SCIENCES HumaineS

Translation as a Learning Experience: Insights from Cognitive Psychology and Psycho-Pedagogy

Received: 20/02/2018 ; Accepted: 03/04/2019

Abstract

Translation teaching is, often, envisioned solely as a problem of content or approach translating a strong desire to give a new breath to the discipline and help it gain its autonomy in order to be taught for its own sake and to be easily distinguished from a traditional language class. In the midst of this educational turmoil, consideration of the learning enterprise as such seems to be ignored. Future translators are learners who need to continue learn for the rest of their life. They need to develop their independence in thinking and decision. To help students in this respect, a teacher needs to gain insights about psycho-pedagogy and cognitive psychology to understand what learning is and how best it can be promoted and developed. This work is a discussion of the different threads of learning and how they can be manipulated in the service of the future autonomous translators.

Keywords: Translation teaching; learning; psycho-pedagogy; cognitive psychology; future translators; autonomous learning.

Saoussen MADOUI*

Department of Translation University Frères Mentouri Constantine (Algeria)

Résumé :

L'enseignement de la traduction est souvent réduit à un problème de contenu ou d'approche : quoi enseigner et comment? Tout ca pour donner un nouveau souffle à la traduction afin de la distinguer du cours linguistique traditionnel. En faisant, le processus de l'apprentissage en lui-même s'avère négligé. La traduction avant tout est un apprentissage que l'enseignant veille à le rendre accessible à l'apprenant en lui créant un environnement adéquat permettant aux futurs traducteurs de développer leur indépendance et leur capacité à prendre des décisions. L'enseignant ici devra profiter de la psychologie cognitive et pédagogique pour bien comprendre son rôle et songer à le soutenir et le développer. Le présent article se veut être une discussion de ce processus d'apprentissage et de ses différents fils conducteurs qui peuvent être maniés au service de l'apprenant et du futur traducteur.

Mots clés: enseignement de la traduction ; apprentissage ; psychologie cognitive ; psychologie pédagogique, futur traducteur, apprentissage autonome

ملخص

عادة ما يُنظر إلى تعليمية الترجمة على أنها إشكال يقتصر على المحتوى أو المنهج، أي ماذا ندرس وكيف؟ ومرد هذا، الرغبة الملحة في إعطاءً نفس جديد للدرس الترجمي لكى تحظى الترجمة باستقلاليتها كحقل معرفي يختلف عن المنهج النحوي الترجمي أو الدرس اللساني التقليدي. وفي خضمً هذا الجُدل التربوْي، يبدو أن عمليةُ التعليم ذاتها قُد غُيبت. تعليمية الترجمة، قبل كل شيء، هي عملية تعلم يحاول من خلالها الأستاذ أن يثمن كل إيجابي فيها ويساعد في خلق جو مناسب للمتعلم. فمترجمو المستقبل طلاب علم بحاجة لأن يستمروا في التعلم مدى الحياة وهم بحاجةً لتطوير استقلاليتهم في التفكير وفي اتخاذ القرار. ولمساعدة الطلبة في هذا السياق، لابد للأستاذ أن يستفيد من العلم التربوي النفسي وعلم النفس الذهني ليفهم ماهية التعلم وكيف يمكن تطويره وتعزيزه. في هذا المقال محاولة لمناقشة عملية التعلم ومختلف الخيوط الداخلة في نسيجها وفهم مدى ترابطها وكيفية تحريكها بما يخدم مصلحة المتعلم والمترجم المستقبلي المستقل.

الكلمات المفتاحية: تعليمية ترجمة؛ تعلم؛ علم نفس معرفي؛ علم نفس بيداغوجي؛ مترجم مستقبلي؛ تعلم ذاتي.

© Université des Frères Mentouri Constantine 1, Algérie, 2019.

