisal of their own culture and language, under control. After independence, Algeria had to meet the need of adopting Arabic as a national and official language, and was faced then with the burden of translating the bulk of legal and administrative documents left and imposed by the French colonizers to prepare the room for the Arabic language to find its way in the life of Algerians, and to be thus operational for their immediate concerns nationally and internationally. As such, the UNESCO suggested the establishment of a specialized school for translation and interpreting that may fulfill Algeria's objectives in terms of arabization even in the long term. Thus, the Ecole Supérieure D'interprètes et Traducteurs was created in 1963 in Algiers, which was to operate in a same fashion as the Esit established in Paris in 1953. This school offered specialized programmes in different linguistic combinations involving French, English, Spanish, German, and Arabic, of course. It also offered courses in simultaneous interpreting to train conference interpreters (Aissani, 2000)

To finish with, one may conclude that translation is a human discipline that was shaped and reshaped in different cultural regions of the world and in different epochs, and Algeria is no exception. The environmental conditions including political, social, economic, and cultural factors, decide on the position translation is likely to hold in a

given time or place. It is no wonder that a specific work translated in a given time may be retranslated to meet some specific requirements of the epoch or the region to which the translator belongs, and from which the need for this retranslation rises. In this respect, Friedrich Schleiermacher (1999:18) was right to insist on this conditional dimension of translation when he said, "*chaque époque a droit à ses traductions, non pas seulement parceque sont corrigées des erreurs des époques précédentes, mais parceque la vie de la langue et l'évolution culturelle, la parole des individus engagent de nouvelles déterminations de concept*". It remains important to signal that this remark was made by Scheleiermacher to defend his argument for a literal translation that preserves its foreignity as meaning changes through time and across languages, and cannot be assumed to be fully grasped by the translator. His favorite approach was, then, to bring the target reader close to the author and leave the author alone.

I-2- Translatology or Translation Science: Beginning of the Systematisation in Translation Research

The first who is said to have provided a clear theoretical frame of reference to translation, and has by this token coined the term "translation studies" to this discipline we know, practice, and research today, is James Holmes. Holmes made a clear cut between the different names that have been used to describe this new discipline by pointing to their limitations and weaknesses. According to him, translation cannot be confined to theory as it cannot be referred to as a science (c.f, Nida' Towards a Science of Translation). The word "Translation Studies", as proposed by Holmes and defined by Werner Koller (in Holmes, 2002: 176) "*is to be understood as a collective and inclusive designation for all research activities taking the phenomena of translating and translation as their basis or focus*". The word "studies" in English solved the problem of

appellation as it designated both exact and human sciences. This does not mean, however, that translation is never to be a science; it was, in fact, according to a different but still an appropriate definition of science, in terms of observations, systematization, and attempts at applications. Fritz Nies (1988) in Reiss (1995:3) considers science to be concerned with the systematization of observations emanating from practice to elaborate relevant theories for practical purposes. In his own words, Nies defines science as "*la systematisation d'observations tirées de la pratique et par l'élaboration de théories qui ont des retombées sur la pratique*" (ibid). Holmes, then, made a clear distinction between pure and applied translation studies and defined their respective sub-branches as defined by their objectives. This distinction is now a referential map for anyone who may want to delve or find his/her way in the discipline. Pure translation studies have as an objective to describe translation phenomena and to establish general principles for their explanation. As such, the field is divided into two branches: descriptive translation studies (DTS) and theoretical translation studies (ThTS). Descriptive Translation Studies is itself of three major concerns: product-oriented, function-oriented, and process-oriented. Product-oriented DTS deals with the description of a given produced translation then comparing it with other translations or versions in the same language or in different languages, within the same period of time or across periods. This may in itself function as a translation corpus that can serve in tracing the history of the discipline. Function-oriented DTS, a less attractive area of research, aims to describe the effect of a given translation on receivers in given socio-cultural contexts, to discern its importance in specific places or periods. It is, in a way, a contribution to translation sociology. Process-oriented DTS aims to describe what goes on in the mind of the translator when effectuating the transfer operation. The results obtained by descriptive translation studies, so far explained, serve the second branch of pure TS, v.z. ThTS, to

elaborate general principles, theories and models to thoroughly explain the translation phenomenon and make predictions about it. Theories of translation can be either general- as described above, or partial / specific, that is depending on the scope it is concerned with. In this latter case, partial theoretical translation is either medium-restricted (the medium may be human or machine, oral or written...), area-restricted (the area may be language(s) or culture(s)), rank-restricted (at the level of the word, sentence, text...), discourse-restricted (according to text-type or genre whether it is literary, scientific, religious...), time-restricted (contemporary texts or old ones), or problem-restricted (confined to some broad or specific problems in translation such as translation equivalence or the translation of metaphors)

The other major branch of translation studies is applied translation studies and it is directly concerned with possible fields of application with translation teaching placed in the first rank. Other fields of applied translation studies include translation aids (in terms of lexicology, terminology and grammars), translations policy (which explains the role of translators, translations and translating in society and provide appropriate advice on what to translate in particular socio-cultural settings...), translation criticism (having to do with the evaluation of translation products and deciding on criteria of evaluation, liable to reduce intuition)

The table below, quoted from Munby (2001: 10) summarizes this distinction Holmes worked out and Toury (1991:181) later enriched.

The Holmes/Toury' map of translation studies (Munday, 2001: 10)

<p>1 'Pure'</p> <p>(a) Theoretical (translation theory)</p> <p>i) General</p> <p>ii) Partial</p> <p>(1) Medium restricted</p> <p>(a) By machine: Alone/With human aid</p> <p>(b) By humans: Written/Spoken: consecutive/simultaneous</p> <p>(2) Area restricted (specific Languages or cultures)</p> <p>(3) Rank restricted (word/sentence/text)</p> <p>(4) Text-type restricted (genres: literary, business, technical translations)</p> <p>(5) Time restricted (periods)</p> <p>(6) Problem restricted (specific /broad Problems e.g.equivalence)</p> <p>(b) Descriptive (DTS)</p> <p>i) Product oriented (examines existing translations)</p> <p>ii) Process oriented (what happens in the mind of a translator)</p> <p>iii) Function oriented (a study of context /'sociotranslation studies' / cultural- oriented translation studies)</p>	<p>2 'Applied'</p> <p>a) Translator training</p> <p>i) Teaching evaluation methods</p> <p>ii) Testing techniques</p> <p>iii) Curriculum design</p> <p>b) Translation aids</p> <p>i) IT applications</p> <p>(1) translation software</p> <p>(2) on-line databases</p> <p>(3) use of internet</p> <p>ii) Dictionaries</p> <p>iii) Grammars</p> <p>c) Translation Policy</p> <p>d) Translation criticism</p> <p>i) Evaluation of translations</p> <p>ii) Revision of students' translations</p> <p>iii) Reviews of published translations</p>
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I-3- Modern Translation Theories

In the 1950s and 1960s, attempts at more systematic description and analysis of translation were made. The debate around literal and free translation that lasted for centuries since antiquity and was subjective and inaccurate as we have seen previously, is still surviving but in a modern shape as translation has finally paved its way towards science and tried to gain more accuracy, objectivity and sound justifications of its data or arguments. No wonder, linguistics was a source of inspiration as it deals with

language, the very basic pillar of translation. As Catford suggested, "*since translation has to do with language, the analysis, and description of translation-processes must make considerable use of categories set up for the description of languages, it must, in other words, draw upon a theory of language- a general linguistic theory* (in Delisle, 1981:53-54). Linguistics continued to have its impact on translation studies, up to the present time, as any development in linguistics eventually inaugurates and prepares the ground for a subsequent development in translation.

Attempts at systematic analysis of translation were thus linguistically oriented with the advent of the then remarkable notion of equivalence, brought about by Roman Jakobson (1959), Eugene Nida (1940s onward), Peter Newmark (1981), and Werner Koller (1979-1989). Notions of equivalence and correspondence gave sometimes their place up for other linguistic orientations based on detailed accounts of contrastive features, characterizing the interlingual process operating with the two languages involved. Examples of such accounts was Jean Paul Vinay and Jean Darbelnet's *Stylistique Comparée du Français et de L'Anglais* (1958). The same principle was pursued by Alfred Malblanc in 1963, between French and German. Besides this contrastive approach, Nida's *Towards a Science of Translation* in 1964 is considered to be a more succinct attempt at linking this new discipline to linguistics, in trying to adapt chomsky's theory of Generative Grammar to Translation.

It is true that the notion of equivalence was of a paramount importance and marked a large part of the history of the discipline in its modern systematic development. Later, however, linguistics continued to bring its contribution to translation, but in other areas such as discourse analysis with theories centered on text types, text purposes and register analysis (Reiss and Vermeer). Other contributions were brought from systemic functional grammar, with theories accounting for socio-cultural

contexts and communication efficiency. Descriptive linguistics and Russian Formalism were also a major source of contribution with theories centered on literary polysystems whereby translated and non-translated literary works compete for dominance.

In what follows is a brief account of the major modern theories of translation as they were very influential in the domain of translation teaching and training, and can explain research orientation in this academic discipline.

I-3-a- Equivalence-Based Translation Theories

Equivalence and meaning were central to any fruitful discussion of translation. This notion was seen to be a more systematic reformulation of past issues pertaining to word-for-word translation, sense-for-sense translation and faithfulness. Nida's suggestion is to propose a distinction between "formal" and "Dynamic" equivalence. Formal equivalence gets closer to word-for-word translation as it attempts to reproduce the ST structure to assure accuracy and exactness. Dynamic equivalence, however, gets closer to sense-for-sense translation as it attempts to produce on the translation recipient the same effect as that produced by the source text on its original readers, by adapting the message to the socio-cultural expectations of the target readers, and allowing a natural flow of discourse in the translation. For Nida, dynamic equivalence should be the aim of any successful translation as the transfer of meaning has priority over obedience to form and allows, as such, freer renditions and adaptations as dictated by the requirements of the target text. Nida's dynamic equivalence was seen as a logical endeavour regarding his theological pursuing. According to his critics, he was just trying to convert his receptors whatever their cultures. In scientific terms, this was considered inaccurate and subjective, as it is impossible to measure this effect Nida claims a translation should produce.

For Newmark the old dichotomy of word-for-word and sense-for-sense was to be replaced by the more systematic dichotomy of "semantic" and "communicative" translation. Semantic equivalence is somehow a match to Nida's formal equivalence, and communicative equivalence is somehow a match to Nida's dynamic equivalence. However, Newmark was careful not to overemphasize the effect a translation should produce on the target reader as a translator cannot always take into account the sociocultural context appropriate for his targeted translation due to eventual discrepancies in time and space. As for semantic equivalence, Newmark considers its difference from the strict word-for-word translation in that it gives due attention to the context in resisting to the ST lexis and syntax. Nevertheless, Newmark insists on the priority and utility of a literal translation and considers it to be the most appropriate method of rendition unless it fails to produce a normal and appropriate target text. It is only then can we safely resort to communicative translation.

Werner Koller then draws the attention to the importance of differentiating equivalence from correspondence, which was nearly used interchangeably by many scholars. For him, correspondence has to do with Saussure's knowledge of Langue and pertains by this token to foreign language competence. Equivalence, however, has to do with Saussure's parole and pertains by this token to translation competence. According to him, *"it is knowledge and ability in equivalence that are indicative of competence in translation"* (in Munday, 2001:47). As such, Koller went further by subdividing this equivalence into types ranging from denotative, connotative, text-normative, pragmatic and formal equivalences.

The notion of equivalence is very much important in training translators and teaching students how to effectuate the linguistic transfer successfully. It is very simplistic an approach to encourage the student to be mentally flexible in dealing with

pair of languages without providing them with some guiding practical examples. Vinay and Darbelnet's contrastive approach was and is still reliable as a training tool in this perspective, at least for beginner students. Within this approach, equivalence is tacked on but with a different meaning and scope of application.

I-3-1-b- Contrastive-based Theories

Vinay and Darbelnet proposed seven translational procedures that sum up the way a translator is to effectuate the transfer. Three of these procedures are a direct approach, i.e, a literal rendition. The remaining four procedures are an oblique approach, i.e, a free rendition. In what follows is a brief account of these major procedures starting with those pertaining to direct translation (Vinay and Darbelnet, 2000)

a-1- Borrowing: items from ST are transferred as they are in TT to fill a semantic gap or add local colour to the produced text. Many words have now gained their place in the target language because of this process. Examples are *café*, *rendez-vous*, *déjà vu*, *genre*, *menu*, etc. The translator is encouraged to make his own contributions and not just use what has already been borrowed, by making sound decisions whenever he judges it appropriate.

a-2- Calque: items from ST are transferred literally to TT respecting thus the particularities of the target language. A calque may be a lexical or a structural imitation as these two examples show respectively: *science-fiction/science-fiction*; *compliments of the seasons/compliments de la saison*.

a-3- Literal translation: this is a word for word rendition that Vinay and Darbelnet highly recommended for translators to pursue unless it proves impossible in case the produced meaning sounds abnormal or could not be obtained for structural reasons. For example, "he looked at the map" can be rendered literally as "il regarda la

carte", while "he looked the picture of health" cannot, and should be rendered into something like "il avait l'air en plein forme".

a-4- Transposition: items from ST change their parts of speech, i.e, verbs are changed into nouns, nouns into adverbs, etc. Transposition in translation is either obligatory or optional. Hence, a sentence like "dès son lever" can only be rendered with a transposition process into "as soon as he gets up" (a change from a noun to a verb). A sentence like "après son retour" can be rendered either literally or through a transposition as follow "after his return" or "after he comes back".

a-5- Modulation: items from ST change their semantic point of view in TT. For example "the time when..." must be rendered into "le moment où..." (when/où). Modulation in this case is dictated by the requirement of the TL. However, modulation is sometimes optional as when we prefer to render "it is not difficult to show..." into "il est facile de démontrer...", although, linguistically speaking, it is possible to cope with the ST form ("ce n'est pas difficile de montrer").

a-6- Equivalence: items from the ST change their stylistic and structural shapes to cope with the requirement of the TT. The best examples of equivalence are idioms and proverbs. As such, "il pleut des sceaux/à cordes" can be rendered into "it's raining cats and dogs".

a-7- Adaptation: items from ST especially those pertaining to cultural aspects change their reference when they are non existent or non operational in the TT. This is often referred to situational equivalence whereby a new situation is recreated for the benefit of the target reader. Vinay and Darbelnet give the example of "he kissed his daughter on the mouth" which would be culturally inappropriate when translated literally into French and has thus to be adapted into something like "il serra tendrement sa fille dans ses bras".

Contrastive-based approach of translation were also pursued by Catford (1965) in suggesting his theory of translation shifts whereby translators are encouraged to make major changes at the levels of grammar and discourse to realize a successful transfer. He thus distinguishes between shifts of levels and shift of category. A shift of level involves an interchange between say grammar and lexis when effectuating the transfer between two languages. A shift of category involves a change in grammatical structure or rank, part of speech, or an internal system as when a corresponding element exists in TT but is not appropriate as such (e.g. *advice* in English is rendered *conseils* in French).

These contrastive approaches were once considered to be translation methods par excellence. However, this can only be true with beginner translators who still need to perfect their linguistic competence and as such need to be made aware of the distinct mechanisms of languages in their ways of relaying thought. Delisle (1981:94) here, rightly claims that this approach "*se révèle surtout un outil de perfectionnement des bilingues. Elle intervient avec profit en pédagogie de la traduction en raison de l'insuffisance des connaissances linguistiques des apprentis-traducteurs et ce, en dépit des exigences imposées par les écoles de traduction à l'admission*".

I-3-1-c-Function-Based Theories

Functionalist and communicative approaches to translation soon emerged in Germany during the 1970s and 1980s to replace the static and minimalist approach to translation that was prevailing at that time. The text or the discourse was viewed as more utile a unit to be looked at to discern any systematicity and regularity in the act of interlingual communication. In this respect, theories about text types and language functions were particularly interesting as regards translators' training. Also was interesting, Vermeer's Skopos theory (2000) which is of much relevance to the translator at work. Nords's model

of text analysis (1991) is a reliable tool in the hands of the trainees, to be inculcated the right habits of dealing with translation and proceeding with texts. In what follows is a brief account of these theories:

I-3-1-c-1- Katharina Reiss's text types: Reiss linked the types of texts to Bühler's language functions. According to her, any text would predominately focus on one of Bühler's three functions, viz, informative, expressive and appellative (Reiss, 2002). Thus a text would either be concerned with transmitting facts, knowledge, information, opinions, etc and as such would be classified as being "informative". If a text is concerned with the aesthetic dimension of language to express attitudes or emotions, it is classified as being "expressive". If, however, it is concerned with persuading the receiver to undertake an action or adopt a given attitude, it is classified as being "operative". Each of these text types would require a different translation method. An informative text, for example, would require from the translator to adopt a plain prose in his rendition using explications and commentaries where necessary. An expressive text, however, would require from the translator the use of the "identifying method" (Munday, 2001:75) whereby the ST author's point of view is emphasized. Last but not least, an operative text, in being concerned with the effect it seeks to produce in the receiver, would require from the translator the use of an "adaptive method" whereby he seeks to reproduce the same effect on the target reader. Reiss's text type theory is also valuable in translation assessment in that the examiner or the translator himself would consider evaluative criteria according to the predominating function the text is to fulfill. She considers, for example, that a metaphor is to be retained in an expressive text and rendered semantically in an informative text.

I- 3-1-c-2- Reiss and Vermeer's skopos Theory: as its name may indicate skopos theory (which means in Greek aim or purpose) defines the purpose of translation and

characteristics of the translational action itself. This would determine the approach the translator should pursue to satisfy the need of his client or translator commissioner. So a translation action starts with defining a goal or aim of the commission as negotiated with the client or commissioner. If the client is unable to define clearly his goals, a translator negotiates with him a possible goal and helps him as an expert to come up with appropriate suggestions. Then the translation action proceeds to determine conditions under which this goal is to be attained in order to be able to decide on the appropriate strategy and procedure the translator is to put in use. Thus, the *skopos* can help "to determine whether the source text needs to be 'translated', 'paraphrased' or 'completely re-edited'" (Vermeer, 2000: 231). Translation in this respect is seen as an action, which obviously implies that the actor or the doer of this action "must (potentially) be able to explain **why** he acts as he does although he could have acted otherwise" (Ibid: 223). The translator should be thus aware of the divergence between aims and potential purposes of both source texts and target texts which would determine and justify the arrangement of the content advocated by their authors. The *skopos* theory in being based on a decision to take with regards to an objective to attain, is an attitude professional translators are used to advocate unconsciously or rather automatically. It is, thus, in pedagogical terms, an attempt to make explicit those unconscious decisions for learners to help them acquire translation competence.

I-3-1-c-3- Nord's Text-Analysis Model: Nord makes a clear distinction between documentary translation and instrumental translation. In documentay translation, which is typical of word for word or literal rendition, elements of the source text are preserved in the target text to achieve some desired effect as to maintain a certain degree of local colour. In instrumental translation, which is typical of a free rendition, source text

elements are adapted to the culture and expectations of the target reader as to ensure the same effect or fulfill the same function aimed by the source text (Nord, 1991). Nord's aim is to help the trainees in effectuating a functional analysis of the source text in terms of its extratextual and intratextual features and determine the most appropriate strategy to be used in its translation. Nord also gives due attention to the role played by the translation commission, or "*translation brief*" as she prefers to call it, and which specifies points of divergence between source text and target text in terms of intended function, kind of addressees, time and place of text reception, medium of production (speech or writing), the motive (why the source text was written and why it is being translated) (Munday, 2001:82). Nord then suggests that the translator proceeds with analysing the source text in terms of features pertaining to subject matter, content, presuppositions known to participants, micro and macrostructures, illustrations, specialized lexis, suprasegmental features of stress, intonation, rhythm...etc. Upon this crucial analysis, the translator is then able to decide on adequate strategies in terms of priorities. He will know if he is to decide on an instrumental or documentary translation, and will know which text features should be preserved and which should be adapted.

I-3-1-d- Polysystem Theory

Polysystem theory is a further advance in translation studies and a further attempt at broadening approaches dealing with translation units, besides the discourse level or the pragmatic level. This theory was first developed in the 1970s by Itamar Even-Zohar who introduced the idea of dynamic structuralism and the concept of open system of systems to account for variability and heterogeneity in time and place that characterize the development of literatures (Even-Zohar, 1979). According to this theory, translation is studied within the cultural and literary system in which it functions. Translated

literature is part of a more primary system of literature which is itself part of a hierarchical order conditioned by a set of social, cultural and historical constraints. The place translations occupy in this system at a given place and time will determine and explain the strategy translators pursue in their renditions. Thus, if the translated work is ranked highly or occupies a primary or central position in this system, translators would not strive for matching TT criteria and would instead bring themselves close to the ST to introduce new creative and innovative models for the target culture. If, however, the translated work occupies a secondary or peripheral position, translators would, in this case, strive for reproducing TT requirements of acceptability to yield a fluent product readable in the target language.

Toury in (Munday, 2001) tried to reach a general explanation of translation phenomenon and determine those trends in translation behaviour that make up the decision making process. In other words, what makes translators translate in a given way or adhere to a given precept? Translators, thus, make their decisions as regards the texts to be translated and the manner they are to be translated according to certain socio-cultural norms they acquired from their community through processes of education and socialisation. These norms are, in fact, graded between idiosyncracies and rules. A norm may be dictated by an individual choice or option or it may be dictated by stronger rules that the whole community adheres to. An example of a norm is when the translator decides right from the beginning to produce a source-based translation or a target translation. This is named by Toury as an 'initial norm'. A translator can also decide on the text to be translated in a specific culture or time, or he may choose to do his translation from an intermediate language. These latter decisions are governed by what Toury names 'preliminary norms'. Last but not least, a translator is also supposed to make decisions about the textual materials and the linguistic shifts he would realize in

his rendition as regards relocation, omissions, additions, segmentation, explicitations and footnotes, lexical items and phrases to be used, etc. Those textual decisions are governed by what Toury names as 'operational norms'.

II-Translation Pedagogy and Translation Didactics

The words pedagogy and didactics are often wrongly taken to mean the same thing in education. However, they are two different but related concepts. Pedagogy has a broader scope and deals with the theoretical foundation of teaching and learning as an educational process. Didactics is rather more specific as being concerned with the application of the theoretical models developed in philosophy, psychology, sociology, pedagogy and any field that can bring beneficial contributions to the teaching-learning enterprise. In being concerned with the practical side of education, it is concerned with the global and specific activities that ease and characterize the educational endeavour including particularly aspects related to instructional design, teaching models, assessment practices, curriculum development...etc. More recently and as education is now shifting attention from teaching to learning and learners, didactics is covering new set of activities to cope with such a shift by including dimensions related to learners and learning mediation and facilitation instead of focussing on classroom instruction (Bertrand & Houssaye, 1999; Allal, 2011). So, when talking about translation pedagogy, we particularly mean the broad theoretical lines explaining its nature and specificity as a discipline to be taught and the general guidelines of what to teach exactly. When talking about translation didactics, on the other hand, we particularly mean translation models and approaches to be immediately adopted in the classroom with the learners. We also mean to explain the attempts made to apply some theoretical and conceptual models concerning translation to meet the needs of learners and

professional translators in relation to a given context of use that can be defined by social, psychological, and/or economic factors. In a sense it answers the questions of how to teach translation according to some given theoretical models? And why teach in a given way?

II-1- Translation Pedagogy

This section aims to introduce the issue of translation teaching and sheds light on major controversies encountered in this domain. Translation teaching is a recent field of interest in comparison to translation practice, which is rather paradoxical as Delisle described it, “*bien que l’on traduise depuis des millénaires, on enseigne la traduction pour former des traducteurs depuis à peine une trentaine d’année, ce qui est assez paradoxal*” (1980:14). This paradox can partly be explained by the fact that translation nature was not clearly discerned to be taught in a systematic way. Up to now, people still tend to believe that it is merely a linguistic skill that deserves only the attention we already give to teaching languages. For those, who see a distinction between a linguistic skill and a translation skill, they usually stumble at the questions, "how to teach translation? / what to teach in a translation course?" These are the very questions this piece of research is concerned with, and these are the same questions we are trying to highlight through this theoretical review about translation hoping to find some encouraging hints to find an appropriate outlet.

According to Delisle, in teaching translation we aim to make explicit for learners the intellectual process behind the operation of transferring meaning. In his own words, he said, ‘*enseigner à traduire, c’est faire comprendre le processus intellectuel par lequel un message donné est transposé dans une autre langue, en plaçant l’apprenti-traducteur au cœur de l’opération traduisante pour lui faire saisir la dynamique*’

(1980 :16). The question is then what is this intellectual process and how can it be taught to learners or make explicit for them?

A more detailed account of what to teach in translation, led Delisle to postulate a cognitive framework which reminds us of the efforts done by educationalists in the field of cognitive and educational sciences to explain and reinforce learners' thinking process. Translation is now not any skill, it is a thinking process that means absolutely to learn how to think, "*Apprendre à traduire serait, en définitive, apprendre à penser pour rendre fidèlement les idées d'un autre*"(Delisle, 1980:18). This is a rather more acute definition but still hard to apply because teaching thinking is in itself a hard enterprise and admittedly needs further clarification. What is this thinking process like? And how can it be taught? The translator, as any learner or practionner may ascertain, should think about many issues at the same time. There are many factors that should not escape his attention and thus his thinking.

Le traducteur pour sa part doit tenir compte de l'origine du texte à réexprimer, de sa nature et du public visé (les futurs lecteurs). Le théoricien et le didacticien de la traduction ne peuvent pas donc limiter leur analyse du phénomène de la traduction aux seules composantes linguistiques des textes, il leur faut absolument déborder sur la pragmatique afin d'inclure dans l'analyse du processus de la traduction les compléments cognitifs et situationnels non manifestes dans les signes linguistiques' (ibid :24)

Following this line of thought, one may ascertain again that this objective is attainable by simply enhancing the students' linguistic aptitude, to make them able to deal with macro-linguistic issues going beyond the word and the sentence. A communicative competence, as expanded by Hymes (1972) brings to light all the socio-cultural

dimensions pertaining to successful communication. So, once again is it beneficial or ever possible to teach translation?

II-1-1- Can Translation be Taught?

Translation was for a long time seeking identification as an academic field. For some it was a science, for others it was an art or a craft. Translation is seen as a science in that it adopts scientific standpoints of neighboring disciplines such as linguistics, neuroscience and even computer science. The most salient characteristics of a science is the notion of laws. However, translation is rarely if ever an instance of applying laws. It is rather a matter of selection and decision. When a translator exerts his freedom to decide on translation issues and problems, translation is felt to be a science. However, translation is a skill and ability that gets enhanced with time and practice in addition to awareness of its mechanism and subtleties. In this respect, Robinson (2003: 164) emphasizes the role of knowledge about translation as a profession in talking about pretending to be a translator, *"it is obvious that the more knowledge you have about how the profession works, the easier it will be to pretend successfully; hence, the importance of studying the profession, researching it, whether in classrooms or by reading books and articles or by asking working professionals what they do"*. As such, translation then is a craft. This problem of identification is at the origin of the issue of whether to teach translation or not. If this debate is pushed a step further, one might even wonder whether there is a difference between teaching languages and teaching translation.

According to Pienemann (1989), teaching a language is amenable to two major aspects. One is related to the developmental aspect of language which is common to all learners without any distinction, with regards to the learner or the learning method. The second aspect is variational in nature in that it pays due regard to variation in the

language acquisition process, and to the relation between learners and learning situations as for example the extent to which the learner is immersed in the target culture. In the same token, translation may be seen from two interrelated angles. On the one hand, it is a common skill with language learning. On the other hand, it is a specific skill that has its keen particularities which clearly distinguishes it from a linguistic skill *per se*. In other words, translation is in a sense a linguistic phenomenon, but from another side, it is an intercultural and intercommunicational enterprise (Azizinezhad, 2006). It is according to this last dimension that Hatim and Mason (1997:1) view translation as "*an act of communication which attempts to relay, across cultural and linguistics boundaries, another act of communication*".

In this respect, someone learning to translate would feel the need to be guided and directed to overcome whatever problem may arise. He would also need to trust his approach and take sound decisions when stumbling at different obstacles, be they linguistic or of another nature. His awareness needs to be raised as regards language intricacies and discourse structure. His cognitive ability needs to be enhanced to increase the capacity of his working memory, attention span, concentration and problem solving efficiency. For all these reasons and more, one might safely conclude that translation is to be taught.

II-2- Didactics of Translation

When talking about translation teaching/learning it is inescapable to talk about language teaching/learning. Traditionally, translation was seen to be affiliated to language acquisition. For a long time, translation was practiced as a linguistic exercise and was even used as a means to reinforce the learner's linguistic background knowledge. Its development was largely inherent and dependent on the development of

language teaching in its own right. So when language learning was reduced to a "bottom-up skill in language reception and production", translation could not escape this tradition in that it was too treated as "*a matter of acquiring a bottom-up skill in understanding source text forms and their content and transforming them in a more or less linear sequence into linguistically 'equivalent' target text forms*" (Baker, 1992: 61). Translation teaching, then, was dealt with in terms of exercises based on linguistic equivalents whereby the learners is encouraged to transfer content from source language to target language, following some set of dictated formal patterns of use to guide the learner in his operation of transfer. Such a kind of exercise gains its force and gives its desired effect when repeated many times. This practice is still adopted in some German institutions.

Delisle (1992), Ladmiral (1979), Lederer (1994) all made remarkable distinctions between translation pedagogy and pedagogy for translation, using different appellations. For Delisle, for example, translation pedagogy refers to the linguistic exercise, learners use or are encouraged to use to acquire a foreign language, while pedagogy for translation refers to the training course future translators follow to acquire translation skill as such. In this latter case, learners are supposed to have already an appropriate mastery of the two languages involved. Now, for Ladmiral, he stressed the same distinction but used other designations namely translational translation (*traduction traductionnelle*) and translation exercises (*thème et version*). As for Lederer, the distinction is between pedagogical translation and professional translation. Lederer, as many other translation scholars, did not neglect the role of translation pedagogy in fostering learners' linguistic background and in enhancing their awareness of the correspondance existing between different linguistic systems which can raise their aptitude in coping with linguistic constraints encountered in translation. Pedagogical

translation proves useful at least at an early stage of learning; however, it is inefficient in preparing translators for the professional field as it does not teach learners methods of creating equivalences at a higher and more sophisticated level. In this respect Lederer says,

enseigner le fonctionnement d'une langue exige un cadre plus vaste que celui fourni par la phrase. Or dès qu'on dépasse cette limite, les contextes modifient les significations. L'enseignement des langues ne peut éviter le recours à des textes mais ne peut se permettre de leur appliquer une méthode interprétative car celle-ci, par les équivalences ad hoc, éphémères, qu'elle établit, va à l'encontre de l'acquisition d'un système linguistique stable et objective. (Lederer, 1994:134)

To make this distinction even clearer, let us take an example Lederer used herself as an illustration. In a translation of a passage from Green's short story: *The Basement Room*, a sentence such as the one below, could be rendered differently according to norms dictated by either pedagogical translation or professional translation. The sentence is: "*she meant nothing to Philip; she belonged to a world about which he knew nothing at all*". Its linguistic translation would be "*elle ne signifiait rien pour Philip; elle appartenait à un monde dont il ignorait tout*". An equivalence-based translation, as required by professionals, would yield, "*Philip n'arrivait pas à la placer*", or "*Philip ne savait pas quoi penser d'elle*". This example, illustrates the kind of skill translators require without diminishing, of course, the role of the linguistic component which, as Lederer said, should be introduced prior to the translation skill *per se* (ibid).

Over the past 30 years or so, another approach came into force and replaced to some extent the traditional linguistic one cited above and which Lederer prefers to call pedagogical translation. This was the functional approach advocated by Justa Holz-

Mäntäri, Katharina Reiss, Hans.J, Vermeer and Christine Nord, which sprung from the observation that different situations call for different renderings (Lu and Guodong, 2011). According to such an approach, translation should take into account factors- other than the linguistic ones- pertaining to the purpose of the text, recipients, specific context, commissioner, communicative text function, producer, ...etc. Translation was not seen anymore as a transformation process, but rather a production process thanks to which a text is produced in a target language and in which it will have a given function according to a specific context dictated by the type of recipient and its defining culture and purpose.

III-Translator-Training Institution

In this section, the notion of institutional translation is introduced as a historical phenomenon that gained force just recently. By institutional translation is meant translation systematized and canonized within a given institution aimed at its development and flourishing. The idea is to give translation a reason of being and to delimit randomization characterizing its practice. Professional translation can be viewed as being institutionalized within this scope if it is the outcome of a pre-planned training set for specific goals or functions. Teaching translation at universities and specialized schools is a case in point. Translation teaching or training may be seen as a recent phenomenon if we just consider its scope of expansion. However, institutional translation existed long before at different periods of its development, but probably for ephemeral and temporal situations that required immediate actions.

III-1- Historical Background

Translation was practiced since antiquity, but people tended to learn this skill through practice without caring much of how it can ever be developed or reinforced. After the French Revolution, ideas about equality were spread and people became more aware of the notion of merit as a social dimension to gain a better status in society (Dollerup, 1995). Furthermore, the scientific achievement and the industrial revolution, created a serious need for intercultural communication and international contact. People felt more and more a need for education and all what it triggers and necessitates in terms of books for knowledge and entertainment. Of course, the need for learning foreign languages and especially for practicing translation became apparent as both serve a means of "adding to home-grown products" and enriching and updating the nation's bulk of knowledge (Ibid: 20). At the beginning, there were more attempts at teaching languages, as translation was made subsidiary and secondary an activity and was understood to be logically tied with language competence. That explains the emergence of grammar-translation method as a methodological tool to support learners' acquisition of a second or foreign language. Gradually, people gained better understanding of translation and of its utility to meet the societal need for translators. In this respect, Dollerup (1995: 29) was right to postulate that *"teachers of translation have not invented translation theory, but they have forced it to take a firmer stand. [...] before there was a massive societal need for translators, there was no need for moving beyond belletristic wanderings"*. This also explains the rise of translation studies as a distinct discipline and the systematic attempts that were made to reach a general and self-contained theory applicable to more pairs of languages and to more types of texts and contexts, as dictated and constrained by the present era. Thus, according to Michel Ballard (1995: 234), *« L'affirmation des langues vulgaires à la Renaissance accroît le*

volume des traductions et déclenche une conscience plus aigüe du phénomène qui donne naissance aux premiers traités »

According to Baker, too, institutional translation is a recent phenomenon in regards with its practice (Baker, 2001:280). The first instance of institutional translation can be traced back to 1669 with the foundation of the Constantinople School to train French-born students as interpreters for Turkish, Arabic and Persian. It was followed by the foundation in 1754 of the Oriental Academy by Empress Maria Theresa and which meant to train orientalist and interpreters required by the Hapsburg court.

In Spain, we could witness some sort of translation institutionalization with the creation of the Toledo School in the 12th century and the emergence of a group of young translators guided by their masters. It is said that “*the great discovery of Columbus and others might never have occurred without the transmission of knowledge and science that took place in Toledo in those years*” (Sofer, 2006: 26) However, translation at that time was far from being a full-time occupation and was only concerned with limited subject matters.

A certain form of training occurred in Europe during European colonization and was politically motivated. In fact, natives were sent back to the metropolis to be turned into bilingual intermediaries. The purpose was not to produce professionals but rather to control what they considered to be a suspect profession.

In Egypt, Al-Asun school was established in 1835 headed by al-Tahtawi, and marked a sort of an opposition to colonial expansion by attempting to confirm one's own culture and identity and encouraging the transfer of knowledge. The school flourished under the supervision of al-Tahtawi and produced many valuable translations that were done for educational and cultural purposes (Brugman, 1984). According to Brugman (1984: 19), it “*was probably one of the very few non-military government*

institutes of higher learning at the time; almost all education subsidized by the state was dispensed at military schools”.

In Europe, translation was given importance in relation to diplomatic and political affairs. It first served the purpose of creating national cultures as was the case with the apprentice scheme espoused by Finland in 1831. Then, it shifted its concern to promoting international relations as was revealed in the measures undertaken by some informal institutions for training translators and interpreters (ibid).

According to Baker's historical account (2001), throughout 1884-1944, special translator-training programmes were designed for diplomats in the Humbolt University in Berlin. In Spain, on the other hand, translation was under the control of the state court with a special emphasis on legal translation and the rendition of official documents. In Uruguay, for example, students of the national university's school of law were granted degree of public or sworn translator since 1855. This was also the case of the Copenhagen Business School since 1921, and the Paris Institute for Comparative Law since 1931.

In the mid-twentieth century, translator-training started to gain independence in universities, by offering more general programmes which were no more specific to some particular vocations. This was the case of Heidelberg (1930), Geneva (1941), and Vienna (1945). In some other universities, translation was associated with language learning and its training was thus dependent on some foreign language institutes. This was the case for Russia, China, and some Eastern European countries.

After the World War II, interest in teaching translation was once again focused on political issues namely, building peace and spreading the international regime of the victorious powers. As such, translator-training institutions gained more force and were established almost everywhere to meet the need in terms of simultaneous and

conference interpreters. For the same reason, the French increasing interest in establishing European unity and imposing French diplomacy in the world was translated into the creation of the Fédération Internationale des Traducteurs (FIT) in Paris 1953, which was followed in 1957 by the creation of the Ecole Supérieure D'interprète et de Traducteurs (ESIT) and the Institut Supérieur D'interprétation et de Traduction (ISIT). Teachers working in such institutions were mainly professional translators, which explain the vocational orientation pursued at that time. The implicit aim beyond these institutions was, in fact, independency and autonomy of the subject they aim to teach. That is to say, they insisted to make a clear distinction between teaching translation and teaching languages. Translation profession was the starting point of most of these institutions which were in permanent conflict with other institutions espousing different approaches. This resulted in a theoretical debate ensued by those advocating a technical and linguistic approach and those advocating a pragmatic or purpose-oriented approach.

Vocationally-based institutions such as the ESIT were then integrated into national university systems to remove any barrier between academic and vocational education. The ESIT has been associated to the Sorbonne by a law passed in 1984. This was also the case of many other institutions across other countries such as Germany and Spain, a fact which raised the number of degrees in translation issued by the universities to meet the need of the market requirements. Since 1990's, newly created translation programmes were actually emerging from within university departments of language and literatures or were organized interdepartmentally. Most of these newly devised programmes, in comparison to the old independent vocational programmes, had the aim to ensure specific competences to students with already basic general skills acquired elsewhere. The programmes thus are often offered, on the basis of shorter cycles (as a master or a postgraduate degree).

Once translation gained its place in the university as short cycle programmes, it started to gain more ground at the level of third cycle academic programmes (doctoral level) where it was associated to other related and neighbouring disciplines such as linguistics and comparative literatures, to widen the scope of translation studies, and to enrich the research literature on the subject. According to Caminade and Pym (1998: 285) "*having thus entered the academic sphere, translator training has become loosely attached to an academic discipline, translation studies, which in some circumstances gives the pedagogical programmes greater legitimacy within the university environment*". Since then, vocational translator-training institutions started to raise doubt about the credibility and the standards pursued by these university programmes, accusing them of teaching languages instead and engaging learners in idle theory. The debate we witness nowadays of whether to teach translation or not, and when to teach translation, and if translation is to be taught along languages or after an adequate mastery of the languages involved has been gained, is the long standing effect of such doubt.

Universities are now offering multitude of programmes meeting the need of the nation they serve and proposing a diversity of approaches and contents that are sometimes put to scrutiny, and stimulate researchers and educators like for disagreement!

III-2-Trends in Translation Teaching

Translation is now recognized as a separate discipline and taught as a speciality in most universities and distinguished schools around the world. However, research in translation teaching and training is still in its beginning, and teachers are still struggling to be guided in their mission of training future professionals in this field. No wonder, translation suffers as a subject to be taught. Teachers do not know what to teach and how

to proceed in the classroom and which theoretical standpoint to adopt and why. Multitudes of questions are standing in the way of teachers and learners of translation. In what follows is an elucidation, drawn from the literature on the subject, of the many approaches a translator teacher may turn to as a source of inspiration when trying to systematize his teaching practice.

III-2-1- Pérez's Seven Major Trends in Translation Studies

Although Pérez's major trends concern translation studies as a whole, these same trends can be said to be applicable to translation teaching as they provide a source of inspirational approaches for teachers and even syllabus designers.

For Pérez(2005: 2,3), thus, there are seven major important trends in translation studies which sum up the various research undertaken about translation and suggest possible theoretical approaches one may adopt in teaching translation. These are:

- 1- A focus on (mostly 'discrete units of) languages (e.g. Jakobson 2000, as well as Vinay&Darbelnet 1977)
- 2- A focus on the communicative nature of texts (e.g. Neubert& Shreve 1992; House 1981,1997; and Hatim& Mason 1990,1997)
- 3- A focus on communicative aims through texts (e.g. Reiß 1989; Vermeer 1989; Nord 1997)
- 4- A focus on the link between translation and target cultures (e.g. Even-Zohar 1990; Toury 1995; Lefevre 1985)
- 5- A focus on the 'new translation ethics'(e.g. Bassnett& Lefevre19910; Venuti1995; and postcolonialists)
- 6- A focus on the translator as a rational and emotional being (e.g. Seleskovitch1976; Krings 1987; Gutt1991,2000)

- 7- A focus on translation corpora (e.g. Baker 1996; Kenny 2001; Laviosa 2002)

These are the different trends vocational institutions, university departments and specialized schools are seen to make use of depending on the aims and objectives they set for their learners or trainees.

III-2-2-Klaudy's Translation Teaching Approaches

King Klaudy (2003) reduced the number of Pérez's trends into three basic approaches or principles especially useful for designing translation courses. These are the inductive approach, the deductive approach, and the functional approach.

III-2-2-A- The Inductive Approach: according to King Klaudy (2003), through this approach, the teacher provides his students with a number of texts to be dealt with during the whole semester. The students translate these texts at home or in the class, then they discuss the translation problems they encountered with their teacher who corrects their mistakes and helps them reach a suitable and adequate translation. This approach is obviously based on the number, type and quality of texts dealt with. The problems that the texts fail to show remain untackled. To reach good results with such a time consuming approach, the learners have to be exposed to multitude of texts of different types. This, however, is almost impossible as the university programme or the programme offered by whatever institution is limited to a maximum of five years. With a maximum of ten texts per semester and with the necessity of grading texts in terms of difficulty throughout the academic year, learners cannot be said to have been exposed to a sufficient number of texts.

III-2-2-b- The Deductive Approach: according to Klaudy (2003), through this approach, learners are invited to deal with specific problems of translation on the basis of which, a text is chosen for translation in the classroom. During the translation activity, techniques are proposed by teachers to suggest solutions for the recurrent translational problems such as the translations of place names, institutions and measurements, translation of some grammatical structures in a given language pair...etc. The advantage with such an approach is that the teacher is free to decide on what problems to cover during the academic year with regards to learners's level and immediate needs, and according to what he judges important. The teacher proceeds, then, to prepare a list of problems to be tackled during the semester, or during the whole year, and to find illustrative examples in texts to be dealt with and discussed in the classroom. The problem with such an approach is that it is not always possible to find appropriate texts that can thoroughly deal with the problems in question. The teacher often resorts to artificial texts that he himself devises to solve this or that problem. This artificiality is often counterproductive in a course specifically designed for translators, as they fail to develop a natural translation competence in the learners.

III-2-2-c- The Functional Approach: according to Klaudy (2003), through this approach, teaching is organized around particular skills to be developed in learners. Teachers decide what skills are necessary for translation competence of their learners and devise appropriate activities or tasks subsidiary to the translation activity *per se*. For example, to meet the need of making learners able to distance themselves from the source text, the teacher may encourage learners, through specific tasks, to use intralingual transformation or paraphrasing within the same language be it source language or target language. He can also help them with summaries and semantic

mapping to increase their ability in analyzing and comprehending a source text. There are, of course, multitudes of task examples that the teachers can make use of in the classroom. The problem with such an approach may be the fact that these tasks are not always easy to devise, and require a sound knowledge about course design and acute awareness about some basic psychological notions related to psychological education and education per se.

III-3- The Role of Theory in teaching Translation

Translators throughout history have attempted to formulate their experience and explain the approaches they believed in, and advocated when translating major works in literatures or else. Their contribution, however, came to us in terms of a heterogeneous mass of general statements and personal impressions or intuitions related essentially to the idea of achieving faithfulness to the original and to some principles they suggested or prescribed as guidelines or norms to follow without sound or objective arguments. Their criteria of evaluation were disparate, subjective and not easy to delimit in a specific framework, as they were sometimes, philosophic, sometimes aesthetic, and at other times social (Delisle, 1981: 48).

[T]he truth is that there are no universally accepted principles of translation, because the only people who are qualified to formulate them have never agreed among themselves, but have bequeathed to us a volume of confused thought which must be hard to parallel in other fields of literature.

A theory of translation, however, should consist of a set of generalizations deduced from practice, and the different translational methods continuously put to use and proven efficient, and from the different accounts and considerations we might have of whatever aspect or factor related directly or indirectly to translation. This was only

possible to reach in the 1950s which characterize the period of the growth of translation studies whereby formulated theories were more descriptive than normative and were keenly associated with other disciplines such as linguistics, psychology and sociology, which were found to be of major concern to translation (Shuttleworth, 2001). Thanks to the scientific development of this discipline, translators have become better equipped to understand the nature of their discipline and its requirements. According to Robert Larose (1992: 7), it is " *un ensemble de généralisations à partir de pratiques ou de méthodes traductives, de considérations sur les rapports entre les mots et les choses, entre le fond et la forme et même, entre le langage et la pensée*". This theory, thus, concerns every aspect pertaining to either process or product and covers whatever aspect affecting them. It is in this respect that we can perceive the utility of the interdisciplinary dimension of translation with contributions brought from neighbouring fields of study as stated above.

It is probably correct to say that without theory, a translator may actually fail or hesitate in his performance and without performance, what a theoretician ever says would be considered empty talk. According to Lefevere (1992:76):

The translator who makes no attempt to understand the **how** behind the translation process is like the driver of Rolls who has no idea what makes the car move. Likewise, the mechanic who spends a lifetime taking engines apart but never goes out for a drive in the country is a fitting image for the dry academician who examines the **how** at the expense of **what is**.

Suffice it to say that theory, in being partly concerned with past achievements, gives confidence and assurance to the future translators, makes them more liable to take decisions and challenge problems and different obstacles, and make them conscious of

their role and responsibility of mediators and communication facilitators. History of translation is full of authentic examples of translation problems, incidents and circumstances, translators' reactions and outcomes that future translators may like to learn from. One objective of teaching translation history might be *"to instill curiosity and teach research skills so that students can develop a capacity for life-long learning which is fundamental to the practice of translation"* (Woodsworth, 1995:11)

One may still wonder, however, what theory has to do in improving one's ability in performing the translation task. One may even doubt if translation theory could have any effect in practice. Students, as being directly concerned with these questions, often grudge or grouse over theoretical assumptions their teachers incite them to assimilate. According to Fawcett, they are bewildered to the extent that *"they anxiously ask who will be marking their exams so that they will know whether to translate literally or not!"* (Fawcett, 1987:31). This state of affairs- which can easily be extended to describe translation classes in our universities, even today- is an indication that the role of translation theory in upraising students' capabilities in practice is not clear. You might be tempted to test this hypothesis by asking translation students of what role they think translation theory has in practice. Their hesitation to answer is by itself alarming!

