

THE IDENTITY OF FOREIGN LANGUAGE STUDENTS

COGNITIVE STUDIES AND NEUROLINGUISTICS

Abstract

This research focuses on studies on the human brain and how it works which have shed light on the strict connection between the sensorial perception of the reality and the emotions experiences trigger in each individual.

The objective is to transfer Neuroscience discoveries and intuitions that have determined so many changes in the field of Language Teaching and Learning into material to be used to help foreign language students travel inside their new identities born in the intercultural world.

Plato's theory and Aristotle's, the introspection or the observation, are the starting point of the long time debate that leads to the examined contemporary studies in Cognitive Psychology and Neurolinguistics.

The path followed to lead students to learn but also think, that is 'translate', 'reframe' the experience from their sensorial, cognitive and creative point of view, is based on the analysis of numerous images, proving visual or other kinds of illusions, as well as texts to which the students are sent back numerous times so as to discover more and more perspectives to the situation experienced. Interaction in communication becomes a multifaceted activity, particularly in foreign language interpersonal and intercultural interchanges.

Key words: mind, identity, meaning

Some years ago the power of media was the only source people had to get to know and understand the social frames of other cultures. Nowadays people move around the world and see for themselves, experience directly what it means to establish contact with ethnically different interlocutors. People actually 'enter' other environments and exploit what to 'communicate' or 'not to be able to communicate' means. It is no longer possible to avoid the responsibility of making choices, both linguistic and behavioral, in social intercultural exchanges. Learning a foreign language, in our times, implies knowing so much more than a set of words or speech acts, well said and grammatically correct, that can make us 'survive' in conversations or practical experiences. Learning and speaking another language leads directly to the people who use that language as their own. And those people have perceptions, emotions, feelings, reasoning, reactions, behaviors and so much more, that are conveyed through the different choices they make in using their language. It all makes up an 'identity' which reveals itself to our own 'identity'. In order to 'understand' the real meaning of messages, we have to try and take up, even if for a short span of time, the perspective of our interlocutors.

Indeed, we are not always culturally ready or available to sink into differences and, above all, we are not always culturally available to the idea that even though we join a conversation with other interlocutors, we do not automatically all take part into the same conversation. It may happen, indeed, that, even though we are dealing with the same issues, we appear to be handling a different issue, or to be handling the same issue in a completely different way, though we say we agree. Most of the times, we are speaking of something different and that is the reason why we feel we do not understand each other or we are not communicating.

In interactions the main point which directs the exchanges is 'the point of view'. This aspect is, often, wrongly considered as something metaphorical rather than literal.

Indeed, when teaching a foreign language, something which should extensively be practiced is to teach a person how to change his point of view, so as to make him look at the various situations from different perspectives and develop an awareness of the dramatic changes it implies. To read a text and just 'say' that it shows, for instance, a 'visual' perspective of a situation, of a scenery it is not exactly the same as to stop and exploit the experience of a 'perception through your eyes', actually 'feeling', in full synesthesia, the colors, the shapes, the sounds, the touch, the smell, even the taste and consider how it feels. This will certainly supply new information about the writer's mental processes and choices.

Think of an argument in which you were certain you were right...now run a movie of exactly the same event, but from the point of view of looking over the other person's shoulder, so that you can see yourself as that argument takes place...did it make any difference? (BANDLER, 1985, p.37-38)

A meaningful training will surely develop new, wider and richer perspectives in human relations by looking at topics switching sensory channels or point of view, say for instance man/ woman, rich/ poor, young / old, physically fit/ handicapped, employed/ unemployed, family raised/ orphan, Caucasian race/ dark skin race, normally sighted/ short sighted/ blind. A foreign language gives an incredible chance to plunge ourselves into new identities and may be we discover we recognize them inside ourselves as something being already there though we never perceived it, or we can learn from them if we feel them as new to us. Plunging ourselves into the perspective of each single character in a literary play will really reveal the ability of a writer when he leads us into situations and makes us travel at 360 degrees inside people's minds only through the words he chooses for each character to say or through the lines of a poem. Reading literature is not like looking at a corpse at the morgue. We have the power to make the text come to life by experiencing its perceptions, thoughts, emotions and listening to them; that is what happens when we 'actually' meet the author and become 'active' interlocutors. It is only when the literary experience has traveled through our mental processes that we are able to make decisions on issues like agreeing, accepting, sharing, debating, rejecting and whatever else we are able to feel.