^{*} Corresponding author, e-mail: smadoui@umc.edu.dz

I-Introduction :

Teaching translation is a vast field of study which gets intermingled with many interrelated aspects. It has to do with learners, teachers, content, educational environment, curriculum design, national aims, social, ideological and political considerations, etc. In other words, there are many dimensions to the question each of which deserves to be treated separately. Yet, there is one particular aspect which often seems to escape the attention of translation teachers especially amidst their quest for better content and global approaches. This has to do with the psycho-pedagogical dimension of learning itself. Often translation teachers happen to be graduates from a department of translation, and it is even preferable that they be translation specialists or professionals and not solely language teachers. However, translation teachers happen to lack any serious training in psycho-pedagogy and may be the little knowledge they have in this respect is inspired from their direct experience and observations they had when they were learners themselves. For this reason, an important pedagogical aspect of the problem remains dormant and not very well known to them. There are many things to know about learning to be able to contribute efficiently to the process and without which all serious efforts may be deemed to failure. Learning is a slow gradual process that needs time and patience and this should be clear for teachers to not lose hope and to decide on long-term prospects. Learners and teachers bring a great deal to the process and have significant roles to play. In what follows is an attempt to discuss what learning is and what factors contribute to its success for teachers to adopt and help students adapt to. The present paper is a theory grounded research to highlight areas of interest to teachers and incites them to rethink of their educational practices. The discussion that ensues brings to the fore some insights drawn from educational and cognitive psychology about learning that teachers need to bear in mind.

I.1. Defining Learning:

The first thing to bring to the discussion is a clear definition of learning. Learning in its broadest sense is, in fact, a lifelong process. It is described as a change in our ideas or attitudes towards something we ignored before. This change is sometimes not even felt until someone points it to us. Following this line of thought, learning can easily be seen to be not necessarily intentional or conscious. We are constantly learning how to change our behaviour to better adapt to the environment in which we live, and in the course of this we come to change our beliefs, attitudes, likes and dislikes... by experiencing a lot of events and new situations. Hall (2002) in Woolfolk (2004: 198) suggests, 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". This suggests that learning can also be induced by biological maturation whereby an individual naturally succeeds to adapt to a new situation of use as a result of his growth. This kind of learning needs to be clearly distinguished from intentional learning in which we are interested and that we are supposed to recreate its conditions for learners. Thus, at school 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). This is why it is important to fix some prior learning outcomes to guide teachers and help them gauge their learners' progress. 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). This I think explain the role the teacher has to play in the classroom. As he cannot teach everything, he must be able to help

students use the educational input with which they are equipped to further their learning after leaving school. Is it what we are doing in a translation class? Are students very well guided to make progress? What kind of environment can we help create for learners in general and for translation learners in particular to help them gain the required autonomy?

I. 2. Categories of Learning:

Thinking of the learning environment a teacher may create for learners requires a deeper understanding of the type of learning we are dealing with. 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 categories of learning which require different types of instruction. Thus, according to him, there are five different categories of learning: verbal information, intellectual skills, cognitive strategies, motor skills, and attitudes. Each of these categories of learning calls for a special attention to a given aspect of instruction. These categories sometimes take different appellations or are found to be overlapping with one another in some references on the subject. Thus, Gagne's categorization does not differ much from the learning categories already advanced by Harold (1972: 122), who drew the distinction between 'sensorimotor skills', 'associational learning', 'perceptual motor skills', 'conceptual learning', 'ideals and attitudes', and 'problem solving'. This is a variegated kind of learning varying between primitive skills which requires rote learning and repetitions like in the case of sensorimotor skills (writing, riding, using specific kinds of tools) and some higher order skills like the acquisition of ideals and problem solving which requires a more sophisticated kind of educational environment. In explaining the nature of conceptual learning, for instance, Harold (1972: 124) provides a good example of Indian learners to show how some concepts are likely to affect learning behaviour. Because Indian children believe it is socially inacceptable to rise above the others, their motivation is seen to be unaffected 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 arrogant and to break the social rule in which they believe. The same thing can be said to apply for the concept of translation and its effect on learners' behaviour. Thus, explaining the importance of translation is necessary for teaching to be effective. If translation learners fail to see the use of translation in their social life, they will also fail to fix any learning objectives. This calls the attention of teachers to consider analysing translation in its real context of use.