Nevertheless, translation theory is taught in highly specialized institutions, such as universities and training schools. Larose (1992:8) believes that a course in translation theory is intended to meet the following objectives:

- a- To familiarize the students with basic translation terminology.
- b- To have a general grasp of major contemporary translation schools of thought.
- c- To assimilate basic notions and concepts in this domain.
- d- To develop a sense of critic to evaluate the quality of texts they translate.

- e- To prepare students for research on different subjects related to translation theory.

Fawcett (1987) seems to be optimistic about translation theory. According to him, theory can be taught and can be a reliable source for teachers in structuring their syllabi, designing their courses, setting their objectives and justifying their approaches inside the classroom. Failure to reach tangible results in teaching translation theory is mainly due to the fact that it is often taught by people who would supply a theoretical framework of translation strategies that is purely of their own creation, and may contradict or not fully adhere to that of their colleagues. A translation teacher, in this respect, should avoid what Fawcett like to call " *a mutual deafness*" that would only cause students to be confused and resist any further attempt to make them grasp the nature of the task they are to resolve (Fawcett, 1987: 32). Students, instead, should be stimulated to trust translation theory and encouraged to think and devise their own theoretical models they judge appropriate in different translational situations encountered in tackling the multitude of texts they may come across. Holmes (1988) cited in Shuttleworth (2001: 499) insisted on the difference between formal theories made up of general statements that have the power of predicting and explaining translation phenomena and which are of immediate concern to researchers, but of no or little importance to practioners, and a body of "*often conflicting insights which together provide a framework within which a trainee translator can begin to make translation decisions*". It is with this latter kind of theory that the learners should be most concerned. Students, thus, may be shown a demonstration of how existing translation theories conceive of a goal or objective of translation and what strategies and techniques to adopt to reach such a goal or objective. For instance, proponents of the literary theory of translation who advocate the documentary approach, whereby the goal is to preserve

source text features in the target text, would incite learners to adopt literalism with justification. On the other hand, theories advocating the illusionist approach whose objective is to produce a target text that can be read fluently as an original in the target language, would incite them to do just the opposite, i.e., adopt a freer mode of rendition coping with strategies of adaptation, substitution, analogy...etc, that would help achieve an equivalent effect on the recipient. The students here are explained how to make adequate decisions for clear and well defined problems (Fawcett, 1987). By the same token, students should also be made aware that translation is not a set of rules and principles to follow or adhere to as if they were mathematical formulae that guarantee the solution. History of translation, in this respect, offers to students the possibility to diagnose the progress made so far by translators and compare their theories to detect their mistakes if ever. In Long's words,

[L]ooking at the history of translation theory gives bases for comparison and demonstrates whether translators are making progress or simply repeating the same mistakes. It also helps to assess whether modern theories are saying something new or simply repeating the same ideas in different languages. (Long, 2007: 64)

This, in fact, would raise their awareness not only as practitioners but also as researchers and potential future contributors to translation norms and ideologies, which is an aim that goes hand in hand with Larose's course objectives described earlier. Again, Fawcett insists that students should be made aware of the decisions they take, banning the archaic methodological principle of "as literal as possible, as free as necessary" without due and conscious consideration of other factors raising their awareness about the importance of a "*systematic solution of problems, and even more vital to translation, systematic testing of solutions*" (Fawcett, 1981: 142). This means

that students should be made aware that there are no ready made rules of thumb to be followed blindly and instantly to reach a solution. Translation is a cognitive activity of a higher order whereby the student is invited to exhaustively make use of his mental resources to reach a satisfactory and convincing solution. This aptitude can be secured well enough by teaching theory in the right way.

Hatim (2001:7) and Venuti (2000:26) believe that theory helps to raise students' awareness and self-confidence in making decisions when encountering translation problems. To make matters plain, Venuti (2000:33-34) compares translators to cooks who are already capable of producing wonderful dishes without theoretical knowledge, but prove more performant and original in their food preparations once they gain a sound theoretical background about the origin and usage of food. Even if we are born translators, as some may suggest, translation requires a reflective attitude that, if done successfully, would ease this operation and bring it to success. According to Jacques Flamand (1983) in Claude Tatilon (1986: 134)

La traductologie est nécessaire pour bien comprendre l'opération traduisante, et mieux traduire. Comme dans toute œuvre humaine, il s'établit un rapport dialectique entre pratique et théorie. Tout traducteur doit être traductologue, s'il veut garder suffisamment de distance par rapport à son texte. Il apprend à réfléchir, à analyser.

What may be particular in translation as a cognitive activity is this ability to distance oneself from the original text and reformulate the message meant to be transferred to the target language. This prerequisite is often described by translation theorists as "deverbalization". Once one is able to mentally dissociate words from concepts, and

rethink the ideas to recast them in the target language moulds, he is said to be able to translate.

Pym (2003:489) further explains the nature of this awareness, theory is said to raise in students, by asserting that teachers of translation should inculcate in the students the ability to "*generate a series of more than one viable target text...for a pertinent source text...and the ability to select one viable TT from this series, quickly and with justified confidence*". This confidence, in fact, is based on the accumulated experience of his predecessors and of his own and an understanding of the seemingly conflicting ideas about translation in the literature and be able to discern their background.

To bring this discussion to an end, Shuttleworth's proposed agenda for translation courses (2001: 501), seems appropriate in this respect as it sums up the most pertinent ideas concerning the role of theory in translators' training, which most of them have already been suggested by researchers presented in the above discussion. Thus, according to Shuttleworth, courses in translation theory should address the following issues:

- a- Try to answer uppermost questions students likely have in their minds.
- b- Expose them to a range of differing opinions on controversial issues.
- c- Provide an alternative to the standard dichotomies according to which translation has all too often been described.
- d- Encourage students to arrive at their own strategies for solving translation problems.
- e- Prepare students for work within the translation industry.
- f- Demonstrate that translation is not an activity which is completely ad hoc and subjective.

IV-Translation and Language Teaching

Translation was for a long time associated with language teaching to the extent that some people have insisted to regard it as part and parcel of the linguistic component, and as such does not merit consideration in its own right. The way translation is taught at universities underpins a belief that translation exercises aiming at the improvement of students' linguistic competence are sufficient and automatically amenable to improve students' translation performance as required by the market. This was commented by Elisabeth Lavault (1998 :79) as follows: " *l'université s'est longtemps cantonnée dans le premier rôle [le perfectionnement linguistique], mais le flou des objectifs a souvent laissé croire qu'en faisant faire des exercices de thème et de version, elle préparait à la traduction professionnelle*". At the same time many other people including researchers and academicians, insist that translation teaching is and should be distinct from language teaching. Delisle (1992) in Lederer (1994:129) and Delisle (1981) distinguishes between pedagogical translation (« traduction pédagogique » / « traduction scolaire/thème et version ») and pedagogy of translation (« pédagogie de la traduction » / « traduction professionnelle »). The first denotes the translation exercises used in language classes to help beginner learners acquire the basics of the foreign language or to perfect students' style at a more advanced level, while the latter denotes the training addressed to future translators who are supposed to already possess an appropriate preliminary competence in languages. Delisle (1981:44) insists, thus, that teaching translation requires more than developing the linguistic competence as we cannot be considered to be writers for the simple reason of being able to write in a language, we are not professional translators simply because we know two languages. Ladmiral (1979) in Lederer (1994: 129), on the other hand, makes nearly a similar demarcation and insists that a distinction is to be drawn between translational

translation («traduction traductionnelle») and translation exercises or pedagogical translation («thème et version»). For Lederer, however, teaching translation proper aims at encouraging students to produce or achieve equivalence at higher levels, whereas, pedagogical translation as being one method of language teaching among many others, aims at the linguistic competence by encouraging students to draw correspondences often at lower levels of language. In being a proponent of the interpretative school, Lederer considers that translation by equivalence is the essence of interpretation, in yielding intelligible messages that say the same thing as the original in a fluent and correct way. When comparing the translation to its original, we would note that there is no abusive use of target structures perfectly corresponding with those of the source text. Translation by correspondence, on the other hand, is established between the smaller linguistic units and would encourage the learners to stick to smaller chunks of discourse failing thus to consider the text as a whole, which is an essential step to produce an intelligible product in the target language.

V- Translation Competence

Before concluding this chapter as a whole and the discussion about translation teaching as such, it is judicious to throw more light on another more particular aspect of the issue pertaining to the entity to be taught. Once we agree that translation teaching is different from language teaching and that it is not a natural talent as some would like to assume, and that it is teachable and can be enhanced with practice and guidance, one is now in a position to ask what translation as an entity to be taught is?

The question may appear to be puzzling as many terms are suggested in this context and we are not sure if they have been used to mean the same thing or there is an implicit intention to make them distinct appellations denoting or emphasizing some precise and

determinate aspects that should not escape our attention. Thus, translation is often heard to be a skill, an aptitude, a proficiency, an ability or a competence. Among these variegated appellations, "competence" is the mostly used and preferred term in the literature. However, "translation competence" has never obtained a clear and straightforward definition in the field of TS. This may be a clear indication that the concept has never been taken to mean the same thing among translators and researchers. That is to say, the assumptions underpinning the usage of such a concept are divergent and multifarious and stem from the much earlier debate of whether to consider translation as something natural and innate or something acquired through experience and training. Besides, when the word "competence" was used in the literature, it was itself collocated with a number of different concepts to yield different compound words such as "transfer competence", "translational competence", "translator's competence"...etc, without any hints by their authors of what these compound words meant exactly. However, the word "competence" was preferred over the other appellations such as skill, ability and aptitude partly because it already has a long tradition in the field of linguistics in which it denotes an entity of a similar nature especially as translation is tightly linked to language and has been deeply influenced by research in this field (Orozo & Albir, 2002: 376). Translation competence, in this particular respect, denotes an internal mental knowledge that makes the translator able to effectuate the transfer between the two languages involved. In other words, it is the knowledge that tells the translator how to translate. According to Rothe-Neves (2007: 125), *"it is a psychological attribute of an individual"* and it is distinct from 'aptitude' which *"clearly implies, beyond mental faculty, also behavioural performance and results"*. This performance is tightly tied to the socially shared representations of the translator's work that determine whatever aspects he should emphasize or de-emphasize.

As such, translation competence appears to be different from language competence though basically dependent on it. Koller (1992: 19-20) in Rothe-Neves (2007:125) said:

The translator's competence surpasses pure foreign language competence as acquired in foreign language classes. The translator's competence, as the ability to produce a target language text for a SLT according to certain requirements, the so-called equivalence requirements, is qualitatively different from the mastery of the languages involved, thus different from pure language competence.

Thus, the confusion surrounding the use of the term "competence" in the field of TS and its careless usage as a concept identical to the one espoused by second language studies is often said to have resulted from the fact that translation has for a long time been considered as a pure linguistic competence. Besides, translation itself has been denied the status of a profession it deserves, placing professional translators in the position of skilled workers or semi-skilled workers and summarizing this ability in a kind of a flair for translation or a sort of a talent.

However, the idea of an innate ability that bilinguals are endowed with was first postulated by Harris in 1976 (in Rothe-Neves, 2007). According to Harris, bilingual children are able to translate naturally in natural situations of use without being exposed to any kind of formal instruction. Later on, Toury (1986) extended this notion of innateness and postulated that this ability cannot be the sole ingredient the translator needs, to develop his competence, adding that translators should also assimilate the different patterns of behaviour determined by the socio-cultural dimensions of the translation in question. Using Rothe-Neves' words "*under natural circumstances, a bilingual does translate without ever having been taught to, but it does not necessarily make her a competent, professional translator according to expert peers*". By this

token, translation is seen to be both an implicit mental ability and a concrete performance.

The debate concerning the definition of translation competence was further enriched and extended by making room for a further account of a set of related sub-competences other than the linguistic one. This gives rise to a componential model of translation specifying the different components contributing to the translator's competence. Thus, translation competence, according to Bell (1991:36) in Faber (1998:9) is seen to be made of five types of knowledge: target language knowledge, text type knowledge, source language knowledge, real world knowledge, and contrastive knowledge. On the other hand, the PACTE group of the University of Barcelona, in Preseas (2000) proposes a model of translation competence made up of six sub-competences, which are: communicative competence in both languages, extralinguistic competence, the competence of using tools and documentary sources, psychological skills such as creativity and rigour, transfer competence, and strategic competence. The four first competences can be said to be peripheral to the central transfer competence. These five sub-competences interact between one another in different ways and directions, according to many variables pertaining to the text-type, the subject matter, etc. These different interrelationships, themselves, are governed by the strategic competence which guides the translator in his search for adequate solutions. By the same token, Albrecht Neubert(2000: 6) identifies five parameters of translational competence that can be developed to different degrees and that are responsible together for monitoring translators' performance and enhancing their competence in translation overall. These are (1) language competence, (2) textual competence, (3) subject competence, (4) cultural competence, (5) transfer competence. According to him too, transfer competence again is at the core of all competences and it integrates them all.

However, the transfer competence cannot be efficient unless secured by the existence of the other competences enumerated above.

However, Hatim and Mason (1998:154) in Kelly (2005:30) prefer the terms 'translator's abilities' instead, and define them as being concerned with the following:

- a-The ability to decode the linguistic system of the source text.
- b-The ability to encode the linguistic system of the target text
- c-The transfer ability.

Although these detailed accounts of the requirement of a translation competence were never subject to empirical investigation, they do not raise much criticism from an educational standpoint. In other words, they may well serve trainers, teachers and syllabus designers to decide on aims and objectives of their courses (Kelly, 2005:31).

What is noteworthy about the definitions provided above is that they all recognize a particular kind of competence, skill or ability that distinguishes translators from language learners. This is referred to, most often, as the transfer competence, the procedural knowledge learners acquire of how to translate and overcome linguistic and communicational barriers. Toury in, (Alves et al, 2001: 122), defines this competence as the ability to transfer texts by possessing a knowledge of structures, which are not usually part of a bilingual competence, but which account for the shared notions that make the translator able to use his abilities according to situation requirements. Pym (1992) went a step further in his proposed definition by explicating a bit more the prerequisite of such a competence. According to him, what is particular to a translator's competence is his/her ability to:

- Generate a target text series of more than one viable term (target text₁, target text₂...target text_n) for a source text.

-Select only one target term from this series, quickly and with justified confidence, and to propose this target text as a replacement of a source text for a specified purpose and reader.

In brief, translation competence is not easy to define and it is so complex an entity that it almost includes bits of everything. Of course, the linguistic competence is one of its fundamental components without which there is absolutely no need to talk about translation! Besides, translation competence is often judiciously linked to knowledge, skills, awareness, and expertise:

It encompasses a number of different elements or abilities to do specific (detailed) things, which are in turn based on knowledge. This knowledge (i.e. declarative knowledge, knowing what) is applied on the basis of an evaluation of various factors affecting the purpose of the (translation) activity, of the communicative partners, etc. (i.e. operative knowledge, knowing why and how to). The ability to make use of this knowledge and to apply it is linked to awareness, which could also be described as conscious decision-making or transfer competence.

(Shäffner & Adab, 2000: x)

Darwish (2007:32) made a comprehensive account of what translation is exactly and its position between the state of total innateness and the state of total acquisition. In fact, he considers translation to be an innate skill in that it is all possible to acquire it. However, it is not natural in that it cannot exist without training and experience. Translation, according to him, is a sort of flexibility the translator develops and is bound to lose if he stops practicing for a while as an athlete loses his flexible ability for the same reason. Moreover, translation according to him, cannot operate without a sound awareness of the translator of his intention to do so which enables him to switch from

the monolingual mode to the bilingual mode. This switch, according to Darwish (2007:33) is "*basically a recognition-priming operation that triggers the two language systems in juxtaposition to one another in readiness for translation and brings the translator online*". This surely means that a bilingual is not enough to cater for this transfer competence and awareness plays a capital role.

Up to this point, enough has been said about the particularity of translation competence and its distinction from a bilingual competence per se. One now is in a position to ask how this competence is brought into being and catered for in professionals.

IV- The Development and Acquisition of Translation Competence

Once we have defined translation competence and have shown its complex nature as a task and as an entity to be taught, we now turn to more fundamental questions pertaining to the way this translation is acquired and the way it is to develop. In other words, how one becomes a translator? What are the stages a novice translator goes through to become a professional? How can this competence be catered for in an educational program? How can a teacher and/or trainer develop this competence in their learners?

Researchers in the field have drawn pertinent conclusions concerning this particular aspect of translation on the basis of: (1) empirical research comparing translation students' performance with that of professionals and language students, (2) theoretical reflections on the components of translation competence, and (3) investigations of the development of expertise in other domains, conducted by cognitive psychologists (Göpferich and Jääskerläinen, 2009: 174-175). These conclusions revealed the following characteristics distinguishing competent translators from less

competent ones or those showing an increase in their translation competence. These touch upon the tendency of advanced translators to:

- Focus on larger translation units.
- Tackle more complex problems such as textual considerations instead of searching lexical equivalents.
- Take into account more aspects that are relevant to produce a target text that fulfils its specific function for a specific audience.
- Proceed in a less ST-oriented and linear fashion and consider larger chunks of discourse in terms of both the co-text and the context.
- Have an increasing awareness about translational problems, strategic solutions to translational problems and monitoring abilities.
- Use reference works to solve text production problems, in comparison to novices who use them to solve comprehension problems.
- Use more dictionaries per a translation item in comparison to novices who tend to look more items in the dictionary-often the same dictionary.
- Use monolingual dictionaries in comparison to novices who tend to stick to the bilingual ones.
- Develop more automaticity in their translation process, reserving their working memory to tougher and novel issues in comparison to novices who tend to bring to their consciousness every stumbling problem whatever simple it might be.

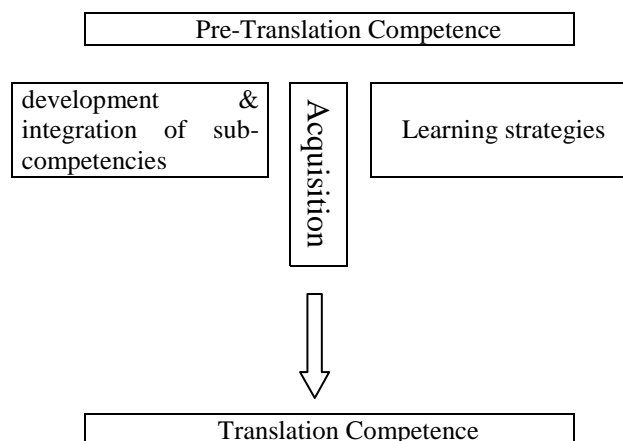
Maria Presas (2000), on the other hand, compared between the translation competence of experts and that of novices. Her conclusions are revealing and interesting to report as shown in the underneath table. According to her observations, a translator makes use of knowledge and skills of a variegated nature, such as “*knowledge of the two languages, knowledge of the real world and of the materials, the ability to use tools*

such as dictionaries and other sources of documentation, cognitive qualities such as creativity and attention, or the capacity to resolve specific problems” (Ibid: 28)

Novice translator	Expert translator
-Non-Specialised Linguistic Skills. -Bilingual Memory (Compound or Subordinated) -Unconscious interference mechanisms. -Code-switching mechanisms (at the lexical level)	-Specialised Linguistic Skills. -Bilingual Memory (Co-Ordinated). -Control over interference in both reception and production) -Heuristic text transference procedures.
Cognitive features: flexibility, lateral thinking, capacity for remote association	

Psycholinguistic profile of the novice translator and the expert translator (Presas, 2000: 28)

These conclusions led researchers to propose models that explain the process or stages the translator goes through to develop his translation competence. The PACTE researchers were among the first to have proposed one. The following diagram is an explication of their model:



PACTE group's 2000 Developing Translation Competence Model in Göpferich (2009: 175)

According to this model, acquiring translation competence requires the development of individual competencies along the integrative competence that allows their effective use in compliance with a scale of priority imposed by the communicative situation. This leads not only to the acquisition of non-existent declarative knowledge, but also to the restructuring of this knowledge. In other words, a novice may have acquired the essential of the required sub-competencies, but needs also to acquire the

competence that helps integrate them in an appropriate way liable to make them in the service of the transfer competence (Göpferich, 2009).

Chesterman (2000:77) considers that the highest stage a translator may reach in the course of developing his translation competence is expertise. He says, “*Whatever else it is, translation is certainly a skill. And like any other skill, it can be learned. When they have mastered this skill, translators are therefore experts. We therefore need a conception of what expertise is, how it can be learned, and how it can be taught*”. Chesterman found an answer to his question in the Dreyfus brothers’ book *Mind Over Machine* (1986) in which the developing course of translation competence towards expertise has been clearly explicated.

Thus, according to Dreyfus brothers in Chesterman (2000), the learning of any skill goes through five stages starting from the stage of novices and reaching the final stage of experts.

Stage one: this is the novice stage whereby the learners start to acquire basic facts and information about the skill to be learned together with the rules that determine the actions based on these facts. The teacher here provides the learners with context-free and relevant features about the skill in question to be processed in a simple and preliminary way. For instance, when learning to drive a car, the learner is presented with information pertaining to different parts of the car such as the brake, the accelerator ... and their roles in its functioning. At this stage, behavior is fully conscious and atomistic as the learners do not have an overall understanding of how to drive, but just proceed in basic and separate activities. In the same way, a translator at this stage does not have a full understanding of the whole process of translation, but operates on the basis of simple linguistic activities and explicates the transfer from preliminary chunks of discourse and isolated micro language elements.

Stage two: this is the advanced beginner stage whereby the learners begin to recognize other aspects of the situation that were not made explicit for them before. They start to perceive similarities and to draw generalization from previous instances of use. The features they learnt in the previous stage become situationalized and clearer for them. Behavior here is still conscious but not so easily verbalized and less atomistic than it was.

Stage three: this is the competence stage whereby the learners develop more experience and are now faced with more relevant features to recognize and learn. The learners need to develop a sense of priorities to make a selection from the situational features available for them to be able to decide which one is to be discarded or overruled. As such, the learners are now able to perceive the task situation as a whole in order to make appropriate decisions as regards options and priorities. At this stage, the learners become conscious of the goal they want to attain and aware of the task as a problem solving and not as a mere information processing.

Stage four: this is the stage of proficiency whereby the learners develop a more holistic vision of the skill in question and become better equipped with their personal experience and intuition. They move instantly between the rational and intuitive mode so that they are “sometimes inside the skill, and sometimes detached from it” (Chesterman, 2000: 78).

Stage five: this is the stage of expertise *per se* whereby the learners become equipped with an intuition they trust as they are able to verify and refine it. At this stage rationality and conscious behaviour become less prevailing and are brought under control. This rational side, according to Dreyfus brothers (cited in Chesterman, 2000: 79) “functions as a kind of monitor that can be switched on at will. It is manifested as what the Dreyfus call ‘deliberate rationality’”

Thus, consciousness of the first stage is different from consciousness of the latter stage. Novices need consciousness all the time to assimilate certain features and basic rules to make the acquisition of the skill in question ever possible. Experts, however, need consciousness from time to time as a monitor. They deliberately switch to this state of consciousness whenever they need to do so. In chesterman's words, "*conscious rationality seems to be the door through which we must pass although we do not need to stay stuck in the doorway forever*" (ibib:80). This deliberate consciousness is what we may refer to as metacognition as it is awareness that monitor and regulates one's knowledge and actions towards achieving a goal. A translator does not need to develop a handicapping automaticity, but a kind of automaticity that makes room for his working memory to process and deal with more complex issues. "*our trainees*", Chesterman says, "*should be aware not only of the prevailing norms and the values underlying them, but also of the possibility of refining or breaking these norms, of finding better ways to meet prevailing values, or refining the values themselves*".

IIV-Metacognitive Aspects of Translation Competence

The previous section was, in fact, meant to shed light already on the part played by metacognition in developing students' competence in translation and making their way towards expertise. This section is an attempt to extend the discussion about this same issue a little further and bring all the ideas in a nutshell.

Translation, then, is not simply a matter of decoding a message in one language and encoding it in another. It is a mental agility that needs a high degree of awareness. In this respect, Ulrych (1995: 252) asserts that translators

will therefore need not only language and content knowledge but also course specifically designed to enhance their socio-cultural awareness and

encyclopaedic knowledge. They also require the cognitive and metacognitive skills that will enable them to evaluate their expanding competence and to monitor their performance in relation to a broad range of text types and fields of discourse

As regards socio-cultural awareness and encyclopaedic knowledge, they are especially enhanced through the use of special kind of texts that obey cultural and contextual norms and specialized domains. Certainly this area of competence is not easy to cater for, but what matters for us most is the development of learners' cognitive and metacognitive skills. Thus, learners should develop a mental agility to successfully realize the linguistic transfer as they should develop their ability to monitor their own processing and understand its mechanism. In this respect, they are particularly required to develop a selective attention, a noticing capability and awareness about the different stages of the process they go through in completing their task. For Mona Baker (1992: 9), it is this particular awareness that allows translators to be recognized as professionals like doctors or engineers. In her introduction to her book *In Other Words*, she asserted that to reach such an objective, translation learners

have to prove to themselves as well as others that they are in control of what they do; that they do not just translate well because they have a "flair" for translation, but rather because, like other professionals, they have made a conscious effort to understand various aspects of their work.

As such, students should be made aware of translation as a process and a professional skill that needs a high degree of self-confidence and autonomy. A traditional translation classroom cannot cater for these requirements unless sustained by more reliable functional activities that develop students' skills in a more systematic way. Students' awareness cannot be enhanced by simply asking them to open their eyes and

ears and feel the world around them by a magical wand. They need to be assisted and guided in this endeavour.

IV- Conclusion

This chapter brought to light some major issues about translation as an independent discipline that deserves analysis as a phenomenon of its own right. Thus, a brief historical sketch is drawn about the development of translation first as a rudimentary practice, then as a systematic study and a disciplined performance. Notions about translation performance and translation principles- as espoused by translators throughout history and in different civilisations- are introduced to bring to the fore the logical development translation may be said to have undertaken. Then, arguments for teaching translation and adopting a given approach or methodological standpoint by teachers and curriculum designers were broadly advanced with a little emphasis on the institutionalisation of translation and its entrance into universities and specialised schools. The debate of whether to teach translation or not and whether translation is to be taught as a language component or as an independent practical subject matter is succinctly explained. This chapter is supposed to have introduced the theoretical background necessary for making the reader aware of what should be done to make translation students benefit from the instruction and the educational feedback they receive. There is still a need for expanding the discussion, however, to make the reader realize the problems facing teachers and educators when trying to inculcate this translational skill or competence to their learners. The next chapter, therefore, will introduce notions about learning and teaching in general to make both teachers and learners benefit from what they do and what they can do to improve their performance.

LEARNING, LEARNERS, AND FACTORS PERTAINING TO THE LEARNING ENVIRONMENT

Introduction

This chapter deals with learning, theories of learning, styles of learning, differences between learners and factors affecting either learners or learning. Moreover, particularities of learning as regards types of knowledge are to be explained to clarify the nature of translation as a skill or competence to be developed in learners and to explain the difference between the acquisition of a skill or procedural knowledge and the assimilation of content or factual information. This chapter is a bridge between the two preceding ones and the forthcoming one on pedagogical implications. As such, it is supposed to give hints of how to exploit knowledge about cognitive and metacognitive abilities of learners and knowledge about the nature of translation and its place in pedagogy, to find a practical way to solve some relevant problems about how to teach translation effectively. Undoubtedly, knowledge about the nature of learning as a process that can be enhanced if well understood and circumscribed is a prerequisite for any serious attempt to seek remedy for some pending pedagogical situations pertaining to translation.

1- Definition of Learning

Learning is, in fact, a lifelong phenomenon as it occurs at any time we come to realize something we did not know before either as a concept or as an action. In this respect, learning can be seen to be not necessarily intentional or conscious as we sometimes do not even know that we have learnt something until someone make us realize the change in our behaviour or attitude. Young children learn to stay away from hot pots even though their consciousness has not yet been developed to understand the

risk of fire. We all learn to adopt new habits or styles of life without even intending or deliberately choosing to do so. In a way or another we come to change our behaviour to adapt to the requirements of the environment in which we live. We also instantly change a lot of our beliefs, attitudes, likes and dislikes... by experiencing a lot of events and situations in life. The environment in which we live never ceases to make us realize new insights or paths to whatever external or internal change without even needing an instructor. At schools, the instructional environment is especially created to incite individuals to make quantitative and qualitative changes in their behaviour as a response to the pedagogical environment put in the service of their intellectual development. This pedagogical environment would involve various activities and experiences that support the learners' cognitive growth and make them realize valuable change in their performance such as *"telling and listening, judging, reading, reciting, observation of demonstrations, experimenting, pupil's interacting, and individual learning quests"* (Harold, 1972: 118). After quitting school, learners would continue to learn through the different interactions they may have at the work place, at home or elsewhere, as has been advanced by Harold: *"living and working with others, supplementing the feedback that comes from reflecting and discussing while engulfed in classroom learning, will, we hope, lead to continued learning beyond the school year"* (ibid: 118) From all what has preceded, it appears that learning is a natural process that brings constant changes to our store of knowledge and/or behaviour. These changes are the results of our interaction with the environment through experience. Hall (2002) in Woolfolk (2004: 198) suggests, in this respect, that *"learning occurs when experience causes a relatively permanent change in an individual's knowledge or behaviour. The change may be deliberate or unintentional, for better or for worse, correct or incorrect, and conscious or unconscious"*. It follows, thus, that the changes brought about the

phenomenon of growth or maturation is not a case of learning. Changes are principally provoked by the environment and they affect both actions and reflections.

2- History of Learning Theories

Now, the questions we might ask at this stage are what kind of process learning is? How do we learn? Is learning facts similar to learning skills? The answers for these questions lead us to go far back in the past to track all thinking about this phenomenon. In fact, the debate on the nature of learning is very old and goes back to the Greek philosophers (Hammond et al, 2001). Plato and Aristotle already emphasized the question of whether truth and knowledge are to be found within us (rationalism) or are to be found outside ourselves through the use of the five senses (empiricism). Plato believed that knowledge is acquired by self-reflection, while Aristotle believed that knowledge is acquired through gathering data from the environment surrounding us. Socrates, on the other hand, is famous with his dialectic method whereby knowledge is discovered and acquired through the conversations one undertakes with his peers or learners. Socrates used this method with his disciples (among them Plato) and we nowadays still owe him much because of this educational insight. The old debate between empiricism and rationalism to explain the nature of learning gave rise later on to more developed theories that, if assembled together, may give a thorough and adequate explanation of this phenomenon. All the attempts made in this view are of major importance in the field of education. Most of them have been of use in particular situations and during many periods of time in history.

The transmission-based approach to education whereby knowledge is acquired through memorization, recitation or apprenticeship as regards the learning of trades, was already a Roman tradition. This approach was established by the priests of the

Catholic Church who took full control of their citizens' education and who were primarily concerned with the development of practical aspects of their society rather than the cultivation of their people's spirit.

Interest in knowledge for its own sake and in thinking and reflection was revived during the Renaissance where people were encouraged to develop their interest in the art and the humanities. The church authority upon the education of citizens was challenged by secularizing education and by the discovery of the sun as the center of the universe (Hammond et al, 2001). This gave rise to a revival of individual inquiry and freedom of discovery.

Later on, John Locke (1632-1704) advanced his ideas about the child's mind as a tabula rasa which gets shaped and restructured through experience, and by this token education was conceived of by him as means to structure experience for students. It was thought that different disciplines require a different restructuring of experience and provide different mental representations for the students.

As for Jean-Jacques Rousseau (1712-1778), education was seen to be a natural process and children were recommended to be left to develop by themselves. According to him, complex ideas build on simple ideas that are gathered bit by bit from the world around. Rousseau's ideas were later on further developed by Dewey, Montessori, Piaget and others.

However, Kant (1724-1804) suggested the existence of 'a priori' knowledge which is said to be innate and forms the basis of our understanding of any knowledge picked from the environment by the senses. In this respect, Kant was seen to be among the first philosophers who have recognized the cognitive processes of the mind. In fact, Piaget's theory of cognitive development followed Kant's path of reasoning.

The aforementioned philosophical discussions about learning formed the food of thought for major scientific theories brought about by the end of the nineteenth century and up to the present day.

3- Modern Theories of Learning

The 20th century witnessed again the same debate on learning, but this time it was centered on the question of whether learning was a behaviourist or a cognitive phenomenon. That is to say, do we simply operate by a stimulus response mechanism, or do we use our brain to construct knowledge on the basis of information we gather from the environment? There are many theories proposed by psychologists in this respect as an attempt to explain the process of learning and shed light on its multifarious aspects. These theories are broadly classified into two types, as suggested by some authors such as Mangal (2007: 197). These types are:

(a) Stimulus responses-associationist type of theories: this category of theories corresponds to the works undertaken by Thorndike (1874-1949); Watson (1878-1958); Pavlov (1849-1936); and Skinner (1904- 1990) and reflects the idea that learning results in a change in the behaviour of learners and is brought about by the association of a response to a stimulus that Skinner calls "operant conditioning". Thorndike's preferred term for this phenomenon is "connectionism", while Pavlov and Watson preferred one is "classical conditioning".

(b) Gestalt field or field cognition type of theories: this category of theories corresponds to the works undertaken by Wertheimer (1880-1943); Kohler (1887-1967); Kofka (1886-1941); Lewin (1890-1947) and reflects the idea that learning results in a change in the learner and his environment as well as in his perception of

himself and of his environment. That is the chief component of this category of theories is understanding and insight.

In what follows is a general account of the major learning theories found in the literature on the subject.

3-1- Connectionism or trial and error learning

Connectionism or trial and error learning was first proposed by Thorndike with his experiments on animals. In one of his experiments, he put a hungry cat inside a box in which there was only one door for exit that could be opened by correctly manipulating a latch. Outside the box, he placed food that acted as a motive or stimulus for the cat to react and find the appropriate solution to get out of the box and reach its reward. The cat undertook many random tentative actions until it came by chance to manipulate the latch and get its reward. Eventually, the cat succeeded afterwards to exit the box without any error. Learning in this respect is "*nothing but the stamping in of the correct responses through trial and error*" (Mangal, 2007: 199). This kind of learning is also referred to as connectionism or "learning by selecting and connecting" whereby the subject comes to select the appropriate response and connect it to the appropriate stimulus. Accordingly, the human mind is a connecting system inside which constant bonds between impressions and impulses to action are formed and are strengthened or weakened to make or break habits.

Following this line of thought, Thorndike formulated a number of important laws of learning which are:

a- The law of readiness: the law of readiness reflects the learner's willingness to act or undertake learning all together. This is an important reflection for those interested in education to pay attention to their learners' state of mind and motivation to learn. This

law says that learners learn more quickly and more efficiently if they are well prepared to learn.

b- The law of effect: this law asserts the existence of a connection between a given situation and its ensuing response. Thus, when a learner is met with success he will be encouraged to proceed further and learn more effectively; when he is met with failure he will soon stop learning and will feel discouraged to go any further. As such, punishment and reward play a capital role in the process of learning, in that they create respectively a feeling of enthusiasm and pleasure or a feeling of distaste and repulsion.

c- The law of exercise: this law emphasizes the strengthening or weakening of connections between situations and responses. That is to say, when a given action is constantly repeated it gets reinforced, but if it is interrupted or suspended it gets weakened and may be forgotten. This law encourages educators to use repetition and practice drills to help learners retain better and learn more efficiently.

3-2-Classical conditioning

This is the theory espoused by Watson and Pavlov who undertook many experiments on animals like cats, rats and dogs. They considered learning as a habit formation based on the principle of association and substitution. A subject habituated to respond to a given stimulus is said to be conditioned to such a stimulus. In an experiment undertaken by Pavlov with a hungry dog, a bell rang each time food was served to the dog. This led the dog to salivate. After many repetitions of these same associated actions, the dog was given no food but the bell continued to be rung. The dog, nevertheless, salivated. This experiment explained that even in the absence of the natural or unconditioned stimulus (the food), the artificial or conditioned stimulus (the ringing of the bell) caused the dog to produce a natural response (to salivate). The dog

here responded to the artificial stimulus because it associated it with the natural stimulus. This conclusion is very interesting for educators in that it explains how learners are made to respond to artificial stimuli by associating these latter with some natural stimuli. Teachers are, for example, made aware of the attitudes of their learners towards assignments that are associated with punishment and are brought to modify their methods and adapt them to learners' advantage.

Before Conditioning	
HEAR → No Response	See the food → salivate in response to food alone
During Conditioning	After Conditioning
Hear the Bell → salivate in response to food and bell	Hear the bell → salivate in response to bell alone

Figure 5: Pavlov's experiment on classical conditioning

3-3- Operant Conditioning

Operant conditioning, also called instrumental conditioning, was originated by Thorndike to describe the effects of the consequence of a particular behaviour on the future occurrence of that behaviour. Thorndike accounted for his theory through the law of effect whereby actions are either reinforced or weakened according to the results they often trigger. In other words, when actions result in a reward or a pleasurable consequence, they tend to get strengthened and reproduced in the future, and when actions result in a punishment or aversive consequences, they tend to get weakened and are less likely to occur in the future. The main difference between classical conditioning and operant conditioning is that in the former the individual is passive and action or behaviour are acted upon by the environment or experimenter; whereas, in the latter the individual or learner plays a more active role and acts on the environment to create reinforcement. Another fundamental difference is that *"in classical conditioning, the crucial relationship for conditioning is between CS and the UCS; in operant*

conditioning, the crucial relationship is between an environmental response and the behavioural stimulus that creates it" (Sternberg, 1995:250).

Skinner further explained the difference between operant and classical conditioning by identifying two types of responses or behaviour: respondent and operant. A respondent behaviour is elicited by a given stimulus such as the case of all types of reflexes the organism may produce in reaction to its environment like blinking one's eyes to avoid a flash of light, moving one's hand to escape a pain of a pin, salivating when smelling delicious food....etc. An operant behaviour, on the other hand, is emitted (rather than elicited) by unknown stimuli such as the case of any behaviour done deliberately like standing up, moving one's hand, writing a letter, eating a meal...etc. The causes of such latter instances of behaviour are not important. What matters most is the consequence of such behaviour whose strength is said to be responsible for the operant behaviour. The organism here initiates the behaviour on its own without any preceding stimulus. In this type of conditioning, the educator is supposed to help evoke the appropriate responses out of the many responses the learners are capable to emit and sustain them through appropriate reinforcement (Mangal, 2007:208).

Still in the field of education, teachers should be careful about how to make their learners willing to boost their performance and show their potential aptitude. Latent learning is, in fact, a phenomenon well experienced by educators whereby learning is not reflected in performance. In an experiment undertaken by Edward Tolman and C.H. Honzik, in (ibid) three groups of rats were placed in a maze. The first group had to learn the maze and was rewarded with food at the end point of the maze. The second group had also to learn the maze but was not rewarded whatsoever. The third group received its reward only after ten days of learning trials. The results showed that with

the first group who was rewarded from the start, rats learned quickly without making wrong turns. With the second group, however, rats which received no reinforcement made more errors before they finally improved their performance. As for the third group, rats which received reinforcement on the eleventh day of learning improved their performance dramatically and could run the maze as well, as did the rats of the first group.

Tolman and Honzik concluded that rats in the third group which were not rewarded from the start learned their route in the maze but were not ready to display their performance until rewarded. One single reward, as it were, boosted their performance. This is obviously an interesting remark to count on in the educational setting.

However, behaviourist learning of that kind insists on "*arranging the students' environment so that stimuli occurred in a way that would instill the desired stimulus-response chains....The students are then dispensed with reinforcement until they became conditioned to give the right answers*" (Bruer, 1994:8). The behaviourist theory of learning was sharply criticized as it fails to account for the essential of the acquisition of knowledge. Chomsky, for example, brought important insights into how language is acquired by a unique human mental ability. His theory of transformational generative grammar (1965) was a clear indication that a behaviorist account for the acquisition of language, and by the same token of knowledge, was not adequate as it cannot explain our ability to generate and assimilate an infinite number of novel sentences that we have never heard or produced before (Bruer, 1994: 8). Chomsky's alternative was to propose his theory of Transformational Generative Grammar whereby our linguistic knowledge is seen to be made up of a set of kernel sentences "deep structures" which are stored in our mind and a set of powerful transformational

rules that operate on these deep structures to produce the appropriate "surface structures" manifested in our speech and writing whether in production or reception. Thus, our linguistic ability is the result of "*the processing of unobservable, mental, symbol structures*" (Bruer, 1994:9). By the same token, learning in general can be seen as a mental processing of information and a high order mechanism that cannot be adequately explained by relying solely on stimulus-response rules.

3-4- Constructivist Learning

According to the constructivist theory of learning, learning is the result of mental construction whereby the new acquired (learned) information is built and added onto an already existing stock of structured knowledge. The information newly acquired and the preexisting knowledge is not limited to factual information as they also include skills, attitudes, concepts and understandings. In this respect, we not only learn factual information, but we also "*learn to understand new ideas, we learn skills, both mental and physical; and we learn about, and develop, new attitudes to our environment*" (Pritchard, 2005: 21).

Piaget is said to be an influential figure in the constructivist theory of learning. The four-developmental stages he described to explain the intellectual development in children from the sensori-motor stage to the formal operational stage, i.e., from the stage of simple reflexive behaviour to the stage of complex and abstract thinking, is a fascinating picture of the construction process through which knowledge is built up and organized (for more details about Piaget's theory, c.f. the previous chapter on cognition and metacognition). His more important contribution in this respect is related to his description of the way new information is built onto the previous one through processes of assimilation and accommodation which explain the growth of knowledge not only in

children but in adults of all ages as well. Piaget's background in biology makes him akin to explain learning in revolutionary terms whereby humans and all living organisms seek to maintain their stability in their environment. Thus, any organism is liable to adapt to changes in its environment. If, for instance, the weather is hot, an intelligent organism would make a change to maintain his body temperature stable. As such, external experience can lead one to make changes to what he already knows. A child who has come to know that a dog is a small creature with four legs and a tail, internalizes this information together with more pictures of this animal that secure his knowledge of that animal. Later on, when the child encounters a cat- which has some of the same characteristics of the dog- would feel a contradiction in its state of knowledge through the reaction of the elders around. This state of uneasiness he would feel is described by Piaget as a disequilibrium that needs to be resolved. When the state of equilibrium is restored, the child is said to have accommodated his knowledge to cope with the new situation or the environmental change, and to assimilate the new piece of knowledge that he adds to his already existing schemata (mental structures formed through experience about any aspects of the world he comes to learn) about this particular aspect of learning. A schema is, in fact, a structure of knowledge that one possesses and makes him able to behave in a given way. According to Piaget, the child is born with a bulk of rudimentary schemata that allows its knowledge to grow further. These schemata take the form of *"highly organized reflexes such as sucking, looking, reaching, and grasping....the grasping schema refers to the general ability to grasp things. The schema is more than a single manifestation of the grasping reflex. The grasping schema can be thought of as the cognitive structure that makes all acts of grasping possible"*. (Olson & Hergenhahn, 2009: 284). An individual adult has a stock

of hundreds of thousands of interrelated schemas in his memory which are ready to be used and updated to cope with the environment and its demands.

3-5- Social Constructive Learning

A further elaboration of constructive theory of learning is social constructivism whereby the learner is placed in a social environment- in the presence of an elder, a teacher or simply a peer- to guide him and ease his process of constructing new knowledge and achieving the state of equilibrium referred to above. Language occupies a major place in this process as the individual is liable to make use of dialogues when interacting with the others and sharing or developing ideas with them. Vygostky is seen to be the leader of such theoretical stand. The process of internalizing knowledge, according to him should be sustained socially to lead to the creation of new knowledge. This makes him in slight opposition to Piaget who advocates the theoretical stand of the internalization of knowledge without socialization as a purely cognitive development. In this respect, Vera and Holbrook (1996: 197) insisted on the difference between facile internalization and socially-sustained internalization. They said, "*in contrast to facile internalization, which leads to limited combination of ideas, internalization that involves sustained social and individual endeavors becomes a constituent part of the interaction with what is known and leads to the creation of new knowledge*".

3-6- Social and Situated learning

Social and situated learning are often understood to refer to the same phenomenon as both of them emphasize the role of the environment in the acquisition of knowledge. However, situated learning is probably better seen as being directly

related to the educational setting as such, whereas social learning is more of a general theory that explains the nature of knowledge acquisition in a social context.

Social learning occurs when observing the behaviour of others and the environmental outcomes it may produce. Through this mode of learning, we do not learn directly but rather vicariously (i.e., through observation). For example, by observing someone getting punished about an action we ourselves did before, we learn not to repeat this action again. In experiments undertaken by Bandura and his colleagues, children were shown to behave aggressively after watching films whereby a doll received punches and kicks from an adult who was rewarded at the end of the film. Children watching this film learnt to imitate or produce the behaviour that was reinforced in the film. On the other hand, children in the control group who watched the film whereby the adult's behaviour was punished or neither punished nor rewarded were less likely to behave aggressively afterwards. In still other experiments, children were shown to imitate the adult behaviour although no reinforcement was offered.

According to Bandura (1977a) in Sternberg (1995:262), there are some conditions which are necessary for observational learning to take place, which are:

- 1-Attention directed to the behaviour to be learned.
- 2-Retention of the scene comprising the behaviour to be learned so that it may be exploited later on when needed.
- 3-Motivation to reproduce the observed behaviour.
- 4-Potential reproduction of the behaviour whereby one is able to reproduce what s/he saw.

So parallel to social learning is the notion of situated learning whereby the context plays a major role in easing the learning process. In this respect, Pitchard (2005: 31) insists that "*if a learning activity falls beyond the cultural understanding of the learner*

then learning is likely, at best, to be less successful than if it had been situated in a more familiar setting". It is very important then to belong to a community with whose members we share the same interest and domain of knowledge. This is what has been postulated by Lave and Wenger in 1991 (in Wenger, 2006) about their theory of "a community of practice". A community of practice, as its name may reveal, is a group of people having the same passion for something that they do and can still do better when they interact with each other. Three factors are important for a community practice to take place: the domain, the community, and the practice. According to Wenger, this community is not any kind of grouping. It should be surrounded around a given shared domain. A group of people sharing the same interest or occupation is not by itself a community unless its members interact and help one another. Besides, these members must be practitioners of the domain in question to be able to pass their experience from one another and build a repertoire of a very practical procedural knowledge. This can easily be applied to learning translation. A community practice of translators would be made up of a number of professionals actually practicing this task whereby they may interact together to bring assistance and support to one another and build a shared and rich repertoire of knowledge. Online networks professional associations, apprenticeships are just few cases in point.