Years ago mass media did not have the powerful role they have nowadays. Advertisements, for instance, present winning people and make everybody who watches them wish to identify with them. Repetition, eventually, makes people who watch actually 'feel' the way those characters feel. The concept of 'identity' has become negotiable. We are involved in a wide range of experiences that demand new attitudes, a new sense of responsibility. We are called to new choices within a new and broader reality surrounding us. Most of our choices are based on our beliefs.

Beliefs are really phenomenal things. Beliefs can compel perfectly nice people to go out and kill other human beings for an idea, and even feel good about it, too. As long as you can fit a behavior into someone's belief system, you can get him to do anything, or stop him from doing anything. At the same time, beliefs can change. You're not born with them (BANDLER, 1985, p.103-104)

Human brain is modular; often the same task is performed in different ways, which means that the same input will not necessarily always produce the same output. Our perceptions of the reality are not the sum of separate elements which will always

produce the same result. We always experience a 'gestalt perception' which makes us react according to the effect every experience has. If something may move us one day and leave us indifferent another day, it means our perception of the issue changed due to new contexts, new links we developed in our minds. The truth is that meanings, which we may call metamessages are passed through channels other than words which are often disregarded or even ignored. Meaning is the response we get. Our brains are wired to distinguish and respond to a great number of emotional states. Our faces are the main source for the expression of emotions. Indeed, one of the most difficult activities, unless we are strongly auditive persons, is to speak over the phone with a foreigner, a situation in which we have to concentrate only on the sounds we hear without the help of an image. A great number of cross-cultural studies are devoted to the analysis of facial expressions as the leading key to the common elements in different cultures, like the smile, for example, a practically universal signal (MATLIN, 2005).

Cognitive studies describe the acquisition, storage and transformation of our knowledge. The core of the analysis is 'how' all this takes place, together with 'what' and 'why'. All the mental processes, like perception, memory, imagery, language, problem solving, reasoning, and decision making are exploited in Cognitive Psychology which also deals with the theoretical orientation that emphasizes people's knowledge and their mental processes and which might explain a number of ethnic stereotypes and their influence on the judgments people make about people from different ethnic groups (MATLIN, 2005, p.2-3).

In Western civilization, interest in human cognition can be traced to the ancient Greeks. Plato and Aristotle, in their discussion of the nature and origin of knowledge, speculated about memory and thought. These early philosophical discussions eventually developed into a centuries-long debate (ANDERSON, 2005, p.6).

Since the time of Plato and Aristotle researchers have wondered about the kind of relationship the human being has with his environment, how he perceives it and what resources are implied in learning about different experiences. The two Greek philosophers had an opposite view regarding the issue. The attempt to understand whether the answer was Plato's theory or Aristotle's, the introspection or the observation, has been a long time debate. Both sides, developing through Philosophy or Physiology, have had famous and relevant supporters throughout the centuries, like René Descartes on one side, and the British philosophers Berkeley, Locke, who used the well known expression 'tabula rasa', and Hume, on the other. Immanuel Kant was seen by some as a synthesis of the two sides. The 19th and the 20th century have witnessed the development of theories and approaches like the structuralism with Wilhelm Wundt, who raised psychology to the level of science, as well as all the European or North American philosophers and linguists, from de Saussure to Lévi-Strauss, Lacan, Foucault, Derrida, Althusser, Titchener, Bloomfield and Sapir. On the other side we see the functionalism with William James, the consequent pragmatism with John Dewey, and associationism with Ebbinghaus and Thorndike. Behaviorism, an extreme version of associationism, through Pavlov, Watson and Skinner, strongly attacked by Chomsky, marked a relevant step in this issue. Behaviorism was not so dominant in Europe where Bartlett, Luria and Piaget were pursuing ideas that play an important role in modern cognitive psychology. The opening of some behaviorists to acknowledging some kind of 'objective', with Tolman, and 'planning', with Bandura, who inspired Vygotsky with his conception of