As for ideals and attitudes, they are not easy to enhance and the teacher should make efforts to help learners in this respect. Ideals, attitudes, tastes and preferences are not innate as they may be believed to be. 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 subjectmatter. A well-organized and coherent lesson may develop the students' willingness to pursue their educational growth even beyond the school years. As such, explaining what translation is and what is required from learners to efficiently contribute in the growth of their society is very important to enhance students' aptitudes and readiness to learn. In sum, not all learning is sitting in class and listening to the teacher explain or answer questions; a lot of learning is about discovering, experiencing, testing, analysing, etc sustained by the intellectual curiosity the teacher is supposed to enhance in learners.

II. Problem Solving as a Key Issue in Translation:

Problem solving is considered by Harold (1972) to be the highest form of learning as it involves the manipulation of abstract ideas and the use of previously acquired knowledge and experience to perceive different nuances of the novel situation in question and explore new paths to reach the goal. 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 in translation, which is basically a

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

Problem solving reposes on the idea that "human cognition is always purposeful, directed to achieving goals and to removing obstacles to those goals" (Anderson, 2005: 240). This means that to solve a problem, we need to have a clear goal, to know how to decompose this goal into sub-goals or subtasks, and apply an operator to help move from one state of a problem to another. The end solution is no more than a series of operators we gradually apply (ibid).

Problem solving strategies may be general or domain-specific. That is, a learner may know a set of general strategies he applies in solving problems of all domains, 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 (Sweller, 1988). This has to do with their schemata which are not enough developed to make them "able to recognize and memorize problem configurations [forcing them] to use general problem solving strategies such as means-ends analysis when faced with a problem." (ibid: 259)

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:

- Identify problems and opportunities: It is to recognize the existence of a real problem and identify it and not just to jump to naming the first one that comes to mind. A real problem should be seen as an opportunity to find an appropriate solution. If the problem is not identified from the start, nothing will happen! That is why learners and translation students, in particular, should be able to precisely identify their problems.

-Define goals and represent the problem: once a problem is identified, an appropriate means is used to resolve it. This requires true understanding of the problem and weighing the relevant information against the 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 into a scheme of actions which may be either straightforward or worked out anew as previously explained.

-Explore possible strategies: In case there is no existing scheme ready to be used directly to reach the solution, the problem solver 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.

-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.

-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. Translators need to be made aware of those stages to gain a realistic view about learning. Thus, translating texts should involve more than exposing students to translation problems, but also monitor their abilities to move through these stages and ensures their passage from novices to autonomous experts endowed with rich schemata and problem configurations. Delisle, in his book "L'Analyse du Dicours comme Méthode de Traduction" (1980) has already advanced a cognitive approach to translation teaching externalizing the mental process going inside the translator's mind to help learners adopt logical paths towards well-thought solutions. More efforts are needed in this respect to help guide learners in acquiring problem solving strategies.

III– Developing expertise and its contribution to translation acquisition:

Anderson (2005) describes three stages of skill acquisition which are the cognitive stage, the associative stage, and the autonomous stage. At the cognitive stage, learners acquire a declarative knowledge about the set of rules and facts appropriate to perform the skill in question. This is actually what happens when we are trying to learn a foreign language or even translation for the first time. At the associative stage, learners start to eliminate errors they used to make at the previous stage and learn to coordinate between what they do and what they know. Again using the example of language learning, they learn to use the language while thinking of the rules they are applying. At the autonomous stage, the procedural knowledge becomes autonomous freeing the mind from the cognitive load required for processing, as experienced in the previous stages. The role of the teacher here is to work on this autonomy to give it accuracy and efficiency. Autonomous experts, as said before, can work efficiently under time pressure.