Meriam and Caffarella (1991: 138) synthesized these major learning theories together with the basic aspects they focus on or they are characterized with and the role the educators may take in their particular situations of use. The following table summarized their views.

Aspect	Behaviourist	Cognitivist	Humanist	Social and situational
Learning theorists	Thorndike, Pavlov, Watson, Guthrie, Hull, Tolman, Skinner	Koffka, Kohler, Lewin, Piaget, Ausubel, Brunner, Gagne	Maslow, Rogers	Bandura, Lave, Wenger, Salomon.
View of learning	Change in behaviour	Internal mental process (including insights, information processing, memory, perception)	A personal act to fulfill potential	Interaction/observation in social contexts. Movement from the periphery to the centre of a community of practice
Locus of learning	Produce behavioural change in desired direction.	Develop capacity and skills to learn better	Become self-actualized, autonomous	Full participation in communities of practice and utilization of resources.
Educator's role	Arranges environment to elicit the desired response.	Structures content of learning activity.	Facilitates development of the whole person.	Works to establish communities of practice in which conversation and participation can occur.
Manifestations in adult learning	Behavioural objectives, competency-based education skill development and training.	Cognitive development, intelligence, learning and memory as function of age, learning how to learn.	Andragogy, self-directed learning. (adult learning)	Socialization, social participation, associationalism, conversation.

Meriam & Caffarella's (1991: 138) four orientations to learning

4- Factors contributing to learning

There are many factors that may bring a boost to the learning enterprise or may hamper it all together. They are pertaining to either the learner, the context of learning or the learner's milieu.

For instance, physical aspects of learning assure the efficiency of learner's cognitive mechanism. These aspects include vision and hearing, plasticity of the central nervous system, functions of enzymes, glandular function, dietary efficiency...etc (Harold, 1972). In short, whenever a learner suffers any given handicap or health condition, he will not be ready to make the expected progress with the same pace- if any- as his healthy peers. Physical aspects of learning are not our concern here as we aim to shed light on aspects we can actually touch upon and bring under control to better understand our role as teachers in the learning enterprise.

Other factors contributing to learning include as well the learners' milieu or environment. Thus, dialogues, communication and adult or teacher guidance are very important to enhance learners' skills and aptitudes. In the educational environment, the teacher-learner relationship is of paramount importance. Sigmund Freud once said, "*it is hard to decide whether what affects us more and was of greater importance to us was our concern with the sciences that we were taught or with the personalities of our teachers*" (Freud 1914; cited in Jarvis, 2005). This brings to light the importance of the way information is being presented to the learners and the interest the teacher may rise in learners to make them appreciate and welcome what they are being provided with as knowledge. Besides, a healthy environment of justice, tolerance, respect between learners themselves and between learners and all members of the educational community, is very important to enhance learners' self-confidence and self-esteem and raise their awareness about the others and about their state of mind and emotion and

about the ways to bring these states under one's control whenever necessary. This latter aspect is what is being identified by educational psychologists as "emotional intelligence", a term first used by Salovey and Mayer in 1990 (Jarvis, 2005: 158) to define the cognitive process one uses to perceive, regulate and express emotions. The following table summarizes Weare and Gray's taxonomy of emotional competences (Weare and Gray, 2003: 159)

Area of Competence	Susbcategory of Competence
Self-esteem	Self-value and self-respect Acknowledgement of right to be valued by others
Accurate self-concept	Identify strengths Identify weaknesses Accurate perception of personality
Autonomy	Independence of thinking Makes sense of self
Experience of emotion	Experiencing and recognising a full range of emotion. Awareness of the effects of different emotions. Talking about a full range of emotions.
Expression of emotion	Use of language, expression, etc., to communicate emotion. Developing a language to describe complex emotions. Expressing emotion through other media, e.g. writing, music, art.
Contextual awareness	Taking into account other people in expressing emotions.
Emotional regulation	Recognise the factors affecting emotion. Self-soothe when upset or angry. Think clearly despite powerful emotion. Avoid sulking. Use strategies such as distraction, self-talk and relaxation.
Increasing positive emotion	Experience happiness. Experience amusement. Experience calm and relaxation. Live in the moment.
Resilience	Survive and learn from negative experiences
Emotional problem-solving	Delay gratification Anticipate consequences of actions. Solve problems in spite of emotional strain. Appraise chances of success realistically.
Attachement	Have affection for others. Trust in their affection.
Empathy	Recognize emotions in others. Have compassion for others Refrain from harming others. Tolerate difference.

This means that whatever the teacher's competence and knowledge, the learning enterprise will not be successful unless the factors described above are sustained, at least to a certain degree. Teacher and learners should be made aware of these factors to bring their positive contribution to the process of learning. Problems pertaining to any area of learning should be correctly diagnosed before they are appropriately solved and remedied.

5- Categories of learning

Learning does not always take the form of relaying a mass of knowledge or information to be acquired by learners. Learning may be concerned with the acquisition of a skill or the adoption of an attitude or ideal...etc (Harold, 1972). Gagne's theory about the conditions of learning (1985) stipulates the existence of different levels or categories of learning which require different types of instruction. Thus, according to him, there are five different categories of learning pertaining to verbal information, intellectual skills, cognitive strategies, motor skills and attitudes. As such each of these categories calls for a special attention to a given aspect of instruction for learning to be successful. These categories sometimes take different appellations or are found to be overlapping with one another in some references on the subject. Below is a description of some categories, learning may be concerned with:

◆ *Sensorimotor skills*: "these are actions that become so automatic that other learned activities may be carried on simultaneously without interference" (Harold, 1972: 122). Examples of these skills are walking, riding, dressing, using different tools...etc. They are internally stimulated unless the person receives directions from outside on how to proceed and avoid gross mistakes in the

execution of those actions. In the early years of school, teachers may get engaged in teaching those skills, as teaching writing, for example.

◆ **Associational learning:** involves relating the new to the known by bonds of associations. The best example is the association drawn between certain vocabulary items and the objects or concepts they call for. Again in the early years of school, teachers may be faced with the task of teaching young learners how to relate words to their different entities and situations using pictures, models, explanations and demonstrations.

◆ **Perceptual motor skills:** this is a combination between sensorimotor skills and associational learning. The learner here is supposed to effectuate some motor skills while drawing some associations at the same time. An example of this type of learning is typing. Thus, when typing, the learner is performing a skill by striking the right letter on the board, and he is drawing associations between the sequence of letters he is typing and the words they refer to. This type of learning is linked to what Harold (1972: 123) calls "percepts", the mental modifications brought by what one perceives, and which are different from the physical objects themselves. A radiologist perceives accurately what is on an x-ray shadow of his patient. By the same token, a language learner is liable to perceive shades of pronunciation in distinguishing between meaning of different words or in uttering, himself, those words.

◆ **Conceptual learning:** they are abstract representations of situations and conditions, which involve a network of relationships between individual percepts. It is not simply a matter of association or drawing a direct link between a word and what it denotes in the physical world. Conceptual learning needs due attention to minute details and aspects of the situation and condition. Examples of these are democracy, motherhood, bankruptcy, racism, translation...etc. All these concepts

cannot be explained in a straight forward way and thus need to be analyzed in their components when acquired. A conceptual grasp of a given situation by a learner decides on his behaviour and attitude of this latter in the classroom and his reaction towards the entity being taught. A good example has been provided by Harold (1972: 124) whereby Indian children are said to hold the idea that to be better than the others is not socially acceptable and by this token their motivation is not raised by the teacher's promise of high grades. In other words, Indian children do not strive to obtain higher grades and to raise their standards higher than peers for fear to be perceived as arrogants. By the same token, one may safely add that students' idea about translation would decide of their attitudes in acquiring this skill and would define the kind of performance they are liable to produce.

◆ ***Ideals and attitudes:*** tastes, preferences, ideals and attitudes are not innate. They are rather acquired through learning whether in society as a whole or within the educational system as such. The interest the teacher may bring to his course is likely to foster the learners' like and positive attitude to this subject-matter. A well-organized and coherent lesson may develop the students' willingness to pursue their educational growth even beyond the school years.

◆ ***Problem Solving:*** this is considered to be the highest form of learning as it involves manipulation of abstract ideas and use of previously acquired knowledge and experience to perceive different nuances of the novel situation in question and apply new possibilities or explore new paths to reach the goal. Anita Woolfolk (2004: 284) defines it as "*the formulation of new answers [and] going beyond the simple application of previously learned rules*". This particular type of learning is of paramount importance to students of translation as translation is most

often seen as a solving problem activity. For this reason, it deserves to be accorded special attention in terms of explanation and analysis.

Problem solving strategies may be general or domain-specific. That is, a learner may know a set of strategies he applies in solving problems whatever the domain, or he may switch to a new battery of strategies whenever he is facing a domain-specific problem. Psychologists assume that novices tend to rely more on general problem-solving strategies, but as they acquire more knowledge of the domain in question they tend to rely on them less, unless a novel situation is presented to them about which they have little information.

A general problem-solving strategy is usually pursued through five stages which are summarized as the acronym "IDEAL" (Bransford & Stein, 1993 cited in Woolfolk, 2004: 284). These are:

1- Identify problems and opportunities: to recognize the existence of a problem and identify the real problem and not just to jump naming the first one that comes to mind. A real problem should be seen as an opportunity so that an appropriate solution might be found.

2- Define goals and represent the problem: once a problem is identified, an appropriate goal is set to resolve it. This requires a true understanding of the problem and weighing relevant information against irrelevant one. It also requires a sound understanding of the words and sentences expressing the problem. Only then is the learner able to translate his understanding to a scheme of action which may be either straightforward or should be worked out anew as explained in the third stage.

3- Explore possible strategies: so in case there is no existing scheme ready to be used directly to reach the solution, a learner is incited to explore other paths which take the form of either procedures: algorithmic or heuristic. An algorithm is a set

of rules to be followed in order to reach the right solution. These rules, however, should not be applied haphazardly without a thorough understanding of the explored path. A heuristic is not as straightforward as an algorithm and does not guarantee a correct answer. Thus, learners are invited to cut their problem in sub-categories and to identify sub-goals. The solution is said to require some kind of detour and making indirect moves.

4-~~Anticipate~~ Anticipate outcomes and act. Once a path is explored and a solution is attempted, the learner needs to evaluate the outcomes to make sure the solution is correct.

5-~~Look back and learn~~ Look back and learn: if the evaluation brings to the fore elements the learner did not attend to, he should try other possibilities and explore new paths.

To ensure an appropriate passage from one stage to the next, the learner should adopt flexibility and avoid fixedness as much as he can.

6- The learners' contribution to the process of learning

Learning is nowadays recognized as a learners' own business. Learners are no more assuming a passive role of just being recipients ready to get the input they are provided with. In fact, they are the heart of the learning process and they contribute to its efficiency at more than one level. Nisbet and Shucksmith (1991:6) cited in Williams and Burden (1997: 146) insisted that successful learners employ strategies or super-skills to attend to the object of their learning. They pointed to the difference between successful and unsuccessful learners as follows: *"people who succeed in learning have developed a range of strategies from which they are able to select those that are most appropriate for a particular problem, to adapt them flexibly for the needs of the specific situation, and to monitor their level of success"*. The following table, proposed by them,

explains these super skills the learners are said to need mostly and successful learners are said to apply to carry out a learning task.

Asking questions	Defining hypotheses, establishing aims and parameters of task, discovering audience, relating task to previous work.
Planning	Deciding on tactics and timetables, reduction of task or problem into components; what physical mental skills are necessary?
Monitoring	Continuous attempt to match efforts, answers and discoveries to initial questions or purposes.
Checking	Preliminary assessment of performance and results.
Revising	May be simply, re-drafting or re-calculation or may be involving setting of revised goals.
Self-testing	Final self-assessment both of results and performance on task.

Nisbet & Shucksmith's learners' super-skills (1991:16)

The principal role of educational psychology as described by Kaplan (1990) in Williams and Burden (1997: 1) is to provide teachers and educators with the possibility of applying the knowledge they gained from psychology about learning and learners to enhance their learners' ability to sustain their lifelong process of learning. Thus, the school should stress the importance of this dimension if the learner is to continue learning even after quitting school. Modern life, in fact, requires that we continuously learn a lot of skills and update our stock of knowledge be it procedural, conceptual or attitudinal. The question of what to teach at school was attempted by John Bruer (1993: 52) through four different theories explained as follows:

- I- The oldest theory maintains that a learner builds up his intellect through mastering formal disciplines such as mathematics, logic, art,...etc. If this theory is correct, the school should place these disciplines at the heart of the educational programme.
- II- With the evolution of cognitive psychology, people started to believe that reasoning and thinking skills are at the heart of human intelligence and should be granted due attention. As such, special courses of study skills and problem solving activities should be given more credit.

- III- With more advance in cognitive psychology, it was found that domain-independent skills and strategies cannot account for human expertise. It was suggested instead that more domain specific skills should be introduced. Following this line of thought, the school should be concerned with teaching learners, knowledge and representations specific to their domain of expertise or the domain they want to excel in.
- IV- In the early 1980's researchers started to notice that intelligent novices can tackle novel problems and situations without enough domain-specific knowledge, by applying general domain independent strategies in an appropriate way. This suggests that experts need more than domain – specific knowledge as intelligent novices control and monitor their thought processes to overcome problems or situations about which they do not have sufficient knowledge. This theory is what Perkins and Salomon (in Bruer, 1993: 55) call the "new synthesis" as it incorporates all the previous theories together to reach an adequate educational practice.

Bearing this theoretical scheme in mind, one may draw the conclusion that learning in the educational context is made to respond to the immediate needs of the respective societies it should serve at the end. Stoll et al (2003) insisted in this respect that all learning from time immemorial was continuously shaped and remodeled according to the theoretical standpoint held by the imminent people of every period about learning and its role in life at that time. It may be interested to quote them here as follows: *“when René Descartes in the late 17th said, ‘I think therefore I exist’, he set in motion an intellectual revolution that underpins all of our major institutions, especially schools. Reason and rationality became the primary way of knowing”* (p14)

When attempting to teach translation or to devise a curriculum for translation teaching, one should decide on what theory to adopt. It is important from the start to know what kind of knowledge we want to inculcate in the students to be able to decide on the appropriate means to reach our educational goals. It is important also to be aware of the nature of the entity to be developed and its use in society and in the life of the future graduate. A domain which is not given due attention in the surrounding environment of the learner and by the same token in that of his teacher or trainer is no liable to inspire educators to bring about judicious ideas and insights about how to enhance development and yield tangible results.

7- The teachers' contribution to the process of learning

The educational practice appears then to be centered on the aim of making learners autonomous and able to control and monitor their learning process. Thus, one might ask how a teacher can succeed in this new task. An appropriate answer may draw on the theory of mediation proposed by Feuerstein (in Williams & Burden, 1997: 68-69) whereby the teacher assumes a role of a mediator rather than a disseminator. This mediation can take different forms depending on the learning task, the learning situation, the learners' culture...etc. Feuerstein enumerated twelve features characterizing mediation; the three first are present in all learning situations without which the learning task cannot succeed. These features are as follow:

- ***Significance***: the teacher should make his learners aware of the significance and value of the task they are required to undertake, to themselves and to their culture or society as a whole.
- ***Purpose beyond the here and now***: besides, the teacher should make his learners aware of the relevance of this task in different future possible context.

- **Shared intention:** the teacher should have a clear intention about the task in question and should make this intention clear to his learners.
- **A sense of competence:** the teacher can also enhance his learners' feeling of self-confidence in their ability to cope with the task they undertake.
- **Control of own behaviour:** the teacher can make his learners able to control and regulate their own actions and learning.
- **Goal-setting:** learners can be made able to set goals and plans to reach them.
- **Challenge:** learners' sense of challenge might be enhanced to make them feel eager to face new challenges in life.
- **Awareness of change:** learners can be made aware of the constant change characterizing all aspects of life including all human beings and themselves. They can be made alert to detect those changes in themselves.
- **A belief in positive outcomes:** they can also be made aware that a solution is always possible whatever the problem.
- **Sharing:** learners can be encouraged to work cooperatively and to recognize the importance of cooperation in solving some particular problems.
- **Individuality:** they may be encouraged as well to recognize their own uniqueness.
- **A sense of belonging:** they can benefit from the feeling they gain about belonging to a given community or culture.

In the same context, Gagne (1985) drew the attention of teachers to eight important phases they should observe in their teaching to make sure their learners are

on the right truck and to bring about the most advantages from the process of learning.

These phases are:

- 1- **Attention:** learners should be made alert and ready to receive the information or skill they are to be taught.
- 2- **Expectancy:** as a second stage, they should be able to expect the usefulness of what is to be taught.
- 3- **Retrieval to working memory:** they should be able to retrieve from memory previous information they have been taught to be able to analyze the information at hand.
- 4- **Selective perception:** once they understand the nature of the task or information they are being taught, they should be able to focus their attention to relevant aspects of the task or knowledge being taught.
- 5- **Encoding:** at this stage, the learners are able insert the newly acquired information to their schemata.
- 6- **Responding:** once the new knowledge or skill is grasped, the learner is able to make active use of what he has learnt.
- 7- **Feedback:** the learner then is able to evaluate his performance and to correct his mistake to act better the next time.
- 8- **Cueing retrieval:** if all the previous phases are well secured, the learner should be able to manifest his ability to cope with novel situations and new contexts of use he has never encountered before.

A good teacher should find solutions for eventual failures in each of these stages. He might, for example, change stimuli or constantly call for attention to keep the learner alert and arouse his attention and interest. He might explicitly state his

objectives with the task in question to optimize the learners' expectancy and allow them to see where they are going. He might, as well, constantly check up and review the prerequisite knowledge and the relevant information previously tackled to help the learners associate what they are being taught to their previous accumulated knowledge. Furthermore, the teacher might offer more opportunities for practice and performance to make his learners more able to put their knowledge into active use. He might above all teach them metacognitive strategies to make them more ready to transfer their acquired knowledge and skill to novel situations and contexts of use.

To put into practice Gagne's learning phases in teaching translation students, one may think of the following plan of action:

- 1- Attention: show them a translation passage together with its source text to try to appreciate the task they are being asked to undertake and sense or appreciate its importance and their desire to know about how to reach the same performance.
- 2- Expectancy (identify the objectives): ask them how can one reach a good translation of the passage at hand and what obstacles they expect to meet and how they envisage to overcome them. Discuss their eventual answers and correct their misconceptions to make them see and endorse the same objective.
- 3- Retrieval to working memory: to draw their attention to previously tackled translation problems or to previous solutions they have retained. They should be encouraged all the time to archive those solutions they strive hard to work out and by the same token to retain as much information as they can from the texts they process for translation. This would enhance their verbal competence and make them more alert to draw associations between different linguistic combinations.

- 4- Selective Perception: to underline or highlight students' gross mistakes and discuss what can be done to overcome them in the future, and by the same token to highlight students' successful solutions or judicious routes to reinforce them in the learners.
- 5- Encoding: to ask them to plainly explain what they have been taught to do to overcome a given problem you were just explaining. Ask precise questions to check their understanding.
- 6- Responding: to ask them to translate similar passages (passages dealing with the same problems they have just tackled), or ask them to provide you with similar examples.
- 7- Feedback: to evaluate their renditions and make sure they have developed their ability to self-regulate their performance.
- 8- Cueing retrieval (enhance transfer): to check their future translations in regards with all the problems previously highlighted and discussed to see if the students can rely on themselves in novel situations of use.

So overall, translation classroom may escape the stereotype image of carelessly going through different texts for translation purposes without due attention to criteria for text selection and without consideration to one's objective in tackling a given text or issue, not to mention the importance one should give to students' attention, motivation and cooperation. A healthy educational setting should undoubtedly cater for all aspects pertaining to the success of the learning process and fosters teachers and students' awareness about this process.

8- Learning Styles

To understand the success or failure of the educational enterprise, one should have a fairly adequate idea of the ways people prefer to learn and process information they receive, or should at least recognize the existence of a panoply of learning styles that characterize individual learners, and the effect these styles might have on the students' renditions and performance. A learning style is the manner one acquires processes and retains information or knowledge he receives from whatever source. According to Dunn and Dunn, 1992, 1993, 1999 in Pashler et al (2009:105), it is "*the way each learner begins to concentrate on, process, absorb, and retain new and different information*". Pashler et al (2009) went further to emphasize that the interaction between these elements is also different from one individual to another. In this respect, one might infer that a monotonous approach to teaching a given subject matter would distract the attention of some learners and would discard some others or lead them to give up their learning sooner. It is true that a given subject matter may dictate a given approach or educational setting, but it is also true that not all learners are served in the same fashion. The international learning styles network, 2008 cited in Pashler et al (2009: 106) stressed the importance of depicting the needs of different groups of learners to work with them in a more adequate and practical way. In their words, they say, "*it is necessary to determine what is most likely to trigger each student's concentration, how to maintain it, and how to respond to his or her natural processing style to produce long term memory and retention*". One may easily think of some simple examples. Thus, some students are known to prefer visual information over auditory one as they tend to retain better when using charts or diagrams than when being told the information orally. Others may prefer to try things by themselves or to work out solutions for hard problems. As such, one might adopt Dunn and Griggs's

point of view (1993:3 in Oxford, 2003:2) whereby the learning style is defined as "*the biologically and developmentally imposed set of characteristics that make the same teaching method wonderful for some and terrible for others*". These learning styles are not categorically cut but are rather laid on a continuum making a person lean to a given style more than another without being immersed in one particular style alone.

Oxford (2003) identifies four major learning styles, according to the following traits:

8-1-Sensory preferences: these are related to the physical and perceptual channels through which the learner receives the information and with which he might feel more at ease. They include visual, auditory, kinesthetic and tactile preferences. Visual learners, for instance, like to read and appreciate more illustrations and drawings; whereas, auditory learners are more at ease with conversations and oral descriptions and feel better served when they are involved in role plays or vivid activities. Kinesthetic and tactile students, however, find it more enjoyable to work with tangible objects or to be involved in activities where there is a lot of movement. They hate sitting at one place for a long time and would rather like to have breaks or move around more frequently.

8-2-Persolnality types: these types include the following classifications:

8-2-1-Extraverted vs. introverted: introverts gains their strength and motivation from the external world. They tend to easily come into contact with people. In the classroom they show more enthusiasm and zeal. However, introverts bring their strength and motivation from inside. They like solitude and tend to have fewer friends.

In the classroom they are less talkative and find it hard to get involved with their peers or to participate in the classroom.

8-2-2-Intuitive vs. sensing-sequential: intuitive learners tend to prefer theories and generalizations. They are more autonomous and rely on themselves in guiding their own learning. However, sensing-sequential learners tend to prefer facts and need more guidance from their teachers. They feel confused if they fail to see any consistency in the material they may be offered to process. In the classroom, the lesson needs to be well structured and organized for sensing-sequential learners.

8-2-3-Thinking vs. feeling: thinking learners, according to Oxford (2003), tend to show less empathy towards the other and do not like to show their feelings. They prefer truth over feeling and are less liable to give praise. Feeling learners are more open to the others and are more ready to use words to sooth difficult situations.

8-2-4- Closure-oriented judging vs. open/perceiving: closure-oriented students are more eager to reach the end very quickly. They are impatient with long-term tasks or with activities whose objective cannot be deduced immediately. They are often said to be serious and hard working with a high sense of respect of deadlines. Open learners; however, tend to consider learning as an enjoyable game. They do not like deadlines and prefer to be left at ease in taking charge of their learning. They may seem to be less serious than closed students, but actually they are more eager to discover new perceptions that might be available for them, and for that reason they are referred to as being "perceiving" (ibid).

8-3-Desired degree of generality: students may also be different in their tendency to concentrate on general or detailed information. Global or holistic students tend to focus on the main idea and discard specific details. They are more able to make guesses to find solutions to the problems they tackle without needing much information. Analytic students, however, prefer precision and strive hard to understand every bit of information to be able to guarantee their guesses and speculations about possible solutions they want to undertake to solve the problems at hand.

8-4- Biological differences: these are related to some biological aspects that may affect learning such as biorhythms, sustenance and location. As such, some students are more active in the morning than in the afternoon; whereas others might be just the opposite. On the other hand, we find that some students cannot learn for a long time without eating something to sustain their energy and concentration, while others may find it disrupting to do so. As for the location, students may differ in their like or dislike for light, sound, temperature and even the comfort offered by the furniture.

From a different but related angle, Kolb (1984) cited in Sims and Sims (2006: 277-278) suggests that learning is also experiential and involves not only the mind but the emotions and muscles as well. According to him, learning takes place following four steps which are: (1) watching, (2) thinking, (3) feeling, and (4) doing. Thus, to be effective, a learner needs to perceive information, reflect on how it may influence any aspect of his life, compares how this information fits into his own experiences, and then thinks about ways to put this information into practice. This gives rise to four different learning modes that may characterize different people who tend to emphasize some part of the circle and not others. In other words, some people, are seen to favor the thinking phase other than the doing phase...etc. These modes are:

- a- **Divergent style:** giving rise to imaginative abilities being based on concrete experience and reflective observation
- b- **Assimilation style:** giving rise to ability for explanatory theories based on reflective observation and abstract conceptualization.
- c- **Convergent style:** giving rise to the ability to put one's knowledge into practice on the basis of abstract conceptualization sustained with concrete experimentation
- d- **Accommodative style:** giving rise to the ability to learn from trial and error through repeated experimentation.

9- Learning and Motivation

It is true that the improvement of the many factors shaping the educational context may lead to an improvement in the students' performance and ability to learn, but this improvement would guarantee no effect unless the learners themselves are ready and willing to receive such a treatment or aware of the need to acquire the information or skill they are presented with. In other words, students should be motivated to learn and interested in what they are being taught. This motivation is not easy to describe as its nature is not clearly delimited. It may be concerned with external drives as it may be emanating from the inner self. It may be enhanced socially through praise and reward as it may gain force through a simple intrinsic desire to achieve and to affirm oneself. According to Williams and Burden (1996: 111), "*it is composed of many different and overlapping factors such as interest, curiosity, or a desire to achieve*".

Early theoretical views of motivation were behaviourist in nature. Human behaviour was believed to be driven by external forces through operant conditioning.

The more these forces prove efficient and important for whatever type of survival, the more the issued behaviour is automatically triggered and gets reinforced to be generalized to other situations. Maslow's famous pyramid of human needs (in Williams and Burden, 1996:34) explains clearly the driving forces leading us to behave in such a way and not to behave in another. According to Maslow (1986-1970), human needs are divided into two categories: deficiency and growth. Deficiency needs refer to the basic means of maintenance such as food, security, belonging, self-esteem. Growth needs refer to a more advanced kind of needs and occupy the top three levels of Maslow's pyramid. They are basically concerned with achieving one's potential and reaching self-actualization. No one can ever reach the top of the pyramid unless the bottom needs are fulfilled one after the other. This theory, although criticized for many respects, is very important in the domain of education as it explains why some students seem to fail in getting along their peers any further and why the students' needs are different, and by the same token, why the amount of progress they make separately is not to be evaluated in the same way.

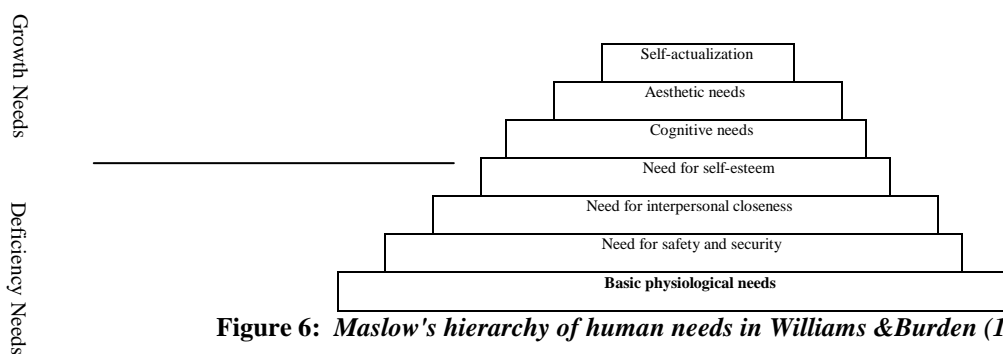


Figure 6: Maslow's hierarchy of human needs in Williams & Burden (1996:34)

Later on, other theories were brought to the fore to replace this behaviourist approach to motivation. Thus, this new theoretical orientation stipulates that certain human beings and even certain animals like to be continuously in a state of optimal arousal at which they function without needing to satisfy any of their basic needs. This

was against a prevailing view whose tenants believe that, on the contrary, humans and animals prefer to be in a well balanced and settled state and by this token avoid any source of arousal. Some of these researchers point to the fact that many are driven by the force of curiosity and the desire to challenge novelty. On the other hand, some people may differ in their desire to achieve well and to be successful. Thus, they may be eager to cope with whatever competition to be granted distinction and recognition. Some would just do the opposite and avoid any occasion that may lead them to failure or to lose their image in their society and the esteem of the peers and families or whoever may be a source of such esteem.

A cognitive approach to motivation holds that individuals are driven by their own forces and their desire to act in a certain way, or to make decisions and choices about the amount of effort they are likely to make to reach their goals. It is important to note here that motivation is not limited to one's desire to act or one's interest in the task. A motivated person needs means to sustain his level of motivation to reach his aim. Motivation, thus, is seen to be made up of three stages that interact with one another to make the person successful in his action. These stages are: (1) reasons for doing something, (2) deciding to do something, (3) sustaining the efforts or persisting (Williams and Burden, 1996: 121). The order of these stages is in no way linear as the third stage, for instance, may have a direct effect on the first one. Once a person succeeds to sustain his motivation, he would feel more desire to act and would be more willing to take immediate decisions for action.

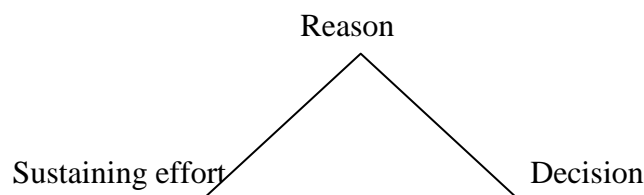


Figure 7: Williams and Burden's A three stage model of motivation (1996: 121)

10- Intrinsic and extrinsic motivation

People's reasons for acting in certain ways may be attributed to internal factors emanating from their own will and desire to act and that may bring them self-satisfaction and pleasure, or they may be attributed to external factors emanating from the environment surrounding them that pushes them to do something to gain reward or escape punishment or blame. People of the first category are said to have an intrinsic motivation, while those of the second category are said to have an extrinsic motivation. Susan Harter (1981) in Williams and Burden (1996:123) extended this dichotomy of intrinsic and extrinsic motivation to include five separate dimensions distinguishing between intrinsically and extrinsically motivated students. These dimensions are described below as follows:

INTRINSIC		EXTRINSIC
Preference for challenge	vs.	Preference for easy work
Curiosity /interest	vs.	Pleasing teacher/getting grades
Independent mastery	vs.	Dependence on teacher in figuring about what to do
Independent judgment	vs.	Reliance on teacher's judgment about what to do
Internal criteria for success	vs.	External criteria for success

Table 10: Harter's dimensions of intrinsic and extrinsic motivation (1981) in William and Burden (1996: 123)

Intrinsically motivated students, then, are more likely to be independent and self-autonomous learners who strive to do their best whatever the learning conditions or environment.

Probably another appellation for the distinction between intrinsic and extrinsic motivation is what Boekaerts name “ego” vs. “mastery-oriented learners”. Ego-oriented learners tend to work hard and do their best in order to succeed and feel this pleasure of winning success. Mastery-oriented learners, however, tend to do their best in order to learn something new or to acquire a given skill they are interested in (Boekaerts, 2002: 14)). Students who are mastery oriented learn better and faster than learners who are ego-oriented and tend to develop a more interesting bulk of learning strategies.

Boekaerts believes that "*the extent to which [a teacher] succeed[s] in creating a mastery-oriented learning setting is an indication of [his/her] professional competence*" (ibid: 14). Boekaerts went on explaining how a teacher can manage to create a favorable atmosphere of learning that encourages students to be rather mastery-oriented. She says,

You can play down ego-orientation by explaining to your students that you are not interested in seeing one correct outcome, but that you focus instead on their attempts to come up with a solution strategy. Students will only believe this 'trying is more important than the product' statement when you act according to what you preach

(Boekaerts, 2002:15)

This is not an easy task, however, as ego-oriented students would feel frustrated when asked to focus on their strategies and mistakes instead. This educational approach is very much rooted in the basic assumptions about metacognition as it encourages teachers to raise their students' awareness about their role as learners and to correct their attitudes towards learning and the subject matter. As such, this is a further indication that metacognition is a multifaceted concept having to do with motivation as well.

11-Attribution theory of motivation

For a more extension of the different sources of motivation, the students report being at the origin of their success and failure, attribution theory as proposed by cognitive psychologists is an important conception and explanation to be taken into account to understand students' behavior and orientation towards their own achievement and degree of perseverance.

Thus, there are a multitude of reasons students may give to explain why they/ or their peers succeeded or failed in a given endeavour. These reasons may vary from a lack of effort/ perseverance, a sudden illness, a teacher’s empathy/sympathy, bad/ good luck, the difficulty of the task, etc. Weiner cited in Woolfolk (2004: 354) described these reasons according to three dimensions, which are:

-Locus of control: explaining whether the reason the students give is internal to them or external.

-Stability: explaining whether this reason is constant and resists changing or is liable to be modified.

-Controllability: explaining whether this cause can be controlled by the student or not.

As such, every cause the student invokes can be classified according to these dimensions as whether it is stable/unstable, internal/external, controllable/uncontrollable. The following table shows some examples of reasons students give to explain their failure and their classification according to the above dimensions (Weiner’s theory of causal attribution (1992) cited in Woolfolk, (2004: 354))

Dimension classification	Reason for failure
Internal-stable-uncontrollable	Low aptitude
Internal-stable-controllable	Never studies
Internal-unstable-uncontrollable	Sick the day of the exam
Internal-unstable-controllable	Did not study for this particular test
External-stable-uncontrollable	School has hard requirements
External-stable-controllable	Instructor is biased
External-unstable-uncontrollable	Bad luck
External-unstable-controllable	Friends failed to help

Table11: Weiner’s classification of causes of failure in Woolfolk (2004:354)

If a learner, for instance, says that he always does bad in translation because he is bad in such a skill, this means that he attributes his failure to some internal cause (aptitude is internal) which seems rather stable (resists change as he is not likely to do

better forever), and upon which he has no control (he feels he can do nothing to change this state of affairs).

This classification is of paramount importance in the field of education as it predicts future performance of learners and their attitudes henceforth. Learners who attribute their failure to stable causes are more likely to fail the next time as well. If, however, students attribute their failure to unstable factors, they are more likely to succeed in the future and change their attitudes positively towards the subject matter in which they failed. As for the internal/external dimensions, they determine the students' degree of self-esteem. If success is attributed to internal factors such as the student's perseverance or intelligence, this would result in the feeling of pride and a boosted motivation. If, however, the reason is attributed to some external factors such as bad luck or the instructor's bias, this would result in a feeling of guilt that would diminish self-esteem. On the other hand, controllability of the factor pertaining to their failure triggers feelings of anger, gratitude, pity or shame. When a student feels he has no control over his lack of ability to succeed in a given subject, he would likely feel angry and ashamed. This would make him withdraw sooner and on the long term affect his ability all together. If however, the student feels he has control over the cause of his failure, this would make him feel responsible and incites him to do his best and change his state of affairs and in the long run his performance will change positively. The most distinguished students are seen to attribute their success to their inner aptitudes and their own efforts, while they attribute their failure to some transitory and controllable factors. Weak students, however, are seen to attribute their failure to either some external factors which fall outside their control, or they tend to adopt some defensive strategies to save their faces and preserve their positive image, by saying that they

could have done better if they wanted, but just did not do so. (Covington, 1984 quoted by Viau, 1997 in Huart, 2001: 230)

12-Self-efficacy and motivation

Besides the learner's dimensions of attribution concerning his failure, he is also liable to have beliefs concerning his ability to undertake a given task and to reach specific goals, a belief which is likely going to affect his motivation to engage in the task all together and to succeed. This is referred to as self-efficacy. Thus, Bandura (1997:3) in Woolfolk (2004: 368) defines self-efficacy as "*beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments*". Self-efficacy is different from the concept of self-construct and self-esteem in that it is not general but related to a specific task. One may believe in his capabilities to carry on a given task in a given domain of knowledge (let's say in mathematics), but fails to do so when dealing with a different task in another domain of knowledge. Self-construct concerns one's perceptions of him/her in comparison with the others, self-efficacy being just one component of these perceptions. As for self-esteem, it involves one's judgment of his/her own worth and has no direct relation to one's judgment of capabilities. Thus, one may feel unable to accomplish a given task or an activity (that probably does not have an importance to his field of interest or specialization) but does not lose his self-esteem or the positive image he has of himself.

According to Bandura (1994), self-efficacy has four main sources. The most important source of fostering one's belief in his capabilities is "mastery experience". Thus, through one's own experience of success in a particular task, one is likely to trust his ability and strengthen his belief in his future success. On the other hand, learners who always experience easy successes fail to cope with the demands of challenging

activities and give up quickly. Repeated failures can only invoke a feeling of incapability in the learner and make him lose faith in any chance of success.

The second source of self-efficacy is “vicarious experiences”. Thus, by observing other people similar to oneself succeed in a given situation, the learner comes to believe that he is able to succeed too. Throughout life, we are all looking for models and exemplar people to imitate and to serve us a pattern. This would allow us to feel more confidence and to gain belief in ourselves and in our abilities to reach the same successful outcomes.

The third source of self-efficacy is social persuasion. Thus, the more one is verbally persuaded of his capabilities and capacities for success and achievement, the more likely he is to reach positive outcomes and attain his objective. This would boost his motivation and makes him patient and persevering in face of whatever obstacles.

The fourth source of self-efficacy has to do with “physiological and emotional arousal”. Thus, one who is excited when facing a given task feels more energy to go on and gain trust and confidence in his endeavour and in his capacity to go through. However, one who is worried and anxious, would lose the thread of the task at hand and concentrate instead on his own emotional state. Gradually, he would give up believing that there is nothing he can really do.

13-Motivation, metacognition and learning

The question now is what have these three constructs to do together and what relation holds specifically between metacognition and motivation if ever, and what sort of effect they can bring to learning?

From the start, one can ascertain that metacognition plays an important role in learning, as awareness about whatever aspect of learning whether it is related to the task

variable, the learner variable or the strategy variable, as has been suggested by Flavell, and is a prerequisite in providing the students with will and capacity to go through with their learning. Strenberg (2001: 340) sums it up as follows: “*to do well in school, students need to acquire practical knowledge about themselves as learners, learn to understand and predict the kind of expectations teachers have, and become aware of the values that are upheld by the school system at large*”. To know themselves, students need to understand their source of motivation and their points of strength upon which they can foster their process of learning all together. Generally, a well motivated student may be seen to be more ready to manifest his metacognitive knowledge and is fully involved in the learning environment to the extent he is ready to tell his goals and strategies and the course of action he is adopting throughout. A metacognitive approach to education is not easy to establish unless a fairly well level of motivation is assured. Viau (1997:7) in Huart (2001: 222) defines motivation as being directly related to one’s perception of himself and his learning environment which stimulates him to react positively by making an appropriate choice, undertaking it, and persevering till he reaches his goal. In his own words, he says : “*la motivation est un concept dynamique qui a ses origines dans la perception qu’un élève a de lui-même et de son environnement et qui l’incite à choisir une activité, à s’y engager et à persévérer dans son accomplissement afin d’atteindre un but*’. This perception one has of himself and his environment is similar to the metacognitive component related to one’s knowledge and one’s abilities to act and control his process of learning.

Thus, a motivated learner is metacognitively aware about whatever aspects pertaining to his learning, and he is likely to attain positive outcomes. However, a metacognitive learner if not incited to persevere is more likely to give up before any serious learning outcome is ever expected to be brought to the fore.

Motivation and metacognition are both two important components upon which, effective learning is built. According to Costa 1996 cited in Stoll et al (2003: 26), there are nine typical human strategies involved in intentional learning:

1- Metacognition: human beings have the ability to reflect on their thought processes, monitor their thinking, bring adjustments and modifications to reach objectives and advance understanding.

2- Constructing abstraction: humans are able to use abstract symbols and notations to represent information. This makes them able to think in abstraction and speculate about any aspect of the world.

3- Storing information outside the body: humans are able to use means to store information other than their minds. They can use books, records, tapes, drawings...etc

4- Systems thinking: humans can perceive organizing patterns and congruencies in whatever input they process. This makes them able to speculate about possible changes and to adopt different perspective to analyze the same phenomenon.

5- Problem finding: humans are always striving to understand the world surrounding them by finding solutions to whatever problem they may face.

6- Reciprocal learning: humans are capable for interacting with the others and learning from them, weighing their understanding against the understanding of others.

7- Inventing: humans are intrinsically motivated to discover new solutions and paths of explorations.

8- Deriving meaning from experience: humans are able to learn from their own experiences and modify their actions and beliefs in accordance with what their experience brings to them.

9- Altering response patterns: humans are ready to change their action and reaction to event they used to respond to in a given way once their understanding of this event is changed.

Although metacognition and motivation are distinct disciplines, they often seem to overlap in some parts especially as regards the interest they bear to learning. The above set of human characteristic, for example, place metacognition and motivation, with other strategies, on the same line leading to intentional learning. Both metacognition and motivation lead to successful learning. Brown in Weinert (1986) noted the relationship between metacognition and motivation by pointing to research undertaken in this area such as the relationship between metacognitive judgments and causal attributions of success and failure, metacognitive and motivational determinants of memory performance...etc. However, these two constructs are also dissimilar in some respect as their history in their respective field of study may depict. The following table is a summary of the different variables these constructs bear and their differing functions in their respective field of research (Weinert, 1987: 12).

Motivation research	Metacognitive research
1- Judgment of task difficulty as a function of one's own experience	
-Performance expectations -Setting aspiration levels -Effort allocations	-Performance predictions -Action planning -Choice of appropriate strategies
2- Causal attribution for success and failure	
-Self-concept of own ability -Individual attribution style -Prediction of future performance	-Knowledge of own cognitive competence -Metacognitive judgments about the determinants of performance
3- Evaluation of action outcomes	
-Use of self-relevant evaluation criteria -Subjective experience of success and failure. -Emotional reactions and their Consequences	-Metacognitive knowledge about task and Person variables. -Evaluation of correct and incorrect judgments. -Improvement of task-related metacognitive knowledge.

Table12: Variables pertaining to both metacognition and motivation and their functions in their respective field of research

14-CONCLUSION

This chapter was rather an attempt to clarify some points related to the educational setting and was meant specifically for teachers to gain awareness of the various factors affecting their job and bringing good results as regards the performance of their learners. Thus, a teacher should be aware of the nature of learning and its mechanism from inside and outside (cognitive Vs. behavioral approaches to learning) and the existence of a panoply of styles distinguishing his learners and making them not on the same line to receive the same treatment. A teacher should also be aware of how the learning process goes on and what to do to make use of the full potential of learners to cope with different situations and types of learning. With this knowledge before one's eyes and with an appropriate knowledge of metacognition and a sound belief in its role for effective learning, one may feel well equipped to bring modifications and feedback to his approaches to teaching. A translation teacher, who just feels skeptical about the way his class is going on, can find impetus and a food for thought in the literature on learning to seek insight and feedback for any pending situation. Translation can be given an appropriate treatment as a subject matter if its nature and intricacies as a particular kind of knowledge to be acquired and developed is adequately understood. Learners also should be made aware of their characteristics as knowledge processors and skill developers to be able to contribute to their own appraisal and efficiency.

Chapter Four: The Pilot Study

Introduction

Prior to the investigation *per se*, a pilot investigation was undertaken to test the feasibility of our actual study and to check the appropriateness of research tools and their relevance for obtaining the information needed.

The pilot study was undertaken at the beginning of the academic year 2007-2008 with 20 students making up for one group among the total of ten third year groups enrolled at the department of translation- University Mentouri of Constantine, in that time. The study was undertaken during an ordinary tutorial session, which was the first session the student had in English/Arabic/English translation module during that academic year. As such, the total number of students taking part in this study was around twenty (20). The pilot study as a whole (the pre-questionnaire, the translation test and the post-questionnaire) lasted three (03) hours. The students answered first the pre-questionnaire and handed it before undertaking the translation test. After they handed the translation test, they were given the post-questionnaire. The test and the questionnaires were anonymous, and students were given instead random numbers written on their pre-questionnaire, which they were requested to report on their answer sheets in order for the examiner to correlate their answers in different parts of the questionnaires with their translation in the test.

All the students did their best and showed a strong motivation to participate. The questions and the instructions the teacher gave were clear, as students did not show signs of puzzlement or confusion. Most of the students spent three (03) hours to finish the questionnaires and the test.

I- Description of the tools of research

The two questionnaires overall were meant to draw a metacognitive profile of the learners in question, to see if they are aware of themselves as learners of translation and of any particularities of the skill they are attempting to acquire. The pre-questionnaire was basically meant to assess students' metacognitive awareness in general without any particular reference to whatever specific translation task. The post-questionnaire, however, was meant to assess their specific metacognitive knowledge as regards the test they have just undertaken. The core element in metacognition is awareness. This awareness can be either related to one's knowledge about him/herself as a learner and a potential translator, or about the task s/he is undertaking, i.e., translation per se, or about the factors or conditions contributing to one's process of acquiring the skill or helping one overcome the difficulties of the task in question. Thus, many metacognitive models were proposed in the literature on the subject namely Flavell's (1976, 1979, 1987), Brown & Compione's (1978), Anderson's (1985), Noël's (1991),...etc. Some of these models are already tackled in the theoretical part of this dissertation. However, probably the most relevant model serving the aim of this research is that proposed by Flavell (1976), which suggests three metacognitive knowledge components that interact together to make one's action possible and purposeful. These components are person variable, task variable, and strategy variable.

Thus, a translator learner should know something true about himself as a learner (when he is doing well and when he is not, whether he is good at translation or not, what are his problems in translation...etc). This knowledge basically refers to "person knowledge" stated above and can be extended to touch upon the knowledge the translation student has of his peers' aptitude as when he compares himself with the others. He should also know something true about the task, i.e., translation (what is translation, is it

necessarily a vocabulary exercise? can it be taught?...etc). He should know as well the conditions making translation acquisition efficient and the translation task successful (what to do to overcome a problem? what else should a translator need beyond the dictionary? is theory most relevant to one's training in translation?...etc).

This research, thus, tries to shed light on these knowledge components in translation students and to see if they really have a part to play in their performance. On the other hand, the translation test would serve a yardstick against which to measure students' actual metacognitive knowledge as revealed in their answers in the questionnaires. Both the mark obtained and the quality of the work submitted would serve the examiner to deduce conclusions and main observations about students' actual performance and monitoring capacities.

Thus the main research questions, the pilot study set to answer and verify its plausibility were the following:

Are translation students metacognitively aware of their competencies, aptitudes and the conditions liable to bring a boost to their actual development in acquiring translation competence?