'learning as a social act', together with the contribution of the Gestalt psychology, opened the way to 'Cognitive Psychology', the term used in the title of the famous milestone book by Neisser. The Gestalt maxim 'the whole differs from the sum of the parts' reinforced the idea that breaking the experience in small parts does not lead to the comprehension of the whole. Linguistics, Artificial Intelligence experiments and Neuroscience development have contributed to the dense scenery of discoveries and intuitions that help so much in the field of Language, and also Foreign Language, Teaching and Learning. The research work in Cognitive Psychology has, indeed, set a new and high standard of commitment in the field of communication and interaction. This commitment addresses two different though complementary aspects, the teaching and the learning processes. 'Cognitive Psychology' is the study of how people perceive, learn, remember and think about information. The term 'Cognition' refers to the acquisition, storage, transformation, and use of knowledge (MATLIN, 2005, p.20).

It definitely is intriguing to consider the distinction between our sensations and our own perceptions of the reality as well as of other people's, together with the mixture of signals, visual, auditory or kinesthetic, they regularly send us. The issue extends even more when we consider the relation between perception and cognition, not to speak of the possibility of a previous likely separation line even between sensation and perception, before we speak of cognition. Even Watson, the father of behaviorism, had to admit defeat on his theory of 'thinking' as a subvocal speech from the body, when experiments proved the existence of a 'silent thinking' which was not attributable to any part of the body, as in the experiments with a temporarily paralyzed participant. Thinking, was proved, proceeds even in the absence of any muscle activity.

Our mind, then, is able to retain an abstract representation of an act of communication, of an experience or a perception so as to determine 'meaning', that is to 'translate' and act or react consequently.

Emotional stimuli are registered by the amygdala. Conscious emotion is created by direct signals from the amygdala to the frontal cortex, and indirectly. The indirect path involves the Hypothalamus, which sends hormonal messages to the body to create physical changes like muscle contraction, heightened blood pressure and increased heart rate. These changes are then fed back to the somatosensory cortex, which feeds the information forward to the frontal cortex when it is interpreted as emotion (CARTER, 1998, p.82).

All information, once it reaches our minds, is inserted into 'a map', that is to say, it does not stay as a single element, but is interrelated to previous information and experiences already stored. The old riddle 'If a tree falls in the forest and no one is around to hear it, does it make a sound?' leads us to consider where we stand on these issues. We may, in fact, answer 'yes or no, depending on how we look at the question. If a tree falls in the forest and no one is around to hear it, it makes no perceived sound. But it does make a sound' (STERNBERG, 2006, p.115).

'Maps' are how we make meaning of the world (O'CONNOR –SEYMOUR, 1993, p.4). The 'map', though, is not the territory. We do not all 'see' the same thing when 'looking' at the same things. We 'translate' the experience, indeed, using the patterns and models we have. If we think of visual perceptions we might remember times when, looking at images, we have seen things that were not present or we have not seen things that were present. A very relevant issue that almost all psychologists recognize is the importance of mental representations, and thinking involves the

manipulation of these internal representations. Two processes that contribute to virtually every other aspect of cognition are 'perception' and 'memory' (MATLIN, 2005, p, 22). Object perception is a good example to prove that our mind organizes perceived data. Let us take, for instance, figure-ground relationship. There are some pictures in which the ground and the figure reverse every time we look at the picture. It happens even if the scene does not have clear-cut boundaries. Our mind completes the missing part and produces a visual illusion. The same thing happens if we are trying to understand some scribbled words. The letters that are not clearly recognized are deciphered through the analysis of the others surrounding them. This kind of activity, called 'data-driven processing' or 'bottom-up processing' is directly linked to another one, complementary to it, which is known as 'conceptually driven processing' or 'top-down processing', when a person's concepts and higher-level mental processes influence object recognition (MATLIN, 2005). Cognitive processes are therefore interrelated with one another; they do not operate in isolation, that is. Differently from the behaviorist's belief of a mind waiting for stimuli, cognitivists believe in active processes of an active mind seeking out for information. If we go back to the example of the figure-ground relationship in a picture, we will get to the conclusion that the different interpretation of the picture will be the result of a mental activity, of our attention in that particular time or situation. The point on which we will set our attention will determine the perception, the interpretation. Something strictly related to attention is consciousness, awareness, an aspect the behaviorists did not consider appropriate for scientific study, but which has been reconsidered by psychologists.