The more one is trained with problem solving through repetition and perseverance, the more he succeeds to develop his expertise in the field. This needs much practice so that hardships of the novice stage dissipate and free the mind from extra cognitive load. Chase, an expert on expertise, summarized the route towards expertise in two famous mottos: "No pain, no gain" and "When the going gets tough, the tough gets going" (Anderson, 2000: 280). While the first motto is plain and straightforward, the second motto needs clarification. It just means that expertise is best displayed whenever the problem gets complicated by imposing some constraints. An example of these constraints is time pressure. In other words, beginners can do well against experts when given enough time, but they would probably fail if invited to reproduce the same task under time pressure. It is here that their distinction with experts becomes very apparent. In translation, teachers should bear in mind that expertise needs much time and efforts and exposition to challenging situations as described by Anderson: "two dimensions of improvement with practice are speed and accuracy" (Anderson, 2005: 282). A translation teacher is required to instil this dimension in his teaching, encouraging the students to finish a translation task in a limited time, gradually complicating the translation task for them, and offering them motivational support in terms of positive feedback to sustain their perseverance.

III.1. The Role of Teachers as Mediators:

Once we understand what expertise is and what stages are involved in a cognitive activity such as problem solving, it becomes easy to understand that the role of the teacher is more complicated than it appears to be and that there are more responsibilities entrusted to him.

To start with, there are many environmental factors that may be seen to contribute to learning. 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. 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*" (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 receptive. A word of caution to start with is that learning requires great patience from teachers.

The educational practice appears then to be centred 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 in order to help in the cognitive

growth of learners. Fuerstein based his works on the belief that learning is always possible whatever the learners' conditions or cognitive deficiencies. For this, he called for the importance of modifying the environment for the learner to enhance his cognitive ability (Oon-Seng, 2003). According to him, "without mediation, a learner has limited opportunity to benefit from either formal or informal learning." (ibid: 55)

This mediation can take different forms depending on the learning task, the learning situation, the learners' culture...etc. Feuerstein enumerated twelve parameters characterizing the mediated interaction a teacher is required to establish with learners; the three first are present in all learning situations without which the learning task cannot succeed. These parameters are: "intentionality and reciprocity", "mediation of meaning", "transcendence", "feeling of competence", "interdependency and sharing", "reflective practice", "search for optimistic alternatives", "change awareness", "challenge of novelty", "goal seeking, setting and achieving", "individual uniqueness and esteem" (Oon-Sen, 2003: 55,56). Thus, a teacher should raise the learners' curiosity from the start and explain the purpose beyond the activity they are going to undertake. He should involve the learners in any teaching task and make them feel able to face challenging situations and to work cooperatively without underestimating their own capacities and the capacities of their peers. He should help them realize any positive change in their behaviour and gauge any progress they make.

Thus, besides the organisational scheme the teacher should adopt to prepare challenging tasks and translational activities liable to enhance their problem-solving skills, as explained above, the teacher should also bear in mind all mediation features when teaching to help learners gain autonomy and self-control now and then. In the field of translation teaching, a social constructivist approach is already felt to be necessary for the development of translation skills. Gonzàlez-Davies (2016) calls for collaborative learning, forming a community of practice and transforming the classroom to a working environment where the teacher acts precisely as a mere mediator. Gonzàlez-Davies (2016: 71), drawing on the work of Van Lier 1996, highlights three important pedagogical principles in this collaboration, which are:

learner *autonomy*, that is the centrality of the learner's role in decision-making to produce a valid product [i.e., effective translation]; *awareness*, achieved through reflection and interaction while accessing appropriate resources and materials; and *authenticity*, achieved through first-hand situated experiences that include simulations as well as translation projects such as might actually be commissioned (Italics are Gonzàlez-Davies').

These pedagogical principles stress time and again the importance of mediated learning and put in practice Feuerstein's ideas in the service of the translation student.