To what extent can this metacognitive knowledge contribute to their performance if ever?

We, thus, hypothesize that translation students would be able to give correct answers pertaining to the evaluation of their own competencies and aptitudes and to the factors contributing to their development in acquiring translation competence.

Their performance in the translation test would show that they actually make use of the metacognitive knowledge referred to above in monitoring and controlling their translation skill.

II- Analysis of the Pre-Questionnaire

To provide a clear vision of our methodological endeavour, all the questions were analyzed and examined as if we were dealing with the actual investigation not a pilot study. In what follows is an explanation of the objectives of each of the questions posited and students' reactions to them.

Section one in the pre-questionnaire aims to collect information about the students' level in English, Arabic, English/Arabic translation, Arabic/English translation. This is thought to be important to know as it directly assesses the students' ability to evaluate themselves.

Question one was: How do you evaluate your competence in English?

a-Good b- Average c- Less than average d-I don't know

Students' answer were:

	Good	Average	Less than average	I don't know	No answer
Total number of the population	1	10	7	0	2
Percentage	5%	50%	35%	0%	10%

Student's self evaluation of their competence in English

Half of the total population (10 students) reported that their English competence is just average, which may indicate that they do not overestimate their competence and still feel a need to be helped to improve. This may be an indicative also of a sort of metacognition related to their awareness of their weakness and their need for instruction and training.

Question two was: How do you evaluate your competence in Arabic?

a-Good b- Average c- Less than average d-I don't know

Students' answers were:

	Good	Average	Less than average	I don't know	No answer
Total number of the population	6	11	2	0	1
Percentage	30%	55%	10%	0%	5%

Student's self evaluation of their competence in Arabic

Once again more than half of the population consider themselves to be just average in Arabic according to their own evaluation.

Question three was: How do you evaluate your competence in English/Arabic translation?

a-Good b- Average c- Less than average d-I don't know

Students' answers were:

	Good	Average	Less than average	I don't know	No answer
Total number of the population	1	13	4	0	1
Percentage	5%	65%	20%	0%	5%

Student's self evaluation of their competence in English/Arabic translation

More than half of the total population reported that they were average in English/Arabic translation. This is in concordance with the answers they gave previously.

Question four was: How do you evaluate your competence in Arabic/English translation?

a-Good b- Average c- Less than average d-I don't know

Students' answers were:

	Good	Average	Less than average	I don't know	No answer
Total number of the population	1	5	14	0	1
Percentage	5%	25%	70%	0%	5%

Student's self evaluation of their competence in Arabic/English translation

The majority of the students consider that they were less than average in Arabic/English translation.

Students' answers in this question and in the previous one are in concordance with our observations as teachers of these modules (students found more ease with translation towards Arabic than towards English). We can say, thus, that students' self-evaluation is realistic and we can trust their evaluation in other questions related to their translation competence.

Question five was: How often do you read in English?

- a-Every Day or More
- b-Once a week or more
- c-Once a month or more
- d-Once every two months or more
- e-Every holiday
- f-Never

Students' answers were:

	A	B	C	D	E	F
Total N° of the population	1	2	6	4	3	4
Percentage	5%	10%	30%	20%	15%	20%

Students' rhythm of reading in English

Question six was: How often do you read in Arabic?

- a-Every Day or More
- b-Once a week or more
- c-Once a month or more
- d-Once two months or more
- e-Every holiday
- f-Never

Students' answers were:

	A	B	C	d	e	F
Total N° of the population	2	6	1	2	3	6
Percentage	10%	30%	5%	10%	15%	30%

Students' rhythm of reading in Arabic

According to the students' answers in this question and in the previous one, we note that they have more contact with the Arabic language than they have with the English language as the percentages of their reading frequency in these two languages may reveal. Again the answers give a true picture of the reality we are witnessing. In fact, students do not read a lot and when they do they prefer reading in Arabic. However, these are the questions we have chosen to omit in the actual questionnaire as they do not bring more information than what is actually covered by other questions.

Section two in the pre-questionnaire assesses students' motivation towards translation and attitudes towards the training they went through.

Question seven was: Why have you chosen to study translation?

a- To acquire a mastery of different languages.

b- I like it

c- To work as a translator after graduation

d- Just a random choice

e- Somebody advised me to do so

f- Other

Specify-----

Students' answers were given in order of preference

First choice:

	A	B	C	D	E	F
Total population	10	4	2	0	4	0
Percentage	50%	20%	10%	0%	20%	0%

The first choice opted for by students

Half of the population (10 students) opted for "a" (to acquire a mastery of different languages). They tend to believe that translation speciality offers the possibility to master languages, whereas actually translation requires a pre-existence of the linguistic competence of the languages in question.

Second choice:

	A	B	C	D	E	F
Total population	4	2	3	0	1	1
Percentage	20%	10%	15%	0%	5%	5%

The second choice opted for by students

Again a mastery of languages has been classified as the second most important reason for students choosing this speciality.

Third choice:

	A	B	C	D	E	F
Total population	0	1	2	0	0	0
Percentage	0%	5%	10%	0%	0%	0%

The third choice opted for by students

All students opted for a maximum of three choices. We notice that option "d" (just a random choice) has not been selected by any of the students. This is logical as translation

is a specialty that not anyone can gain access to according the required entrance condition set in relation to students' results in the baccalaureate exam.

Question eight was: Have your expectations about translation (as a speciality) been met?

a- Yes

b- No

Students' answers were:

	Yes	No
Total population	10	10
Percentage	50%	50%

Students' expectation about translation as a speciality

Half the population is not satisfied with what they have been given as instruction during their previous years of study. If the sample was larger, what would be the percentage? 50% is already a considerable percentage to make us probably question the validity of our training.

Question nine was: If you answer in Q8 has been “No”, please say why here:

Students' answers were by and large related to:

- Lack of seriousness in teaching this module as this student's answer may reveal “I expected more seriousness...”
- Number of languages involved in their training as they expect to deal with more languages other than English and French!!
- Lack of pedagogical tools for enhancing this competence (language laboratories)
- Lack of motivation as this student answer may reveal “it's boring, I'm not making any progress. I don't know what to do when I graduate”. Another students said in this respect “lessons are the same, we don't make any progress”. Still another one said “I thought it more enjoyable”.

First choice

	A	B	C	D	E	F	No answer
Total population	4	3	1				2
Percentage	20%	15%	5%				10%

The first choice opted for by the students

Second choice:

	A	B	C	D	E	F
Total population	3	0	1	1	0	0%
Percentage	15%	0%	5%	5%	0%	

The second choice opted for by the students

Third choice:

	A	B	C	D	E	F
Total population	2	0	0	0	0	0
Percentage	15%	0%	5%	5%	0%	0%

The third choice opted for by the students

As we may notice, option "b" (not systematic) has been given more importance by the students as it has been chosen in either the first or the second position according to their scale of preference. This may suggest that students cannot see the objectives set by teachers to teach them this skill and do not feel well guided to make any progress.

Question twelve: Do you expect your teacher of tutorial (TD) to teach you something about the theory of translation? **a-Yes** **b-No**

Students answers were:

	Yes	No
Total population	18	2
Percentage	90%	10%

Students' sensing the importance of theory to their practical training

90% of the students feel the need for theoretical support to practice. Theory is a conceptual framework within which translation is defined and delimited. This means that the students up to this level do not have a clear idea of what translation is and the practical exercise they undertake during their tutorial sessions do not suffice to make these basic notions clear to them.

Question thirteen was: If your answer in Q12 has been “Yes”, is it because:

- a**-Theory helps me to understand how to improve.
b-It increases my overall knowledge of translation
c-It gives importance to my academic training
d-It explains translation problems in a more systematic way
e-I don't know
f-Other
 Specify-----

Students' answers to this question were classified according to the order of importance they opted for.

First choice

	A	B	C	D	E	F	No answer
Total population	8	4	1	4	0	0	1
Percentage	40%	20%	5%	20%	0%	0%	5%

The first choice opted for by the students

Second choice

	A	B	C	D	E	F
Total population	3	1	1	2	0	0
Percentage	15%	5%	5%	10%	0%	0%

The second choice opted for by the students

Third choice

	A	B	C	D	E	F
Total population	0	1	3	2	0	0
Percentage	0%	5%	15%	10%	0%	0%

The third choice opted for by the students

Fourth choice

	A	B	C	D	E	F
Total population	0	2	1	1	0	0
Percentage	0%	10%	5%	5%	0%	0%

The fourth choice opted for by the students

The highest percentage has been given to option "a"(theory helps understand how to improve). This means that the students have sensed the need to know the process they go through to develop their translation competence. The need they expressed in knowing how to improve is directly related to our concern in this piece of research which is increasing students' awareness of their process in learning (metacognition).

Question fourteen was: If you answer in Q12 has been "No", is it because:

- a- It has nothing to do with practice
- b- It adds to my burden of learning
- c- I don't understand its relevance
- d- I don't know
- e- Other Specify-----

Only two students answered "no" in the previous question. The reasons they gave are as follow:

One of them ticked option "a" (has nothing to do with practice).

The second one ticked none of the options and proposed his own answer instead, saying that *“we have already studied theory in the first and second year. We just need practice to improve. We don't need to repeat what we have already done”*. These students do not see the relevance of theory to practice. This may be due to the way their teachers implemented theory to practice as it may be due to their self-satisfaction with theoretical concepts needed for translation practice. An examination of the translations they produced in the test gave an indication of their aptitude in translation. The student who said he had already studied translation handed a rather weak translation full of mistakes especially linguistic ones. Probably the student feels the need to spend more time in improving his competence in languages rather than wasting time with theory which would be appropriate only at a higher level. The other student who does not see the relevance of theory to practice handed a rather acceptable translation. His problem was mainly with fluency and naturalness in the target text. He is probably over confident about his competence!

Question fifteen was: What is translation competence for you?

- a- A good mastery of languages
- b- A lot of practice
- c- A number of rules to respect
- d- A God gift
- e- Other Specify-----

Students' answers were classified according to their scale of preference.

First choice

	A	B	C	D	E	No answer
Total population	11	7	1	0	0	1
Percentage	55%	35%	5%	0%	0%	5%

First choice opted for by the students

Second choice

	A	B	C	D	E
Total population	4	8	0	0	0
Percentage	20%	40%	0%	0%	0%

Second choice opted for by the students

Third choice

	A	B	C	D	E
Total population	1	0	2	4	0
percentage	5%	0%	10%	20%	0%

Third choice opted for by the students

Fourth choice

	A	B	C	D	E
Total population	0	0	1	0	0
percentage	0%	0%	5%	0%	0%

Fourth choice opted for by the students

The most chosen option by the students has been "a" (a good mastery of languages). This may be due to the fact that these students have still a problem with languages which they hope to master along learning translation *per se*, but it also explains that they have not a clear idea of what translation is. In fact, they relay the responsibility of their lack of competence in languages to their teachers who are not catering for it.

Question sixteen was: How do you evaluate your progress in translation from the first year till now?

- a-** Little
- b-** Average
- c-** Great
- d-** Nothing at all
- e-** I don't know

Students' answers to this question were:

	Little	Average	Great	Nothing at all	I don't know
Total population	8	9	1	0	2
Percentage	40%	45%	5%	0%	10%

Students' own evaluation of the progress they made in acquiring translation competence

The highest percentages represent successively students who think they have made an average progress and those who have made little progress. These percentages indicate the need for revising the training they go through.

Two (02) students, however, answered that they "didn't know", which means they have a serious and a noticeable problem in monitoring their own learning process towards the acquisition of translation competence.

Only one (01) student said he had made a great progress. However, the translation he submitted in the test was fairly average. Probably he had made progress according to his own academic level he started with. Another possible reason is that he was over-estimating his competence. In fact, he answered "good" in Q2 related to his own evaluation of his competence in Arabic although the translation he handed reveals he is not good in that language.

Question seventeen was: How often does your evaluation of your own translation product match with that of your teacher?

Always often sometimes rarely never

Students' answers to this question were:

	Always	Often	Sometimes	Rarely	Never
Total population	0	3	14	3	0
Percentage	0%	15%	70%	15%	0%

Frequency with which students evaluation of their translation correlate with that of their teachers

The majority of students (70%) reported they sometimes find their evaluation of their own translation productions match with that of their teachers. This reveals two major observations. The first one is related to students, while the second is related to teachers. Students do not understand the criteria of a good translation and did not set up an objective aim to their acquisition of this competence. Teachers themselves do not have clear

objectives for evaluating the translation of their students and have rarely if ever convinced their learners of what a good translation is. Besides, different teachers may disagree on how to grade the same translation. This is due to the different approaches they have about translation. Whatever the observation we want to emphasize more, there is a considerable lack of awareness on the part of the students about the significance of the task they go through which can only affect their process of acquisition of that competence.

Question eighteen was: What do you expect from your teacher of translation to do, to make you improve?

Students' answers to this question according to their frequency of occurrence were mainly related to:

- A need for more practice and coverage of text types.
- A need to improve teaching methodologies.
- A revision of the programme they go through in terms of content and objectives
- A need to be continually assessed to track the development of their competence.

III- Analysis of the Students' Translations

As soon as students handed their pre-questionnaire, they were given a text to translate. The text was rather easy and neutral in terms of content. The students did not find difficulty in comprehending the text as was revealed from their translation and answers related to difficulty comprehending the text (forthcoming in the analysis of the post-questionnaire).

However, their translations were rather average with even some translations which were less than average. Students who submitted acceptable translations (average) found difficulties in coping with naturalness in the production of the target discourse. The text they produced in the target language did not sound fluent in Arabic. They respected the same cohesion patterns of the source text. Some expressions they used were grammatically correct but inappropriate for the fluency of the target discourse. For example one of the

students translated the title "a pause to wonder" as "وقفة للتعجب". A sound understanding of the text content would clearly discard this choice as the writer was inviting readers to ask some speculative questions (what's if). Thus a more appropriate translation for the title would be وقفة للتساؤل. Another example related to fluency of discourse is this sentence:

إذا كان نيوتن لم يستطع اكتشاف قانون الجاذبية، فهل يا ترى بإمكان إنسان آخر القيام بهذا؟

as a translation of the sentence:

"if Newton had not discovered the law of gravity, would somebody else have done so afterwards?"

There is no doubt that the student understood the original sentence, but he reformulated it in a way that denotes the interference of the source text on his translation. He should have produced something like:

"لو لم يكتشف نيوتن قانون الجاذبية، فهل كان بإمكان غيره أن يفعل ذلك "

Students who submitted weak translations (they were fewer) made many linguistic mistakes which showed clearly their weak competence in the Arabic language and their inability to avoid ST interference. For example, a student reproduced the same word order of the source language:

"إذا نيوتن لم يكتشف قانون الجاذبية..."

His translation was not even void of spelling mistakes

"...بالنسبة..."; instead of " و الأمر نفسه بنسبة نيوتن"

"من الحتمي /حتما سيكون هناك من يواصل..."; instead of "فمن الحتم انه سيكون من يواصل عمل..."

All in all, the students showed an inability to distance themselves from the original text and to produce a natural translation as required by the discourse norms of the target language they are translating into. This ability is the very essence of translation competence. A translator should develop certain flexibility and ease in moving from one language to another. It is this ability we want to develop in the students and that we need to

develop their awareness about and how it should be catered for gradually throughout their academic years.

VI-Analysis of the Post-Questionnaire:

The post-questionnaire aims to assess students' reactions to the text they have just translated. It also aims to diagnose their translational behaviour in terms of the number of reading times, attitudes towards translation problems, the importance they give to the revision stage if ever, and their satisfaction with the translation they produced.

Question one was: How many times have you been reading the text before you started translating it?

- a-Once (1 time)
- b-Twice (2times)
- c-Three (03) times
- d-More than 3 times
- e-I have directly started my translation without reading the whole text

Students' answers were:

	A	B	C	D	E
Total population	3	10	5	1	1
Percentage	15%	50%	25%	5%	5%

Number of times the students have been reading the text

The student who answered that he directly started his/her translation without reading the whole text handed an acceptable translation void of any mistake related to meaning.

Two of the students who read the text just once handed weak translations.

The majority of the students (50%), however, read the text twice which is normally the average number, as students must have a clear idea of the whole text and decide on the way they are going to segment it into smaller units. A translator at a more advanced level can start his translation after one reading only. One reading in this case is enough to grasp the general idea of the text. An exaggerated number of readings may reveal that the student

had a problem in comprehension. The student who said he read the text more than twice handed, in fact, a weak translation.

Question two was: If you have been reading the text more than two (2) times, say why? Is it because:

a-I haven't understood it.

b-I wanted to have a clear idea about the aim of the writer, his attitude and intention, where and when the text might have been produced.

c-My teacher advised me to do so.

d-To have a clear idea of how I am going to translate the text

e-To assimilate the maximum of information from this text.

f-Other

Specify:

.....

Students' answers to this question were classified according to the order of importance they attribute to the above reasons.

First choice:

	A	B	C	D	E	F
Total population (6students)	0	4	1	3	0	0
Percentage	0%	70%	17%	50%	0%	0%

The first reason opted for by the students

Second choice:

	A	B	C	D	E	F
Total population (6students)	0	1	1	0	1	0
Percentage	0%	17%	17%	0%	17%	0%

The second reason opted for by the students

Third choice:

	A	B	C	D	E	F
Total population (6students)	1	0	0	1	0	0
Percentage	17%	0%	0%	17%	0%	0%

The third reason opted for by the students

Fourth choice:

	A	B	C	D	E	F
Total population (6students)	0	0	1	1	0	0
Percentage	0%	0%	17%	17%	0%	0%

The fourth reason opted for by the students

Fifth choice:

	A	B	C	D	E	F
Total population (6students)	0	0	0	0	1	0
Percentage	0%	0%	0%	0%	17%	0%

The first reason opted for by the students

The reason most ticked by the students is "b" (I wanted to have a clear idea about the writer's intentions and attitudes...) which means that the students could understand the text, but wanted to gain a deeper understanding and probably make sure he understood well. The second most ticked reason is "d" (to have a clear idea of how I'm going to translate the text).

These reasons given by the students could indicate their awareness of the nature of translation process and what it requires as self-thought skills and abilities. Thus, a good translator and a good learner of translation need to plan his actions towards the work he is to accomplish. However, the production of these six (06) students who have been reading the text more than twice, with the exception of only one student, were not better than the other students who said they have been reading the text just once or twice. One of these students' translation was even weak and full of mistakes pertaining to language competence and discourse coherence.

This may mean that these students strived to be methodic and systematic in their translation work, but could not be efficient. This again is a hint at the students' weaknesses we aim to help them to overcome.

Question three was: What do you do, in general, when you fail to translate a word or an expression in the text?
a-I leave a blank for it in the target language.
b-I avoid using the original expression
c-I leave it as it is
d-I make a guess whether right or wrong
e- I immediately ask for help
f-Other
Specify.....

Students' answers to this question were classified according to the order of importance they opted for.

First choice:

	A	B	C	D	E	F	No Answer
Total population	8	6	1	0	1	1	1 ¹
Percentage	40%	30%	5%	0%	5%	5%	5%

First choice opted for by the students

The student who opted for another choice (other than the ones proposed by the examiner) said "I try to change the word or the expression into some easy words or expressions then I translate" (sic).

Second choice

	A	B	C	D	E	F
Total population	0	3	0	2	2	0
percentage	0%	15%	0%	10%	10%	0%

Second choice opted for by the students

Most students said they leave a blank when they fail to translate a word or expression in the target language. In fact, they do so as has been noted in the translation test they submitted. The other most ticked option was (I avoid using the original expression). This option, in fact, is the same as the one suggested by the student who offered his own answer (who ticked "f"). One of the aims of translation teachers is to help their learners acquire how to cope with difficulties while their competence in the source and target language is not yet complete. By this token, learners are advised to paraphrase the expression they fail to transfer into a simpler expression that they can translate. The text the students translated was rather simple and nearly void of any stylistic expression the students may really find hard to overcome. However, there are some words-which are not key words- that the students failed to translate and thus omitted them. Another option "I omit it from my translation" should be added to this last question in the actual investigation.

Question four was: Have you revised your translation before submitting it to your teacher?
a- Yes **b-No**

¹ The student who didn't answer this question didn't order his choices, so his answer was discarded

Students' answers to this question were:

	Yes	No
Total population	19	1
percentage	95%	5%

Students' revision or non-revision of their translation

The great majority of students said that they revised their translation before submitting it to the examiner. This is normally a good indication of the awareness they have of the importance of this stage, in regulating their behaviour towards the task they were undertaking to successfully accomplish it. A translation should be revised to gain a natural fluency in the target discourse, and to check any possible omissions or careless mistakes.

Question five was: If yes, say why? Is it to :

- a- Give it more naturalness in the target language.
 - b- Fill the blanks I left if any.
 - c- Check if I have translated everything.
 - d- Other
- Specify:.....

Students' answers to this question were classified according to the order of importance they opted for.

First choice

	A	B	C	D
Total population	11	4	6	0
Percentage	55%	20%	30%	0%

First choice opted for by the students

Second choice

	A	B	C	D
Total population	0	2	3	1
Percentage	0%	10%	15%	0%

Second choice opted for by the students

The student who suggested an answer other than the ones suggested in the questionnaire in terms of options said, “to correct mistakes that I didn't pay attention to”

Third choice

	A	B	C	D
Total population	2	0	0	0
Percentage	10%	0%	0%	0%

Third choice opted for by the students

The most ticked option was “a” (give it more naturalness in the target language). This is rather good as a step in revision. However, most of the translations handed by the students- if not all of them- lacked this naturalness in discourse. A possible explanation might be that the students know about the essential steps they should go through in their translation but they do not know how to successfully attain the objectives of each step. Students know that their translation should sound natural- at least in general texts of the type they dealt with in the test- however, they do not know *how* to succeed in reaching this naturalness. Another possible explanation might be attributed to their lack of competence in the target language particularly at the stylistic level. This last explanation is not totally unrelated to the previous one as even when there is a lack of competence in a particular linguistic area, students should know what to do to bring remedy.

Question six was: Do you think that your translation of the text has been successful?
a-Yes **b- No** **c- I don't know**

Students' answers to this question were:

	Yes	No	I don't know
Total population	4	0	16
percentage	20%	0%	60%

Students' self evaluation of their translation

The majority of students answered that they did not know. This is a clear hint of the ambiguity they have about translation. It may mean they are learning translation without a clear objective. The students' answers to this question are compatible with their answer in the pre-questionnaire to the question related to their expectation about translation (c.f. Q9 in the pre-questionnaire) to which many students reported their doubt in teaching

methodology. To this question, most students whose expectation about translation have not been met answered that they would like to have more explicit aims in the teaching of this discipline.

Question seven was: If your answer has been “No”, say why?

- a-**I haven't found solutions to many problems in the text.
- b-**I haven't understood the original text.
- c-**I'm not good at the target language (Arabic)
- d-**I have never done well in translation
- d-**Other
Specify.....

Normally no one is supposed to have answered this question because no one answered "no" in the previous question. However, one student answered "I don't know" in the previous question, but ticked option "d" in this question (I have never done well in translation). The translation he submitted was rather average. A possible explanation is that the student is frustrated about the marks he usually obtains in translation modules.

V-Concluding Remarks

The analysis done so far reveals that the students sense the need for a change in their training programme, but have false assumptions about the skill they are learning, as a lot of students think translation is a mastery of languages. Their metacognitive knowledge can be said to be inefficient as far as monitoring their own learning process is concerned. For example many students answered that they revised their translation before submitting it, but their translation was not good. It means they know what to do, but they do not know how to do it. Students' answers to questions pertaining to teaching methodologies and expectation about translation speciality reveal that they feel there is a problem, which is a good point to start from as it assesses their readiness to be helped.

After analysing the pre-questionnaire, the translation test, and the post-questionnaire, we noted some remarks that would help us devise a more appropriate study with appropriate questions and methodological tools of research. A more thorough reading in the areas pertaining to our research in the light of the results obtained also helped us refine our methodology and bring some essential modifications.

Overall, the pilot study included a lot of questions and this would be strenuous for the students. Although we did not note any unwillingness on the part of the students who participated in the pilot study, we fear that with a larger population and with a different timing, students' reaction would be different. As such, we opted for omitting some questions that we did not feel they were so reliable. For example, Q5&Q6 in the pre-questionnaire related to frequency of reading in both Arabic and English can be dropped out as frequency of reading is not always a hint at the students' competence in the respective languages. Q7 related to students' reasons for choosing translation can also be dropped out as it does not really contribute in measuring students' competence in this speciality. Q12 and its related questions 13 and 14 related to students' idea about the contribution of translation theory to the improvement of their performance are to be dropped because the objectives of these questions can be fulfilled with Q9 related to whether they are satisfied or not with the way they are taught translation. Overall, the questionnaire used in the actual investigation needs to be more focussed on the aspects targeted by the present study. The pilot study went into many details that are liable to distract the researcher's attention from the main problem under scrutiny. For example, students' reaction to teaching methodology and their suggestion for remedy do not really show their awareness about their learning enterprise as this an uncontrollable variable that escapes our control. Besides, students' metacognitive awareness may be enhanced by different means other than the teaching methodology per se.

As for the translation test, we noted that the test was long but easy without potential problems in the area of meaning. However, as most translation texts, it presents challenging problems pertaining to the fluency of the discourse and the ability to detach oneself from the source text forms. Translation students suffer a lot from interference problems especially at the discourse level. The text to be used in the actual investigation would be a text different from the one used in the pilot study, and one which would especially test students' ability to cope with discourse problems, i.e., problems pertaining to the text cohesion and coherence and its fluency to communicate the message for the target reader in a most natural way.

Other questions are, thus, included in the post-questionnaire to identify whether or not students identified any translation problem and what they did to solve them. The students' translation would serve to see whether the students succeeded or not in solving those problems.

Another question to be added to the post-questionnaire is related to students' retention capacity and level of concentration. Q11 and Q12 are, thus, meant to give an idea about the students' cognitive processing and metacognitive awareness of this process as they are asked to give examples of the words or expressions they had retained from the text they have been translating. Translation learners are language learners in parallel. The texts they work on to acquire translation competence serve them as a tool to improve their competence in the languages involved. Besides, they are always encouraged to use parallel texts to find equivalent expressions and idiomatic forms of the messages they attempt to transfer. Thus, they are supposed to develop an archive memory that would help them increase their linguistic store of knowledge and making them more flexible in tackling novel texts. Students of translation should always retain something from the texts they deal with.

After refining our measuring tools and research methodology, we propose here a new pre-questionnaire, a new translation test and a new post-questionnaire to be administered at the beginning of the next semester of the academic year. Of course some questions need not be repeated especially those related to background information about the examinees. The pre-questionnaire and the post-questionnaire are now fused together in one block to ease the task for the testees. The analysis of the questionnaire needs to be done in view of comparing students' reactions in its both parts (pre- and post-questionnaires) while constantly checking students' translation in the test.

The actual investigation is, now, more focused on students' awareness of their learning process in the translation domain, including the knowledge they have about themselves as learners, the translation skill they are acquiring, and all potential variables contributing to this acquisition. This represents, briefly, their metacognitive knowledge following Flavell's model (more details on this in the next chapter dealing with the actual investigation)

CHAPTER FIVE: The actual investigation

Introduction

This chapter is the practical part of the thesis as it is devoted to the investigation *per se*. Thus, once the pilot study has been undertaken and the research tools tested and tried on a small random sample of population, the investigation is reproduced again with a larger sample after inserting appropriate modifications and adaptations drawn from the pilot study. This chapter is, for methodological reasons, divided into four major parts, dealing respectively with the four major sections or phases of the investigation; namely, the analysis of the students' translation, the analysis of the students' answers to the first part of the questionnaire (standing for a pre-questionnaire), the analysis of students' answers to the second part of the questionnaire (standing for the post-questionnaire), and the general results.

Although the analysis is divided into three separate parts dealing with different phases or components of the investigation, these parts are found to be overlapping with one another and related together in many aspects of the research. This overlapping is, in fact, meant to bring a clearer view of the problem investigated and to weigh up data obtained from different parts of the research against each other. Thus, some of the students' responses in the first part of the questionnaire; for example, are compared to their responses in the second part to bring answers to the research hypotheses and reach explanation of major issues under investigation. Moreover, students' translations are sometimes required as a source of interpretation and are thus brought to the fore to sustain their answers to either the first or the second part of the questionnaire. Their marks obtained in the translation test, although not definitely an objective scale, are used as a yardstick against which to measure their translation ability. The analysis of

their translation performance, as has been explained, prevents a blind reliance on the marks.

PART ONE: Analysis of the Students ' Translations

1-1-Description of the translation test

The text that was given to the students to translate, before starting to fill in the questionnaire, belongs to a general domain of knowledge and is entitled: "Water Crisis". It has been taken from an internet resource and can be retrieved from the following electronic address: <http://www.worldwatercouncil.org/index.php?id=25> (last time checked for possible retrieval on February 7th 2011). The text is overall easy to comprehend, and accessible to the average student of translation.

The aim beyond using a discourse of this kind is to be able to measure students' natural reaction to communicative texts whereby they have to make use of their transfer skill without being hampered by the text difficulty or level of interest. As Nord (1990: 160), in Basil and Ian (1997: 164), explained "*test-takers are often prevented from demonstrating one of their skills- their 'transfer skills' simply because the source text is too difficult for them to analyze and understand properly*". The students were thus expected to be able to detach from the text to render its meaning in an authentic and acceptable way, according to the norms of the target language.

Translation norms to be respected with regards to texts are different from one situation to another. Sometimes the students are required to translate more literarily when the task requires such an approach. At other times, they are required to translate more freely again when the task or the situation needs so. For example, a literary text requires from students a great care and attention to the source text and its forms especially as regards stylistic features peculiar to the author. An informative text, however, necessitates

from them to be alert to the receptiveness of the message and the comprehension requirements for the target readers. This is usually specified by the translation brief or “skopos” which indicates for students the specific objective of the translation and the conditions it should meet. This brief is not needed in our case as it may rather be implicitly understood. The text in question is communicational in nature as it is addressed to the general reader to persuade him/her to take measures and react to the water crisis the whole world is witnessing.

1-2-Methodological Procedure in Correcting Students' Translation

Translation evaluation is by itself a debatable issue not yet settled by researchers especially in the field of translation training (Hatim and Mason, 1997). Translation teachers often complain about the absence of an objective grid upon which to base their evaluation. However, the evaluator is often seen as a judge who exercise an authority to which “*the person evaluated has to submit*” although this evaluation is not always reported to be “*just or objective*” (Martinez Elis & Hurtado, 2001: 275). In our case, it suffices to have an aim beyond this evaluation to reach a given degree of objectivity. This can partly be sustained by guarantying the anonymity of the papers corrected as is going to be explained below. When it comes to assessing students’ translation production, teachers should make the distinction between summative and formative assessment. The former refers to students’ translation as an end product whereby errors are highlighted and students are sanctioned on the spot without due regards to the progress they have probably made in comparison to their earlier production(s). The latter refers to a rather diagnostic evaluation whereby students’ actual learning is assessed and their mistakes are analyzed to gain a better understanding of the progress they have made and the route they have followed in the development of their competence (Kelly, 2005; Hatim & Mason, 1997). In

the present research, and for practical reasons, students have been evaluated once without due regards to the evolution they have made if ever in their acquisition process. Despite that, this evaluation cannot be said to be summative as students' end product was not directly aimed at. This kind of evaluation takes into account not only the students' mastery of the two languages in terms of reception and production but gives due attention to their ability to achieve fluency of discourse and capabilities to make appropriate choices and take adequate decisions in relation to the context of use. The examiner gives credit to students' actual level in the two languages involved and gauges the severity of the mistakes they commit accordingly. In doing so, the examiner would sort out the characteristics of the communicative competence students are endowed with. In short, students are evaluated not according to their ability to decode a given message but rather to their ability to render an appropriate discourse. After all, the translator's communicative competence is, according to Bell (1991: 41) , "*the knowledge and ability possessed by the translator that permits him/her to create communicative acts-discourse- which are not only (and not necessarily) grammatical but socially acceptable*".

Thus, it is important to note that students' translations were anonymous. The sheet of paper on which the students were required to report their translation held a random number that the students were requested to remember and to report again on the questionnaire sheet. So in this way the examiner's objectivity may be said to be guaranteed as the names of the students are not going to appear on their answer sheets, and as s/he is going to match the numbers in both the translation sheet and the questionnaire sheet (similar numbers indicate that the answers is that of the same student).

Students' translations were corrected in the usual way, i.e., according to the grid the teacher usually uses in correcting students' translation production in ordinary examinations. Of course, a single production is not normally enough to reach a thorough formative

evaluation of the student's competence in translation. This examination was rather a kind of a proficiency test whereby students' practical knowledge was compartmentalized into sub-skills or areas of performance according to their general abilities without any direct reference to particular points dealt with during the lessons. Thus, five (5/20) points were given for their attendance to meaning, five (5/20) points for their correct language in terms of respect of grammatical rules (tenses, spelling, structure), five (5/20) points to their way of achieving cohesion and coherence in the translated text, five (5/20) points to their way of achieving fluency of discourse (in terms of the modifications they have adopted or created in the form of the target language to achieve a natural flow of discourse that would ease the comprehension of such a produced text). The translation is thus marked according to a scale of 20/20 which represents the sum of the points obtained in the four skill-areas indicated above. Actually it is impossible that a translation is given a full mark. Perfection is impossible to attain even by professionals. Students usually can at best achieve 15 out of 20 or in some rare cases- when their rendition is really exceptional- 16/20. A student who obtains 15/20 may be described as very good, indeed.

In what follows, some details are given about the evaluation of each of the four components making up the total scale to which we are referring to here as (1) meaning, (2) language, (3) cohesion and coherence, (4) fluency of discourse.

1-Meaning

Students should give the exact meaning of the ideas expressed in the source text. Core meaning or main idea or what we may refer to as key message is sacred and the student is severely sanctioned if s/he fails to render it. His mark will be seen to automatically drop very badly according to the severity of the mistake and its eventual impact on the reader, as this mistake will eventually show its effect on the student's

language comprehension ability and the coherence of the message he produced. Mistakes concerning peripheral meaning or secondary ideas not affecting much central meaning are often pardoned and not as severely sanctioned by the examiner. An actual example of a student's mistake affecting core meaning is the following:

Student's mistake	Back translation of the student's production	Original sentence
الماء هو تجارة كل واحد منا" هو واحد من مفاتيح الرسالة المقدمة في قمة العالم الثاني للماء.	"water is a trade of everyone of us" is one of the keys of the messages presented in the second world summit	"Water is everybody's business" was one of the key messages of the 2 nd World Water Forum.

Obviously such a mistake will cost the student much (this student actually obtained 5/20). He translated the word "business" with its literal meaning having to do with trade and commerce rather than concern which is the meaning looked for.

Now an actual example of a student's mistake affecting peripheral meaning and not as severely sanctioned by the examiner as the previous one is the following:

Student's mistake	Back translation of the student's production	Original sentence
هذا التحدي للماء يؤثر ليس فقط على ماء المجتمع بل على صنّاع القرار أيضا و كل الكائنات الحية	This challenge for water affects not only the community's water but also decision makers and <u>all living beings</u>	This water challenge affects not only the water community, but also decision-makers and <u>every human being</u>

This mistake did not cost the student much as did the previous mistake (this student obtained 12/20), though it brought a kind of a blemish to the student's translation as it affects common sense knowledge. The student rendered "human beings" as "living beings" as if plants and insects or whatever animal or beast is concerned with this challenge.

2- Language

Students should respect the grammatical rules of the language in which they are translating (tenses, structure of sentences, spelling...). Students' mistakes in this domain are evaluated according to the teacher estimation of the severity of the mistake. In such a

case, the teacher should give due attention to the overall academic level of the students in the target language. Actual mistakes of such a category are the following:

يُأمنون instead of يؤمنون (a spelling mistake due to a lack of appropriate grammatical competence)

يتجه استهلاك الماء نحو الارتفاع instead of استهلاك المياه يتجه نحو الارتفاع (word order).

However, grammatical or structural mistakes may sometimes affect meaning and make it rather opaque. The examiner, having an idea about the original text, can see that such mistakes are a result of weak competence in the target language. Nonetheless, he can only consider them to be serious mistakes affecting meaning as the translator should be careful to transmit a clear meaning to the addressee for whom the original is not accessible. This is, in fact, a case that typically concerns translation into the second or foreign language where the learners are struggling more about improving their competence in the target language.

Besides, grammatical and spelling mistakes make the translator lose his credibility in the eyes of the receiver. In other words, if the translator's command of the language(s) is not appropriate how can he be trusted to have conveyed the correct meaning?

3- Cohesion and Coherence

Students should be able to relate and link between ideas in an appropriate way. Cohesion is related to the use of appropriate coordinating conjunctions and juxtaposition. Coherence sometimes necessitates reordering ideas and deciding upon the length of sentences. The Arabic language tends to use long sentences, whereas English tends to use short ones. This length of sentences may affect the conceptual network of the text, i.e. coherence. As for cohesion, English tends to use variegated battery of conjunctions to concretely mark the link between ideas or juxtaposed sentences whose relation is not

explicitly marked but rather implicitly understood. Arabic, however, tends to use fewer conjunctions and more cases of juxtaposition. Thus, sentences are just organized one after another in a way that links them conceptually. As such, a conjunction in the original English text is not necessarily rendered by a conjunction in the Arabic text as the translator may feel the need to reorder his sentences or arrange them in a way that make the relation between them explicit without the need for a conjunction. The same thing applies for translation from Arabic into English.

An actual example of a student's mistake affecting cohesion and by the same token coherence as well, is one which depicts a use of a wrong coordinating conjunction as shown below:

Student's mistake	Back translation	Original sentence
الماء مهم للجميع إذ كان أحد الرسائل المفتاحية ...	Water is important for everybody as it was one of the key messages....	Water is everybody's business was one of the key messages...

The student finding it hard to cope with the original structure, used "إذ" as a coordinating conjunction.

4-Fluency

Students should be able to detach themselves from the original to be able to produce a coherent text in the target language in a form adequate in that language. The produced text should read easily as if it was originally written in that language. Students should feel free to bring modifications to the original form of the message to attain this goal. However, this freedom is double-edged and may lead to a distortion of meaning. The following is an example taken from the translation of a student whose translation fluency affected the original meaning and led him a little bit astray:

Student's translation	Original sentence	A suggested translation
مع توسع النسيج العمراني و التغييرات التي مسّت عادات الأفراد، فإن استهلاك المياه أخذ في التزايد	with urbanization and changes in lifestyle, water consumption is bound to increase	من الطبيعي أن يزيد استهلاك الماء مع هذا التوسع في النسيج العمراني و مع التغييرات التي مسّت عادات الأفراد

In fact, the meaning of “is bound” in the original does not mean that water consumption is presently increasing, as has been suggested by this student, but rather means that water consumption cannot but increase (i.e., with these changes it is normal that water consumption would increase). This student scored high in fluency but loses advantage as regards meaning.

An example of a fluent translation without any negative effect on meaning is the following sentence taken from a translation of one of the students:

Student's translation	Original sentence
<p>هناك إمكانية لترشيد استعمال هذه المادة الحيوية و الحفاظ عليها في كل الميادين (الزراعة و الصناعة و الاستعمالات الشخصية)، غير أن ما نراه هو تضييع للمياه في كل مكان، فطالما لا يعاني الأفراد من شح في المياه فإنهم يعتقدون أن التزود به شيء طبيعي و بديهي.</p>	<p>Whatever the use of freshwater (agriculture, industry, domestic use), huge saving of water and improving of water management is possible. Almost everywhere, water is wasted, and as long as people are not facing water scarcity, they believe access to water is an obvious and natural thing.</p>

This student, in fact, scored 4/5 on fluency and made some modifications concerning the use of appropriate words, punctuation marks and cohesive ties. Fluency is a more advanced ability that the translators are required to develop as they learn to detach from the source text and adopt a more flexible attitude. Students who usually score high on fluency obtain the best marks overall. The students who scored 4/5 above obtained 14.50/20 in his translation although he made some careless mistakes pertaining to peripheral meaning as explained above.

On the other opposing side, this is an example of a student who scored low in fluency as regards the same example stated earlier:

Student's translation	Original sentence
<p>مع إعمار و تغيير أسلوب الحياة، فإن استهلاك الماء موجه للارتفاع.</p>	<p>With urbanization and changes in lifestyle, water consumption is bound to increase.</p>

This student, as may be observed, stuck to the forms of the original message to the extent that the translation he offered appears as if it has been done by a machine. He actually obtained 1/5 in fluency overall and 5/20 in his translation overall.

1-3-Students' Scores in the Test

In what follows, are details of the scores obtained by the students in their translation of the text: “water crisis”, as regards their rendition of the text as a whole, and as regards each of the four components apart (meaning, language, cohesion/coherence, and fluency).

The following first table gives the scores obtained by the students with the redundancy of each score and shows the mean of the sample in question.

X is the mean,” x” is the student's score, “f” is the redundancy of the score.

The mean (X) is calculated by multiplying students' marks by the number of their occurrence (f (x)), then dividing the sum by the total number of the population $\Sigma f(x)/n$.

(The mark obtained)	F (frequency of occurrence of the mark)	F(x)
5	6	30
6	7	42
6,5	2	13
7	9	63
7,5	3	22,5
8	5	40
8,5	2	17
9	1	9
10	5	50
11	2	22
11,5	1	11,5
12	3	36
12,5	2	25
13	3	39
13,5	1	13,5
14	2	28
14,5	1	14,5
	N=55	476

students' score in the translation test

$$\bar{X} = \frac{\Sigma fx}{n} = 8,65$$

Now to obtain a clearer view about the homogeneity of the population in question in terms of the dispersion of the marks obtained, the standard deviation of the sample in question is measured. Standard deviation(S) is the square root of the variance, and is the measure of how spread out the scores are. As for variance, it is the average of squared differences from the mean, and is calculated by subtracting the mean from each score, squaring the results and working out their average.

Thus, variation is calculated according to this formula:

$$s^2 = \frac{1}{n - 1} \sum_{i=1}^n (x_i - \bar{x})^2$$

Standard deviation of the sample is thus obtained as follows:

$$s = \sqrt{\frac{1}{N - 1} \sum_{i=1}^N (x_i - \bar{x})^2},$$

Where x_i is the mark and \bar{x} is the mean, $s=2.82298 \approx 3$

The standard deviation obtained is significant and indicates a discrepancy in the academic levels of students who took part in the present investigation. In fact, the higher the standard deviation, the larger is the spread between the scores obtained. On the other hand, the smaller the spread between the scores obtained, the smaller is the standard deviation, which would mean that students have acceptable competence in translation at least for the task proposed in this investigation. In our case, the standard deviation obtained suggest that there are substantial differences between the scores each student got for the components we devised (meaning, grammar, cohesion/coherence, fluency). The academic level of the participants is not homogeneous as reflected in their actual performance. This may be attributed to an inadequacy in the kind of training they received or to an interfering variable having to do with their internalizing process per se. The results call overall for the need to know the reasons behind such a discrepancy. Thus, they are hoped to serve the

purpose of this research in bringing to light the relation between students' strength or weaknesses and their metacognitive knowledge as yielded from the questionnaire.

As for each evaluated component apart (meaning, language, cohesion and fluency) which have been marked out of five (5) point each, the results obtained in each of these components are as follows:

	X/(5)	F	Mean
Meaning	1.5	16	2.28 /5
	2	14	
	2.5	10	
	3	8	
	3.5	7	
Language	1.5	13	2.33 /5
	2	15	
	2.5	12	
	3	7	
	3.5	8	
Cohesion	1.5	18	2.027 /5
	1	7	
	2	10	
	2.5	9	
	3	7	
Fluency	3.5	4	2.027 /5
	1.5	24	
	1	6	
	2	5	
	2.5	8	
	3	6	
	3.5	5	
4	1		

Table 14: Students' scores in each of the evaluation components apart

The results displayed in the above table show that the marks of students, as regards the four components we devised above, are nearly of the same level. Students, however, are found to stumble at fluency and cohesion issues more than they do at language and meaning issues. Thus, the majority of students are less able to cope with aspects of fluency of the message they produce for the target reader. Fluency, as has been pointed out earlier, is usually the highest level students aspire to attain. It is related to what is known in the literature on the subject as verbal intelligence whereby translators or students use language

intelligently and artistically in a way that serves the communicative need of the message. Carroll (1978: 123), in this respect, insists that verbal intelligence is one of the essential requirements, besides the linguistic competence, that translators and interpreters need most to be accredited a place in a training programme. A verbal intelligence, according to him, or the V factor as he also calls it, represents

not only the individual's knowledge of advanced vocabulary, but also his sensitivity to established word usages, to nuances of idiomatic phrases, and even his ability to predict the transitional probabilities of words in phrases (...), the ability and facility (speed) in detecting semantic and syntactic ambiguities and ability in writing effective, highly rated themes.

(Carroll, 1978:123).

Thus, it is not enough to know about a given word or expression; a translator needs to know about its appropriate use in a context and the words with which it may be adequately collocated, the connotations it may convey and the effect it may produce...etc. In short, this is what makes translation different from a simple decoding process.

1-4-Interpretation of the Test Results

According to the results obtained, as shown in the two tables above, the majority of students have produced a quite average translation. Thus, twenty (20) students out of the total population (about 36%) obtained marks equal or superior to 10/20. However, if we consider the mean calculated above to be the actual average, we find that twenty three (23) students obtained marks equal or above 8.5/20 (about 42%). Thirty two students (32), that is about 58% obtained marks below 8.5/20.

The homogeneity of the group, as has been shown through the calculation of the standard variation, is not sustained, but the reliability of the group to bring valid results is not put into question as the study aims to draw a general metacognitive profile of students and examine the effect it may have on their competence. The group, in fact, may be considered average overall and contains even some good elements liable to bring tangible results.

This lack of homogeneity, after all, is not surprising as students of translation are known to suffer problems in English/Arabic/English translation more than they do in French/Arabic/French translation. This is because in Algeria, English is a foreign language in comparison to French, which is a second language. Students of translation are also known to have more difficulty in acquiring a translation competence besides their difficulties with fully mastering the languages involved.

Achievement of students making up for this population, as regards the four components explained above (meaning, language, cohesion/coherence, fluency) is nearly the same if we consider the mean obtained in each of these components. Their achievement in these components in terms of ease may be ordered as follows: meaning, language, cohesion and fluency. Students find it difficult to tackle fluency issue, then cohesion. It is easier for them to render meaning especially when a text is plainly informative with no consideration or no much consideration of stylistic and macrolinguistic features that may blur the students' conceptual vision of the task at hand. The issue of language should not normally cause a problem as it is a matter of translating into one's language of habitual use. However, students' rendition in this test as regards language was not satisfactory as it normally should. This may be explained first by the fact that Arabic is not their language of habitual use as French or English are for their respective native speakers. Second, it is sometimes hard to dissociate between language and meaning. When one misunderstands a

given passage or a small portion of a passage, s/he would more likely produce wrong structures or loses control over his/her encoding process. His/her translation would be merely a decoding process. Third, translation, when undertaken carelessly, cannot be free from instances of interference imposed by the form of the ST especially as regards structure and some established linguistic patterns of use in the SL.

