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Original Paper

Oral Didactics in an Actional Approach: Manifesting Emotions and Involving the Limbic System in a Face-to-Face and in a Hybrid Context

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Abstract

In oral didactics, the nature of the interactions which are established among the members of the group grant a cognitive, socio-affective and behavioral dimension in order to implement collaborative tasks, linking conviviality and pragmatism. In collaborative distance learning, teachers and learners are able to share experiences as well as new IT tools, while multimodal and open approaches can facilitate exchanges among the participants who put pragmatic learning modes into practice. As a result, the promotion of new training requirements through the adoption of good educational practices, cultivates the knowledge of an action-centred creative potential. Therefore, acting and co-acting in a group's face-to-face or even in a hybrid context becomes a new challenge for oral learning, since digital media can also condition the sensations but also the behavior of users, a fact which has consequences on the biological and neurological rhythm and psychological life of people involved in the learning process.

Keywords

actional approach, manifestation of emotions, creative interaction, procedural memory and limbic system, hybrid context

1. Introduction

In language didactics, the actional approach is defined as a multidimensional and holistic one aimed at cultivating not only the physical and emotional aspect but also the mental and psychological state of the participants in the pedagogical process. More specifically, in oral didactics, the nature of the interactions which are established among the members of the group grant a cognitive, socio-affective and behavioral dimension, in order to implement collaborative tasks, linking conviviality and

pragmatism. In this aspect, it would be interesting, on the one hand, to reflect on the manifestation of emotions triggered by verbal expression while assessing the contribution of memory. On the other hand, we will look at the dimension of verbal creativity and the functioning of the limbic system, in order to develop the dynamics of exchanges in interaction not only in a face-to-face but also in a hybrid context.

2. Perform Creative Tasks in a Constructive Interactional Approach

During oral interactions, inferential processes can, on the one hand, be denoted with emotion and, on the other hand, make a syllogism of cause and effect by going as far as explaining the established situation. Because verbal behaviors alternate with non-verbal traits such as signs and gestures, since kinesics but also proxemics occupy a primordial place in the interactional framework, where the people involved act in a specific context. According to Chatar-Moumni (2013), "Most models developed in cognitive psychology and neurobiology, but also in sociology (von Scheve 2009), to explain emotional processes integrate several components, the three main ones being cognitive evaluation processes, peripheral physiological responses and behavioral expression (Scherer, 2000)".

In this perspective, the behavior of a person becomes a stimulus for the other members of the group so that an interdependence takes place through the pedagogical process, where conscious or unconscious actions determining their behavior are exercised. Moreover, "Cicurel defines didactic interaction as 'a finalized dialogue whose goal is learning' (Cicurel, 1993a, p. 95): this means that all the verbal exchanges that take place in it -with a few exceptions- are motivated by this goal." (Bigot, Conversing in language class: myth or reality? http://cediscor.revues.org/362).

Furthermore, all communication generates inferences concerning not only the understanding and restitution of a message broadcast in a given context but also reflecting the thoughts, emotions or cultural substrates of the interlocutors. During oral interactions, inferential processes can, on the one hand, be denoted with emotion and, on the other hand, make a syllogism of cause and effect by going as far as explaining the established situation. On the other hand, verbal behaviors alternate with non-verbal traits such as signs and gestures, since kinesics but also proxemics occupy a primordial place in the interactional framework where the characters act in a specific context. In addition, it is important to take into consideration the implicit context in interpersonal exchanges, which could manifest cultural misunderstandings or even become a source of blockage, which denotes the psychological difficulties related to misunderstandings during the pedagogical process. According to Collès (2013), "Other implicit, on the contrary, tropes, come from the transgression of certain conversational norms. This transgression may have linguistic or psychological reasons. (...) In my opinion, many verbal misunderstandings stem from a misinterpretation of the implicit content of the message." (Collès, 2013, p. 82).

To establish communication, it is necessary to use transactional strategies, integrating sensory channels in the reception of information, reflection through analysis, analogy and the affective factor in the processing of the message sent and verbal expression but also action and emotion in the emission of the

data collected. In verbal interactions, gestures are considered essential in the evocation of signs because the unspoken elements include meaning in communication. To the pauses and silences the mimicry and in general, the bodily expression of the speakers is added. In this way, physical traits remain associated with psychological components, since people's reactions are connoted and nuanced by more or less positive, negative or even neutral feelings. All these components belong to different domains: psychological components (speaker's intentions, self-image), physical components (phonatory apparatus, body), pragmatic components (ability to understand the situation, ability to adapt), discursive and linguistic components (discursive behaviors required such as knowing how to argue for example), linguistic components (level of mastery of grammar rules, lexicon), prosodic components (inflection, tone, tonality, intonation, accent, modulation), metalinguistic components (ability to control one's speech, to reformulate it, to explain it), interactive components.