There are numerous Gestalt images in which we may experience how a picture may represent different things if looked from different perspectives. Some people are able to immediately visualize the double possibility; others see only one at first and need directions to be able to actually see the other option. There are experiments in which people read words or sentences completing unfinished graphic symbols without even noticing they are doing it. The same is likely to happen if people hear some sounds hinting at familiar situations, they may be convinced that they heard sounds which had not been included. Due to "the principle of 'immediacy of interpretation' people try to extract meaning out of words as they are heard and do not wait until the end of a sentence or even the end of a phrase to decide how to interpret them" (ANDERSON, 2005, p. 391). Our minds use the representations already present, due to previous experiences or knowledge of the world, to 'translate', 'to reframe' the new experience. Translations and reframing, therefore, may be voluntary as well as involuntary resources. In pictures as well as in most situations what we see is more related to who we are than to what is represented. Practice in speculation and discussion is more enriching than plain descriptions. Sometimes we seem to be surprised at the interpretation that some people attribute to our words or gestures, without us ever implying any such intentions or being aware of having done anything leading towards such an 'interpretation'. How do we know that the meaning they get is the meaning we meant? What we do know is that our mind, our emotions and our body are always interconnected, whether we want it or not. Communication is not a list like affair, when we interact we not only pass information, we also receive information. The meaning of our message is the reaction we get. We do not respond to facts, but to our interpretation of them. We ourselves decide who we are based on how the others react to us and we gain an idea of who we are from the way others define us (ADLER; ROSENFELD; PROCTOR II, 2001), p.7). Perception checking is an important issue when analyzing communicative exchanges. Let us consider

apparently harmless statements like “Come on. Tell the truth”. (Who said you were lying?) or “What’s the matter with you?” (Who said anything was the matter?) can be defense arousing, may sound like accusations (ADLER; ROSENFELD; PROCTOR II, 2001), 2001, p.114), and may lead to misinterpretation. Our perceptions are influenced by all kinds of stimuli, sometimes obvious, sometimes related to first impressions. The most common attitude is to assume that others are like us, that they see and perceive the world through the same ‘map’ we have. Now, if this attitude may create problems in same culture or co-culture situations, it may be completely misleading in intercultural contexts. Students need to learn but also need to think, that is ‘translate’, ‘reframe’ the experience from sensorial, cognitive and creative points of view, particularly in foreign language interpersonal and intercultural experiences. To know does not mean to ‘think’. In order to learn how to think and understand how they think, students are to be involved in activities which help them become flexible and aware of the set of strategies, beliefs and values each exchange is based on, both on their side and the interlocutor’s. We communicate with our words, with our voice quality, and with our body: postures, gestures, expressions. Communication is, therefore, much more than the words we say. Indeed, it has been found that words count only for 7% of our communication, whereas body language counts for 55% and voice tonality for 38% (O’CONNOR –SEYMOUR, 1993, p.18). Verbal messages as such may not be meaningful or easy to decode. An example comes from the cyber language interactions of our contemporary internet time. E-mails, in non formal contexts, have slowly changed from simple text to text plus emoticons or indications of laughter, giggle, or whatever else in brackets, to finally be supported by voice or video messages. We have two hemispheres in our brain and information flows through both of them and needs the so called ‘meta-messages’, that is all the non verbal information which is going to make the interlocutor able to understand the message. Anybody who has traveled to other countries and tried to communicate in the foreign language knows how many times the lack of meta-messages has left native speakers puzzled even though all the words uttered were correct (DILTS, EPSTEIN, 1995, p.227). Perception, indeed, is a ‘set of processes by which we recognize, organize, and make sense of the sensations we receive from environmental stimuli’ (STERNBERG, 2006, p.111). Perception may be influenced by physiological issues, like the senses, age and even biological cycles as there are some ‘morning’ people as well as ‘night’ people. Other issues influencing perception may be psychological, that is related to mood or self-concept, may be social, related to gender or occupational roles or also to shared narrative between the interlocutors, or may be cultural, as well. When learning a foreign language students need to be given practice in areas like ‘kinesics’, as to touch, postures and gestures, ‘paralanguage’, as to tone of voice, ‘proxemics’, as to distance among interlocutors, ‘chronemics’, as to timing and appropriateness of issues, ‘clothing’, as to interlocutors’ attires in different communicative situations, and ‘environment’, as to the actual physical setting where the interchanges take place (ADLER; ROSENFELD; PROCTOR II, 2001). Feedback is, therefore, a basically relevant tool which helps us redirect or restructure our behaviors and cognitive patterns in interchanges.