On the basis of these preliminary results, we can bring some provisional answers to some of our research hypotheses pertaining to whether or not third year translation students at the university of Constantine are metacognitively aware of translation and whether this metacognition is at the core of their good performance if any. We may be inclined to think for the time being that the students making up for our population are not enough metacognitively aware of translation as far as their self-regulatory capabilities are concerned. They could not escape some translational problems and bring appropriate solutions to them as the examples above taken from their actual productions, show. They mostly appear to need outside guidance and were not able to monitor their translation process by themselves. Actually, twenty (20) students, out of a total of fifty five (55), obtained marks equal or above 10/20. This may initially be said to represent the number of students who were able to monitor their production and by the same token those who can be said to be metacognitively aware about the translation process they went through. These results are further checked through the students' answers in both first and second parts of the questionnaire.

PART TWO: Analysis of the First Part of the Questionnaire

2-1-Methodological Procedure in Administering the Questionnaire as a Whole

Before analyzing the first part of the questionnaire, it is important to give first an idea of this tool as a whole and the conditions of its use, as it was administered as one block after students finished translating the text given as a test.

The questionnaire was administered at the beginning of the second semester of the academic year 2008-2009. However, students were fairly introduced to metacognitive thinking all along the first semester to make them more cooperative during the tutorials and to make them aware of their role in contributing to their learning enterprise. We believe that an understanding of the objective of whatever activity the teacher initiates in the classroom is important to assure students' readiness to cooperate and to help in the learning process. Thus, students are always asked to reflect upon the problems they have encountered in their translation assignments and to speculate as well upon possible solutions they might bring to these problems. As has been pointed out by Adey and Shayer (2002: 182), *“it is now widely accepted that students are more likely to develop wide-ranging thinking skills if they are encouraged to think about their own thinking, to become aware of the strategies of their own thinking and actions”*. To make their ideas plainly, Adey and Shayer (ibid: 183) gave an example of teaching metacognition in a science lesson in which,

the teacher asks pupils to talk both with the teacher and with each other about difficulties and successes they have with problems, not just saying “that was difficult”, but also explaining “what was difficult about it, and how did I overcome the difficulty?” students become accustomed to reflecting on the sort of thinking they have been engaged in, to bringing

it to the front of their consciousness, and to making of it an explicit tool that may then be available for use in a new context.

Thus, following this line of thought, the students of the present study are sometimes asked to make comments on their translations and the translations made by their classmates. Questions frequently asked before starting the translation correction is "have you met any problem translating this text? / What are they? Why are they problems for you? What can you do to overcome these problems?). While discussing the students' answers, students' ideas about what translation is and how it is to be learnt emerge clearly to the teacher who then tries to raise the students' awareness about the task they are undertaking and correct their misconceptions and fallacies whenever they occur.

To ease the task for learners and avoid their reluctance to contribute seriously to this research, the pre questionnaire and the post questionnaire were gathered into one block (one questionnaire) subdivided into two parts. The first part stands for the pre-questionnaire and deals with general issues not directly related to the test, and the second part stands for the post questionnaire and deals with issues directly related to the test (for more details on the form of the resulting questionnaire c.f. appendix03)

The questionnaire was administered to the students (dispersed in three different groups) during ordinary tutorial sessions¹ after completing their translation of the text they had been given to translate. Students were given directions on how to answer the questionnaire and the teacher was present all the time to make sure everything was clear. Students were encouraged to answer in any language they wanted to ease the task for them. They actually spent approximately one hour (1h) in answering the questionnaire. They, however, spent approximately one hour and a half (1h30mn) in the translation task. The

¹ An ordinary tutorial session lasts for three hours, one hour and a half for English/Arabic translation and one hour and a half for Arabic/English translation.

examiner made sure the students provided their own answers by encouraging them to work individually.

2-2-Description of the Questionnaire

The questionnaire consisted of a total of 21 questions organized in two parts. Part I consists of 9 questions related to students' general ideas about translation, their competence in translation, their evaluation of their own competence in translation, the progress they have made if ever in acquiring such a competence, and their attitudes towards such a competence and the way it is acquired. Part II consists of a total of 12 questions related to the students' specific reactions to the text they have been translating in terms of problems encountered and strategies employed. The questions also assess students' actual attitude towards the task they have been undertaking in terms of cognitive and metacognitive awareness. An example of a question assessing students' cognitive attitude is question 12 (is there any word, expression, structure, or something of the like you have retained from the text you have been translating?). This question addresses the problem of concentration and attention while undertaking a translation task. An example of a question assessing students' metacognitive awareness is question 6 (How did you solve the problem?). This question assesses students' metacognitive awareness in terms of monitoring and control abilities. More will be said on these issues when analyzing students' answers to these questions.

2-3- Analysis of the Students' Answers to the First Part of the Questionnaire:

Question n° 1 was: what is translation for you? (Give a maximum of two-sentence answer)-----

The aim of this question is to assess students' awareness about the skill or competence they are learning or trying to acquire. For learning to be successful, students should know something true about the subject matter they are attending to. Fallacies or misconceptions about what learners actually hold about the different domains of knowledge they want to master are at the origin of their failure to be competent in those domains. In translation, for example, some students continue to believe that translation is a means to learn languages or is a set of prescribed rules they are taught and asked to learn and to instantly follow. This belief can only be detrimental to their process of acquiring this skill. In this respect, Nida & Taber (1982:101-102), for instance, give some explanations of why translators fail in the transfer process, which is a particularly important phase in translation next to analysis. They say, "*another personal problem [in the transfer process] is simple ignorance of what translation is all about. Because of the average person naively thinks that language is words, the common tacit assumption results that translation involves replacing a word in language A with a word in language B. and the more conscientious this sort of translator is, the more acute the problem*". A misconception about the nature of translation can only lead to disorientation and lack of awareness to acquire this competence or to regulate one's process of learning.

Students' answers to this question (c.f. appendix 4 for full description of their answers to this question) were analyzed according to whether they were correct, wrong/fallacious, unclear/too general/vague, or irrelevant. Some of the answers were noted to be inappropriate to the question such as the following "*when I translate I feel like I'm playing a thinking play*" (sic). This answer does not reveal the student's conception of what translation is, but rather indicates his feeling or motivation towards it. As such three (03) students, in fact, gave irrelevant answers to this question. Some students (a total of 11), however, expressed a misconception about translation sometimes along their expression of

their self-motivation and like for translation as the answers of these two students might reveal:

1- "pour moi la traduction est un rêve d'enfance d'étudier les 03 langues et d'être une traductrice" (for me translation is a dream since I was a child: to study 03 languages and be a translator. [our translation])

2- "It is a good job. It gives me the opportunity to know and learn different languages".

So these two answers indicate these students' high motivation and like for translation, but might also be said to hold a misconception about what translation is and how it is to be acquired as both of them thought translation to be concerned with language acquisition *per se*. In fact, this is one of the most severe problems we meet in teaching translation as students continue to be convinced that the department of translation is the right place to learn languages. However, students who gain access to this specialty should normally have a good mastery of the languages involved that they would strive to develop to a more advanced level and not simply to start from scratch or from a poor and insignificant academic level.

Other misconceptions students hold are found to be related to form. Some students, in fact, continue to put constraints for themselves in not getting free from the form of the original message when attempting to transfer meaning to the target language. Three (03) students among the total of eleven (11) students whose answers revealed misconceptions were found to hold false ideas about total respect of form as the following examples taken from their actual answers might reveal:

- "translate meaning and respecting the structure of the two languages" (sic)

- "the ability to reproduce texts from a source language to a target language with the total respect of meaning and grammatical rules" (sic)

- "it is to move from one language to another with saving technics of the source text" (sic)

Twenty two (22) students were found to hold correct assumptions about translation. Some examples of these assumptions which are estimated to be correct are the followings:

- "it is reproducing the meaning said in a source language into a target language by respecting the specificity of each language"

- "it is transferring a text from one language to another and be equipped with some knowledge and culture in all domains"

Nineteen (19) students were found to hold general- sometimes even too general- ideas about translation that are not operational and supposedly help the students little or not at all in their acquisition of such a competence. Examples of students' general or vague assumptions about translation are as follows:

- "it is a language art"

- "it is the action of rendering a text from a source language to a target language"

- "for me, it is more than moving from one language to another. It is used to bridge the gap with other nations"

Thus, students' answers to question one can be summarized in the following table and its corresponding diagram:

Students' assumptions	Correct	Wrong/ Fallacious	General/ Vague	Irrelevant
Total number of the population	22	11	19	3
Percentage	40%	20%	35%	5%

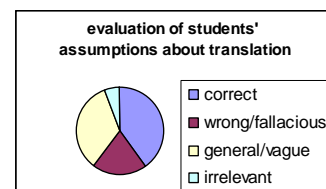


Table15: Students' definitions of translation

The answer to this question is to be sustained later on with students' answers to question four (part two) related to the justification they gave as regards the requirements of translation besides the bilingual dictionary and also with question 8 (part one) related to

their judgment of a number of statements about translation. Overall, the percentage of students who provided a correct definition of translation (40%) corresponds approximately to the number of students whose translations were considered average in the translation test (42%). To verify this preliminary assumption, the marks obtained by these students are brought to the fore for examination and comparison with the marks obtained by students whose answers to the same question were considered wrong/ fallacious and general/vague. The results obtained and the mean calculated for each of these sub-groups are shown in the following table:

Results of the students whose Definitions of translation was Considered correct			Results of the students whose Definition of translation was considered wrong or fallacious			Results of the students Whose definition was Considered general/vague		
X(scores)	N	F(x)	X(scores)	n	F(x)	X(scores)	N	F(X)
5	5	25	5	1	5	6	2	12
6	1	6	6	2	12	7	2	14
7	4	28	6.5	1	6.5	8	1	8
7.5	2	15	7	3	21	8.5	1	8.5
8	3	24	7.5	2	15	9	1	9
8.5	1	8.5	8	1	8	10	2	20
10	2	20	10	1	10	11	2	22
12	1	12	$\bar{X}=\frac{f(x)}{n}=7.04\approx 7$			11.5	1	11.5
12.5	1	12.5				12	2	24
13	1	13				12.5	1	12.5
14.5	1	14.5				13	2	26
$\bar{X}=\frac{f(x)}{n}=8.11\approx 8$						14	2	28
						$\bar{X}=\frac{f(x)}{n}=10.28\approx 10$		

Table 16: Students' results in the test examined against the type of definition they gave to translation

X is the score obtained; n is the total number of student in each of the sub-groups of students (students whose definitions was correct v.s. students whose definition was wrong or vague). It also represents the frequency of occurrence of the score; f(x) is the score multiplied by its occurrence to calculate the mean.

As is shown in the above table, the mean of the sub-group representing students whose definitions to translation was considered correct is 8/20, which is lower than the mean of the total sample (55 students) indicated earlier and which is 8.65/20. However, the mean of the group of students whose definition was considered vague or general was the

most superior among them all (10.28/20). That is most students who obtained good marks overall fall in this category. This may seem rather bizarre, but a few seconds thought may lead us to think that in the course of acquiring this skill, a student may be guided by rather general assumptions that he works hard to try them out before he reaches his point of satisfaction and gains a complete awareness of the entity he is acquiring. This may mean that having a good definition of translation does not help much in making one acquire a translation skill and develop it appropriately. As we can see only six (06) students among those who provided a correct definition of translation obtained 10 or more, and half of the students (11 out of 22) obtained marks below the average adopted, i.e., <8. This may be explained by the fact that an operational definition can help monitor one's strategies and skills when they exist already but cannot bring them to existence if the students have not developed them yet. Students of translation are often reported to be suffering linguistic problems that hinder their advance to whatever upper level they may aspire to. This can be illustrated by the remark inserted by one of these students at the end of the questionnaire. This student, in fact, provided a correct definition of translation in Arabic as he said, "translation is a transfer of a message from one language to another (source to target) involving two different civilizations" [our translation]. The student actually obtained 5/20 in the test and wrote a remark in Arabic at the end of the questionnaire saying, "*I want to improve my level in English as I find difficulties in translation. The problem is that I understand well English songs and can learn them by heart, but when it comes to translation I become a total ignorant not able to understand a thing. I want advice to change this state of affair that I really see to be a problem and this annoys me much. Thank you in advance*" [our translation]. As it can be inferred, this student most severe problem is a linguistic one. When examining his translation, it has been revealed that the student has really a problem in comprehending many English structures and was felt to be

perplex in his translation. For instance, he could not understand the following structure: “it is a crisis of managing water so badly that billions of people-and the environment- suffer badly”. His translation was as follows:

هي مشكلة تسيير أو استخدام الماء بطريقة سيئة و خاطئة من طرف الملايين من الأشخاص- المحيط- يعانون"

(a back translation would give the following: it is a problem of managing water badly by billions of people-the environment-suffer). It is clearly a mechanical rendition which reflects his puzzlement with the structure referred to above.

Even when he got the meaning right, this student was found to suffer, as well, problems of interference and to lack the appropriate mental agility to find the suitable words and choose the appropriate structures to convey the meaning required. His production looked like parts and parcels of every bit of the language that came to his mind as this sentence taken from his translation may reveal:

كذلك أينما تكون الماء مبدّر، و مهما عدم مواجهة الناس نذرة المياه إنهم يأمنون أن الوصول إلى الماء شيء واضح و شيء طبيعي"

(The original sentence is: Almost everywhere, water is wasted, and as long as people are not facing water scarcity, they believe access to water is an obvious and natural thing)

The case of this student may be explained by his high level of worry and helplessness—as expressed through his own words above- which makes him unable to cope with problems of interference. Worried students divide their cognitive load between learning and worrying. According to (Cassady & Jhonson, 2002; Paulman & Kennelly, 1984) in Woolfolk (2004: 366), these students “*miss much of the information they are supposed to learn because their thoughts are focused on their own worries*”

On the opposing side, we find that only one (01) student among those whose definitions were considered wrong or fallacious, obtained the average (10/20). This student’s definition of translation was considered wrong because he believed that

translation required total respect of both meaning and form. However, he also believed that translation necessitates comprehension of the original text before starting its translation. In his own words, he said, “Translation is a comprehension of the meaning of the text then I translate it in the target language, I should respect the meaning and form” (sic). An examination of the translation of this student reveals that he tried to be accurate in both meaning and form as he said in the definition he suggested. His translation lacks cohesion and fluency and it is felt in some of its parts to be a simple decoding as this example taken from his translation may reveal:

فهناك ارتفاع في الوعي بأن مصادر المياه العذبة تم تحديدها و تحتاج إلى حماية من حيث الكم و النوع

(the original sentence is: there is an increasing awareness that our freshwater resources are limited and need to be protected both in terms of quantity and quality)

The student stuck to the form as much as he could as “ارتفاع في الوعي” is not a good collocation in Arabic and looks like an imitation of the English pattern “increasing awareness”. The same remark applies for the use of the words «يتم تحديدها» for «limited» (the student apparently was misled by the form of the phrase: “are limited”, and thought that the “ed” denoted the past and so made use of an expression in the past instead of an adjective when transferring that bit of discourse to Arabic).

All in all, students’ metacognitive awareness about translation in terms of what they think translation is, may be said to be quite average taking into account the percentage of students whose definition was considered correct (40%). However, this metacognition is not a good predictor of their performance or procedural knowledge. Thus, not all students who provided correct definition of translation -not even the majority of them- performed well in the translation test. The majority of students, however, whose definition was considered vague or too general, did well. By the same token, some of the students who provided a wrong definition of translation scored well in the translation test. The first case

may be explained by the fact that a correct assumption about translation cannot replace a good command of the languages in question or make for procedural knowledge that students actually make use of. As for the second case, it may be explained by the fact that, even when a student is wrong about his assumption on translation, he may all the same succeed in achieving some of the general requirements pertaining to common knowledge such as the meaning of the message and most of its form especially when the text in question is not so difficult.

So as regards our first hypothesis, we may be inclined to say that students' metacognition in relation with their knowledge of what translation is, is average. However, this metacognitive knowledge does not appear to play a major role in their translation competence. The forthcoming questions may shed more light on this effect and on other metacognitive aspects and their possible impact, if any, on students' actual performance.

Question n°2 was: How do you evaluate your competence in translation?

a- very good **b-** Good **c-** Average **d-** Bad **e-** Very bad **f-** I don't know

This question aims at assessing students' evaluation of their own competence in translation. It mainly assesses their awareness or unawareness about themselves as learners and gives some hints of the role they hold in the process of learning. Thus, it is important for students to know about their strengths and weaknesses to be able to actively contribute to their learning. Poor learners are often reported to "*not evaluate the success or failure of their learning. They may not recognize that they lack the ability to self-evaluate*" (Anderson, 2008: ?). The answers of the students in this question are to be correlated with their actual performance in the test to see if the evaluation they gave of themselves is positively exploited as may be reflected in their translation. It is also to be correlated with their answer to question 8/part 2 related to their evaluation of their performance in the test.

Their answers to this question may also help give their degree of self-confidence in their own abilities.

Students' answers to this question are as follows:

	Very Good	Good	Average	Bad	Very bad	I don't know
Number of the total population	1	10	37	5	0	2
Percentage	2%	18%	67%	9%	0%	4%

Students' self-evaluation of their competence in translation

- very good
- good
- average
- bad
- very bad

Table 17: Students' self-evaluation of their competence in translation

According to the percentages obtained, we first notice that the majority of students (67%), i.e, 37 students out from a total of 55 students making up for the whole population, reported that their competence in translation was average. However, according to the marks they scored in the translation test, the standard mean of the population was found to be 8.65/20. This can be said to be an average mean indeed, but this is not to forget that the scores obtained by students indicate that the population was not homogeneous.

No student, however, reported that his/her competence was very bad and only five students reported they were “bad” although more than five students did perform poorly in the test (fifteen (15) students actually obtained low scores as their marks were between 5 and 6.5/20).

Only one (01) student reported that he was very good, which may be astonishing as a first reaction. This student, in fact, obtained 12.5/20 in the translation test, which is a good mark but not a very good one. The paper he submitted was very clean and neat. It is felt that this student did his best to produce a satisfactory translation. The translation he submitted and the answers he provided to both parts of the questionnaire do not give the impression that he suffers any problem of overestimating his competence but it is probably a matter of perseverance and confidence to go further and do better. The evaluation he gave of his translation in the test is in compliance with what he actually did. He said his

translation was "good" and he actually obtained a good mark (12.50/20) (c.f. Q9/part two in appendix 02). Besides, this student shows a kind a proud to not appear inferior. He said his translation was "good" but answered question 10 normally addressed to students who were not satisfied with their translation as in that question they were asked to justify their dissatisfaction if any (if you are not satisfied with your translation say why). His answer to this question was as follows: "I didn't do my best, and I could have done much better than that. I didn't give much importance to the text while I was translating". However, his translation overall shows he did his best.

The following table summarizes the results with regards to students' evaluation of their competence weighed up against the marks they actually obtained in the translation test. Thus, cases of discrepancy are sorted out and typed in bold to be interpreted.

Students' evaluation of their competence	Students' actual marks	Percentage of Discrepancies
Very good	12.5	/
Good	14.5	30%
Good	14	
Good	12	
Good	10	
Good	9	
Good	8.5	
Good	8	
Good	7	
Good	7	
Good	7	
Average	5	≈30%
Average	6	
Average	12	
Average	6	
Average	13.5	
Average	11	
Average	11.5	
Average	11	
Average	10	
Average	13	
Average	12.5	
Average	6	
Average	13	
Average	7.5	
Average	10	
Average	7	
Average	8	
Average	6.5	
Average	5	
Average	6	
Average	7.5	
Average	8	
Average	7	
Average	7	
Average	10	
Average	8.5	
Average	7.5	
Average	12	
Average	5	
Average	7	
Average	5	
Average	13	
Average	8	
Average	7	
Average	7.5	
Average	5	
Average	6	
Bad	7	00%
Bad	6	
Bad	6	
Bad	5	
Bad	7	
I don't know	6	
I don't know	10	

Table18: A comparison between student's self-evaluation and actual marks obtained

It is not a discrepancy a case of a student who says his competence is good, but who is found to have produced an average translation. In fact, it is quite normal for a good student to produce an average translation from time to time when for instance the text is not appealing for him or when the environment is not quite favorable to make him able to show his full potential. A single instance of production cannot be considered a yardstick

against which to measure his competence in this case. It is just important that he does not go below a certain minimum level that makes him considered incompetent all together. When trying to confirm this discrepancy between one's evaluation and one's actual performance, an examination of the student's rendition on the test paper appears compulsory as the mark in itself is not enough to reach such a conclusion. However, it is considered a discrepancy the case of the student who reported his translation competence to be good but whose actual production in the test was found to be low according to the mark he obtained and the sort of mistakes the examination of his paper reveals.

Obviously, of the total ten students who reported that their translation competence was good, three (03) among them did actually bad in the translation test and made a wrong evaluation of their production as they were expecting themselves to have done well. One (01) student, however, said he did not know if he did well in the test or not. This mismatch between what one is thinking about his aptitudes and what his actual aptitudes are is an aspect of a metacognitive deficiency and hinders one's ability to monitor and regulate one's learning process. In other words, students lacking an adequate awareness about their strengths and weaknesses cannot be expected to bring anything positive to their learning enterprise. They will stand still in the same stage and will go desperate about their learning situation. This is known in the literature on metacognition as "person knowledge". It is the knowledge one has of himself as a learner and which constitutes a starting point to self-regulate one's learning (Flavell, 1987).

All in all, the analysis of the students' answers to this question revealed that there are 14 cases of true discrepancies (typed in bold in the table above). Two students were not able to evaluate their competence in translation as they answered "I don't know". We may, thus, conclude that 16 out of 55 students (i.e., $\approx 29\%$) have problems pertaining to their awareness of themselves as learners of translation. In addition, such discrepancies were

found to be more important among the category of students who considered their competence in translation to be average or good. There is no discrepancy at all among the category of students who reported their translation competence to be bad. This may be an indication that problems of metacognitive awareness do not arise in extreme cases (very good/bad) but do arise especially in the middle of the scale. That is, students who are situated in the middle (who feel they are neither good nor bad) are most likely to experience lack of awareness and to manifest loss and disorientation in their process of acquiring this skill.

It would have been beneficial to have invited this category of students too (students who reported themselves to be average) to give their reasons of why they considered themselves as such.

Thus, as far as our research hypotheses are concerned, we may be inclined to say that students have overall a quite metacognitive awareness related to their ability in self-evaluation as only 16 students (29%) were revealed, through discrepancy cases, to have a deficiency in their metacognitive awareness. Besides extreme cases of a total lack of metacognitive awareness are very rare as may be revealed by the number of students who ticked the option 'I don't know'. Actually, only two (02) students answered "I don't know" when invited to evaluate their general competence in translation. However, perfect metacognitive awareness (without any case of discrepancy) was found to exist among students who scored bad in the translation test. This goes against our expectation as regards our third hypothesis pertaining to the effect of metacognition on students' performance. Thus, metacognition is existent among poor achievers as well and probably it is more affirmative among this last category of students!

Question n°3 was: If your answer in the previous question was "d" or "e", say why?

- a-I lack a good command of the languages involved.
- b-I can't see what is expected from me to acquire this skill.
- c-The teaching methodology of the teacher does not help.
- d-I'm not giving much importance and attention to my learning of this discipline.
- e-I don't like translation.
- f-Other... Please specify.....

So the five (5) students who considered their competence in translation to be “bad” are invited here to give their justification for such an evaluation and to see if the absence of a discrepancy noted in this category of students is an indication of a real awareness. The aim of this question is, thus, to assess students' ability to diagnose their source of weaknesses. In other words, can students who were found to be metacognitively aware about their incompetence in the previous question say objectively what the causes of their failure were? Being able to detect the origin of one's weakness is a good starting point to seek a remedy. It is also an indication that one is aware of the learning enterprise in which he is taking part and in which he plays a major role. Students who may have opted for “a” (I lack a good command of the languages involved) may, in a sense, be said to be aware of their weaknesses if their translation productions reveal their problems are really linguistic. Students who may have ticked option "b" above (" I can't see what is expected from me to acquire this skill") may be said to be lost and do not get the objective they normally should strive to attain in order to be successful. Students, however, who may opt for "c" ("the teaching methodology of the teacher doesn't help") might be said to be aware of the objective but unsatisfied with the way they are guided to track their skill and attain the objective set for its acquisition. Successful teachers should make their learners convinced of the route they suggest to them. So students who answered "c" may be said to need more help in guiding their learning and may be said to be less independent and probably less motivated as well, as they attribute their failure to outside factors and discard their own

responsibility. Students who may opt for “d” (“I’m not giving much importance and attention to my learning of this discipline”) might be said to adopt a defensive strategy to not appear weak or unable in terms of their personal aptitude. In motivational terms, this kind of students may be said to be unwilling to act positively for the benefit of their own progress (cf. attribution theory of motivation, section 9/chapter 3)

Thus, this question would bring further features of the metacognitive profiles of the students taking part in this investigation.

Students' answers to this question were:

First choice opted for by students

	A	B	C	d	E	F	No answer
Total number of the population²	2	1	2	0	0	0	2
Percentage	29%	14%	29%	0%	0%	0%	29%

Table 19: Students' reasons for feeling unsatisfied with their competence in translation (first option they opted for)

Second choice

	A	B	C	D	E	F
Total number of the population	0	0	0	1	0	0
Percentage	0%	0%	0%	14%	0%	0%

Table 19': Students' reasons for feeling unsatisfied with their competence in translation (second option they opted for)

According to the results shown in the tables above, two 2 students attributed their failure to teaching methodology. Another student cannot see what is expected from him or in other words what objectives the teacher sets for him to attain as far as the translation module is concerned. One of students who answered “bad” did not tick any of the options offered. This may mean he did not agree with any of the options offered by the examiner, or lacked the appropriate linguistic competence to offer his own justification in his own words. One of the students who answered ‘I don’t know’ in the previous question did not answer the present question as well, which is a reaction that confirms his state of

² Number of the total population answering this question is normally 5. We added to this number the answer of the students who answered "I don't know" in the previous question. The number is, thus, 7 students.

puzzlement and loss. In other words, if one is not able to evaluate oneself, he is most likely not able to say what's wrong with him. The other student who answered "I don't know" in the previous question said he could not see what was expected from him, which is also an answer that confirms his state of loss and confusion. These two students obtained respectively (6/20 and 10/20) in the translation test. An examination of their translations revealed that the student who obtained 6/20 was suffering more severe problems in his translation competence as he was translating without due logical reasoning. His problems in comprehension were found to be complex to the extent that the translation he proposed for those parts he could not understand looked very awkward as this example may reveal:

"في الوضعية الحالية لهذا المشكل، تصحيح المقاييس ما زال يستطيع تجنب الوقوع في أزمة أسوأ"

(the original sentence is : with the current state of affairs, correcting measures still can be taken to avoid the crisis to be worsening)

Thus, the student could not understand that the word 'correcting' in this sentence functions as an adjective and not as a verb, he also misunderstood the passive phrase 'still can be taken' , he could not render the phrase "avoid the crisis to be worsening". Overall he seems to have problems with the transformational rules that are applied to kernel sentences to produce more complex structures. What is worse, the translation he provided sounds awkward in its context of use, but the student seems not to care or rather not able to do anything to clear out the awkwardness.

As for the student who obtained 10/20, his translation revealed that he was lacking appropriate verbal intelligence in his choice of words, and his approach to the cohesion of the message he conveyed for the target reader, but he was logical overall in reconstructing the message and bringing it through. His state of confusion, thus, may be attributed to his weakness as regards the required mental agility he is supposed to develop and which was hindered by the constant interference of the source text he could not escape. It is possible

that this student is not able to evaluate himself because there is a discrepancy between his present competence and the potential competence he is required to develop by the help of the educational system or the teacher. He may be said to be situated in Vygotsky's zone of proximal development and mostly needs help and orientation to reach his objective. The students answered all questions related to the assessment of his metacognitive knowledge about his translation competence acquisition process. He said the progress he achieved from the first year till now was good. He said he was able to track his own mistakes in translation and answered logically the questions pertaining to his procedural knowledge while tackling translation problems. However, he answered "sometimes" when asked to express the frequency of which his evaluation matched with that of his teacher. Obviously then, this student cannot clearly see what was expected from him by his teacher. He did not answer question (3) above because the form of the question itself did not invite him to do so. Thus, the question was worded as follows: "if your answer in the previous question was "d" or "e" say why?" ("d" stands for "bad" and "e" for "very bad"), and as this student ticked "g" ("I don't know") in the previous question, he most probably did not feel concerned with this question.

All in all, we can say that students who answered "bad" in the previous question (they were five) and whose evaluation of themselves was found to be matched with their actual performance, attribute their failure to either the teaching methodology, a deficiency in their competence of the languages involved, or lack of a clear objective. In terms of attribution theory of motivation, only the student who said he lacked the command of the languages in question can be reasonable in his justification as the examination of his translation might reveal. The option related to the problem in teaching methodology does not stand here as a valid justification since the majority of students do not appear to support this position, and even if the teaching methodology was not good it is not a major

handicap otherwise it would have been reported as such by most students. These students, except the one who admitted his incompetence in languages, seem to be careless and unmotivated about their acquisition process as they discarded their own responsibility all together. Poor achievement in translation can be seen to be related to a lack of practice, careless thinking (not spending enough time thinking of how to solve a recurring problem), lack of interest (translation tasks and assignment are done recklessly and mechanically), poor reading competence in source and target language (not reading a lot in these languages), lack of concentration and attention when tackling a translation task (not trying to analyze texts, to learn from them and to archive some of their elements for possible future use), lack of motivation (feeling bored and not interested in the task one is undertaking)...etc. In short, the student can see his own responsibility in many ways.

One may be tempted to conclude, thus, that metacognitive awareness of poor achievers is *superficial* and limited as they know they are incompetent but do not seem to be aware of the reasons of their incompetence. In other words, they know that they do not know but do not know why they do not know! This may partly serve to answer our second hypothesis pertaining to types of metacognitive knowledge students show. That is to say, low achievers are more metacognitively aware than high achievers, but their metacognition do not go beyond the simple fact of being aware of one's weakness without being able to specify what went wrong exactly.

Before ending this discussion, it is important to note that the number of students upon which the above results are yielded (5 students) is not enough significant to reach any sustainable generalizations we expect to reach. It would have been more interesting, in fact, to have invited all students who were unsatisfied with their competence in translation to give their justification for such non satisfaction.

Question n°4 was: How do you evaluate your progress in translation from the first year till now?
a-Very good b-Good c-Average d- Bad e-Very bad f- I don't know

The aim of this question is to assess students' ability to sense any logic in the course of their learning and to gauge their awareness of their learning enterprise. Students who are aware of their progress can be said to be more liable to monitor and regulate their own learning process and are more ready or prepared to receive feedback which can be a remedy for their weaknesses. Kruger and Dunning (1999: 1121) argue that in essence “*the skills that engender competence in a particular domain are often the very same skills necessary to evaluate competence in that domain- one’s own or anyone else’s*”. In other words, students who are able to truly evaluate their competence so far may be said to have acquired the appropriate translation competence to do so.

Students' answers to this question were:

	Very good	Good	average	Bad	very bad	I don't know
Total number of the population	1	20	25	4	2	3
Percentage	2%	36%	46%	7%	4%	5%

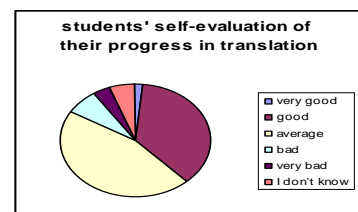


Table20: Students' self-evaluation of their progress in translation

The majority of students 46% consider that the progress they have made up to now is average. Still a significant number (36%) consider that this progress is good. Overall 45 students may be said to be satisfied with their progress up to now (the number of those who answered ‘good’ plus the number of those who answered ‘average’). Six (06) students reported their progress to be either bad or very bad. Three (03) students, however, denoted a total unawareness about their actual advance in the acquisition of this competence as they answered “I don’t know”. It is, probably, these students who may be said to need the most attention in terms of guidance and supervision.

What is striking in these results is that students who said that their progress was good were found to be the better among the other categories of students (those they said they were average, bad,...etc) in terms of the scores they obtained in the translation test. Actually, the mean representing this group of students is equal to 10.22/20. This may be explained by the fact that students would not feel satisfied if they did not realize tangible results in their productions. In other words, the better marks a student obtains, the better confidence he will gain in himself and his abilities. Moreover, this goes hand in hand with Kruger and Dunning's argument above. Competent students are able to see themselves competent and tend to not hesitate to give their own evaluation of themselves as they possess the requirements to do so. Another striking remark about these results is the total number of students who felt they made a rather positive progress (good or average) compared to those who reported to have made insignificant progress (bad or very bad). This may be indication that these students making up for our population of study are metacognitively aware about the requirement of a translation competence. The following table gives an idea about the marks obtained by each group of these students in terms of the degree of progress they sense, to note any discrepancy between the answers they gave and their actual performance as shown in their results:

Degree of progress	Mark obtained	Mean
Very good	8	/
Good	14.5	10.62 Percentage of discrepancy= 35%
Good	13.5	
Good	12.5	
Good	12.5	
Good	14	
Good	14	
Good	13	
Good	13	
Good	12	
Good	10	
Good	9	
Good	8.5	
Good	8.5	
Good	7.5	
Good	8	
Good	8	
Good	7	
Good	7	
Good	7	
Good	5	
Average	13	8 Percentage of discrepancy =64%
Average	12	
Average	12	
Average	11.5	
Average	11	
Average	10	
Average	10	
Average	10	
Average	8	
Average	7.5	
Average	7.5	
Average	6.5	
Average	7	
Average	7	
Average	7	
Average	7	
Average	7	
Average	6	
Average	6	
Average	6	
Average	5	
Average	5	
Average	5	
Average	5	
Bad	8	6.25 Percentage of discrepancy =0%
Bad	6	
Bad	6	
Bad	5	
Very bad	6	6 Percentage of discrepancy=0%
Very bad	6	
I don't know	11	9.5
I don't know	10	
I don't know	7.5	

Table21: A comparison between student's evaluation of their own progress and their actual marks

Thus, a fairly good number of the students who believed their progress to be good obtained rather good results in the translation test. Actually, 10 students out of 20 obtained

grades equal or superior to 10/20. For those who obtained grades between 9 and 7 and their number was 9 out of 20, they may be said to have sensed a progress in comparison to the competence they had when starting to learn translation and which was probably below the average. Again, low achievers among students (those who obtained low marks) tended to give exact evaluation of their progress. The percentage of discrepancy between their actual marks and the evaluation they gave is 0%. This is likely to mean that there is metacognitive awareness in extreme cases. In other words, high achievers and low achievers are more likely to be metacognitively better aware about their learning progress than those in the middle of the scale (average achievers) as the discrepancy percentage may reveal.

The most striking results this time are obtained with students who answered “I don’t know” as these latter produced good translations overall. Actually two students obtained marks that are above the average (10/20 and 11/20). These students may be seen to lack self-confidence or probably they associate the progress they made with the marks they usually obtain and that they are not always satisfied with. By examining these students’ answers to question (6) related to whether the marks they obtain in these modules are always matching with those attributed by their teachers, it is revealed that they answered respectively “rarely” and “sometimes” respectively. This may mean that they were having in mind the marks they usually obtain as a yardstick against which to evaluate progress. An adequate and objective evaluation, however, should emanate from a true and personal awareness about one’s abilities and weaknesses as regards one’s competence. Students’ awareness described above (for the case of students who felt they have made a good progress) is to be verified in question 5 and 6 below.

Hence, the same conclusion drawn from the previous question applies to the present question as well. Students at the bottom of the scale are found to be in a better position as

regards their awareness about their own progress as their evaluation of the progress they said they made was found to correlate with the actual scores they obtained. However, there is more evidence that this awareness again does not seem to rest on objective criteria of evaluation as some students were felt to have made this evaluation in terms of the marks they usually get in translation tasks.

Question n°5 was: Are you able to track your own mistakes in translation?
 a-Yes b- No

Students' evaluation of the progress they made need not be just superficial and related to their own records of marks they usually obtain. Thus, students are supposed to gauge their progress more precisely or to explain its nature more clearly. The aim of this question is again an attempt to confirm students' awareness about their process of acquiring translation competence. Students who are able to say when they are wrong and when they are not, or where they were successful and where they were not may be said to be more aware and by this token more liable to monitor and regulate their own process of learning or acquisition. In other words, if students are really aware of the progress they have made in translation acquisition, they should be able to know when they have made a mistake and where they have been successful.

Students' answers to this question were:

	Yes	No	No Answer
Total number of the population	48	6	1
Percentage	87%	11%	2%



Table 22: Students' evaluation of their inability to track their own mistakes

According to the results shown on the above table and its accompanying diagram, the great majority of students making up for the whole population (87%) said they were able to

track their own mistakes. Detecting one's mistake is a first step to overcome it. Students' metacognitive awareness can be said to be adequate if we just rely on these results. These results can also be said to be in correlation with the answers obtained in the previous questions in relation with students' self-evaluation of their own competence in translation and their ability to gauge the progress they have realized so far.

However, judging one's knowledge of something is the result of metacognitive experience that the learner builds up throughout his encounter with similar situations of use. The students here may be said to have experienced many instances of translation in which they were able to detect their own mistakes. Metacognitive experience is very important in determining one's interest and willingness to pursue similar tasks in the future. *"the subliminal intelligence that makes it possible for us to translate rapidly, reliably, and enjoyably"* is, according to Robinson, *"the product of learning-which is to say- of experience stored in memory in ways that enable its effective recall and flexible and versatile use"* (Robinson, 2003: 50). The more one feels frustrated and unsatisfied with one's moment-to- moment unfolding of the task, the more reluctant he would become in regards with similar tasks in the future, and the more one feels successful and at ease with the task at hand the more will he would show in future occurrences of such a task. Thus, students may be said to have exhibited the maximum of their efforts in tackling the task at hand, and their metacognitive knowledge may be safely counted upon to reveal objective facts about their metacognitive profile overall. According to Flavell (1979), achievement of a goal draws heavily on both metacognitive knowledge and metacognitive experience. In other words, students who know themselves well as learners and can tell what are their points of strength and weaknesses, and feel they are able to undertake a given task on the basis of their accumulated experience through instances of undertaking such a task, are more liable to attain their goal and succeed in their endeavour.

However, two (02) of the six (06) students who answered “no” to this question (i.e., they are not able to track their own mistakes) were found to have obtained good marks (10/20 and 13/20) and the translation they handed showed they have overall a good monitoring abilities as they were able to overcome most of the problems. It is particularly useful to note the answer given by the student who obtained 13/20 to question 10 below (related to justifying his non satisfaction with his translation). This student said, in fact, that he had never done well in translation though he did well in the translation test, which is a confirmation that he is not able to gauge his own problem and track his own mistakes. Moreover, he said the translation he submitted was average but it was more than average. The student who obtained 10/20 answered question 10 below by ticking option “c” reporting thus that there were problems he was not sure he had succeeded to overcome. This is again a confirmation that this student is not able to track his own mistakes as he said.

The examination of the translations handed by students who answered “yes” (i.e., are able to track their own mistakes) revealed that there are problems which went unnoticed by students as they were not reported by them when asked to give an example of a problem they encountered in their translation (question 5 below). To illustrate, underneath are examples taken from the translation of a student who claimed being able to track his own mistakes. This student reported only his problem with structure when asked to give an example of a problem he faced in his translation in the second part of the questionnaire. He also evaluated his own translation to be average. Yet, he made many mistakes pertaining to meaning that we wonder how they could escape his attention. Some of the sentences he produced in his translation look awkward to the extent that they should have raised doubt on the part of the student and required from him intense attention and concentration.

The original sentence	Student's translation
With the current state of affairs, correcting measures still can be taken to avoid the crisis to be worsening	حسب الوزارة الحالية للأشغال، فإن اتخاذ الإجراءات يبقي ممكنا لتفادي هذه الأزمة قبل أن تزيد سوء.
...they believe <u>access to water</u> is an obvious and natural thing	فهم يؤمنون أن <u>تدخل الماء</u> شيء جلي و طبيعي....
Almost everywhere, <u>water is wasted</u> ...	و قد نجد <u>ضعفا</u> في كمية المياه في كل مكان تقريبا...

The student, thus, seems to have rushed to the first that came to his mind on the basis of the misleading similarity between the actual word and the one he thought the text referred to (waste/worse, state of affairs/government). This student is not the only exception; many instances similar to these examples may be recorded in the papers handed by the students making up our population. This may mean that the solutions students strive to give for the problems they encountered especially those pertaining to meaning were trusted by them and as such went unnoticed.

Students overall, have good monitoring abilities as they are found to be able to track their own mistakes. However, this monitoring ability is found to be confined to detecting general problems pertaining to micro level of analysis such as overall meaning and textual structure. They were not, however, able to achieve coherence, to cope with style to produce appropriate structures...etc. It may be concluded that students tend to rush to generalizations about their aptitudes. In other words, on the basis of few instances of success, they tend to overlook their many instances of failure. This is rather a normal state of affairs as mistakes made by students are of a variegated nature and touch upon many levels of language analysis that the students' competence may not have reached yet.

Question n° 6 was: How often does your evaluation match with that of your teacher?
a-Always b-Often c-Sometimes d-Rarely e-Never

To further assess the validity of students' answers to questions 2, 4 and 5 above (related respectively to their evaluation of their competence in translation, their progress in

translation and their ability to track their own mistakes), this question particularly verifies whether students' self-evaluation is objective or not, i.e., whether what they sense as an ability to track their own mistakes or progress or the feeling they have about their own competence is stemming from tangible facts or from illusionary assumptions.

This question is a further assessment of students' metacognitive experience with translation and a means to assess any kind of discrepancy students' answers may reveal about evaluation criteria of translation.

	Always	Often	Sometimes	Rarely	Never
Total number of the population	3	4	35	11	2
Percentage	5%	7%	64%	20%	4%

students' appreciation of their self-evaluation against that of their teacher

Legend:
■ always
■ often
■ sometimes
■ rarely
■ never

Table 23: Students' evaluation of the match between their own evaluation and that of their teachers

The majority of students (64%) think that their evaluation sometimes matches with that of their teacher. This means that they also sometimes get marks they were not expecting, which are an indication that there may be a problem either in the teaching methodology or students' personal attitudes towards the skill in question and towards their learning especially if we take into account their answers to the previous question related to their ability to track their own mistakes. In fact, most students (48) said they were able to track their own mistakes. However, if not most of them see their own evaluation to match with that of their teachers, this means either that they are not satisfied with their teachers' evaluation methods and by the same token their teaching methodology as well, or they are using an evaluation scale of their own, i.e. not an objective one. A subjective evaluation underpins an inadequacy in metacognitive awareness or a false impression of what one actually knows and wants to achieve. In our case, students need to correctly gauge their strengths and weaknesses to be able to monitor their translation acquisition process. Question 7 below aims to verify the validity of the explanations we presently provided for

the discrepancy there is between students' actual evaluation of their work and that of their teachers. However, only students answered "rarely" or "never" were invited to answer this question! The percentage of students who answered the present question as such is only 13 out of 55. We were expecting to have a higher percentage with either students who answer "rarely" and "never" or "always" and "often". The answers students gave were situated, as most other questions, in the middle of the scale. Students have reported to be average in most aspects of the research question. Again it would have been more interesting if we addressed this question to all students of our population without any distinction!

Question n°7 was: if your evaluation of your translation rarely or never matches with that of your teacher, say why?

- a-Teachers are subjective in their way of correcting translation.
- b-I don't know what is expected from me to do well in translation.
- c-Teachers themselves do not agree on how they evaluate their students' work.
- d-I'm rarely or never convinced with the correction model offered by the teacher (this model is either wrong or worse than your own translation)
- e-other... please specify.....

This question is directly related to the previous one as it assesses the reasons beyond student's finding a discrepancy between their own evaluation of their translation and that of their teachers. Students who opt for "a" (teachers are subjective about the way they correct students' translation) would show their reluctance to cooperate and negotiate an agreement on how to proceed with one's learning of this skill. Students who opt for option "b" (I don't know what is expected from me to do well in translation) would show their loss and disorientation about what translation is and what their roles are. Option "c" (teachers themselves do not agree on how they evaluate their students' work) would reveal absence of objective criteria for students to rely upon in their performance as they tend to do what may please the teacher not what is required from them as future translators. As for option "d" (I'm rarely or never convinced with the correction model offered by the teacher (this

model is either wrong or worse than your own translation) would reveal the students' inflated overconfidence and unawareness about their own competence as no teacher, whatever incompetent or subjective might he be, would ever miss the chance to perceive the competence or smartness of his "exceptional" or "talented" students! Option "e", however, offer students the possibility to suggest their own justifications if none of the options above reflects their real attitudes. Teachers' feedback is very important to help students learn better, but if this feedback is not trusted, because distorted or exaggerated, it cannot yield the desirable result. This is what has been underscored by Pintrich (2002: 222) with regards to teachers' attempt to motivate their students and raise their self-esteem, when he said that *"we are not advocating that teachers try to boost students' self-esteem (a completely different construct from self-knowledge) by providing students with positive, but false, inaccurate, and misleading feedback about their strengths and weaknesses. It is much more important to have accurate perceptions and judgments of one's knowledge base and expertise than to have inflated and inaccurate self-knowledge"*. Following this line of thought, teachers' evaluation should be objective, highly explicit and convincing for students to help them set true objectives to attain their potential.

Students' answers to this question were:

	A	B	C	D	E	No answer
Total number of the population	2	7	1	0	2	1
Percentage	15%	54%	8%	0%	15%	8%

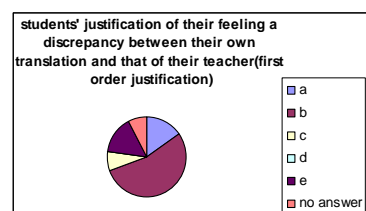


Table24: Students' justification of their feeling of a discrepancy between their own translation and that of their teachers (first order justification)

Total number of students answering this question is thirteen (13), which is the total number of students who answered "never" or "rarely" in the previous question (related to students' estimation of the degree to which their translation match with that of teachers). More than half the number of these students (i.e., 7 out of 13) revealed their own loss and

disorientation as they ticked “b” expressing their inability to see what was expected from them. Only two (02) students attributed their justification for the discrepancy they reported to the subjectivity of their teachers. Actually, two students (02) provided other answers than the one offered by the examiner. One of them said, *"I don't understand meaning"* (sic) which may indicate that this student suffer a problem of comprehension in the source language. The other student said, *"I try to make my translation correct, but there are some mistakes that I made usually"* (sic) although he answered “yes” to Q5 related to the ability to track one’s own mistakes. This student also reports a problem in his linguistic competence, but this time in the target language. He said as a response to Q6 related to matching his evaluation to that of his teacher: *“in English: sometimes or rarely when my translation and that of my teacher similar because I’m not very good in this language, but in French probably always”* (sic). The student apparently means to say language mistakes are not easy to estimate especially when there are many. In other words, mistakes in language make any objective evaluation difficult.