When acquiring a second language, a constructive interactional approach based on group impact can spark creativity. On the one hand, an apprenticeship, which cultivates imitation, makes it possible to serve as a springboard to go through the technique of transfer to alternative choices while distancing itself from the initial form. On the other hand, the transition to combinatorial structures leads to divergent elaborations. Finally, the practice of the verbal game technique leads to a creative interactional approach sometimes characterized by original formulas. According to Muller, "new ideas are also born from the combination of several responses. After the presentation of the theoretical and methodological framework, the analysis of the data will be conducted in three stages: the identification of clues by the learners, the use of analogy and the combination of ideas." (Muller, 2009, p. 89). It is in the professorial action that the transmission of verbal or non-verbal data highlights the actional approach, in order to acquire a creative competence in action.

A constructive interactional approach can spark participants' creativity. In this respect, the transmission of verbal or non-verbal data highlights the creative skill that is put into action. The incentive to act verbally or not ensures the dynamic presence of the participants, who cultivate their skills but also give an active meaning in the pedagogical process. "Since learners become social actors, strategies must be used that propose divergent communication situations both orally and in writing in as authentic and motivating a way as possible. Thus, we manage to achieve a double perspective: a) to liberate the cognitive and affective world of the person, b) to decode and decipher his reactions and production skills reveal at the same time the personal obsessions and the socio-cultural status of the learners." (Efthimiadou, 2013).

3. Verbal Expression of Emotions and Different Memories

What is decisive for the positive engagement of the learner in the act of learning is the setting in motion through active participation and personal involvement, which will determine his investment in action by creating fruitful exchanges with his partners. Moreover, as Bogaards (1991) notes, "Other situational

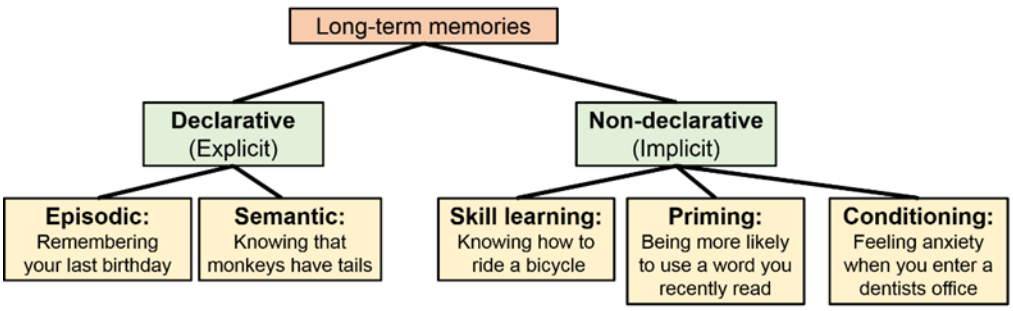
and personal, physical and psychological factors play their role, not only in the how of the process, but also in its determination and modalities." (Bogaards, 1991, pp. 50-51).

The different memories play a preponderant role not only in the reception of data from the environment, but also in the processing and retrieval of information, because they depend on the encoding and storage of cognitive, socio-affective and metacognitive decision-making in any learning situation. Sensory memory remains dependent on the amygdala of the brain, in order to examine very quickly and approximately the signals perceived by the natural environment. This storage of information binds to emotional memorization by the hippocampus, which makes learning more effective. On the other hand, short-term memory associates the cognitive aspect with the affective one. As Efthimiadou, notes: "In the process of memorization, short-term memory activates mental operations by maintaining, but also by processing the information retained by the reception of sensory data. (...) Short-term memory retrieves the data recorded by long-term memory to proceed to the analysis of information related to sensory memory." (Efthimiadou, 2018, p. 122).

Working memory (or short-term memory) is used to manipulate and retain information while performing a task or activity. Working memory or active memory serves to activate all the information stored in our brain in order to perform one or more simultaneous tasks.

If we take into consideration the different places of long-term memory, for declarative or explicit memory, personal memories can be recalled consciously. We can distinguish the semantic memory capable of memorizing the notions of procedural memory related to motor skills and cognitive skills cultivating the know-how in learning episodic memory, which allows us to remember the events of our lives as well as our emotions.

On the one hand, episodic memory, or autobiographical memory, makes it possible to remember past moments (autobiographical events) and to predict the next day. This form of memory is linked to our past, our history, our identity because it allows us to remember the events of our lives as well as our emotions. On the other hand, semantic memory is the memory of knowledge, words, concepts and definitive knowledge. It concerns personal data but also general data accessible to our conscience. Semantic memory is able to memorize the notions of procedural memory related to motor skills and cognitive skills, cultivating the know-how in learning.