III.2. Fine-tuning the process of learning

Always as a reaction to a traditional way of teaching translation where learners are passive recipients agreeing most of the time with the problem solutions provided by the teacher and taking for granted any information they are given, and within the same context of pedagogical rethinking, the teacher should act positively to concretize his mediation. Gagne (1985) suggested teaching phases teachers should go through to fine-tune the process of learning, which we are providing here with a direct implication for translation teaching:

a- Attention: learners should be made alert and ready to receive the information or skill they are to be taught. In a translation classroom, a teacher may show learners a translation passage together with its source text to try to appreciate the task they are being

asked to undertake and sense its importance and enhance their desire to know about how to reach the same performance.

b- Expectancy: as a second stage, they should be able to expect the usefulness of what is to be taught and identify the objectives behind the task. I think no teacher failed at least once in his career to notice the case of students who did not even understand the aim of the module they are taught. As far as translation is concerned, a teacher may overcome this problem by trying to put the learners in real contexts of use. He can ask his learners about how one can reach a good translation of the passage at hand and what obstacles they expect to meet and how they envisage overcoming them. He may discuss their eventual answers and correct their misconceptions to make them see and endorse the same objective.

c- Retrieval to working memory: learners' progress can be gauged by their capacity of recalling previous learning situations and using them to face novel situations of use. As concern translation, a teacher may proceed in his teaching from simple to more complex issues drawing the learners' attention to previously tackled translation problems or to previous solutions they have retained. Learners 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.

d- Selective perception: once they understand the nature of the task or information they are being taught, they should be able to focus their attention on relevant aspects of the task or knowledge being taught. In translation, a teacher may 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.

e- Encoding: at this stage, the learners are able to accommodate the newly acquired information to their schemata. A translation teacher may ask his learners to plainly explain what they have been taught to do to overcome a given problem he has just explained. He may ask precise questions to check their understanding.

f- **Responding**: once the new knowledge or skill is grasped, the learner is able to make active use of what he has learnt. In translation, a teacher may ask his learners to translate similar passages (passages dealing with the same problems they have just tackled), or ask them to provide him with similar examples.

g- Feedback: the learner then is able to evaluate his performance and to correct his mistake to act better the next time. As concerns the translation class, a teacher can evaluate the students' renditions and make sure they have developed their ability to self-regulate their performance.

h- Cueing retrieval (enhanced transfer): 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. A translation teacher here may check his students' 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.

The 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 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. This pedagogical loop depicts the efforts the teacher should deploy to hone his students' learning capacities that a monotonous translation class dealing with random texts cannot offer.

III.3. Learners' Super-Skills and their Contribution to Learning

Learning is not the business of the teacher alone; learners are also responsible of the success of their learning and should assume an active role in the process. In fact, they are the heart of the learning process and they contribute to its efficiency at more than one level as explained in what follows. 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 by stressing that "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 in William and Burden (1997: 146)

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. The super skills mentioned above can be inculcated to learners to help them improve. Translation being a cognitive skill, that is an internal process, students should be encouraged to externalise their learning and discuss their control strategies with teachers by asking questions, checking their understanding, tracking their goals and assessing their production. For instance, when dealing with a translation exercise, it is better to invite students to anticipate translation problems and invent strategies to overcome the problem by themselves. A translation teacher should care more about directing students' attention and reaction instead of worrying about the adequacy of their translations. An overcorrecting teacher is likely to miss the chance of developing the learner's autonomy.

III.4. Other Extra Factors Contribution to Learning

Ways of learning have always been affected by the social forces characterising a given era. The prevailing intellectual paradigm, whether reductionist, positivist, holistic, etc, would dictate the educational approach to adopt (Stoll et al, 2003). Bruer (1993: 52) traces back the educational evolution according to four distinctive theories summarizing and elucidating the different educational positions, as explained here:

I- The oldest theory maintains that a learner builds up his intellect through mastering formal disciplines such as mathematics, logic, art, etc and this is the reason why at a given time schools placed 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 were henceforward suggested in the educational programme.