	A	B	C	D	E
Total number of the population	0	0	0	1	1
Percentage	0%	0%	0%	8%	8%

Students' justification of their feeling of a discrepancy between their own translation and that of their teachers (second order justification)

One student (01) offered an answer other than the ones proposed as options by the examiner. He said, *"sometimes I translate subjects that I don't like that's why I don't know to translate it because I love adding my impression to the text"* (sic). This student relates this discrepancy to his own motivation. However, it is difficult to see the relation between motivation and the discrepancy he reported. Probably the student understood the question as being concerned with giving reasons for why he sometimes obtained bad marks or fails to satisfy either his expectation or that of his teacher.

	A	B	C	D	E
Total number of the population	0	0	0	1	0
Percentage	0%	0%	0%	8%	0%

Students' justification of their feeling of a discrepancy between their own translation and that of their teachers (third order justification)

One student (01) provided an answer other than the ones proposed by the examiner. He said, "*I feel that I'm bad in translation*". This student relates this discrepancy to a kind of a predisposition or talent as if translators are a sort of gifted people. His answer reveal a kind of unawareness as he used the word "*feeling*", which means he is not able to say what's wrong exactly. These answers show these students' reluctance or inability to contribute to their acquisition process.

Analysis of students' answer to this question reveals, overall, that they are ready to attribute this discrepancy they were asked to justify to themselves especially those who reported a problem in their linguistic competence. The fact that there are many students who have chosen to offer answers other than the options proposed by the examiner is in itself an indication that they are aware or conscious of the existence of the problems they are facing as they have shown a will to report them using their own words.

To end this analysis, it seems judicious to give a summary of the scores obtained by these students to check whether deficiency in metacognition is related to one's performance.

Student's judgment of the discrepancy between their self-evaluation and that of Their teachers	Students' scores
Rarely	05/20
Rarely	06/20
Rarely	06/20
Rarely	07/20
Rarely	07/20
Rarely	08/20
Rarely	08.5/20
Rarely	09/20
Rarely	10/20
Rarely	10/20
Rarely	13/20
Never	05/20
Never	06/20

Table 25: A comparison between students' scores and their judgment of the discrepancy between their evaluation and that of their teachers

Obviously then, most students who said that their own evaluation of their renditions in translation never or rarely matches with that of their teachers obtained weak marks with the exception of three students who got scores equal or above the average. This may be an indication again that low achievers are in a better position to evaluate themselves and to tell about their learning history, and by the same token seem to be more aware about their performance path overall. However, the majority are not able to transform this evaluation into a tangible and realistic knowledge liable to help them bring improvements to their performance. The answers offered by some of these students above showed either a degree of subjectivity or superficiality in the facts they reported.

Question n°8 was: say whether these statements are true or false according to you.

- a- Translation is no more than a mastery of two languages T F
- b- Translation problems are basically vocabulary ones T F
- c- Translation is a natural talent that cannot be taught T F
- d- After graduation, we are normally expected to be able to translate all types of texts without any difficulty T F
- e- A good translation is the one that is based on an exact rendition of the way something has been said in the SL T F
- f- A translator is not free to bring about any modifications to the original form of the source message. T F

In this question, six statements are given about translation, which are all false. The students should then say if they believe they are true or false according to their own understanding of what translation is and how it is to be learnt. Students' reactions to these statements would reveal the misconceptions they hold about translation and can explain therefore the difficulty they encounter in their course of learning this skill. Kussmaul in Colina (2003: 40) argues that *“the better informed the student translator is about the processes involved in translating and the more he/she knows about translating, the greater the degree of self-awareness. Once self-awareness is developed, self-confidence follows as*

a natural consequence”. In what follows students' answer to each statement is shown in a separate table.

Statement (a): Translation is not more than a mastery of languages.

This statement is related to students' assumption concerning the nature of translation and how it is acquired. In fact, translation cannot be reduced to a simple mastery of two languages as it needs sustained practice for translation students to assimilate the process of transfer and to develop a verbal competence that makes them able to decide on linguistic combinations and semantic networks appropriate for the context of use at hand. A translator should also be able to decide on the appropriate approach and choose the adequate strategy when confronted with a typical translation task or translational problem. Harris was among those who believed in a natural translation competence that all bilinguals are supposed to possess (Harris and Sherwood, 1978). However, there is a difference between bilingualism and language mastery. Bilingualism arises out of natural contexts of use whereby the language is acquired naturally and put in use whenever appropriate. Mastery of languages presupposes a systematic learning in artificial contexts of use where the language is decompartmentalized and learnt as separate components. This, in part, brings into the fore the major distinction between “compound” and “co-ordinate” bilinguals. A “compound bilingual”, according to Lambert (1978: 137-138), *“would be one who learned his two languages simultaneously (e.g., from infancy on) and with interlocutors who used the two languages equally often and interchangeably; the compound bilingual would develop a common system of meaning subserving concepts in both languages.* As for the “co-ordinate” bilingual, according to Lambert, he *“would be one who had distinctive acquisition settings for each language, distinctive as to time of acquisition (the second language learned after infancy), socio-cultural context (one*

language at home, the other from outside, or usage settings. [This] would tend to make the two language systems relatively independent and thus more functionally autonomous". Thus, students learning languages develop two separate linguistic systems that they need to coordinate between to achieve efficiency. This can only be possible through intensive practice sustained by sound awareness about the role of the translator in communication, and his limitations in adopting whatever approach.

The majority of students (69%) answered this question correctly as most of them considered this statement to be false, which is the case.

Students' answers to statement (a)

Statement (a)	True	False	No answer
	13	38	4
	24%	69%	7%

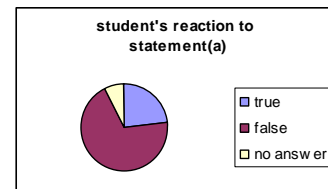


Table26: Students' reactions to statement (a)

However, not all students whose answer was considered correct did well in the translation test, and not all students, whose answers were considered wrong, did not do well in the test. The following table summarizes these results:

Marks of Students whose answer was considered correct (The mark obtained x the number of students who obtained this mark)	Marks of Students whose answer Was considered wrong (The mark obtained x the number of students who obtained this mark)	Marks of Students who did not Answer (The mark obtained x the number of students who obtained this mark)
5 X 5	5 X 1	6
6 X 4	6 X 2	7
6.5 X 1	7 X 2	8
7 X 6	8 X 3	14
7.5 X 4	10 X 1	The mean=8.75/20
8 X 1	11 X 1	
8.5 X 2	13 X 2	
9 X 1	14 X 1	
10 X 4	The mean= 8.9/20	
11X 1		
11.5 X 1		
12X 3		
12.5X 2		
13 X 1		
13.5 X 1		
14.5 X 1		
The mean= 8.57/20		

Table27: Comparison of students' marks in relation to their reactic to statement (a)

This confirms results in question one related to giving one's definition of translation. Thus, a correct definition of translation does not guarantee a good rendition in performance.

Statement (b): Translation problems are vocabulary ones.

This statement is related to students' assumptions about translation problems. Novices are often reported to think that translation is reduced to the process of finding the equivalent of words. Translation students are often seen to rely much often on the bilingual dictionary as soon as they stumble at an uncommon word. They seem to neglect the role of structure in conveying meaning and the importance of context to clear up ambiguity and provide clues to choose the right equivalent. In this respect Ingrid Meyer (1946) in Roberts (1990: 75-76) outlined the weaknesses of the bilingual dictionary for translators working into their second language. These weaknesses affect not only the user's selection of the target equivalent, but also his "*combination of the selected TL item with other elements of the TL context*". Besides these weaknesses are of different types "*first, there is the problem of absence of the SL item (...). Second, there is the problem of absence of the TL equivalent (...). Finally, there is the problem of inadequate semantic and stylistic discrimination between the various TL equivalents proposed*". These weaknesses affecting the combination of the selected TL item with other elements of TL context "*include inadequate morphological specification, inadequate syntactic specification and inadequate collocational specification*". Obviously, then, translation problem cannot be confined to vocabulary items as the translators' task resides in more than fetching for equivalents and concerns a minute analysis of the context, the intention of the author, the intended effect to decide upon the multiple items a bilingual dictionary offer or to work out the meaning that the dictionary does not offer all together.

Statement	True	False
	22	33
	40%	60%

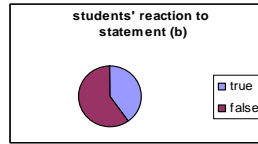


Table28: Students' reaction to statement (b)

Students' reaction to this statement was again positive as most of them (60%) responded correctly and considered translation problems not to be simply restricted to vocabulary ones, though the number of students who answered this question correctly is less significant than the number of those who provided a correct answer to the previous question. This may indicate that this question is a little more difficult than the previous one.

This time, students whose answer was considered correct did better than students whose answer was considered wrong as this table reveals:

Marks of Students whose answer was considered correct x Nbr of students who obtained that mark	Marks of Students whose answer Was considered wrong x Nbr of students who obtained that mark.
5 X 3	5 X 3
6 X 4	6 X 3
7 X 4	6.5 X 1
7.5 X 2	7 X 5
8 X 3	7.5 X 2
8.5 X 2	8 X 2
9 X 1	10 X 2
10 X 3	12.5 X 1
11 X 2	13 X 2
11.5 X 1	13.5 X 1
12 X 3	The mean= 7.36/20
12.5 X 1	
13 X 1	
14 X 2	
14.5 X 1	
The mean= 9.07/20	

Table29: Comparison of students' marks in relation to their reaction to statement (b)

These results might be an indication that the knowledge of the constrained role of vocabulary in translation and the awareness of the extended scope of translation getting over the task of merely finding equivalents is significant in monitoring one's ability to

translate appropriately. Moreover, the more issues concerning translation get complicated the more effect they would have on students' rendition.

Statement (c): Translation is a natural talent that can't be taught.

This statement is related to students' assumptions about the teachability of translation. Some students are often seen to grudge at making any serious effort in learning translation believing that it is a natural talent or a sort of innate predisposition upon which they miserably have no control. This belief or assumption can only bring a hindrance to their acquisition of this skill. In this respect, Toury believes in an innate human predisposition to translate which co-exists with bilingualism, but emphasizes all the same that this rudimentary competence should be sustained by an interlingual or transfer competence which comprises *"the individual's ability to transfer texts equivalently on various levels according to a given purpose/aim and with regard to sense, communicative function(s); or deliberately violate postulates of equivalence for a certain purpose"* (in Lörsher, 2003: 84). Thus, even when a student is endowed with a natural predisposition to use language effectively for communication purposes, there is still much to learn about this skill to forge, enforce and shape it for the service of the task in question.

Students' reaction to this question was again appropriate as the majority of them (41%) reported that that statement was false, which may be an indication that their acquisition process is on the right track.

Statement (c)	True	False	No answer
	12	41	2
	22%	74%	4%

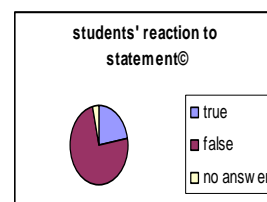


Table30: Students' reaction to statement (c)

One of the students who did not answer statement (c) wrote below, "*I agree that translation is a talent but we can do efforts to learn it even if I think that's a craft but with making efforts at least we can translate even badly*" (sic). This student probably believes talent to mean distinction in performance and is not a condition to practice translation. His answer reveals his will to do what he can to acquire this skill. This response may be seen as an indication that overall students' answers to this question are highly reliable to confirm their attitude to the issue questioned.

The results obtained show that there is nearly no difference in performance between those students whose answers were considered correct and those whose answers were considered wrong as the following table may reveal:

Marks of Students whose answer was considered correct	Marks of Students whose answer was considered wrong	Marks of Students who did not answer
5 X 4	5 X 2	7 X 2
6 X 6	6 X 1	
6.5 X 1	7 X 1	
7 X 6	7.5 X 1	
7.5 X 3	8 X 2	
8 X 3	10 X 1	
8.5 X 2	11 X 1	
9 X 1	12 X 1	
10 X 4	12.5 X 1	
11 X 1	13.5 X 1	
11.5 X 1	The mean=8.79	
12 X 2		
12.5 X 1		
13 X 3		
14 X 2		
14.5 X 1		
The mean= 9/20		

Table 31: Comparison of students' marks in relation to their reaction to statement (c)

Again, one might conclude from the results shown in the table above that believing or not that translation is a natural talent has no effect on one's performance. After all, as has pointed out by Neubert (2000:10), "*it is not enough to know about translating, it has to be done*". And this question is mainly concerned with students' declarative knowledge which does not directly emanate from their practical experience representing their bulk of procedural and conditional knowledge.

Statement (d): After graduation, we are normally expected to be able to translate all types of texts without any difficulty.

This statement is related to students' assumptions about the scope of translation teaching. In fact, a number of students are found to expect their course to be thorough and complete from the start to make them equipped with once for all competence. This assumption makes them stumble at obstacles and prevent them from acquiring the necessary aptitudes to become self-regulated and autonomous learners. Translation students are expected to acquire the core competence together with an appropriate knowledge of what translation is exactly and what role are translators supposed to fulfill in their societies and at the field of work. It is in no way exhaustive and it cannot be, as translation is a huge field of specialty that requires a constant update of one's information and continuous learning and refining of one's knowledge in all domains of knowledge and in languages. Thus, the university or the training institution provides students or trainees with the necessary background knowledge that they are expected to bring continuously further for the benefit of their own competence and profession. According to Bernadini (2004: 20- 21), the educational priority of translation pedagogy is to develop students' awareness, reflectiveness and resourcefulness. By awareness, it is meant students' critical ability "*to see language as a network of connected choices dictated by the mould of culture into which they are cast*". By reflectiveness, it is meant students' capacity "*to practice, store and use more or less specific strategies and procedures involved in translation*". By resourcefulness, it is meant students' ability "*to exploit finite resources indefinitely (competencies and capacities) to cope with new and unexpected challenges and to acquire new resources autonomously as the need arises*". Equipped as such, students are liable to become autonomous and develop furthermore their skills by themselves whenever they

meet a novel challenging task. Translation by this token is a never ending process and students should be aware of the new challenges awaiting them.

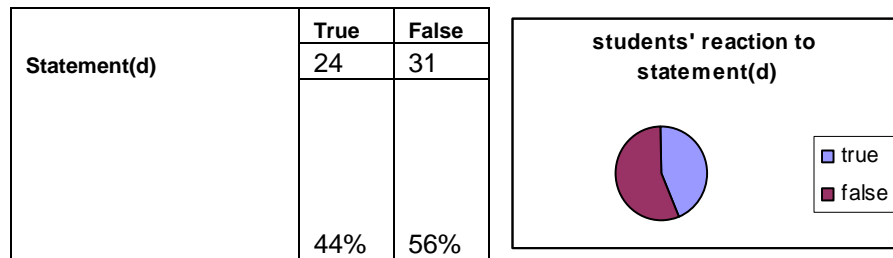


Table32: Students' reaction to statement (d)

The results reveal that most students got this answer correct and 55% answered false, i.e., they believe that when they graduate their competence in translation is not yet complete.

As for the comparison of students' answers with the marks they actually obtained in the test, the results show that students whose answers were considered correct did better than students whose answers were considered wrong as this table may reveal:

Marks of Students whose answer was considered correct	Marks of Students whose answer Was considered wrong
5 X 1	5 X 5
6 X 6	6 X 1
6.5 X 1	7 X 8
7.5 X 3	7.5 X 1
7 X 1	8 X 2
8 X 3	9 X 1
8.5 X 2	10 X 1
10 X 4	11 X 1
11 X 1	12.5 X 2
11.5 X 1	13 X 1
12 X 3	13.5 X 1
13 X 2	The mean=8/20
14 X 2	
14.5 X 1	
The mean=9.19/20	

Table33: Comparison of students' marks in relation to their reaction to statement (d)

We might be inclined to believe here, once again, that this particular type of knowledge can have an effect on students' translation performance. This may be explained by the fact that students who believe that their translation competence is not yet perfect are

more patient and perseverant, and can show more trust and confidence in their aptitudes and abilities which can only be manifested in their ease in coping with the difficulties of the task at hand. The belief that once graduated, one is normally able to translate all types of texts without any difficulties gives a hint of the idea some students have about translation difficulties. Thus, translation difficulties are naturally at the core of translation competence itself and there is no wrong in stumbling with problems from here and now until one reaches a higher stage in his/her acquisition process. Translators' basic knowledge is procedural and is meant to make them able, with time, to overcome recurrent translational problems.

Statement (e): A good translation is one that is based on an exact rendition of the way something has been said in the source language

This statement is related to students' assumption about translation approaches. Still some students are found to believe that a faithful translation is one that should obey not only to meaning or to the author's saying but also to the way this meaning or saying was formed. They sometimes respect the form of the message in detriment to the message itself and they are often found to be confused about which approach to use and why. This assumption can only hinder their process of developing a sound "transfer" competence upon which the whole translation competence is based.

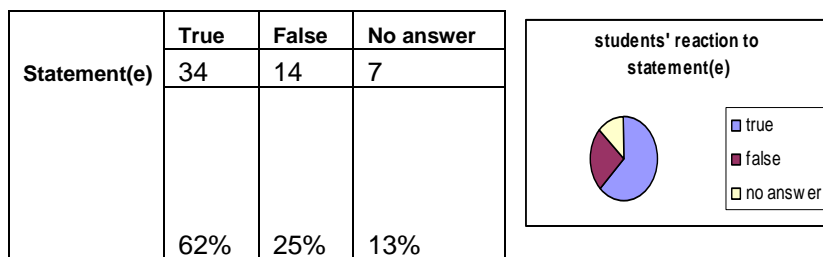


Table34: Students' reaction to statement (e)

Students' reaction to this statement was not positive as most (62%) agreed that translation was about the exact rendition of that way something has been said in the source language. Thirteen percent (13%), however, did not respond to this statement. This may mean that the question was not that easy for them as it may suggest that they are not decisive about this issue and they are skeptical about the very foundation of such a translation approach. Their hesitance to react to this statement may be interpreted, thus, as a lack of knowledge concerning this aspect of the problem.

Marks of Students whose answer was considered correct x the number of students who obtained that mark	Marks of Students whose answer Was considered wrong x the number of students who obtained that mark	Marks of students who did Not answer x the number of students who obtained that mark
6 X 2	5 X 6	6 X 2
7 X 3	6 X 3	8 X 2
7.5 X 1	6.5 X 1	10 X 2
8 X 1	7 X 6	11 X 1
8.5 X 2	7.5 X 3	The mean=8.42/ 20
9 X 1	8 X 2	
10 X 1	10 X 2	
12 X 1	11 X 1	
13.5 X 1	11.5 X 1	
14.5 X 1	12.5 X 2	
The mean= 8.89/20	12 X 2	
	13 X 3	
	14 X 2	
	The mean=8.63/20	

Table35: Comparison of students' marks in relation to their reaction to statement (e)

For this question, which was found to have rather been difficult to answer easily as some did not react to this question all together, students who answered correctly did not differ in their performance in the test from those who answered wrongly, as their marks may reveal. This may be due to the fact that the issue in question is still an unresolved matter for most students. This is in compliance with what teachers may notice about the behaviour of their students who are often reported to stick to the form of the source text whatever their teacher may tell them about distancing oneself from the linguistic mould of the original text.

Statement (f): A translator is not free to bring about any modifications to the original form of the source text

This statement is related to students' further assumptions about translation approaches as it seeks to uncover their reactions about the possibility of ever making any modifications to the form of the text one is aiming to translate. Students again are often seen to react reluctantly against any suggestion to alter the form of the original message even when this is the only way left to them to make a correct rendition in the target language. They tend to stick to the original form of the message to the extent that they appear to have lost any control upon the task and to be led by the source text instead. This assumption can only escalate their feeling of frustration and disorientation as they will lack the appropriate awareness that helps them make any progress in their process of acquiring this skill.

Statement(f)	True	False	No answer
	28	26	1
	51%	47%	2%

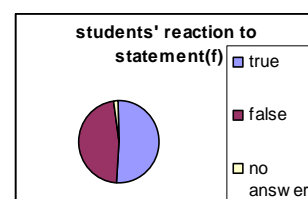


Table36: Students' reaction to statement (f)

To this statement again, a great number of students (28, ie., 51%) did not provide a correct answer to this question as they believed that they were not free to bring any modifications to the form of the message. However, the number of students who failed to provide a correct answer to this question is less significant than the number of the students who failed to answer the previous statement related to their belief that translation was concerned with the rendition of the way something has been said in the source language. This may be due to the fact that the question is less explicit in the previous statement and thus confused the students and made them hesitant to react as the number of students who did not answer this question may reveal (7students).

Moreover, the same student who did not react to statement (c) above, did not react to this statement (f) as well and wrote below, "we can never say that we are able to translate all types because of many reasons-always new words....-in need to learn even if we're already graduated" (sic).

Marks of Students whose answer was considered correct	Marks of Students whose answer Was considered wrong	Marks of students who did Not answer
5 X 3	5 X 3	8 X 1
6 X 1	6 X 6	
7 X 4	6.5 X 1	
7.5 X 2	7 X 5	
8 X 3	7.5 X 2	
8.5 X 1	8 X 1	
9 X 1	8.5 X 1	
10 X 2	10 X 3	
11 X 2	12 X 2	
12 X 1	12.5 X 1	
12.5 X 1	13 X 2	
11.5 X 1	14 X 1	
13.5 X 1	The mean= 8.12020	
1 3X 1		
13.5 X 1		
14 X 1		
14.5 X 1		
The mean= 9.69/20		

Table37: Comparison of students' marks in relation to their reaction to statement (f)

Students who provided correct answers did better than those who did not. Again this question may be said to constitute an unresolved issue for translation students as most of them are often reported to not dare going astray from a given linguistic form the author of the original text may opt to use. In this respect, it is judicious to refer to Daniel Gile's teaching approach to make students aware of the legitimate possibility to get free from the source text form. Gile divided his students into two groups, one group stayed in the classroom while the other waited outside. He showed those inside a picture in which a car was running in the highway and coming across a road signal on which is inscribed the expression "Paris 50 Km". He asked the students to write as many sentences as they can to express what they have seen on the picture. The students suggested as many sentences as they could, such as "50km and we reach Paris", "50km is left to reach Paris", "Paris is at

50km from here”. All these sentences were written on the board before the teacher ordered the students outside to come in. Once in, the students who just joined the class were asked to translate the sentences written on the board into their mother tongue. The students came up with as many translations as the number of the original sentences they were asked to translate from. Through this exercise, the teacher explained that the many sentences written on the board represent one reality that the picture showed. This is similar to one’s way of expression. Thus, we cannot avoid express the same reality differently whatever effort we may exert to reach an agreement. So, why should a translator force himself to do what is undoable?

Results obtained from this question in terms of students’ reactions to a number of statements about translation skill and its acquisition show overall that students have quite good knowledge of many aspects pertaining to translation as the majority answered all questions correctly. Yet, these results got less affirmative the more complicated the questions turned to be. In other words, the more the questions got complicated or involving more complicated issues, the more students stumbled at these questions and provided wrong answers. Besides, this knowledge students are revealed to have about translation seems to have a positive effect on their results in the translation test. However, knowledge pertaining to students’ procedural competence is revealed to be more significant in having a direct effect on their rendition. That is, students equipped with this type of knowledge appear to have a better performance in translation.

In what follows is a general sketch of the students’ responses to the above statements as a whole.

	True	False	No answer
Statement A	24%	69%	7%
Statement B	40%	60%	0%
Statement C	22%	74%	4%
Statement D	44%	56%	0%
Statement E	62%	25%	13%
Statement F	51%	47%	2%
Total	41%	55%	4%

Table38: Students' reaction to all statements as a whole

As we can see, most of the time the majority of students recognized the faultiness of the statements proposed to them, except for statements E and F which are directly related to one's approach to translation.

PART THREE: PART TWO OF THE QUESTIONNAIRE:

This part of the questionnaire deals with students' reactions to the test they have been undertaking. It consists of a total of twelve (12) questions and assesses students' difficulties with the text and the strategies they adopted or they often adopt, their evaluation of their own translation and their cognitive process as regards their strategies and endeavors in detecting and solving problems and as regards their retention capacity in terms of words or chunks of discourse retained. Students' cognitive and metacognitive profile is expected to be explicitly revealed in this part of the questionnaire as it relies mostly on the students' actual reaction to a real translation task and is thus far from being based on merely speculative assumptions.

Question n°1 was: How many times have you been reading the text? 1 2 3 >

This question aims to give an idea about the students' actual reaction in terms of the attention they gave to the text and the time they allotted for its processing. It is very important that one gains a full understanding of the material in question especially when it is a matter of a short text as this one. An exaggerated effort, however, would reveal students' difficulty with the task and probably their weakness as regards translation competence. It may also indicate the processing time they devoted for the problems they encountered. In fact, there is no better indication of students stumbling with translational problems than the time they allot for the processing? Thus, Lörcher (1991:80) believes that *“a translation problem is considered to occur when a subject realizes that at a given point in time s/he is unable to transfer adequately a source language segment into the target language segment”*. This is partly revealed, as has been explained earlier by time consumption during the activity overall. The examiner noted that most students spent one

hour and a half in their translation. This is in itself an indication that the task incited them to give it time and attention. The number of reading can give a further hint of their processes and a further indication of the existence of a problem nexus, which, according to Angelone and Shreve (2011: 109), is “*the confluence of a given textual property and level (lexis, term, collocation, phrase, syntax, sentence, macro-level feature, and some sort of deficit in cognitive resources: a lack in the declarative or procedural knowledge the translator possesses*”. A small number of times, however, would indicate students’ recklessness and superficial processing in the translation task especially when the result is weighed up against their actual performance.

Students' answers to this question were:

Number of readings	Once	Twice	thrice	More than 3	No Answer	Other answer
Total number of the population	8	28	9	8	1	1
Percentage	14%	51%	16%	15%	2%	2%

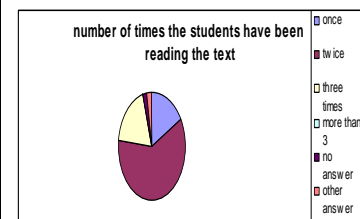


Table39: Number of times the students have been reading the text

One (01) of the students did not circle any of the options offered and wrote instead "none". Two (02) students circled "more" but wrote next to it "1hour".

All in all, it may be deduced that the students gave enough attention to the text they have been asked to translate as the majority (37) read the text twice or thrice. The following table shows the relation between students’ times of reading and their actual performance in terms of marks obtained:

Number of readings	Mark Obtained X The number of times this mark is obtained	The mean	Number of Readings	Mark Obtained x the number of times this mark is obtained	The mean
Once	5 X 2	7.06/20	Three times	5 X 2	7.77/20
Once	6 X 2		Three times	7 X 2	
Once	7 X 1		Three times	7.5 X 2	
Once	8 X 2		Three times	10 X 2	
Once	11.5 X 1		Three times	11 X 1	
Twice	5 X 1	9.58/20	> than three times	7 X 1	9.43/20
Twice	6 X 5		> than three times	8.5 X 1	
Twice	6.5 X 1		> than three times	9 X 1	
Twice	7 X 3		>than three times	10 X 4	
Twice	7.5 X 2		>than three times	11 X 1	
Twice	8 X 3		None	7.5 X 1	/
Twice	11 X 1		N o answer	7 X 1	/
Twice	12 X 3				
Twice	12.5 X 2				
Twice	13 X 3				
Twice	13.5 X 1				
Twice	14 X 2				
Twice	14.5 X 1				

Table40: Number of reading compared against students' marks

Most of the students who did well in the translation test (obtained good marks that are above the average) are situated among those who said they read the text twice. 13 students out of 28 making up of the total of students who reported having been reading the text twice obtained marks above the average. Even the student who obtained the best mark among them all belongs to this last category. This goes with the prediction we set above that students who spend too much time reading the text are not those who generally do better but on the contrary they are usually those finding more difficulties in their translation. An exaggerated rate of reading probably goes against an expectation of a good rendition. An insufficient rate of reading, however, may denote a careless attitude towards the task itself. The majority of students making up for this population are situated in the middle, a result which is in compliance with the previous answers whereby students were often shown to be average. This may suggest that they did not find much difficulty necessitating pausing longer on various text fragments for better processing.

Question n°2 was: was there any word you could not understand without the help of the bilingual dictionary? a- Yes b-No

The aim of this question again is to gauge students’ actual problems with the text they have been given to translate and to assess their monitoring capacity in terms of their ability or inability to overcome problems pertaining to meaning in their translation. The text overall is easy to comprehend and to process normally without the help of the dictionary. Students who believe in the overwhelming authority of a bilingual dictionary would feel handicapped and unable to deduce the meaning of words they met for the first time and would not probably feel sure of their rendition.

Students' answers to this question were:

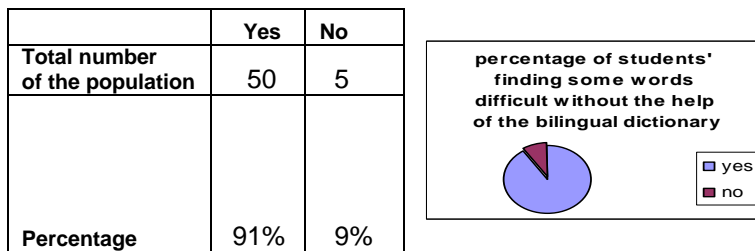


Table 41: Students finding difficulty with some words without the help of the dictionary

Students’ answers to this question reveal that the majority (91%) felt the need for a dictionary in their translation. Just five students reported having been able to do without the help of the dictionary. This difficulty they met during their task should at least make them more alert in terms of attention and concentration when processing the text in question. Those who said they did not need the help of the bilingual dictionary (05 students) did not obtain good marks overall as only two of them reached the average. Their marks were as follows: 5/20, 6.5/20, 7/20, 10/20, 10/20. When examining their translation, it was found that they did actually fail to render the meaning of some words, and despite that what they produced as a translation looks awkward, they do not seem to realize that.

For example, one student who actually obtained 5/20, produced the following translation:

The original sentence	Student's translation
There is an increasing awareness that our <u>Freshwater</u> resources are limited and <u>need</u> to be protected both in terms of quantity and quality.	إن ارتفاع الوعي بمصادر <u>منتوجاتنا</u> المحدودة و <u>الحاجة</u> محمية سواء من الناحية الكمية و النوعية.

As the above table may reveal, the student rendered « freshwater » with "منتوجاتنا" (our products), which is totally wrong and the sentence overall carry no meaning in itself. He also considered the verb “need” to be a noun apparently believing that “be protecting” is the main verb of the sentence as he rendered it as "الحاجة". This student evaluated the translation he submitted to be average (Q9 below). However, he said there were problems he was not sure he overcame when asked to justify his non satisfaction with his rendition (Q10 below). Clearly, this student's monitoring capacity is very low. A confirmation of this state of affairs comes from his answer to Q7 when asked to explain how he solved the problem as he said he asked the teacher for help (this student did not report any translation problem in Q5; he probably meant to tell about his general attitudes to translation problems encountered during classroom assignments).

Another example taken from the translation of another student is the following:

The original sentence	Student's translation
Almost everywhere, water is <u>wasted</u> , and As long as people are not facing water scarcity, they believe access to water is an obvious and natural thing.	نجد غالبا الماء في كل مكان <u>غير نقي</u> . بما أن الناس لم يواجهوا ندرة الماء فهم يؤمنون بأن الماء أمر جلي و طبيعي.

This student rendered « wasted » by « غير نقي » (impure), which is wrong and does not carry any sense in this particular context of use. However, the student does not seem to have noticed his mistake as he did not report such a problem when he was asked to do so in Q(below. This student obtained 7/20 in the test.

Still another example, this time taken from the translation of the student who obtained 6.5/20, is the following:

The original sentence	Student's translation
There is an increasing <u>awareness</u> that our Freshwater resources are limited and need to be protected both <u>in terms</u> of quantity and quality.	و هناك ارتفاع للجهل على أن مصادر مياهنا العذبة محدودة و تحتاج إلى حماية على حد سواء في مصطلحات الكمية و النوعية.

This student failed to render the meaning of two words or expressions « awareness » and « in terms » which he translated respectively as “الجهل” (ignorance) and “مصطلحات” (terminology). The sentence he produced does not make any logic. This student reported to have met a problem in structure instead (question 5 below), but could not evaluate his rendition as he answered “I don't know” to question 9 below related to his own impression of the translation he produced.

However, the two students who obtained 10/20 did not fail to render vocabulary items as their translations may reveal. Their problems were mainly centered on structure and verbal intelligence (to find the appropriate words that fit the context of use and the textual structure of the discourse overall).

The number of students who answered “No” to this question (that is those who reported that there were no words they could not understand without the help of the dictionary) is too limited (05 students) to reach tangible results. Yet, we may still be inclined to conclude that low achievers are not able to tell what went wrong with them or to specify the learning problems they suffer from. The students whose translations were discussed above do not seem to know that the words they rendered were not correct as they attested not feeling the need for a bilingual dictionary. We have seen before (part one of the questionnaire) that low achievers were better metacognitively aware than average students to tell about their abilities or inabilities. However, this metacognitive knowledge is insufficient and superficial in nature as these students tend to be unaware of the nature of their ignorance and cannot tell what went wrong with them exactly.

This question could have yielded better results if formulated differently. Students seem to have understood the question as being concerned with their feeling or not for a need of a dictionary to check the translations they proposed. In fact, students were not allowed to use the dictionary while taking this test. Thus, even students who obtained good marks reported finding difficulties they could not overcome without the help of the dictionary although they produced correct translations and their rendition does not suggest they could not overcome any vocabulary problem!

Related to question n°2 is the following sub-question:

-How many words? 1 2 3 > I don't remember....

Students' answers to this question were:

Number of Words	One word	Two words	Three words	More than 3	I don't know	No Answer
Total number of the population	2	11	12	11	12	2
Percentage	4%	22%	24%	22%	24%	4%

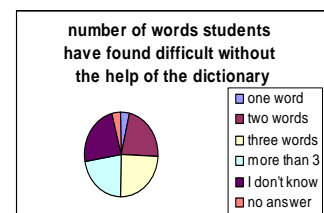


Table 42: Number of words students stumbled at during their translation

Some of the students circled ">" but added below the number of words they think they remember have found difficult without the help of the dictionary. These numbers varied between 3 and 8. Some of the students even cited the words they could not translate without the help of the dictionary next to the number they specified.

Strangely enough, 12 reported not knowing how many words they stumbled at although they were offered the option “more” to tick in case the number of words is significant to be remembered. However, “I don’t know “ was offered as an option to tick, and students may be said to have preferred to tick this option as it is more liable to represent their situation in not giving much attention to the amount of difficulty they were facing. This reaction shows the students’ cognitive process while translating. A translator, in control of the task in question, should be able to know what problems he is facing, and

The great majority of students (93%) answered “no” attesting thus that the bilingual dictionary is not enough to solve vocabulary problems. This may be an indication that they have a good awareness about the particularities of vocabulary problems in translation and the limited role of the bilingual dictionary in this respect. It remains to check if this knowledge is really put into practice. In other words, do students manage to solve the vocabulary problems they meet without the help of the dictionary?

The students whose translations were analyzed above (the previous question) answered “No” to this question related to their belief of the utility or limitation of a bilingual dictionary in translation. They were found to have wronged in some vocabulary items and produced illogical sentences without being aware of that. However, they gave good justifications for why the bilingual dictionary was not enough. One of them said, “*the translation doesn’t depend on words and the translator must understand the meaning of the text and doesn’t focus much more about the words itself because with this way may reach to incorrect translation*” (sic). The poor language production this answer may show is an obvious explanation for why this student was not able to know that he did not succeed in translating some vocabulary items. Thus, if one is struggling hard with language at the most elementary level, it is most natural that he will not be in a position to know what went wrong on a more advanced level. Metacognition, as has been explained many times, is higher order cognition and a meta-level awareness that is not likely to be manifested and exploited positively in the performance of low achievers, especially as regards its regulatory component.

Overall, students may be said to possess adequate declarative knowledge about the limitation of a bilingual dictionary in translation, but are not able to put this knowledge in the service of the task they undertake. In other words, they know that a dictionary may not suffice, but are not able to disentangle the meaning of words and expressions they stumble

at in their translation. This may suggest that students' procedural knowledge is not activated unless their declarative knowledge is sustained by a good command of the languages in question especially the encoding one.

Question n°4 was: if your answer has been "No" in the previous question, what else do you think a translator might need? (That is what else does a translator need beyond a bilingual dictionary?)

This question aims to assess the students' awareness about the limitations of a bilingual dictionary and the requirement of a good translation skill. Their answers would give hints about their acquisition process and their learning philosophy pertaining to this skill.

Students' answers to this question reveal that they have correct assumptions about the limitations of a bilingual dictionary and of what is needed to reach an adequate and acceptable translation. The majority of students (all of them except two) gave correct and plausible answers to this question. Probably, the two exceptions noted concern these two answers:

1-*"a translator might need a lot of talent. For example, he might have a good dictionary of meaning in his mind"*.

2-*"the translator must need his own culture"*

The first student may be said to have assumed that translation is basically about vocabulary. Besides, he seems to consider that vocabulary acquisition to be a matter of talent! He also seems to be totally lost in translation and does not even know what is required from him to acquire this skill. This student scored 6.5/20 in the translation test and defined translation in the first question of the questionnaire as being *"a science, it is the transport of words from a language to another with keeping the meaning"* (sic). Obviously,

his definition of translation is wrong and does not seem to be of any help for him to go further.

This conclusion is furthermore sustained by his other answers in the other questions. For example, he said that his evaluation of his own translation rarely matches with that of his teacher (Q6/part 1), and as a justification for this state of affairs he said he did not know what was expected from him to do well in translation (Q7/part1). As for his strategies to overcome vocabulary problems (Q8/part2), he said he either omit the word from his translation or leave a blank for it. He does not even know if he did well in the translation test (Q9/part2). However, he could identify his problem in the test to be with structure as shown in his answer to Q5/part2, and he was able to know that he did not succeed in solving the problem (Q6/part2). This is a clear indication that this student need to be guided and assisted in his process of acquiring this skill.

As for the second student, who said that the translator might need the knowledge of culture besides the bilingual dictionary, he scored 8/20 in the translation test and defined translation in (Q1/part1) as being "*a very large domain which includes many things the knowledge of the two languages and culture*". This definition is as general as was his answer to the present question. In fact, it is not certain that this student does not know the answer for this question as his answers to other questions were rather logical and in compliance with one another. For example, he said his translation was average and it was actually. He said he was able to track his own mistakes and he appears to be able to do so according to the translation he handed. Apparently, this student needs to be guided in this respect and shown exactly why a dictionary is simply a working tool that has its limitations in comparison to the translator's sound decisions and sharp analysis of the text and his translation process.

The rest of the students (those who gave plausible justifications for why the bilingual dictionary was not enough to reach a good translation), they gave answers which were mainly centered around the problems of synonymy, context, style, cultural connotation, grammar-based meaning, discourse type, parallel texts, the meaning intended by the author....etc. Among these answers, the following may cited as typical examples:

-“he might need logical thinking, a specific language, access to context to make a better choice for the words (restricted vocabulary)” (sic)

- “because sometimes we don’t find the meaning of the word which we are researching in our language or to another language (differentiation of the culture). Also the word can have a lot of meanings” (sic)

- “translators need to know the grammar of English”

- “translation doesn't depend on words but on meaning and the translator must understand the meaning of the text and doesn't focus much on words themselves which may lead to incorrect meaning”

For full details of all justifications provided by students about why the bilingual dictionary is not enough to reach a good translation, cf appendix VI.

As for those who answered “yes” (that is they believe that the bilingual dictionary was enough to reach a good translation” and they were just four (04), their translation in the test reveal some mistakes pertaining to their inability to work out the meaning from context such as the following examples may reveal:

Original sentences	Students' translations
1- With the <u>current state of affairs</u> , correction measures still can be taken to avoid the crisis to be worsening.	- و مع شؤون الدولة الحديثة، فإن تصحيح الإجراءات قد يؤخذ لتجنب الأزمة التي ستزداد سوءاً.
2- Almost everywhere, water is wasted, and <u>as long as people</u> are not facing water scarcity, they believe access to water is an obvious and natural thing.	- كذلك أينما تكون، الماء مبدّر، و مهمما عدم مواجهة الناس نذرة المياه، إنهم يأمنون أن الوصول إلى الماء شيء واضح و شيء طبيعي.
3- Whatever the use of freshwater (agriculture, industry, domestic use), huge <u>saving</u> of water and improving of water management is possible.	- مهما يكن استعمال المياه العذبة (زراعة، الصناعة، الاستعمالات المنزلية) لإنقاذ المياه و تحسين كيفية استخدام أو تسيير المياه و جعلها ممكن.

All in all students making out for our population of study seem to have fair knowledge about the limitations of the bilingual dictionary as their answers may reveal (the majority answered “Yes” to this question). This awareness, however, is of a declarative nature as students’ productions revealed they were unable to work out meaning logically from the context. The justifications most of them gave of what else a translator might need beyond the bilingual dictionary uncover a superficial knowledge that cannot be activated in regulating one’s activity. This knowledge is probably what they have been told to do theoretically speaking; the sort of knowledge we are inculcated without being guided of how to use it! Another major handicap to the activation of this knowledge, as has been pointed at earlier, is their poor command of the languages involved. Thus, students may know they need logical meaning and grammar to decipher meaning, but remain actually unable to put this knowledge into practice as they know their knowledge about grammar and mechanics of language is poor. They probably feel better equipped in another linguistic combination (Arabic/ French, for example) and by this token it is more likely that their declarative knowledge about this issue may be activated in this respect and put in the service of their translation process.

Question n°5 was: Give an example of a problem you encountered in your translation of the text "Water crisis"
 E.g..... I don't remember....

This question aims to assess students 'actual ability to diagnose their own problems and to highlight them. Being able to tell what the problem is may be an indication that the student is likely to achieve his goal and to follow strategies to reach a solution. Students' answers to this question would give us an idea of the problem they actually met in their translation and would allow us to assess their strategies in overcoming such a problem. A translation problem, it should be emphasized, is not limited to vocabulary as has been pointed out before. This question is an occasion to assess students' knowledge about the nature of translational problems as well. Moreover, students' not remembering the problems they met may serve as an indication that they have gone recklessly in doing their translation and shows the weakness of their cognitive processing as regards the translation task.

Students' answers to this question were:

	students recognizing a problem	I can't Remember	No answer
Total number of the population	38	16	1
Percentage	69%	29%	2%

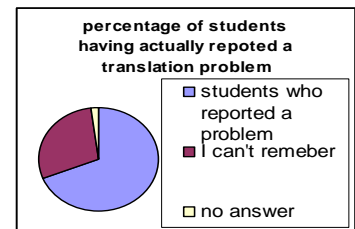


Table 44: Students reporting a problem in their translation

A significant percentage of students (69%) reported having met problems in their translation, which is in compliance with their renditions. Thus, most students stumbled at many difficulties in the text, some pertaining to vocabulary, some to structure, some to meaning....etc as their translations may reveal and as shown in the many examples provided. However, 16 students (29%) revealed they did not remember! Students may be said to be hesitant in asserting that the problems they met deserve to be referred to as

problems as probably they succeeded to solve them. Or probably they have taken the option to mean they did not remember the solutions they adopted for every particular problem they met. This percentage is alarming if it taken to mean that they actually were totally unconscious about their difficulties when undertaking their translation and they were not striving enough to find solutions to overcome problems in their task. More evidence about this state of affair is likely to be revealed in their answers to the forthcoming questions.

Question n°6 was: Did you succeed to solve it?
 a- Yes b-No

Thus, this question attempts to further assess students’ monitoring capacity in terms of judgment of their ability or inability at solving the problems are likely to have encountered in their translation. Students should normally be in a position to tell whether or not they have succeeded to solve a problem if they have really been monitoring their process of translation. This ability would show their awareness as regards the process and as regards their role in accomplishing the task.

Students’ answers to this question were:

	Yes	No	No answer
Total number of the population	29	21	5
Percentage	53%	38%	9%

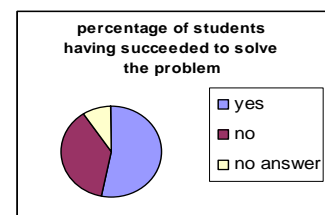


Table 45: Students who have been successful in solving the translation problem

29 students reported having succeeded to solve the problem against 21 students who reported having failed to do so. Although the number of students who succeeded to solve the problems is more important, the number of those who said they failed to do so is significant as well. This may make us inclined to conclude that the regulatory ability

students of our population of study are endowed with is just average. The number of students who did not answer this question (05 students) is a further indication that the issue at hand is more complicated and requires more guidance on the part of teachers especially that the question was simply a matter of responding with “Yes” or “No”.

Now let us compare the results obtained by those who said they succeeded to solve the problem with the results of those they said they did not, and compare as well their self-evaluation of their performance in the test to see if there is any match or discrepancy between them.

Marks obtained by students who said they succeeded to solve the problems(s)	Their self-evaluation In the translation test	Marks obtained by students who said they failed to solve the problem(s)	Their self-evaluation in the translation test	Marks obtained by students who Did not answer The question	Their self-Evaluation In the Translation Test	
5	I don't know	5	Average	6	I don't know	
5	Average	5	Bad	6	Average	
5	Average	5	Average	7.5	Average	
6	Average	6	Average	10	I don't know	
7	I don't know	6	Average	11.5	No answer	
7	Good	6	Average			
7	I don't know	6	Average			
7	Average	6.5	I don't know			
7	Good	7	I don't know			
7	Good	7	Average			
7	Good	7.5	Average			
7.5	Good	8	Average			
7.5	I don't know	8.5	Average			
8	Good	9	I don't know			
8	Average	10	I don't know			
8	Average	10	Average			
8	Average	10	I don't know			
8.5	Average	11	Average			
10	Average	12.5	Good			
11	Average	14	Good			
12	Average	14	Average			
12	Average	percentage of discrepancy=19%				
12	Average					
12.5	Good					
13	Average					
13	Good					
13	Average					
13.5	Good					
14.5	Average					

percentage of discrepancy= 41%

Table 46: Students' finding or not solutions to their translation problems compared to their self-evaluation of their own renditions

As can be seen, students who said they succeeded to find solutions to the problems they stumbled at in their translation were more likely to give a correct evaluation of their

renditions than the students who reported having failed to do so. In fact, there is 41%, i.e., twelve (12) out of a total of twenty nine (29) positive correlations between the mark obtained and the evaluation suggested among the category of students who said they succeeded to solve the problems, against 19%, i.e., four (4) student out of a total of twenty one (21) representing positive correlations among the category of students who said they failed to solve the problems they met. This may initially suggest that students who are able to solve the translational problems they encounter are more aware about their aptitudes and potential than those who are not in a position to overcome the obstacles they stand in their way. In fact, students who manage to find solutions to their translational problems may be said to have exercised much effort and gave more attention to the task they were undertaking to the extent that their translation process was brought before their eyes and their awareness was at its peak. Naturally, students who fail to bring solutions to whatever problems they stumble at may be said to either go recklessly about doing their translation or to be unaware of what is required from them to the extent that they are unable to tell what went wrong and what went right. They are seen to be totally ignorant of the translation process and of its requirement. In fact, most students who answered “No” in the previous question (Give an example of a problem you encountered in your translation) ticked “No” in the present question as well (i.e., they did not succeed to solve the problem). In other words, not being able to solve a given translational problem may be in itself an indication that the student was not doing his best and was not bringing his process under conscious control.