Consciousness, indeed, means the perception of the world around us, our visual images, the comments we silently make inside ourselves and, what is extremely relevant in an intercultural interaction, our beliefs about the world and our attitudes about other people. A language is culture, costumes and attitudes. When we use a language we make choices, whether consciously or automatically, that are related to

our perception of the world and to our beliefs. We need to have knowledge of our mental processes, of our cognitive processes. Metacognition, as this knowledge is called, allows us control over our cognitive activities. It helps us in learning as well as in understanding who we are, how we function, which allows us to look at the others and 'map' the signals they convey in their interaction with us. We make 'mental maps' for a great number of our own cognitive activities, we create mental representations of stimuli when they are not present, that is we rely on 'imagery', a completely top-down processing which often requires creativity. Imagery has been rediscovered by cognitive psychologists in opposition to the behaviorists' denial of it based on the impossibility to connect it to observable behavior, as John Watson himself maintained (MATLIN, 2005). Without this process a foreign culture or a foreign literature would be very hard to be exploited.

Nowadays studying a language like English, for example, implies the acquisition of an even greater flexibility as its being used by people from so many countries has enriched and weakened it at the same time. There is an illusion that people saying the same words mean the same things. English, nowadays, is used all over the world and each culture using it is adapting it to its own patterns and necessities. This frightening and intriguing aspect empowers students who learn this language to reach out for so much more than just one more foreign language. In the past students tried to acquire the 'correct' pronunciation looking at the British or North American models. Nowadays people learning English or speaking English as their second language are less worried and more comfortable with their accents so showing a wish or a need to keep their identities. The idea of identifying with the other language speaker or his cultural aspects has lost its aspect of superficiality or imitation and is heading more towards a feeling of 'empathy', which leads learners to playing with identities and roles from different perspectives. It should, hopefully, lead to overcoming feelings of racism and discrimination, too, as well as avoiding the creation of pseudo-natives.

Empathy is "the ability to recreate another person's perspective, to experience the world from his or her own point of view...it is impossible to achieve total empathy, but with enough effort and skill, we can come closer to this target" (ADLER; ROSENFELD; PROCTOR II, 2001, p. 116). This ability, in a very basic form, seems to be present even in very young children. Babies, in fact, will burst into tears when hearing another child crying or if adults around them start crying. Another example of 'physical' empathy is yawning when we see other people yawn. Sympathy would just be feeling 'with', whereas empathy is feeling 'inside'. A gesture like the Japanese way of handing something with both hands, for instance, rather than with one hand as in the Western culture, or of leaving the money in a tray and waiting for the other person to pick it from there, may or may not be described 'in words' in a text, but, when reading, the reader has to 'see' it and feel what the character is feeling, so perceiving the discipline in the body posture or the lack of all that when people act differently. 'Reading' and 'feeling inside' what the character in Joyce's 'The Dead' feels in looking out of the window means 'listening' to the silence and 'reading' it with a body and mind experience, or D.H.Lawrence's characters in 'The Fox' feel staring at each other in the hunter-prey situation in a silence which involves senses and emotions, another perfect mind and body experience.