III- With more advance in cognitive psychology, it was found that domainindependent 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 was henceforth concerned with teaching learners, knowledge and representations specific to their domain of expertise, i.e., the domain in which they wanted to excel.

IV- In the early 1980's researchers noticed that intelligent novices can tackle novel problems and situations without enough domain-specific knowledge, by adequately applying general domain independent strategies. This suggested that experts needed more than domain –specific knowledge. This theory was named by Perkins and Salomon (in Bruer, 1993: 55) as the "new synthesis" as it incorporates all the previous theories together to reach a more 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 serves and as dictated by some imminent scientific figures of the time as illustrated here by Stoll et al (2003: 14):

> 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. Since he didn't say 'I feel', 'I sense', 'I intuit', 'I remember' or 'I believe', feelings, intuition, memory, ethics and common sense disappeared from intellectual discourse.

When attempting to teach translation or to devise a teaching curriculum in this respect, we 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 the 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. If the subject to be taught is not given due attention in the surrounding environment of the learner, it is no liable to inspire educators and learners to reach tangible and profitable results.

IV- Conclusion:

The above discussion is an attempt to place translation teaching in its natural context of use which is a purely pedagogical setting before anything else. It unfolds on a definition of learning and its different types to uncover the nature of translation as a problemsolving activity reposing on expertise. It also explains the role of the teacher as a mediator and highlights the super skills learners should be inculcated to contribute to the efficiency of the learning enterprise. It finally hints at some other general external factors such as the philosophical stance of society that indirectly affects the educational aims and students' motivation, and which teachers are advised to consider. A translation teacher needs to know about theories of learning and to understand what actually happen when someone is confronted to a situation of learning to grow aware of his role as a guide, facilitator and mediator and contribute efficiently in the success of the operation by helping students grow autonomous and aware of the role they should play in the process. A psycho-pedagogical path in teaching translation is, therefore, not to be discarded. This discussion, though theoretical, prepares the ground for some action research to be undertaken by teachers to question, assess and try to improve their teaching methods.

References:

- [1] Anderson John Robert (2000). Cognitive Psychology and its Implications. Worth Publishers and W. H. Freeman. New York.
- [2] Anderson Neil, I (2008). "Metacognition and Good Language Learners". In Griffiths, C. (Eds) (2008). Lessons from good Language Learners. CUP.
- [3] Bruer John Thomas (1993). Schools for thought: A science of learning in the classroom. Massachusetts's Institute of Technology.
- [4] Delisle John (1980). L'Analyse du Discours comme Méthode de Traduction: Initiation à la Traduction Française de Textes Pragmatiques Anglais : Théories et Pratique. Editions de l'université d'Ottwa.

[5] Harold, W. Bernard. (1972). Psychology of Learning and Teaching. McGraw-Hill, Inc.

- [6] Gagne Robert .M., (1985). The Conditions of Learning and Theory of Instruction. New York: CBS College Publishing.
- [7] Gonzàlez-Davies Maria. (2016). "A Collaborative Pedagogy for Translation." In Venuti, L. Teaching Translation: Programs, Courses, Pedagogies. Routledge.
- [8] Jarvis Matt. (2005). The psychology of effective learning and teaching. Nelson Thornes, Ltd.
- [9] Oon-Seng Tan. (2003). "Mediated Learning and pedagogy: Applications of Feuerstein's theory in twenty-first century education." in REACT, 2013 (1), 53-63.
- [10] Stoll Louise; Fink Dean; Earl Lorna. (2003). "Learning about learning". In It's about Learning (and It's about Time) What's in For Schools? Routledge Palma.
- [11] Sweller John. (1988). "Cognitive Load during Problem Solving: Effect on Learning." in Cognitive Science 12, pp257-285
- [12] Williams Morris & Burden Robert. L. (1996). Psychology for Language Teachers. Cambridge University Press.
- [13] Woolfolk, Anita (2004). Educational Psychology. Pearson Education, Inc.