Overall, students’ answers to this question reveal that their procedural knowledge is less developed than their declarative knowledge. Thus, they are less able to tell about their capacity at regulating their process than they are at telling about the knowledge they have about translation and its requirement and which does not involve any action. Furthermore,

students who are able to tell about their regulation are more likely to monitor their process and tell about their success. In other words, they are better equipped to evaluate themselves.

Question n°7 was: How did you solve it?.....I don't remember....

The aim of this question is to assess students' ability to use appropriate strategies to different types of problems they encounter. Knowledge of strategies makes part of the overall metacognitive knowledge the student may be endowed with. However, this knowledge is not enough if not sustained by knowledge of why and when to use a given strategy and not another. In this respect, Pintrich (200: 221) says:

As students develop their knowledge of different learning and thinking strategies and their use, this knowledge reflects the “what” and “how” of the different strategies. However, this knowledge may not be enough for expertise in learning. Students must also develop some knowledge about the “when” and “why” of using these strategies appropriately

Besides, students who cannot remember the strategies they employed to overcome the problem may be said to be unaware of the process they went through and require guidance and advice on what to do, how and when as explained in the above quotation.

Students' answers to this question were:

	Students who actually answered	I don't Know	No Answer
Total number of the population	24	3	2
Percentage	83%	10%	7%

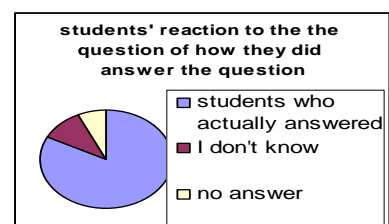


Table 47: Students' reaction to the question of how they did solve the problem

Total number of the population answering this question is 29, which is the number of students who answered "yes" in the previous question i.e., the number of students who said they succeeded to solve the problem.

We first note that only three (03) students answered "I don't remember" to this question. Forgetting the way one has actually solved a problem may suggest that the person did not do his best which may be considered a clear indication of his weakness in self-regulating his capacity having to do with metacognitive awareness of the student undertaking the test. This metacognitive ability, according to Anderson (2008; ?), "*of deciding when to use particular strategies indicates that the learner is thinking and making conscious decisions about the learning process*". It is clear that when we are aware of the activity we are undertaking, we ask ourselves questions to see if we are actually in control of the situation, we detect problems and look for their solutions that we try sequentially to test their validity. The end product is then an ability to report what went wrong and how exactly we did to get it right.

The two (02) students who did not answer this question are not in a better position than the three (03) students who said, "I don't remember". Their metacognitive awareness, too, might be questioned. Not answering a question may indicate that they actually find it hard to recall exactly what they have really done. This is similar to the tip of the tongue phenomenon where a person is aware that he knows something- in our case he did something- but is unable to reproduce it or retrieve it from memory.

The twenty four (24) students who answered this question and reported the strategies they adopted to solve the problems they encountered suggested overall the following strategies in their order of frequency:

- Deducing meaning from context
- Reformulating or restructuring the source sentence

- Rereading the text many times until grasping the meaning
- Using the dictionary
- Asking for help

Some of the students did not give precise descriptions of what they actually did but offered instead the exact solution to the actual problem they said they encountered. For example, a student wrote as an answer for the present question,

“الأفراد لا يعانون شح في المياه” to suggest the solution he found for the problem he reported having met in question five (« people facing scarcity »).

Overall, the students were found to have a battery of useful strategies they said they have employed although this battery need to be enriched and extended to overcome more complex issues. The two last strategies enumerated above were reported by a minority of students. The majority, however, opted for the first strategy reported above. To have a full details of the answers proposed by students with respect to this question, c.f., appendix 4.

Question n°8 was: what do you usually do when you do not succeed to translate a Word or an expression?

- a- I find a way to omit it from my translation
- b- I leave a blank for it
- c- I paraphrase it in the source language to facilitate its transfer in the target language.
- d- I immediately ask for help
- e- Other Please specify.....

The aim of this question is to assess students' strategies of overcoming translational problems in general to see if the battery of strategies suggested above are limited to what they have actually suggested or is liable to be extended when confronted with different types of problems probably not covered by the present text. Detecting problems is one level of metacognitive regulation, bringing a solution to this problem is another level. In fact, Nelson and Narens (1990), distinguished between cognitive monitoring and cognitive

control. The former refers to bottom-up processes such as error detection, source monitoring in memory retrieval, whereas the latter refers to top-down processes such as conflicts resolution, error correction, inhibitory control, planning, resource allocation, etc. In our case, the stage whereby students recognize there are problems they encountered in their translation represents the cognitive monitoring. Normally at this stage, a perseverant and alert student should grow conscious of the need to seek remedy and control the situation. The harder he tries with the problem at hand, the better he will be to describe his strategies, we would be inclined to believe.

Of course, problems of translation are not restricted to vocabulary items, but this is the simplest and most apparent and common problem among all translators especially translation learners. Students who are metacognitively aware should at least avoid rushing to seek help from the others and would not be inclined to leave a blank for the word they could not find. Students who choose, for example, to paraphrase the lexical item in the source language are actually using a strategy that they are aware of its effect and utility. Thus, a complex structure in the ST is modified and simplified in more explicit words before it is transferred to the TT. This kind of reformulation would enable students to explore the syntactic and lexical possibilities of the ST and TT. According to Hewson (1993/180),

la reformulation comporte, bien entendu, un travail sur les axes paradigmatiques et syntagmatiques qui génère des gammes lexicales et syntactiques à l'intérieur de la LCI[langue de culture 1] ; ce travail permet non seulement de développer ses moyens d'expression, mais aussi de relativiser un texte de départ (TD) et de mieux cerner sa signification en étudiant ce que le producteur de texte avait préalablement éliminé dans sa production.

Students who choose to find a way to omit the word from their translation are consciously making use of an avoidance strategy. That is, instead of leaving a blank or giving a false guess, they resort to bring appropriate modifications in which the target word would not appear in their TT without affecting the intended meaning. This is especially possible when dealing with cultural terms. Of course, a professional translator should strive hard searching these words using adequate tools. However, a translator student lacking the appropriate tools, falling under time constraints and still paving his way in translation competence may be considered successful when using this strategy. As learners, they may be said to be in a better position in terms of metacognitive awareness. Students may also resort to other strategic solutions they are invited to explicitly describe in the option "other".

Students' answers to this question were:

Options	A	B	C	D	E	No answer
Total number of the population	16	3	23	2	10	1
Percentage	29%	5%	42%	4%	18%	2%

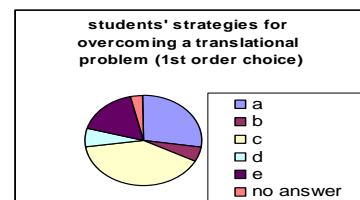


Table 48: Students' strategies for overcoming translational problems

42% (23 students) said they paraphrase the word in the source text to facilitate its transfer into the target language. 29% (16 students) said they find a way to omit it from their translation. That is the majority of students making out this population of study possess practical strategies to overcome translational problems. Just few of them (7students) are shown to be unable to cope with their difficulties as they either said they leave a blank for the word or they immediately ask for help.

The ten (10) students who suggested answers others than the ones proposed as options, expressed themselves as follows:

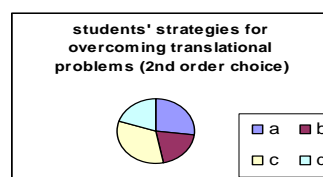
- 1- "I try to find a word from what I understand in it" (sic)
- 2- "Context"

- 3- "I try to translate the meaning"
- 4- "I try to understand its meaning then I translate it from the text"
- 5- " je le traduit selon le contexte"
- 6- "I try to translate its meaning, but sometimes I omit it"
- 7- "I translate it by using its meaning in the sentence"
- 8- "try to translate the general idea"
- 9- "I read the general meaning of the phrase then I guess it (I guess the word)" (sic)
- 10-"I change the structure of the phrase"

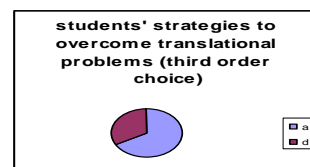
These latter students show that they behave strategically when translating as they strive to infer the meaning from the context, find the nearest possible equivalent (not necessarily the exact word), set back and free oneself from the form...etc.

One (01) student who chose "a" as a first choice and "c" as a second choice wrote below as a clarification " 'a', but if it's an important word 'c' ", that is, he finds a way to omit it from his translation, but if it is an important word, he instead paraphrases it in the source language to facilitate its transfer in the target language. This student is apparently even more strategic as he knows exactly which strategy to use and when. Thus, he has a clear metacognitive awareness concerning its procedural and conditional components.

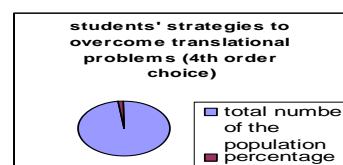
Options	A	B	C	D
Total number of the population	4	3	5	3
Percentage	7%	5%	9%	5%



Options	A	D
Total number of the population	2	1
Percentage	4%	2%



Options	D
Total number of the population	1
Percentage	2%



All in all, a fairly good percentage of students (42%) were revealed to have good knowledge about effective strategies to use in their translation as they recognized the utility of paraphrasing in escaping the dominance and interference of the source form. 29%, on the other hand, reported their knowledge of the utility of finding a way to express the intended idea without being obliged to use the same word used by the original writer. Only a small fraction of the students answered they resorted to help or leaving a blank for the word they could not guess. However, this percentage was to a great extent on a par with their practical knowledge assessed in the previous questions pertaining to their procedural knowledge. The same fairly amount of students (nearly half of the population) were found to be able to detect what went wrong in their translation and were able by the same token to tell if they reached a solution or not. However, their actual rendition in the translation test sometimes revealed inadequacies and inefficiencies in putting those conceptions and assumptions about overcoming translation problems into actual use. It is true that most students who ticked (“c”) as their first strategy (paraphrasing the structure to ease its transfer) were found to be among those who scored well in the test. Yet, some of them did not do well as the marks they obtained may reveal. The following table gives an overview of these results:

Scores of students who said they find a way to omit the word they could not translate	Scores of students who said they leave a blank	Scores of students they said they paraphrase	Scores of students who said they immediately ask for help	Scores of students who opted for other options
13 10 8.5 8 7.5 X 2 7 X 4 6.5 6 X 4 5	13 8 6	14.5 14 13.5 13 12.5 X 2 12 X 3 11 X 2 10 X 1 9 8 X 2 7.5 7 X 2 6 5 X 4	5 6	14 10 X 4 8.5 8 7.5 7 X 3

As we can see, the majority of students who obtained good marks belong to the category of those who opted for the paraphrasing strategy as a first solution they resort to in order to overcome the problems they encounter. However, a significant number of students who said they make use of this strategy obtained poor results in the test. Thus, 10 students out of the total of 23 who ticked this option, obtained marks equal or below 8/20. Moreover, the student who was reported above to have a good procedural and conditional knowledge of what strategy to use, when, why and how has obtained only 8.5/20. This suggests that knowledge of the utility of a given strategy is no guarantee that the student is able to activate it when required. A possible source of hindrance to such activation is a poor command of the languages in question as has been suggested earlier, especially as regards the decoding language.

Question n° 9 was: How do you evaluate your translation of this text?
 a-very good b-good c-average d-bad e-very bad f-I don't know.

This question aims to assess students' ability for self-evaluation. Students who are able to self-evaluate their work may be said to be metacognitively aware about the process they have undertaken and the factors contributing to its success. However, to reach this latter conclusion, their evaluation should match with their effective performance. In other words, the judgments they make about their performance should comply with their actual production.

Students' answers to this question were:

Options	A	B	C	D	E	F	No Answer
Total number of the population	0	11	33	0	0	10	1
Percentage	0%	20%	60%	0%	0%	18%	2%

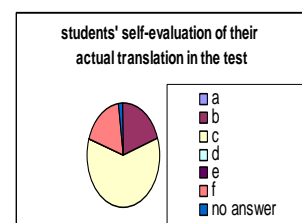


Table 49: Students' self-evaluation of their actual translation in the test

Overall, students' answers to this question correlate with their actual translation in the test. The majority of students (66%) said their translation was average and it was, indeed, if we take their scores in the test into account. However, 10 students said they did not know if they had done well or not. This is not a slight percentage and it pinpoints a problem in their ability to self-evaluate. Self-evaluation is a prerequisite to students' ability to make a progress and to their readiness to cooperate in the learning enterprise. It also reflects the degree to which they were gearing their task and monitoring their process. Thus, a student who does his best to overcome whatever problems he faces in his translation, feel more trust in himself and is more liable to produce a correct picture of what he is actually able to produce.

In what follows is a table summarizing the relation between their self-evaluation and their actual scores in the translation test they have just undertaken, compared as well to the evaluation they gave of themselves before undertaking the translation test. Cases of discrepancy are typed in bold. A discrepancy is a mismatch or absence of correlation between the student's evaluation of him/herself and his/her actual performance:

Students' evaluation of their Competence	Students' evaluation of their Translation in the test	Students' actual marks
Very good	Good	12.5
Good	Good	14.5/20
Good	Good	14/20
Good	Good	7/20
Good	Average	12/20
Good	Average	10/20
Good	Average	8.5/20
Good	Average	8/20
Good	Average	7/20
Good	Average	7/20
Good	I don't know	9/20
<i>Average</i>	<i>Average</i>	5
<i>Average</i>	<i>Average</i>	6
<i>Average</i>	<i>Average</i>	12
<i>Average</i>	<i>Average</i>	6
<i>Average</i>	<i>Good</i>	13.5
<i>Average</i>	<i>Average</i>	11
<i>Average</i>	<i>No answer</i>	11.5
<i>Average</i>	<i>Average</i>	11
<i>Average</i>	<i>Average</i>	10
<i>Average</i>	<i>Average</i>	13
<i>Average</i>	<i>Good</i>	12.5
<i>Average</i>	<i>Average</i>	5
<i>Average</i>	<i>Good</i>	6
<i>Average</i>	<i>Average</i>	13
<i>Average</i>	<i>I don't know</i>	7.5
<i>Average</i>	<i>Average</i>	10
<i>Average</i>	<i>I don't know</i>	7
<i>Average</i>	<i>Average</i>	8
<i>Average</i>	<i>I don't know</i>	6.5
<i>Average</i>	<i>I don't know</i>	5
<i>Average</i>	<i>I don't know</i>	6
<i>Average</i>	<i>Average</i>	7.5
<i>Average</i>	<i>Good</i>	8
<i>Average</i>	<i>Average</i>	7
<i>Average</i>	<i>Average</i>	7
<i>Average</i>	<i>Average</i>	10
<i>Average</i>	<i>Average</i>	8.5
<i>Average</i>	<i>Good</i>	7.5
<i>Average</i>	<i>Average</i>	12
<i>Average</i>	<i>Average</i>	5
<i>Average</i>	<i>Average</i>	7
<i>Average</i>	<i>Average</i>	5
<i>Average</i>	<i>Average</i>	13
<i>Average</i>	<i>Good</i>	8
<i>Average</i>	<i>Good</i>	7
<i>Average</i>	<i>Average</i>	7.5
<i>Average</i>	<i>I don't know</i>	5
<i>Average</i>	<i>Average</i>	6
<i>Bad</i>	<i>I don't know</i>	7
<i>Bad</i>	<i>I don't know</i>	6
<i>Bad</i>	<i>Average</i>	6
<i>Bad</i>	<i>Average</i>	5
<i>Bad</i>	<i>Good</i>	7
<i>I don't know</i>	<i>Average</i>	6
<i>I don't know</i>	<i>I don't know</i>	10

Table 50: A comparison between student's prior evaluation and post evaluation with their actual marks obtained

Again there are more cases of discrepancy among the category of students who felt they were average in translation. It is important to note as well that students who said were bad in translation were much perplexed and confused this time when asked to give a direct evaluation of a known work which was theirs. Thus, those who answered “I don’t know” gave an evaluation which goes against with what they actually did. This may be seen to be further evidence that students at the bottom of the scale know they are not doing well but do not know exactly what is going wrong with them.

Question n°10 was: If you are not satisfied with your translation say why?

- a-I have never done well in translation.
- b-The text was difficult for me.
- c-There are problems I am not sure I have succeeded to overcome/solve.
- d- Time wasn't enough to finish my translation.
- e- I don't know.
- f- Other Please specify.....

This question aims at assessing furthermore students' awareness about themselves as learners and about their weaknesses. If, for example, a student answers "I have never done well in translation", one may be inclined to judge his lack of self-awareness, i.e., the student is not in a position to say what went wrong with him exactly and is less ready and not well tuned to receive help and direction. Nearly this same value judgment may be inferred from the answer of a student who opt for "I don't know", with the difference that this student may be said to be more ready to receive help and feedback. In brief, the answers students would give would show the kind of student they are and their state of mind as efficient participants in the learning process. Students are nevertheless invited to offer their own answers if none of the propositions suggested correspond to their own beliefs and assumptions.

Students' answers to this question were:

Options	A	B	C	D	E	F	No answer
Total number of the population	6	3	18	2	5	11	10
Percentage	11%	5%	33%	4%	9%	20%	18%

students' reasons for not being satisfied with their translation(first order justification)

- a
- b
- c
- d
- e
- f
- no answer

Table 51: Students 'reasons for not being satisfied with their translation

The first thing to note is the number of students who decided to answer this question. This question, in fact, was addressed solely to students who were unsatisfied with their rendition in the test. However, nearly all students (except 10) offered their answers to this question. This is in part natural as perfection is impossible to attain, and as such full satisfaction is not likely to be expressed by any of the students. This state of affairs may suggest students' awareness about their weaknesses and their need to go further in the development of their competence.

As for the justification they provided, the majority of students (33%) said that they encountered problems to which they could not find solutions or were not sure about their correctness. Eleven (11) students, however, offered answers other than the ones suggested as options to tick. This is, in fact, another indication of a certain awareness on their part as they have showed they were able to express their own problems using their own words. Their answers are literally reproduced here as follow:

1-"this is what I can do"

2-" I'm not sure if my translation is in just way"

3-"I didn't do my best and I could have done much better than that. I didn't give much importance to the text while I was translating"

4-"some structures were difficult"

5-"I don't have a rich vocabulary which allows me to translate well"

6-"because this is what I know"

7-"lack of concentration"

8-"I don't have a good style"

9-"language is very huge"

10-"I have a problem that I never have a self-confidence"

11-"I have to translate more texts and find the tricks"

Some students attribute their failure to external factors such as the case of students 6, 7, 9 and 10 above. Some tend to give concrete answers demonstrating an ability to know where the problem is, e.g. students 11 and 4. Some, however, think they know what the problem is but their answers show they do not (e.g. student 8, 5, 2)

Among the ten (10) students who did not answer this question and by this token did not express their dissatisfaction with their performance, four (4) answered "good" in the previous question related to their self-evaluation of their own translation of the text. Five (5) of them answered "average" to the same question; whereas, one (1) did not answer that same question at all (it is noted that this student was careless in his reaction to a number of other questions as well).

Among the students who answered this question and were thus seen to be unsatisfied with their translation, ten (10) answered "I don't know" in the previous question, i.e., they don't know if they have done well or not in their translation. Three (3) of them justified their non satisfaction with the fact that there were some problems they could not overcome easily (option "c"). Two (2) among them re-expressed their lack of knowledge again in this question. One ticked explicitly option "d" ("I don't know"); whereas, the other expressed himself as follows ("because I am not sure if my translation is in just way" (sic)). The student's answer reflects his lack of knowledge presented under another disguise. One of the student attributed his non satisfaction to his lack of concentration, whereas, another attributed it to a lack of style. For another student the text was difficult as he ticked option "d" offered by the examiner. Still another student offered to explain that that language was huge, certainly meaning that he cannot know here again what is wrong as he can never be in command of all aspects of language. This is a judicious answer to escape appearing ignorant or to avoid saying "I don't know" twice.

27 students who answered "average" in the previous question felt concerned with this present question, the fact which may be interpreted that they were not satisfied with their rendition in the test. So "average" for most students making this population may not be equated with satisfaction. 8 students, however, who answered "good" in the previous question, felt also concerned with this question by providing justification and explaining their reasons for not being satisfied with what they did in the translation of the text.

Some students ticked more than one option as a second order justification as shown below:

Options	B	C	E	F
Total number of the population	1	1	2	4
Percentage	2%	2%	4%	7%



Those who offered answers other the options proposed were a total of 4 students and they said:

- 1-"I would like to improve my level in English pour me faciliter la traduction"
- 2-"I have a problem in the cohesion of sentences"
- 3-"sometimes I don't understand the meaning of the text"
- 4-"Je crois que j'ai pas beaucoup de niveau"

These answers relate all to the students' competence in the languages involved which is a true cause of a bad production in translation. Overall students feel inadequacies in their command of languages which blur their vision of self-evaluating themselves. The answer N°4 above reveals such a doubt on the part of the student about his competence in general as he used the verb "I feel".

Question n°11 was: is there any word, expression, or something of the like you have retained from the text you have been translating?
 a-Yes b-No

The aim of this question is to assess students' processing ability in terms of their endurance and perseverance with the task in question. We may be tempted to think that the harder the student works on his translation and strives to find solutions to problems he encountered, the better his memory will be in terms of retention and learning of new vocabulary and grammatical items. Robinson, in this respect, believes that *"the less relevant a thing is to you, the harder it will be for you to remember it. Things that do not impinge on your life experience 'go in one ear and out the other' "* (2003:55). Following this line of thought, the student who does not do his best in struggling with the text to be translated is not liable to remember any details or retain any word from the task he was undertaking.

	Yes	No	No Answer
Total number of the population	32	20	3
Percentage	58%	36%	6%

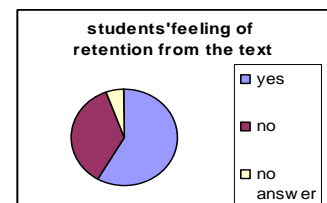


Table 52: Students' evaluation of their retention capacity

One (1) of the students who answered "No" to this question wrote next to his answer "I know most of them", which means that the text he was asked to translate did not include new vocabulary items the students did not master already. This student obtained 12.5/20 in his translation, and he is the same student who was shown to be confident when analyzing the previous question. Self-efficacy and the image one has of himself and his aptitudes seem to have a positive effect on one's performance. One would wonder if this remark can be generalized had we a significant percentage of students showing these attributes!

There are three (03) students who did not answer this question. One of them seem not to have understood the question as he answered "yes, I have a problem in structure" in the next question where he is asked to state actual examples of things he has retained. One (01) student, however, is just being careless again as he did in a number of questions. Another student looks hesitant as he was careful to answer all questions, but he was among those who ticked most of the time the option "I don't know" whenever it was offered as an option by the examiner.

If we just look at the percentage of students who answered "yes" to this question (whether they retained anything from the text they have been translating or not), we may be tempted to conclude that the population under study is endowed with efficient cognitive processes and concentration. However, we should be careful not to generalize unless this reaction is sustained by concrete examples liable to reveal the nature of such processes. Thus, question 12 below is particularly aimed at this issue.

Question n°12 was: if "yes", what is it or what are they?

Students who answered this question are those who answered "yes" in the previous question and their total number is 32.

The answers they gave vary between single words, phrases, collocations and full expressions. They also vary between old vocabulary items (probably already known by the students but not in the combination observed in the text, e.g. water crisis, water is human's business....) and new vocabulary items (newly acquired by the students as may be guessed, e.g. scarcity, bound to increase,...). Another remark that may be drawn from the students' answers is the number of items they suggested. Some gave a long list while some suggested one word only. This may indicate the kind of effort they were exercising during their translation. Those who strived a lot with their translation are more likely to retain

more elements from the text. Some students, however, just mentioned the nature of the entity they said they retained (e.g. "sometimes expression and structure and sometimes the sens also"(sic)). Some others just gave very vague hints at what they retained (e.g. "the first sentence in the second paragraph/the last sentence of the last paragraph). This last case, though barely useful in the present analysis, underpins a correct assumption about retention in general. We all tend to remember the beginning and the end of discourses we may have to process!

Some other students were not able to reproduce correctly what they said they have retained (e.g. "the crisis is not about little having too satisfy our needs"/ "water in cricis..."). This latter case is an indication of the sort of flaws that characterize their retention. That is to say, these students are not able to retrieve correctly what they themselves said they retained (a mismatch between their judgment of knowing and their actual knowledge). Two students understood this question as being concerned with what they have learnt from the text and not what they have retained. One of them made a comment about the coherence of the text (*"I haven't understood its moving from idea to the next one, as in every new one he put an end and restart several times there will be a segmentation at the end, no coherence"* (sic)). The other student made a similar comment related to the coherence of the text and its flow of ideas and added another comment related to his own appreciation of the information he learnt from it (*"there was no coherence and no logical movement. From meaning yes, from now we have to be careful when we use water!"* (sic)).

Overall, students' answers to this question show the deficiency in their ability for retention. Most of them retained just a few words in isolation. Some of them even gave distorted forms of what they stored in memory. The quality of what they actually retained shows that they were not using their full resources for processing. This is a clear indication

that metacognitive ability as concerns their cognitive processing (actual monitoring) is weak. Moreover, these students, as it seems, are not able to learn from the material they use in their translation task. Resnick (1987:17) was one among those who believed metacognition to be a component of intelligence, and who suggested important general metacognitive skills to apply across different situations. These include:

- “- Keeping track of one’s own understanding of the issue under consideration
- Organizing one’s attention
- Organizing the available resources
- Reviewing one’s own progress”

Moreover, the quality of what students actually said they retained is grammatically incorrect, which also suggests their inability to acquire grammatical knowledge implicitly. Translation learners are language learners at the same time and they should pay great attention to language mechanisms at many level of analysis to sustain their linguistic development in the languages involved. A translator is in a better position than any other user of language to be aware of the linguistic intricacies of the texts and passages he happens to process. The quality of retention of the students making up for the population of study plus the comprehension mistakes they produced in their translations show they have rather a poor cognitive processing which appears to be mainly due to their linguistic deficiencies in the two languages involved especially in English.

4-General Results

The results obtained so far show that students possess some kind of metacognitive knowledge but their knowledge or awareness is deficient and insufficient concerning many other aspects of the process. Thus, they are metacognitively aware mostly of the task overall and the conditions contributing to its success. They have knowledge of what translation is and how it should be undertaken and what factors play a role in its

realization. When asked what translation was, most students could provide correct definitions, though limited or too general sometimes. When asked what they thought was necessary beyond the bilingual dictionary, they were also able to give good and plausible answers. They were also successful (the majority at least) in commenting on some statements and assumptions about translation (c.f. question 8/part 2). The majority were in a good position to evaluate themselves in terms of competence and progress they had made, and their ability to track their own mistakes. However, this evaluation rests upon a general comment they make without being able to go further and deeper in the analysis of what exactly went wrong in their competence or performance. Students who belong to the category of low achievers (those whose scores were low) were found to be more accurate in the evaluation they gave of themselves as zero cases of discrepancies were noted between their evaluation and the scores they obtained in the test (they said they were bad and they did bad actually). Yet, when asked to justify their evaluation, they were not able to objectively tell what their problems were. Most of them were attributing their weaknesses to factors that escape their control and are not liable to help them change their conditions. In attributional terms (in reference to attributional theory of motivation), these students motivation is extrinsic and by this token they are less likely to do their best and to become autonomous learners.

Moreover, these students, making up for our population, seem to lack a sound awareness of the strategies they make use of when overcoming translational problems and they sometimes even seem not to know which strategy to employ and when. Their store of strategies is poor and very limited and too general as a procedural knowledge although they know when they are meeting a problem and they often can tell if they have solved it or not. So the problem is mainly with their ability to activate a given strategy or to choose from the bulk of strategies they already possess.

So to recapitulate and to bring direct answers to our research hypotheses, we may say:

- As regards the first hypothesis, third year students of translation are metacognitively aware of translation as a skill or competence to be acquired. They overall know what translation is and what it involves as a skill. They can gauge their own progress and tell about their own aptitudes in general terms, which is mainly an indication that they know the requirements of this skill and how it is acquired. They are aware of the limitation of the bilingual dictionary and they can avoid a lot of misconceptions about translation when asked to evaluate a set of statements involving many aspects pertaining to translation learning. This may partly suggest that the theoretical course they might have been exposed to is fairly adequate to give them the required awareness they need to learn translation. Their problem, then, may not be said to be related to a lack of a sound theoretical background.
- As regards the second hypothesis, third year translation students of the University of Constantine have a quite good awareness of the task nature and what translation involves as a problem solving activity. They can give examples of problems they actually encountered, and they can tell whether they succeeded or not to solve the problem they stumbled at. However, this awareness is rather superficial in nature and poor in quality. Most students reported problems in relation to vocabulary items only. Other problems pertaining to deverbalization and verbal intelligence in finding the exact word or expression for a given idea, which often appear to be their main problems during translation assignments undertaken in the classroom, were not reported at all. Some other students described their problems in very general terms or failed to report the exact problems that were revealed in the translation they handed. Generally speaking, these students lacked the regulatory mechanism that is normally responsible for the activation

of their monitoring and control abilities (detecting one's problems and mobilizing the appropriate strategy to bring the most appropriate solution). Thus, students making up for our population of study are not equally aware about all aspects of translation. They seem to be endowed with declarative and conditional knowledge more than they are with regulatory and control abilities. This may be an indication that they need more guidance and supervision while translating. A full reliance on integral texts with the belief that a longer exposure would make students able to infer appropriate translational strategies does not seem to be tenable in this respect.

- As regards the third hypothesis, metacognition in its declarative and conditional components (the components that were confirmed by the investigation) does not appear to have a direct effect on students' competence as shown through their performance in the test. Not all students possessing a sound knowledge about translation were able to produce good translations. There were even cases of students who did well although the ideas they hold about translation were false or inadequate. Many cases of discrepancies were revealed in the results obtained by students when analyzing many questions concerning their awareness, with regards to many aspects of translation. For examples, when asked to evaluate their translation, most students said they were average but the results they actually obtained showed many discrepancies.

A recurrent problem among students who reported having a problem in their translation performance or competence is their awareness of the deficiency in their mastery of the two languages involved. However, their cooperation in the learning process seems to be kept to a minimum as they attribute their failure to external factors or rigid variables that are not liable to change (for example, "time wasn't enough", "I have never done well in translation", "I have always a problem in self-confidence"...). These kinds of answers

show that these students ceased to stick to hope and are rather unwilling to contribute to their own improvement.

As for the impact of this metacognitive knowledge on the students' performance and hence on their translational competence, we may be inclined to say that students making up this population of study were either of two types:

-Students whose knowledge about their competence and abilities corresponds to their actual performance.

-Students whose knowledge about their competence and abilities is opposite to what they actually do.

It is hard to declare once for all, at least for the time being, which category prevails in our population of study. The highest percentage seems to fluctuate from one question to another. This may be attributed to the variation among students as regards the type of metacognition they are most characterized with. Some students, as has been noted before, are more aware of the task nature and less aware of the process and vice versa.

Some students were nearly perfect on all aspects of metacognitive knowledge (they know a lot about translation- they make correct judgments about their competence and weaknesses- they can evaluate their production-they can tell about the progress they make....), but their performance in the test was just average (as they expected) and has shown major problems the students were encountering in their task. Here, it may be said that their metacognitive knowledge had no effect on their performance. However, they still may be expected to make progress in their acquisition of this competence (they themselves declared that they made progress from the first year till now in one of their answers in the questionnaire).

The population under study, it should be remembered, was not homogeneous as regards the results obtained from the translation test. The heterogeneity, it is believed,

perpetuated all along the analysis as students were not on the same line of thought concerning many questions related to their metacognitive awareness and actual reactions to aspects of their translation in the test they have undertaken. A common characteristics, however, was probably their weakness in regards to the linguistic competence of either of the languages involved, as has mostly been apparent in their translation (they were either poor producers in Arabic or deficient processors in English). Their most important problems in the translation test were mainly related to aspects of cohesion and fluency of the discourse (they tend to stick to the original form of the text and respect the number of sentences and punctuation marks of the source text). They sometimes do not even seem logical in their understanding of the piece of discourse they aim to transfer into Arabic. Their process seems to go on mechanically without much thinking.

All in all, due attention is to be given to the students' translational process and learning process as well. Students' retention capacity was found to be limited and deficient. The number of words they could retain from the text they most said they have been reading more than twice shows they were not actually giving much importance to the translation operation they went through. Some even reproduced deformed and wrong forms of what they have actually retained. Most of them do not seem aware of the possibility of making advantage of the text they process for translation. As learners, they seem to lack autonomy because their cognitive process was revealed through their retention capacity and its quality to be mechanical and reckless. A translation student is supposed to give more attention to what he does from the moment he embarks on the task till he feels self-satisfied and confident to submit his product. Robinson (2003: 10) emphasized the importance of this awareness: *“subliminal functioning without critical self-awareness quickly becomes mind-numbing mechanical routine; analytical critiques without rich playful experience quickly become inert scholasticism”* A translation student is a

permanent learner of his/her working languages and the texts they come to translate may serve them the dual aim of exercising their translation competence and enforcing their linguistic skill in the source language in either reception or production. However, the process students went through seems to be mechanical and superficial lacking aspects of concentration, monitoring and control.

Metacognition, then, appears to be a fundamental component in the educational setting, in bringing to the fore students' awareness of their own strengths and weaknesses and their own perception of their progress, and the route they should undertake to enhance their acquisition process. However, it can in no way stand for, or replace the basic component of linguistic mastery which is at the core of translation competence. The linguistic competence was found to be a major stumbling block in the way of students. Metacognition may be assumed to fulfill a better role for more advanced learners whose mastery of languages is better sustained. Low achievers (students who actually scored low in the test) were found to be able to accurately evaluate themselves as they knew they did not do well. Yet, they were found to be unable to tell what went wrong exactly. The factors some students attributed to their failure were also found to be subjective and uncontrollable and of no use in bettering their achievement. All these aspects show that students need help and guidance to understand how to learn and what to do to be integrated in the process of learning.

However, the present research is also sustained by general observations drawn from everyday teaching in the department of translation. As a teacher of translation and in the course of teaching this skill, we often notice that some students are eager to acquire this skill and make profitable contributions in the classroom with the help of their peers even if they suffer a linguistic inadequacy. When, it comes to examination and testing, they are less ready to show their strength or signs of awareness. This reinforces the hypothesis that

students' lack of an adequate linguistic background stands as an obstacle to their advance in achieving autonomy and reinforcing their procedural knowledge. In other words, the more they are hampered by their incompetence in the language(s) involved, the readier they are to give up any serious attempt to tackle the translational problems they stumble at. Christine Nord (2005: 211) explained, in this respect, the difficulties translation teachers find in achieving the balance between students' needs in terms of linguistic knowledge and those needs pertaining to translation per se. She says, "*if translation is taught too early, i.e., before the students have reached a sufficient command of language and culture, translation classes will degenerate into language acquisition classes without the student or the teacher even realizing it*". This is amenable to rethink the prerequisites for translation training and teaching, and a sound consideration of students' difficulties in particular linguistic domains while translating.

The next chapter is particularly devoted to answer these questions and shed light on some of the implications and pedagogical suggestions yielded by the present study.

CHAPTER SIX: Pedagogical Implications and Suggestions for Further Research

Introduction

Having completed this research, it is obvious to come out with some ideas and suggestions to be implemented in the pedagogical setting or exploited for future research. The results obtained so far shed light on many aspects of translation learning/teaching that need further analysis and attention. They also highlight the nature of the metacognitive component in translation and its potential role in pushing translators' competence further. Before presenting some suggestive remarks pertaining to translation teaching *per se*, it is important to present an overview of major results brought by this research as regards students' translation competence and factors affecting it positively or negatively.

1- Overview of major results

First of all metacognition is not a magical wand that requires an extraordinary treatment, but rather a general ability students are endowed with already and which they may have acquired and transferred from other domains of knowledge, and put into application in any new field of study they are acquiring or attempting to learn. However, not all students develop their metacognitive ability to the same degree and not all of them are capable of transferring and applying their general metacognitive knowledge to novel situations of use. As such, Veenman et al (2006) tend to believe that "*metacognitive skills initially develop in separate domains, and later on become generalized across domains*". However, it is not clear what processes are involved in such transfer to new domains. According to Veenman et al, "*these processes include among others, high road transfer and linking metacognition through instruction and feedback provided by teachers*" (ibid). By high-road transfer is meant the kind of

transfer that involves a high degree of understanding, mindfulness and application of strategies that cut across disciplines, in opposition to low-road transfer that involves developing a high degree of automaticity through practice. By this token, teachers are much needed to support students' metacognitive development and self-independence. According to Brown (1983) in Vye et al (1998: 306), informed training needs to replace blind training whereby students are not only taught strategies without information about how and when might they be put in use, but they are also helped with monitoring activities and offered "*opportunities to exercise self-control of strategies*". Students receiving informed training, in this respect, were reported by different studies to have been "*more successful in promoting spontaneous transfer*"(ibid;,306). In the field of translation teaching per se, expert behaviour should be the intended goal of the teacher whereby future translators are encouraged to develop their self-awareness and self-confidence springing from their understanding of the translation process and related skills, and their ability to discuss translations in an objective way (Kiraly, 1995; Ladmiral, 1977 in Coria, 2003:41)

Besides, metacognition is found to be tightly linked to motivation and the ideas learners have of themselves and their abilities. Students may not be ready to activate their process of gaining awareness of what they actually do if they are not motivated to do so. In other words, if students do not see any purpose behind their acquiring translation, and they feel just obliged to study it, they will not be ready to spend any effort whatsoever and will not feel the need to activate their awareness.

The results revealed a poor academic level of the students in either English or Arabic or both. It is important to note that metacognition, as a procedural knowledge making students able to overcome recurring translational problems, is of no use next to the students' poor linguistic background. Some theoreticians would assert that

metacognition cannot replace intellectual ability. In this respect, Veenman et al (2006: 6), said that “*there is ample evidence that metacognitive skills, although moderately correlated to intelligence, contribute to learning performance on top of intellectual ability*”. The same thing, we believe, may be true for language competence. If a student is incompetent in either of the two languages involved or in both, there is no use behind his awareness about whatever aspect of the process. However, metacognition is still beneficial for his learning process as such. That is, students need to know about their strengths and weaknesses and the different aspects pertaining to their acquisition process to have a clear idea of where they go and how. Hence, students gaining access to translation speciality should possess an appropriate academic level in languages which they would try to improve along their process of acquiring translation skill *per se*.

2- Methodological remarks

The questionnaire used in this investigation was not enough to make students verbalize all what they think about translation and whatever aspects pertaining to their learning. Future research can shed light on their thinking process during translation activity to describe their control and monitoring processes when overcoming recurring translational problems. Students may also be interviewed before and after completing a translation task to note the relation between their general and actual metacognitive knowledge and to be able to ask them to give explanations about any discrepancy or question the researcher stumble with during the investigation.

Although there are many factors contributing to the enhancement of students' competence in translation, and it is nearly impossible to tell which factors contribute most in this endeavour, metacognition can still be considered a factor of a considerable importance in the learning enterprise. Students' making up this population were not

found to be highly metacognitively aware. Their awareness of themselves as learners, and of their multiple needs was found to be limited and superficial. It was impossible in our case to weigh appropriately the effect this metacognition can have on their performance. We have found, nevertheless, a certain relation of cause and effect between metacognitive awareness and students' performance. Future research would bring better results and more details if students making up for the population of study are selected according to their high metacognitive profile as may be revealed by a sound methodological tool of measurement, or else are selected according to their good translation competence solely. Homogeneity of the group under investigation, in this respect, can bring plausible results to either translation or metacognition.

3- Pedagogical implications

Metacognition was not discarded in this research from being a key factor influencing in a positive way students' competence in translation. Thus, metacognition is still felt to be of major importance for students acquiring translation or developing their translation competence if more consideration is given to the linguistic component. As such, it seems crucial to suggest ways to implement metacognition in the teaching-learning environment, at least to bring a new breath to the classroom. Thus, teachers should be made aware of their role as guides and facilitators and should know the requirements of the translation skill and all necessary conditions for its development. Students who were found to be lost and unaware of the acquisition process they go through need to be guided carefully into logical and systematic steps that are liable to correct their misconceptions about either translation or learning, and to create the appropriate atmosphere for them to ease their learning or acquisition process. By the same token, teachers need to be metacognitively aware themselves of the skill they are

teaching. For this pedagogical implementation to be successful, teachers should observe certain rules and conditions that guarantee their success and guide their task all together. They must be patient overall, as metacognition is not a habit to be inculcated overnight. Pressley (1995) argues that metacognition as self-regulatory strategies cannot be developed with a limited number of experiences but must rather be part of a lifelong developing expertise reinforced through teachers'scaffolding. Moreover, teachers should themselves believe in the utility of the habit they are trying to inculcate to their learners, in order to be convincing. They should most importantly be tactful and judicious in the way they implement metacognition in their instruction. Translation, according to Douglas Robinson (2003: 49) is:

intelligent activity involving complex processes of conscious and unconscious learning; we all learn in different ways, and institutional learning should therefore be as flexible and as complex and rich as possible so as to activate the channels through which each student learns best.

This means that the activities undertaken in the classroom should address the needs of different categories of students and should be constructed in a way liable to cut the monotony that stands as an obstacle to students' awareness of the intricacies of the task and that might help them deliberately activate their conscious processes. The way the teacher is to meet this requirement is mainly left to his self ingenuity, but overall he needs to observe general common guidelines applicable in all situations of use pertaining to the implementation of metacognition in instruction. These are, for example, the main recommendations Veenman and Van Hout-Wolters (2006: 9) suggest:

Three fundamental principles are known from the literature for successful metacognitive instruction : (a) embedding metacognitive instruction in the content matter to ensure connectivity, (b) informing learners about the usefulness of metacognitive activities to make them exert the initial extra effort, and (c) prolonged training to guarantee the smooth and maintained application of metacognitive activity

There are many tools and techniques suggested by researchers in the literature on the subject to implement metacognition in the educational setting. Using diaries is one among the mostly cited examples that can be implemented in teaching different subject matters. In translation, it seems of a particular use for students as they are supposed to track their own progress by noting down the new elements they acquired and the ones they still stumble at, through the different texts they deal with during the whole period of their instruction. This tool, obviously, stimulates learners to reflect on their strengths and weaknesses and with time they will find themselves obliged to move further and to overcome obstacles standing in their way to develop their translation competence. They may also record particular linguistic patterns of use, pieces of information, new strategies, impressions about their experience, or whatever elements they feel are relevant to their learning enterprise. For a more detailed description of pedagogical tools used to enhance learners' metacognitive knowledge, cf. chapter one.

A diary remains a tool used on the part of the students, and if appropriately explained to learners, is liable to bring the benefits we explained above. However, the success of a diary is highly dependent on the student's will and perseverance as it is mainly initiated by him. A teacher, in this respect, can only encourage the learners to constantly use their diaries and motivate them to persevere. As such, more sustaining tools need to be implemented by the teacher to cater for the meatognitive development

of their learners. It is believed that a special metacognitive environment can incite learners to alter some of their attitudes towards their learning process, and to improve their acquisition process. Teachers need to vary their approaches and techniques according to the special requirements of the skill they are teaching. In what follows a list of activities the translation teacher may use in the classroom. This list is not exhaustive and cannot be meant to stand for a set of heuristics to follow. It is just suggestive of what can translation teachers do to adapt their teaching methodologies to translation students' needs in terms of awareness and better control of their acquisition. Thus, this list of activities can be extended infinitely and modified at will to meet the immediate needs of every group of students.

4-Suggestive Models of Activities

We have seen that the metacognitive approach we adopted prior to the investigation proper was probably not enough to enhance student's awareness of translation and to improve their rendition. Their metacognitive profile, as revealed by this research, was seen to be lacking depth and adaptability. In fact, students need down to earth techniques to make them realize the profit metacognition can bring to their learning enterprise and show them the route they should undertake in order to enhance their metacognitive knowledge and put it in the service of their own acquisition of translation competence. To make students metacognitively aware of their learning process and make them able to cater for their own progress in the acquisition of the translation skill, a set of concrete activities should be devised in which students may take active part. According to Danica Seleskovitch (in Delisle, 1981: 6), teaching translation is not a matter of transmitting knowledge, but rather making students exercise the notions of the skill they are being taught, until they become automatic. Using Delisle's words,

“enseigner à traduire ce n’est ni transmettre des connaissances, ni faire assimiler des notions régurgitables à souhait, mais faire comprendre des principes et y associer des exercices qui assurent que leur application bascule dans le réflexe”. Thus, a translation teaching environment should center around making learners act on their own learning process. Each activity of this set is responsible for at least one aspect of the learning process and has thus a precise objective. The more the learners will be exposed to such activities (to drive their attention to the possibility of autoregulating their learning process), the more aware they become of this enterprise (viz., learning). The activities should be of a variegated nature (of different modes and structures) to cope with the different cognitive styles of learners and with their different psychological aptitudes. For example, activity 01 below cannot be appropriate for a shy learner or learner more liable to be anxious. The more we vary the set of activities we devise, the more chance we have to target the metacognitive process of every learner individually. Moreover, it is important to encourage learners to interact and to actively participate in the activities rather than act as passive observers.

In what follows, we present a preliminary set of activities whose validity need to be experimentally proved by future research. In the course of putting them into practice, the students are invited to comment on them and bring their own contributions. The activities, thus, get enriched throughout the process of learning. Then, on the basis of the results obtained and the criticism brought by the students, the teacher modifies whatever aspects of these activities, and adapt them to the need of his students. Overall, the teacher needs to make his/ her learners more self-aware and self-confident to acquire the appropriate expert knowledge. They need on the top of all to *“use techniques as discussion/defense of translation solutions in front of peers or in translation teams, e-mail discussions, and a student-centered classroom that moves away from the*

traditional teacher-centered “performance magistrale”” (Kiraly, 1995; Ladmiral, 1977 in Corina, 2003: 41)

Activity n°1: A student is asked to provide his own translation of a selected passage on the blackboard. He will be able to make adjustments, correct mistakes, modify elements on his translation in front of his peers. He will not be allowed, however, to answer any question or comment made by his classmates until he finishes his translation. Meanwhile, the other students seating in the class will take notes on the translational behaviour of their friend while he is translating. They are required to make guesses at the thought processes of their friend, then they will be able to check their guesses against the answers this friend will provide them with at the end of the activity.

The objective of the activity is to make the learners aware of the existence of a thinking process behind the translation activity. In observing the thought process of their friend, their attention-with time- might be successfully directed towards their own processes.