Creative writing helps in practicing introspection and perception through the multisensory channels. Students are asked to focus, before starting to write, on a 'picture', a representation of what they want to write about, then they will listen internally to any sound associated to this situation. They will, then, get in touch with

any feeling or emotion they, or the characters they want to write about, will go through and how it all 'feels'. Finally they will have to 'listen' internally to what they or the different characters would say about the different experiences (DILTS; EPSTEIN, 1995, p. 301). At this point they are ready to start writing, and will have no difficulty. Students may try interpreting or rewriting texts through the perspective of the different characters, maybe minor characters, or from a different perspective such as turning funny or ironical something tragic or vice versa. Being, actually, in the situation, playing with the 'as if you were there' as far as possible, feeling with all your body a 'new' situation will produce 'meaning', real meaning. A technique used to help students who wonder how come they can talk so easily but find it difficult to write requires them to imagine they are talking to someone, making writing an auditory activity, so whilst they are writing they follow their interlocutor, imagining the questions he might raise, the answers they would give, the reactions they might perceive in him or the issues they would exploit to involve the imaginary interlocutor. Empathy allows 'translating' in the sense of 'reframing' so as to reach meaning for comprehension as well as be able to 'translate' from one language to another without losing the true message a text is meant to pass on.

The ability to imagine how an issue may look from another perspective will generate a great quantity of information which shows the relevance of another ability, listening. Listening is a very relevant, though slightly forgotten or mistreated ability in the teaching practice. Its aim is not only to understand but also to get information about the 'other', his attitude, his culture, his strategies, his beliefs and values. Reading as well is and should always be an interactive process. In order to read and be able to understand and consequently remember what we have read, we need some reference experiences so as to feel motivated to read. Another element we need in order to be able to read and understand is to have a choice of reading strategies. People wishing to communicate, whether in speech or in writing, certainly are thinking in one of the three main representational systems, that is through visual images, through emotions, talking to themselves or listening to sounds. Students who approach a reading text will have to connect to the text and discover the modality or the modalities used so as to tune in with the author and interact with him. Literary texts would lose a great part of their real meaning if the students did not go through this process. The content of so many literary pages is, indeed, the perception of a whole world that the artist is trying to share, say for instance most of D.H. Lawrence's production or Wordsworth's poems, just to mention some examples. It is a perception the student has to reach not 'be told' about.

Memory will work better if the reader is involved in this exchange. Memory is a very intriguing aspect of our minds. It may even be related to where and how the reading takes place. Some people prefer to lie down when they read, others are unable to concentrate or remember what they read when they lay down. Sometimes lying down or sitting at the table are related to the kind of reading, that is more or less serious materials. People are unaware that these choices will affect their memory or even their understanding of the material they are reading (DILTS; EPSTEIN, 1995).

Scientific discoveries cannot proceed separately from what happens in the teaching and learning contexts. They deal with human brain and mind processes as well as with behaviors related to them. Teaching and learning a language or languages are going to affect the identity of the learner, the way he will perceive himself, the way he will perceive the others, the way he will manage his interactions and exchanges and the way he will perceive the reality around him. To feel able to be an active and creative character in interpersonal relations is an empowering tool that decreases the

level of the affective filter in the learner's performances, whereas the opposite would be a very devastating message.

Metacognition, our knowledge about our cognitive processes, may enhance our performances making us aware of resources and strategies available to us. It gives awareness as well as control over cognitive processes. Students sometimes believe 'they have understood something they have read because they are familiar with its general topic, however they fail to retain specific information (MATLIN, 2005, p. 201). Familiarity, at times, may be more of a hindrance than a resource as it does not stimulate to thinking. The ability to think can be learnt, students can and have to be trained in it so as to build their maps of the reality (DILTS, EPSTEIN, DILTS, 1993, p. 34).

Language is an interactive process. Communication is not something we do 'to' others; it is an activity we do 'with' them. We process communication through our sensory system and create maps; we need to 'experiment' thinking. 'Imagination is more important than knowledge', Einstein used to say while trying to imagine what it would be like to ride on a beam of light (DILTS, EPSTEIN, DILTS, 1993, p. 33).

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