Activity n°2: Students are given a text to translate. They are asked to read it carefully and thoroughly. Afterwards the text is taken away from them. The teacher asks them questions about some details in the text. The students work hard to find answers in terms of what they could remember and retain from the text they have been reading. As a second stage, the students are asked questions about the text but this time in the target language. In this way, the students are first encouraged to train their memory for better retention and then translate naturally by going through the deverbalization process using the target language directly.

The objective of this activity is to meet the need of the students to develop a competence in recognizing prototypes of the different texts they are actually translating.

This activity, thus, makes them able to enhance their ability to grasp the maximum of knowledge and skills from whatever text intended for translation they may come to process. Their repeated encounter with a diverse set of texts would diminish the time they may spend later on, in their translation.

An activity of the same kind was proposed by Karla Déjean Le Féal(1993) as has been reported in Jean Vienne (2000:94). In this activity, Déjean Le Féal displays the text to be translated on an overhead projector screen to make students able to grasp the content without giving them enough time to concentrate on the words themselves. Then the students are encouraged to reverbitalize the text in the target language without being influenced by the verbal form of the source text. It is in this respect that we can understand Delisle's emphasis on teaching translation as communication. According to him, the one who translates should be skilful enough to understand how thought is modeled in discourse, i.e., to relate linguistic forms to ideas. In his words, "celui qui traduit doit être particulièrement habile à analyser les articulations de la pensée dans le discours, c'est-à-dire à subordonner des formes linguistiques à des idées » (1981 : 97)

Activity n°3: students may play the role of a teacher by asking one student to give instructions to his classmates, to help them overcome the translation problems a given text may present, or to explain the steps he himself went through when translating the text in question. In doing so, the teacher may note features pertaining to translation and to teaching that the student-teacher brings his attention to, which is the main objective of this activity.

Activity n°4: Students may be required to play the role of a researcher. By being exposed to the development of translation discipline through time, students may be invited to think about possible solutions for the drawbacks and the difficulties the history of the discipline may reveal. Learners may be required to find the place of

translation theory in the field of practice, as the relationship between theory and practice is still an issue of controversy up to now. And this is what Williams and Chesterman (2002) emphasized:

One weakness of our field, however, is the discrepancy between the huge amount of research that has gone into developing and refining conceptual tools by means of interpretive hypotheses, and the much smaller amount of research that has gone into applying these tools to real problems.

Activity n° 5: Students may be asked to write a text on any topic they like (they act as if they are writers), and bring these texts to the class. The teacher chooses one of these texts, and asks the whole class to translate it. Then the teacher discusses the translation of the students with the presence of the writer himself.

The objective of this activity is to direct the students' attention to the importance of taking into account the original writer's ideas while translating. A good translator would always strive to think about what might be the original writer's purpose in choosing one particular expression rather than another.

Activity n° 6: Students may be given a text to translate. They are then divided into small groups of about 5 students each. In each group a spokesman is designed. The students in the group discuss the translation of each other to decide on the best one after they have drawn a list of the advantages and disadvantages of each translation.

The objective of such an activity is to make students aware of the weaknesses a translation may reveal, and the qualities that a good translation should exhibit. By working together, students may help each other correct misconceptions about translation and acquire the necessary information to acquire or sharpen this skill.

5- Suggestions for further research

There is a need to know more about the nature of students' translation competence, and the way to develop it. Once we agree that awareness is at the core of the students' acquisition process, it is important to know how it is manifested during the process of translation. Thus, we need to incite students' to explicitly describe what they actually think about the strategies they employ to overcome recurrent translational problems, and what they do when they get confronted to them, or how they come to decide on the way to solve them. Knapper and Cropley (2000), for example, argue that it is extremely important that people develop an ability to describe and explain their metacognition, as this is liable to bring reflection into conscious awareness and by this token would allow communication to take place between learners. This awareness, as has been explained before, needs time and perseverance to become firmly established in students' attitudes and behaviour. As such, a longitudinal research in this respect is very much welcomed whereby students are encouraged to constantly comment, and annotate their translation assignment during the whole academic year. In this way, students would come to question themselves about the routes they undertake when translating a given text and would realize by themselves the importance of being aware of one's approach and strategies for one's own progress. According to Williams and Chesterman (2002: 7-8), "*one value of such research lies in the contribution that increased self-awareness can make to translation quality. [It might also show] whether you have found any helpful guidelines for your translation decisions in what you have read in translation studies*".

Overall, research in the field of translation teaching should try to bring more sustaining evidence about the route translation learners should take to safely attain their objective of acquiring this skill, and becoming self-independent life-long learners as required by their profession.

CONCLUSION

This piece of research was rather an attempt to draw a metacognitive profile of third year translation students at the university of Constantine, and to assess the effect of this metacognition, if ever, on their competence in translation as shown in their actual performance. The metacognitive knowledge the study aimed to investigate is divided, according to Flavell's model (1976) to three components which are: the declarative knowledge, the procedural knowledge and the conditional knowledge. In other words, students were assessed on their knowledge of what translation is and what it involves as a skill or competence to be acquired, what does translation involves as a process and what strategies to use to solve recurrent problems, how and when. Moreover, their experiential knowledge in terms of awareness of the progress they make and ability to evaluate oneself and one's rendition was brought to the fore for analysis.

The study made use of a translation test whereby the students' competence is evaluated and analyzed according to the mistakes they committed and the marks they obtained based on an evaluation scale, taking into account their rendition in terms of attendance to meaning, mastery of language, respect of cohesive patterns, and ability to produce a natural and fluent message according to the requirements of the situational context of the translation in question. A questionnaire was also used to investigate students' metacognitive awareness. The questionnaire is divided into two parts; the first part (the pre-questionnaire) aiming at assessing students' metacognitive knowledge in general, and the second part (the post-questionnaire) aiming at assessing their knowledge in terms of their reaction to the translation test they have undertaken.

The results showed that translation students making up for the population of study have a metacognitive knowledge concerning some aspects, but lacked a sound awareness concerning other aspects. They were mainly aware of aspects pertaining to

the declarative metacognitive knowledge. They know that translation is not merely a means to acquire languages. They know that the message is more important than form when deciding what to transfer from a language to another. They know that the authority of the bilingual dictionary is very limited...etc. However, their declarative and conditional knowledge was not that efficient. Although they can tell about their strategies, they still cannot overcome many translational problems their renditions in the test, revealed. They seem to know about strategies, but they not seem to make use of them. They sometimes could not tell about mistakes they committed and which they let go unnoticed. Besides, the relationship between students' metacognition and their performance was not safely confirmed as even students who scored high in the test were sometimes found to be puzzled, and not aware of the evaluations they were requested to make.

The linguistic competence of students especially as regards English was felt to be a barrier to any possible effective use of the metacognitive knowledge for improving their performance and competence overall. Metacognition is a high order process of thinking and control that cannot compensate for students' weaknesses at lower levels. Besides the heterogeneity of the sample used for this study is another possible source for this blurring of vision as regards the results obtained.

It is highly recommended, thus, to reproduce this piece of research with a more homogeneous population and with due attention to students linguistic competence.

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Appendix 1: Schraw and Dennison's Metacognitive Awareness Inventory (1994)

Items included in the Metacognitive Awareness Inventory

- 1- I ask myself periodically if I am meeting my goals. (M)
- 2- I consider several alternatives before I answer. (M)
- 3- I try to use strategies that have worked in the past. (PK)
- 4- I pace myself while learning in order to have enough time. (P)
- 5- I understand my intellectual strengths and weaknesses. (DK)
- 6- I think about what I really need to learn before I begin a task. (P)
- 7- I know how well I did once I finish a test. (E)
- 8- I set specific goals before I begin a task (P)
- 9- I slow down when I encounter important information. (IMS)
- 10- I know what kind of information is most important to learn. (DK)
- 11- I ask myself if I have considered all options when solving a problem. (M)
- 12- I am good at organizing information. (DK)
- 13- I consciously focus my attention on important information. (IMS)
- 14- I have a specific purpose for each strategy I use. (PK)
- 15- I learn best when I know something about the topic. (CK)
- 16- I know what the teacher expects me to know. (DK)
- 17- I am good at remembering information. (DK)
- 18- I use different learning strategies depending on the situation. (CK)
- 19- I ask myself if there was an easier way to do things after I finish a task. (E)
- 20- I have control over how well I learn. (DK)
- 21- I periodically review to help me understand important relationships. (M)
- 22- I ask myself questions about the material before I begin. (P)
- 23- I think of several ways to solve a problem and choose the best one. (P)

- 24- I summarize what I've learned after I finish. (E)
- 25- I ask others for help when I don't understand something. (DS)
- 26- I can motivate myself to learn when I need to. (CK)
- 27- I am aware of what strategies I use when I study. (PK)
- 28- I find myself analyzing the usefulness of strategies while I study. (M)
- 29- I use my intellectual strengths to compensate for my weaknesses. (CK)
- 30- I focus on the meaning and significance of new information. (IMS)
- 31- I create my own examples to make information more meaningful. (IMS)
- 32- I am a good judge of how well I understand something. (DK)
- 33- I find myself using helpful learning strategies automatically. (PK)
- 34- I find myself pausing regularly to check my comprehension. (M)
- 35- I know when each strategy I use will be most effective. (CK)
- 36- I ask myself how well I accomplished my goals once I'm finished. (E)
- 37- I draw pictures or diagrams to help me understand while learning. (IMS)
- 38- I ask myself if I have considered all options after I solve a problem. (E)
- 39- I try to translate new information into my own words. (IMS)
- 40- I change strategies when I fail to understand. (DS)
- 41- I use the organizational structure of the text to help me learn. (IMS)
- 42- I read instructions carefully before I begin a task. (P)
- 43- I ask myself if what I'm reading is related to what I already know. (IMS)
- 44- I reevaluate my assumptions when I get confused. (DS)
- 45- I organize my time to best accomplish my goals. (P)
- 46- I learn more when I am interested in the topic. (DK)
- 47- I try to break studying down into smaller steps. (IMS)
- 48- I focus on overall meaning rather than specifics. (IMS)

49- I ask myself questions about how well I am doing while I am learning something new.

(M)

50- I ask myself if I learned as much as I could have once I finish a task. (E)

51- I stop and go back over new information that is not clear. (DS)

52- I stop and reread when I get confused. (DS)

Note: **DK**, declarative knowledge; **PK**, procedural knowledge; **CK**, conditional knowledge; **P**, planning; **IMS**, information management strategies; **M**, monitoring; **DS**, debugging strategies; and **E**, evaluation.

APPENDIX II: THE PILOT STUDY

THE QUESTIONNAIRE

Dear student,

You are kindly requested to fill in this questionnaire to express your most sincere thoughts about translation, how is it taught? And how you think it should be taught? Your answers are very important for the validity of the research we are undertaking. As such, we hope that you will give us your full attention and interest. You may seek clarifications from the teacher whenever you feel the need for that. Feel free to answer in any language you want and don't write your name on the questionnaire you submit to your teacher.

Circle the choice that best represents your answer. You are allowed only one choice. If, however, you feel that more than one choice represent your answer, order your choices with numbers from the most important for you to the least important. (write 1 in front of the choice that best illustrates your answer, 2 in front of the choice that comes in second position,...etc)

SECTION ONE

1-How do you evaluate your competence in English?

a-Good **b**-Average **c**- Less than average **d**-I don't know

2-How do you evaluate your competence in Arabic ?

a-Good **b**-Average **c**- Less than average **d**-I don't know

3-How do you evaluate your competence in English- Arabic translation?

a-Good **b**-Average **c**- Less than average **d**-I don't know

4-How do you evaluate your competence in Arabic- English translation?

a-Good **b**-Average **c**-Less than average **d**-I don't know

5-How often do you read in English?

a-Every Day or More
b-One a week or more a Week
c-Once a month or more
d-Once two months or more
e-Every holiday
f-Never

6-How often do you read in Arabic?

a-Every Day or More
b-One a week or more a Week
c-Once a month or more
d-Once two months or more
e-Every holiday
f-Never

SECTION TWO

1-Why have you chosen to study translation?

a- To acquire a mastery of different languages.

b- I like it

c- To work as a translator after graduation

d- Just a random choice

e- Somebody advised me to do so

f- Other

Specify-----

2-Have your expectations about translation (as a speciality) been met?

a-Yes

b- No

3-If your answer in Q8 has been “No”, please say why here:

SECTION THREE

1-Are you satisfied with the way your teacher teaches you translation?

a-Yes

b-No

2-If your answer has been “No” in Q10, what do you think is wrong with the way s/he teaches you this skill?

a- It is boring

b- It is not systematic

c- It has no clear objective

d- It is too complicated

e- It doesn't cope with the actual level of the learners.

f- Other

Specify-----

3-Do you expect your teacher of tutorial (TD) to teach you something about the theory of translation?

a-Yes

b-No

4-If your answer in Q12 has been “Yes”, is it because:

a-Theory helps me to understand how to improve.

b-It increases my overall knowledge of translation

c-It gives importance to my academic training

d-It explains translation problems in a more systematic way

e-I don't know

f-Other

Specify-----

5-If you answer in Q12 has been "No", is it because:

a- It has nothing to do with practice

b- It adds to my burden of learning

c- I don't understand its relevance

d- I don't know

e- Other

Specify-----

6-What is translation competence for you?

a- A good mastery of languages

b- A lot of practice

c- A number of rules to respect

d- A God gift

e- Other

Specify-----

7-How do you evaluate your progress in translation from the first year till now?

a- Little

b- Average

c- Great

d- Nothing at all

e- I don't know

8-How often does your evaluation of your own translation product match with that of your teacher?

Always

often

sometimes

rarely

never

9-What do you expect from your teacher of translation to make you improve?

THE TRANSLATION TEST

Translate the following text into Arabic:

A Pause to Wonder

If Newton had not discovered the law of gravity, would somebody else have done so afterwards? The answer to this question is a sure yes, for even if Isaac Newton did not exist, there would certainly be some who continue the works of Aristotle, Galileo, Kepler and others, until they arrive at these laws. Others continued the work of Newton and arrived at what we now know about the laws of physics and mathematics. In spite of this, one fundamental and basic thing must be emphasized: all those people made the subjects they excelled in, and devoted themselves to, their own mission and concern; consequently, accomplishing their inventions and discoveries. It was not only because they were geniuses or brilliant, but because with all their thinking, intellect, and sentiments they considered their subjects- mere subjects- as their only worries and concerns.

If millions of apples had fallen on the head of a genius like Pasteur, he wouldn't have cared or discovered the laws of motion and gravity. This wouldn't have been due to deficiency in understanding or insufficiency of genius, but for an extremely simple reason: All of Pasteur's concerns and thinking were preoccupied with, and directed to another subject that had nothing to do with the motion and gravitation of bodies. The same thing is true about Newton himself, for he wouldn't have been able to discover germs because that was a subject irrelevant to his thinking and far from the range of his goals.

THE POST QUESTIONNAIRE

Would you please answer the following questions related to your translation aptitude in general and your translation of the text: *A Pause to Wonder* in particular. Circle the choice that best illustrates your answer. If you opt for more than one choice, order them according to their importance for you (write 1 in front of the answer that best illustrates your position, 2 in front of the choice that is of second importance for you...etc)

1-How many times have you been reading the text before you started translating it?

- a-Once (1 time)
- b-Twice (2times)
- c-Three (03) times
- d-More than 3 times
- e-I have directly started my translation without reading the whole text

2-If you have been reading the text more than two (2) times, say why? Is it because:

- a-I haven't understood it.
 - b-I wanted to have a clear idea about the aim of the writer, his attitude and intention, where and when the text might have been produced.
 - c-My teacher advised me to do so.
 - d-To have a clear idea of how I am going to translate the text
 - e-To assimilate the maximum of information from this text.
 - f-Other
- Specify:

.....
.....

3-What do you do, in general, when you fail to translate a word or an expression in the text?

- a-I leave a blank for it in the target language.
 - b-I avoid using the original expression
 - c-I leave it as it is
 - d-I make a guess whether right or wrong
 - e- I immediately ask for help.
 - e-Other
- Specify.....

.....

4-Have you revised your translation before submitting it to your teacher?

- a- Yes
- b-No

-If yes, say why? Is it to :

- a- Give it more naturalness in the target language.
- b- Fill the blanks I left if any.
- c- Check if I have translated everything.
- d- Other

Specify:.....
.....

5-Do you think that your translation of the text has been successful?

a-Yes

b- No

c- I don't know

6-If your answer has been "No", say why?

a-I haven't found solutions for many problems in the text.

b-I haven't understood the original text.

c-I'm not good in the target language (Arabic)

d-I have never done well in translation

d-Other

Specify.....

.....

Appendix III: The Actual Investigation

THE QUESTIONNAIRE

Dear students,

You are kindly requested to fill in this questionnaire whose results are needed for research purposes. You don't need to write your name on the answer sheet; you just need to report the same number mentioned on the translation test sheet.

The questions require from you either to tick the right answer, to provide your own answer using your own words, or to opt for a choice or more in the list of choices offered by the examiner. In case you choose more than one option, you need to classify them according to the order of your preference (write 1 next to the most important choice for you, 2 next to the second in importance,...etc).

You can answer in any language you want.

Part one:

1-What is translation for you? (Give a maximum two-sentence answer)

2-How do you evaluate your competence in translation?

a-Very good b-Good c-Average d-Bad e-Very bad g-I don't know

3- If your answer in the previous question was "d "or "e " say why?

- a- I lack a good command of the language (s) involved
- b- I can't see what is expected from me to acquire this skill
- c- The teaching methodology of the teachers doesn't help
- d- I'm not giving much importance and attention to learning.
- e- I don't like translation
- f- I don't really know the causes of my failure to acquire this competence
- g-Other/ specify:.....

4-How do you evaluate your progress in translation from the first year till now?

a-Very good b-Good c-Average d-Bad e-Very bad g-I don't know

5- Are you able to track your own mistakes in translation?

a- Yes b- No

6- How often does your evaluation of your own translation match with that of your teacher?

a- Always b-Often c- Sometimes d- Rarely e-Never

7- If your evaluation of your translation rarely or never matches with that of your teacher, say why

- a-Teachers are subjective in their way of correcting translation
 - b-I don't know what is expected from me to do well in translation
 - c-Teachers themselves do not agree on how they evaluate their students' work
 - d-I'm rarely or never convinced with the correction of the teacher
 - e-Other
- Please specify.....

- 8- Say whether these statements are true or false according to you
- a- Translation is not more than a mastery of languages T F
 - b- Translation problems are basically vocabulary ones T F
 - c- Translation is a natural talent that can't be taught T F
 - d- After graduation, we are normally expected to be able to translate all types of texts without any difficulty T F
 - e- A good translation is the one that is based on an exact rendition of the way something has been said in the source language T F
 - f- A translator is not free to bring about any modifications to the original form of the source message T F

Part Two:

Based on your translation of the text "Water Crisis" and on your knowledge of translation in general, answer the following questions

1- How many times have you been reading the text? 1 2 3 >

2- Was there any word you couldn't understand without the help of the bilingual dictionary?

- A- yes
- b- No

How many words? 1 2 3 >

3- Is the bilingual dictionary always enough to reach a good translation?

- a- Yes
- b- No

4- If your answer has been 'No' in the previous question, what else do you think a translator might need?

.....

5- Give an example of a problem you encountered in your translation of the text "water crisis":

e.g.....I don't remember

6- Did you succeed to solve it?

- a- Yes
- b- No

7- How did you solve it?.....I don't remember.....

8- What do you usually do when you don't succeed to translate a word?

- a- I find a way to omit it from my translation
- b- I leave a blank for it
- c- I paraphrase it in the source language to facilitate its transfer in the target language.
- d- I immediately ask for help
- e- other
- please specify.....

APPENDIX VI: STUDENTS ANSWERS TO THE OPEN QUESTIONS

A translation into English is provided for students' answers in Arabic. The translations, however, reproduced as literally as possible students' answers. Mistakes found in these translations are reproduced to give an exact and objective description of the students' ideas.

I- Students' answer to question 1 part I

- 1- "When I translate I feel that I'm playing like a thinking play"
- 2- "translation for me, first it is my study. I like it and I will do my best in order to succeed in it"
- 3-"translation is not only to write a text or a statement with other language, but it is a real dialogue between civilizations and cultures"
- 4- " It is to swim deeply in a source text to bring out a new text that can be understood by other readers and other cultures without making a big difference between the two texts".
- 5-" translate meaning and respecting the structure of two languages"
- 6-" it is the fact of moving from one language to another and keeping the same idea or meaning faithfully"
- 7-" c'est transmettre un texte d'une langue à une autre"
- 8-" c'est intéressant pour moi parce que c'est grâce à la traduction qu'on peut transmettre un message d'une langue à une autre"
- 9-" expressing the same meaning in another language. You give the same meaning in another language. We use some procedures like borrowing"
- 10-' translation for me is a means for knowing the foreign language"
- 11-" pour moi la traduction est un rêve d'enfance d'étudier les 03 langues et d'être une traductrice"
- 12-" it is an option to transfer an idea from a language to another to be understood"
- 13-"it is a science. It is the transfer of words from a language to another and keeping the same meaning"

14-" translation is an art or a work which the translator does and not everybody can do it because it has some requirements"

15-"it is an important speciality because it helps acquire other languages"

16-"it is to transfer words, texts from a source language to a target language"

17-" it is the operation by which we move words, phrases and texts from one language to another"

18-"to transfer a text or words from a source language to a target language"

19-"it is the transfer of meaning from a source language to a target language"

20-"it is understanding a message in a source language, then transferring it into a target language and respecting the meaning and form"

21-"it is a good job. It gives me the opportunity to know and learn different languages"

22-"it is a process by which a source text is re-expressed in a target text"

23-"it is the action of translating science or knowledge from a source language to a target language"

24-"to change a text from a source language to a target language"

25-"it is the action of rendering a text from a source language to a target language"

26-"I think it is transferring words or texts from a source language to a target language"

27-"it is transferring a text from one language to another and to be equipped with some knowledge and culture in all domains"

28-"the ability to reproduce texts from a source language to a target language with the total respect of meaning and grammatical rules"

29-"it is a science, an art and a love of translating and curiosity"

30-"for me, it is the art of transferring a text with all its ideas and its meanings and also with its used expressions and hidden meanings from a source language to a target language with a perfect mastery of both languages"

31-" is to leave the same feeling of a source text in a target text by keeping also the mystery"

32-" for me, it is more than moving from one language to another. It is used to bridge the gap with other nations"

33-"for me, it is a very large domain which include many things such as the knowledge of the two languages and the two cultures"

34-"it is craft, an art and even a science. A craft as it depends of each one's love, an art as it is a personal vision of each one (style of recreation), a science as you need always more of knowledge"

35- "it is a language art"

36-"it is an art"

37-"it is changing words from one language to another. It is also a way to practice language. For me, it's an art that we need in our daily life"

38-" it is reproducing the meaning said in a source language into a target language by respecting the specificity of each language"

39-" for me, it is a very important speciality because you're learning many languages that let you more competent and understand the other who speak the foreign languages"

40-"for me, it is craft that needs a lot of hard work and practice"

41-" it is a creation and a craft. You need to know two languages or more. To be in touch with a general culture. This helps us to communicate to different people and for different purposes"

42-" it is to move from one language to another with saving the technics of the source text"

43- هي عبارة عن تحويل النص الأصيل إلى النص الهدف مع مراعاة البنية اللغوية للنصين و من دون الاحتيال على النص

الأصل بالزيادة أو النقصان (الأمانة في الترجمة)

It is the transformation of the source text into a target text paying attention to the linguistic structures of both texts and without betraying the original text by making additions or deletions (faithfulness in translation)

44- الترجمة هي نقل ما يعبر به في لغة ما إلى لغة أخرى، أي نقل معنى كلمة أو نص من لغة إلى لغة أخرى مع احترام القواعد و القوانين المستعملة في الترجمة و إتقان اللغات.

Translation is the transfer of what is expressed in one language in another language, that is the transfer of a word or a text from one language to another while respecting rules and instructions used in translation and mastering the languages.

45- الترجمة هي الاطلاع على ثقافات الأمم الأخرى و هي مقيدة بزيادة المعارف و تعلمنا كيفية التعامل مع الأمم

Translation is gaining knowledge of other nations' culture and its is constrained by an increase in knowledge and learning the way to deal with nations.

46- الترجمة هي نقل من نص إلى آخر و من لغة إلى أخرى بنقل الألفاظ و المعاني و الأساليب من لغة إلى أخرى و استبدال مادة نصية في لغة معينة بمادة نصية مكافئة لها في لغة أخرى.

Translation is a transfer from one text to another and from one language to another by transferring words and meanings and styles from one language to another and substituting a textual substance in a given language into an equivalent textual substance in another language.

47- الترجمة هي التعبير عن لغة بلغة أخرى أي نقل ما في لغة إلى لغة أخرى.

Translation is the expression about language with a different language, that is conveying what is in a language into another language.

48- الترجمة بالنسبة لي هي حوصلة لجميع المعارف المختلفة في شتى الميادين و هي إمكانية التطلع و معرفة الثقافات الأجنبية فهي شعبة لا تجعلك تتخصص و تلم بخصائص ميدان واحد فقط و إنما كلها السياسية و الاجتماعية و الثقافية و المترجم هو الوحيد الذي يمكنه أن يكون همزة وصل بين جميع هته الأخيرة.

Translation for me is the total of all the different knowledge in different domains and it is the possibility to know about foreign cultures. This is a branch of study which does not make you specialize and gain sound knowledge of one domain only but of all domains whether political, social and cultural and it is the translator who can bring the gap between all the latter.

49- الترجمة بالنسبة لي هواية و حب أتمنى أن أحقق من خلالها يوما ما شيئا ينفعني و ينفع غيري.

Translation for me is a hobby and a like that I hope will help me one day to achieve something useful for me and for the others.

50- الترجمة هي نقل الكلام من لغة إلى أخرى شرط معرفة خصائص اللغة الأصل و اللغة الهدف.

Translations is the transfer of content from one language to another provided one knows the characteristics of source and target languages.

51- الترجمة هي نقل كلام من اللغة الأم إلى اللغة الهدف و هي نقل بين حضارتين مختلفتين.

Translation is the transfer of a content from a mother tongue to a target language and it is a transfer between two different cultures.

52- هي نقل ما عبر به في لغة قوم إلى لغة أخرى شرط المعرفة الجيدة للغة التي تنقل منها و إليها.

It is the transfer what has been expressed in one people's language to another language provided one has a good knowledge of the languages he is translating from and into.

53- الترجمة هي نقل نص من اللغة الأصلية إلى لغة أخرى.

Translation is the transfer of a text from the original language to another language.

54- الترجمة علم يعنى بنقل النصوص من لغة إلى لغة أخرى مع احترام رسالة النص وذلك يتطلب من المترجم أن يتسم بالأمانة.

Translation is a science interested in the transfer of texts from one language to another while respecting the text message which requires that the translator be faithful.

55- قد تكون الترجمة هي نقل نص من لغة إلى أخرى و لكنني أعتبرها أداة لتعلم اللغات و حب لها أي أن أتمكن من التكلم بها.

Translation may be a transfer of a text from one language to another, but I consider it to be a tool to learn languages and to like them, that is to be able to speak in these languages.

II- Students' answers to question4 partII:

1- "The dictionary leads to no sens, so the grammar plays a good role in translation"

2- " translation needs a big knowledge and a lot of practice. Therefore, we sometimes need a dictionary to understand some words, but we have to understand the meaning of the text and the context"

- 3- "we need to read much in the other language and practise translation"
- 4- "the translator might need a good level in grammar and vocabulary and also his translation must have a sens and a good structure"
- 5- " to have a good English and a good Arabic and to be able to combine between the context of sentences. To be educated"
- 6- "the bilingual dictionary is not enough to reach a good translation because you must know well both languages (source and target) besides their structures and vocabulary"
- 7- "because sometimes we don't find the meaning of the word we research in our language or another language (differences between cultures). Also the word can have many different meanings"
- 8- "to do a good translation and correct translation you must know about the source language and the target one, about the people, the culture, the traditions...etc. all these enter in translation because sometimes dictionaries are not able to give a correct meaning"
- 9- " he needs knowledge about the text he will translate. This knowledge is a result of reading books and having a large culture about each language"
- 10- "because there are some expressions he must translate within the context, and the word and its explanation are not enough"
- 11- " the translator must need a previous knowledge of the subject of the text he will translate and he must know the two languages that he works with and must understand the writer's intended meaning in his text"
- 12- " I should master the two languages well. I should be cultivated. I should have knowledge in all domains. I must read books"
- 13- " monolingual dictionaries as well"
- 14- " he must need logical thinking. A specific language. Access to context to make a better choice for the words (restricted vocabulary)

15-" our culture in specific fields. Specific terms in specific fields. We must deal very well with both languages"

16-" a translator must have more documents. He should have an opportunity to discover other cultures in their home country in order to do well in his translation"

17-" the translator must need his own culture"

18-" le traducteur doit aussi savoir utiliser la bonne définition au cas où il y'en aurait plusieurs dans le dictionnaire et ne pas se fier qu'au dictionnaire non plus. Le dictionnaire doit juste être utilisé au cas d'oubli et en aucun cas se substituer au traducteur"

19-" I think that a translator don't waste his time looking for hard words but he has to carry more about the meaning and make sure he's giving a true meaning"

20-" the bilingual can give the words but it can't give the meaning"

21-" he needs also to be cultivated in the languages and their grammar and vocabulary"

22-" the translator needs a background about the context of the subject. He needs also knowledge about his audience. He has to know how to avoid the critic"

23-" we need to read more than 1time. Also we need to understand the meaning and having the ability to transmit it"

24-" the translator needs to know the grammar of English"

25-" the translator must be educated and detain a certain degree of knowledge concerning the source and target language"

26-" the translator must have a good vocabulary and must know the grammar of the two languages"

27-" we should read books so much and enlarge our imagination to find the correct translation and choose the best one in addition to the well concentration to the teacher"

28-" sometimes I need the monolingual dictionary"

29-" the culture (of source and traget language). A mastery of the two languages"

30-" cela dépend aussi du niveau qu'a le traducteur dans la langue cible parce qu'on ne peut pas construire une phrase en se basant juste sur un dictionnaire"

31-" parce que le dictionnaire bilingue ne vous donne pas le contexte et le sens exact voulu par le texte original"

32-" parallel texts (context: the use of words in context). A deep research in other fields such as the scientific one. Dictionary of idioms.

33-" avoir un dictionnaire ce n'est pas suffisant peut être pour savoir l'équivalent d'un mot dans une autre langue mais pas plus que ça car il faut comprendre le vouloir dire de l'auteur du texte. Il faut capter le sens"

34-" must know two languages. The translator needs a monolingual dictionary. Must be cultivated. Must read"

35-" the translator might know the context and needs exactly this word or no other one and he must give a good style of the text"

36-" first of all, to translate is to transform from language to another in this operation. Translation may use many things like dictionary but it is not enough. He needs also his skills in language, writing..."

37-" usually the dictionary doesn't really give the right translation which is the same to text source. This is included in the culture of the language. Me, I never search in the dictionary immediately. I try to get the meaning by myself if not I check it in the dictionary"

38-"the translator needs many things. He has to bring a little bit of information about the text and his culture from where the writer...and also vocabulary, grammar, transformation from a language to another equivalence (like proverbs...)

39-"translation doesn't depend on words but on meaning and the translator must understand the meaning of the text and doesn't focus much on words themselves which may lead to incorrect meaning"

40-" the translator might need a background knowledge of languages. Know the level of audience (to whom he translates), the dynamic equivalences in both SL and TC.

41-" a translator must have all ideas about the subject and he must know the nature and writer of the source text (culture, religion). And he must be skilled and intelligent.

42-" a translator might need a lot of talent. For example, he might have a good dictionary of meaning in his mind"

43-" on a besoin de notre culture et d'améliorer mon vocabulaire parce que la traduction n'est pas de mettre mot à mot. On cherche le sense"

44-بالنسبة لي لو كان هناك قواميس تترجم عبارات كاملة لأن هناك تجد معنى الكلمة منفردة و لكن عند وضعها في السياق بنفس المعنى يكون المعنى مختلف أو خاطيء.

For me, if there are dictionaries liable to translate full expressions because there you find the meaning of the individual word but once put in context with the same meaning the meaning becomes wrong or different.

45-للوصول إلى ترجمة وافية لا بد من التمكن من اللغة من حيث المعاني و البلاغة و القواعد و لا بد أيضا من امتلاك أسلوب شخصي مؤثر، و الأهم أيضا هو معرفة المترجم بالموضوع الذي هو بصدد ترجمته.

To reach a satisfactory translation one must have a good mastery of the language in terms of meaning, rhetorics, grammar, and one must also possess a personal and effective style. Most importantly also is to have a knowledge of the subject matter one is translating.

46-تحتاج إلى إتقان اللغات الأجنبية و التمكن منها. أن يكون عارفا ببيئة و مجتمع اللغة التي يترجم إليها. ان تكون لديه كفاءة مدعمة بالتكوين العام و الأمانة الصادقة و التدقيق المستمر و كذا الذوق. أن يتقيد بعدد الكلمات بل بقيمتها.

He should master well foreign languages. He should have knowledge about his own environment and that of the language he is translating into. He must have a competence sustained by a general training, true faithfulness, constant verification, and taste. He should respect the number of words and their values.

47- على المترجم أن يعرف قبل كل شيء لغته الأم و اللغة التي يريد الترجمة إليها و قواعدها و ثقافتها و أن يتكلم اللغة الهدف و كأنها لغته. كما يجب عليه أن يعرف قواعد النحو و البناء (حروف الربط...) في لغة الهدف و هي مشكل بالنسبة لي.

The translator should after all know his mother tongue and the language he is translating into, and its rules, cultures and to speak the target language as if his own language. He should also know rules of grammar (coordinating conjunctions...) in the target language which is a problem for me.

48- على المترجم أن يكون ذكيا فطنا و أن يفهم ماذا يعني الكاتب أو القائل بالضبط ثم يترجم لأن كل كلمة و لها سياقها في معنى النص فكل كلمة لها معاني كثيرة و السياق فقط يحددها.

The translator should be very intelligent and understand the exact meaning intended by the writer or speaker then translate because every word has its own context in the overall meaning of the text. Every word has different meanings that only the context can determine.

49- القاموس لا يساعدنا دائما على الترجمة في بعض الأحيان إذا وضعنا الكلمة المراد إيجادها في الجملة كما هي في القاموس يختل المعنى. فهذا متوقف على ثقافة المترجم و نباهته في انتقاء الكلمات المناسبة لسياق الكلام.

The dictionary does not help us always in translation. Sometimes if we put the word we want to translate as it is in the dictionary, the meaning will get distorted. This is dependent on the translator's knowledge and intelligence in selecting words appropriate to the context.

50- المترجم يحتاج إلى دعم الأستاذ عن طريق معرفة كيفية الترجمة الصحيحة و بالإضافة إلى حل مشاكل في القواعد أما من جهته فيجب البحث و العمل أكثر و الاستعانة بنفسه.

The translator needs the teacher's help to know how to translate correctly in addition to solving problems in grammar. As on his part, he should make research and work harder and rely on himself.

51- للحصول على ترجمة وافية و سليمة لا بد من كونك متمكنا من اللغة و لا بد من البحث عن المعنى لا المبني، لهذا نلجأ دائما إلى القاموس.

To get an adequate and correct translation you should have a good command of the language and you should look for meaning not form, that's why we always resort to the dictionary.

III- students' answers to question 12/part II: (students' answers to this question have been faithfully reproduced here with their original mistakes)

1-business, a current, World Vision, needs, crisis, water, people, agriculture...

2-water challenge affects.

3-to increase awareness/as long as people believe.../water community/world water forum

4-correcting measures still can be taken.

5-scarcity but before I found it in the dictionary, I translate its meaning and I found that the meaning I bring is near to the word found in the dictionary.

6-awareness

7-huge, wasted, scarcity.

8-water crisis

9-scarcity

10-the current state of affairs, correcting measures.

11-water is everybody's business/increasing awareness

12-water is everybody's business/increasing awareness/ql;ost/zhenever.

13-sometimes expression and structure and sometimes the sense also.

14-obvious/lifestyle/urbanization/huge consumption/water is human's business.

15-water is everybody's business was one of the key messages of the 2nd world water forum.

16-increasing awareness/bound to increase/water community/key messages/everybody's business/domestic use.

17-the water is the business of everyone.

18-almost, everywhere water is wasted. They believe access to water is obvious and a natural thing- wasted-scarcity.

19-water is everybody's business, everywhere water is waisted (sic)/ people are not facing water scarcity.

20-I haven't understood its moving from idea to the next one, as in every new one he put a full stop, however in Arabic we can't put an end and restart several times there will be a segmentation at the end, no coherence.

Words such as: consumption/scarcity/awareness/bound.

Expression or structure no as I've said its moving from one idea to the other wasn't good, there was no coherence and a logical movement. From meaning yes, from now we have to be careful when we use water!

21-there is a water crisis today but the crisis is not about little having too satisfy our needs/ almost/wherever.

22-the first sentence in the second paragraph

The last sentence in the last paragraph

23-water crisis/peoples think that water is an obvious thing.

24-water crisis/water is the business of everybody/decision maker/management of water/scarcity...

25-water fresh/whatever/scars water...

26-with world state affairs/beef/I forget some of them

27-the crisis is not about little having too satisfy our needs/1kg of beef consumption 13000litre.

28-comsption/crisis.

29-water is everybody's business/water crisis.

30-to increase/forum/freshwater/water community/as long as/lifestyle/mostly/domestic use.

31-freshwater/2nd world water forum/urbanization/access to water.../with the current state of affairs.

ملخص البحث:

دور الإدراك فوق المعرفي في تطوير الكفاءة الترجمية للطلبة

تهدف هذه الدراسة إلى تسليط الضوء على دور الإدراك فوق المعرفي في تنمية كفاءة الطلبة في الترجمة. و يقصد بالإدراك فوق المعرفي (metacognition) إدراك الطلبة لإمكانياتهم المعرفية و فهمهم لطبيعة الترجمة و استيعاب كافة العوامل المؤثرة فيها، حيث نعتقد أن هناك فرقا واضحا في الأداء بين الطالب الذي يتمتع بقدر من الإدراك المعرفي و آخر يفتقد إليه. و استنادا لنظرية فلافل (Falvell, 1979) و نظرية شراو و دينيسون (Shraw and Dennison, 1994)، ارتأينا أن نركز على ثلاثة جوانب من هذا الإدراك، و هي:

- إدراك الطالب لشخصه كمتلقن للترجمة (person variables) (ما هي الإمكانيات التي يتمتع بها للقيام بالترجمة و ماذا ينقصه لتحسين أدائه و فيما يختلف عن غيره من الطلبة من حيث كفاءته الترجمية....)

- إدراك الطالب لماهية الترجمة كنشاط و حقل اختصاص (task variables) (أن يكون قادرا على تعريف الترجمة تعريفا عمليا و صحيحا و أن يكون على دراية بخصائص هذا النشاط للتمكن من تبني الاستراتيجيات المناسبة عند محاولة تخطي العقبات....)

- إدراك الطالب للعوامل الفاعلة في عملية الترجمة (strategy variables) (معرفة الطالب لجملية العوامل التي تساعد في تفعيل عملية اكتساب مهارة الترجمة و كيفية استغلال الاستراتيجيات المكتسبة في تخطي العراقيل التي يمكن أن تقف حجرة عثرة في طريقه....)

و لقد اعتمدنا في هذه الدراسة على اختبار كتابي و استبيان مزدوج (قبل الاختبار و بعده). يهدف الاستبيان إلى تقصي إدراك الطلبة حول الترجمة و المترجمين و مختلف العوامل المتدخلة في نجاح مثل هذا النشاط، و أما الاختبار الكتابي فيهدف إلى تكوين فكرة عن أداء الطلبة حيث يقومون بترجمة نص عام من اللغة الانجليزية نحو اللغة العربية و يُقيم أداءهم على أساس نقلهم للمعنى بوفاء و أمانة و كذلك احترامهم لقواعد و مقتضيات اللغة من نحو و ترابط و فصاحة. كما تساعد نتائج هذا الاختبار في التأكد من مدى مصداقية الإجابات المتحصل عليها في الاستبيان خاصة تلك المتعلقة بتقييم الطلبة لإمكانياتهم و أدائهم في الترجمة.

و لقد خلصت النتائج إلى ما يلي:

- يتمتع طلبة السنة الثالثة ليسانس ترجمة بإدراك فوق معرفي لا بأس به على وجه العموم، يمس هذا الإدراك خاصة معرفتهم بمتطلبات الترجمة و بمستواهم الحالي، إلا أنه لا يعدو أن يكون سطحيًا و غير موجه توجيهًا صحيحًا نحو معرفتهم بالاستراتيجيات الضرورية للنهوض بكفاءتهم الترجمة و تقصي أخطائهم و مدى تقدمهم في اكتساب مهارة الترجمة.

- كما بينت النتائج أن الطلبة ذوي المردود الضعيف أكثر معرفة بإمكانياتهم المعرفية من غيرهم، حيث أن إدراك الطلبة ذوي المردود المتوسط يشوبه الكثير من التفخيم أو التحقير عند تقييمهم لكفاءتهم و أدائهم.

- و إضافة إلى هذا، تبين أن للتحفيز الذاتي دخل كبير في توسيع إدراك الطلبة بخصوص كفاءتهم الترجمة، حيث نجد أن الطلبة الذين يُسندون فشلهم أو تردي مستواهم إلى أنفسهم أكثر وعيًا و إدراكًا بماهية الترجمة و ضروريات اكتسابها، و العكس صحيح بالنسبة للطلبة الذين يُسندون فشلهم أو تردي مستواهم إلى عوامل خارجية تفلت من سيطرتهم.

و تفيد هذه النتائج في تسليط الضوء على ضرورة الاهتمام أكثر بالمكون اللغوي للترجمة، و كيفية توسيع إدراك الطلبة و توجيهه نحو خدمة كفاءتهم الترجمة و عملية التعلم الذاتي بصفة عامة، كما تفيد في اقتراح الطرق الواجب إتباعها في الدرس الترجمة للنهوض بقدرة فهم الطلبة لخصائصهم و احتياجاتهم كمكتسبين لمهارة الترجمة و إحكام السيطرة على طريقتهم في التعلم لتحقيق الاستقلالية و الاعتماد على النفس الواجبين من أجل مواصلة التعلم بعد التدرج و الخروج إلى الحياة المهنية.

الكلمات المفتاحية: الإدراك فوق المعرفي، الوعي، الكفاءة الترجمة، تعليمية الترجمة.

Le Résumé :

Le rôle de la métacognition dans le développement de la compétence des étudiants en traduction

Cette recherche vise à examiner le rôle qu'a la métacognition dans le développement de la compétence en traduction chez les étudiants de troisième année licence traduction de l'université Mentouri de Constantine. Nous croyons que les étudiants dotés d'une connaissance métacognitive adéquate sont plus apte à produire de bonnes traductions en comparaison avec ceux dotés d'une connaissance métacognitive superficielle ou inadéquate. Pour aboutir aux réponses requises, nous nous sommes inspirés des travaux de Flavell (1976, 1979) et de Shraw and Dennison (1994) qui font la distinction entre le savoir métacognitive en rapport avec les connaissances déclaratives et le savoir métacognitive en rapport avec le contrôle et la régulation de l'activité cognitive elle-même. Flavell, par exemple, divise la métacognition en trois composantes principales, à savoir la connaissance de la personne, la connaissance de la tâche et la connaissance des stratégies.

La connaissance de la personne, dans notre cas, est centrée sur la connaissance qu'ont les étudiants sur leurs aptitudes en traduction, leurs points forts ou leurs points faibles....etc.

La connaissance de la tâche est concernée par le savoir qu'ont les étudiants sur les particularités de l'activité de traduction, sa nature, ses méthodes et approches, ...etc.

La connaissance des stratégies, quant à elle, met en relief le savoir qu'ont les étudiants sur les moyens d'activer leurs stratégies acquises et les mettre au service des buts tracés. C'est en quelque sorte savoir gérer son potentiel et son action pour résoudre un quelconque problème traductionnel.

La présente étude est basée sur un test en traduction et deux questionnaires jumelés (le premier concerné par la phase pré-test et le deuxième par la phase post-test). Le questionnaire est spécialement conçu pour déceler les caractéristiques du savoir métacognitif qu'ont les étudiants sur leurs aptitudes personnelles, leur progrès, leur capacité de détecter leurs fautes et juger leurs performances, leur savoir sur la traduction en général et sur les différentes stratégies applicablesetc. Le test vise à diagnostiquer la compétence des étudiants en la matière et de vérifier les réponses dans les deux questionnaires.

Les résultats ont met en évidence ce qui suit :

Les étudiants sont dotés d'un savoir métacognitif raisonnable, en général, surtout par rapport aux connaissances qu'ils ont de leurs aptitudes et sur la traduction comme telle. Cependant cette connaissance reste superficielle et non suffisamment adéquate pour gérer leur ressources et les mener vers le succès de leur action. Les étudiants ont encore besoin d'être guidé et dirigé pour arriver à des solutions. Ils ont une connaissance des stratégies de la traduction mais ne savent pas les mettre en application. Ceci dit, la troisième composante de Flavell concernant le savoir stratégique peut être à l'origine des problèmes rencontrés par les étudiants dans l'exercice de la traduction.

En outre les étudiants en bas de l'échelle (ceux qui ont obtenu des notes faibles) sont plus exacts dans l'évaluation qu'ils donnent sur leur niveau ou rendement. Par contre les étudiants qui ont obtenu des notes moyennes montrent beaucoup plus de fluctuations dans leurs évaluations. Donc, un savoir métacognitif exact avec un niveau linguistique inadéquat ne peut être bénéfique pour l'étudiant.

En revanche la motivation personnelle s'est révélé un facteur primordial dans la capacité des étudiants à comprendre leurs besoins et leur potentiel actuel. En effet, les étudiants qui attribuent leur succès et échec à eux-mêmes sont plus conscients et capables de donner une image exacte de leur performance et de leur rendement, tandis que les étudiants qui attribuent leur succès ou échec à des facteurs externes qui échappent à leur contrôle sont moins capables de donner une évaluation objective sur ce qu'ils peuvent réaliser ou ce qui leur manque pour s'améliorer.

Les résultats obtenus peuvent être utiles pour expliquer la façon par laquelle nous pouvons développer la prise de conscience chez les étudiants et la mettre au service de leur compétence en traduction. Ils peuvent aussi être utiles pour l'enseignant en quête de comprendre comment qu'il peut faire bénéficier ses étudiants de son cours de traduction et quelle méthode devra-t-il adopter dans l'enseignement de cette matière. En tout, l'étudiant devra pouvoir profiter pleinement de la possibilité d'apprendre à devenir autonome et de se prendre en charge par lui-même lorsqu'il quitte les bancs de l'université ou s'affronte au milieu du travail.

Mots clefs : métacognition, prise de conscience, compétence en traduction, enseignement de la traduction.