Modeled after Squire & Zola-Morgan (1991); Biological Psychology, 4th ed. (2004)

Subsequently, emotional conditioning is part of implicit memory. Associative learning is the basis of this form of memory. This is the link that can be created between an emotion and a situation, event, or object.

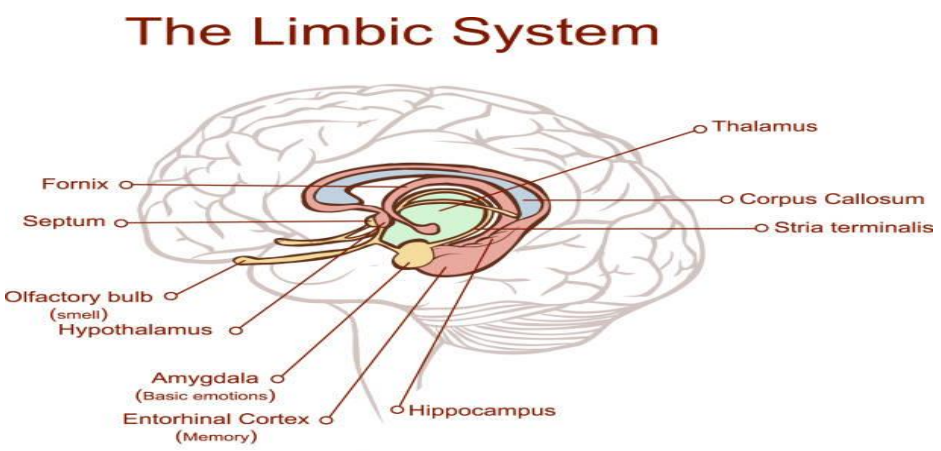
Long-term memory goes from storing to retrieving stored data to elaborate feedback from the release. It is important to note that "There are interactions between the working memory system and those of long-term memory. They allow the memorization of certain events and, thus, to recall old memories in the face of certain present situations, in order to better adapt. (Https://www.inserm.fr/dossier/memoire/). Interactions occur between explicit and implicit memory because the complex set of activations and deactivations remains closely linked to explicit memory and implicit memory tasks.

It is essential to take into account the mental states of people interacting, in order to decode their behavioral reaction and to predict their conduct but also their regulation during interpersonal exchanges. As a result, "the emotional dimension appears central in the design of current machines, and it is partly linked to memory: both with human memory, in particular the unconscious memory at work in recognition phenomena, and with its computer modeling, which includes machine learning techniques." (Ganascia, 2016, p. 153).

In this sense, the memorization of experiences in life becomes profound if we live each situation in a state of strong emotion. As Eustache (2016) points out, "The importance of the event, perceived from the outset, the element of surprise and the emotional charge lead to memorizing the context of learning: where we were, what we were doing at the time it happened, what we felt, how we reacted." (Eustache, 2016, p. 21).

4. Limbic System and Digital Media

The limbic system is a collection of structures involved in processing emotion and memory, including the hippocampus, the amygdala, and the hypothalamus. The term limbus, Latin 'border' has been used in modern neuroscience to indicate a progressively increasing number of regions dedicated to a wide range of functions. "The hypothalamus, the anterior thalamic nucleus, the cingulate gyrus, the hippocampus and their interconnections, constitute a harmonious mechanism which may elaborate the functions of central emotion as well as participate in the emotional expression." **(**Papez, 1937). "According to Papez, 'emotion may arise in two ways: as a result of psychic activity and as consequence of hypothalamic activity'. The psychic activity enters the circuit (later named after Papez) through the hippocampus while visceral and somatic perceptions enter the circuit through the hypothalamus." (Catani & Thiebaut de Schotten, 2012).



Cross-section through the brain showing the limbic system and all related structures. Image Credit: Corbac40/Shutterstock, *https://www.news-medical.net/health/Limbic-System-and-Behavior.aspx*

The nature of the stimulation shapes the connections among neurons that create the neuronal networks necessary for thought and behavior. With this in mind, digital media can condition our sensations but also our behavior by exerting an influence on our perceptions and thoughts, which has consequences on the biological and neurological rhythm and psychological life of users. Indeed, we find ourselves immersed in different media environments, always particular, frequently overlapped and superimposed on each other, which penetrate into us -into our "thought"- far beyond the only "information" that we draw from it punctually (Citton, 2016). Because the technocratic invasion manages to penetrate our human life and to modify our way of learning, informing, thinking, acting and even reacting by external stimuli, which invade the areas of our brain and our sensitivity.

The participation of the limbic system focuses attention on the message through its emotional component and facilitates the development of procedural memory. For his part, Cortillon (2014) highlights the functioning of procedural memory and the limbic system to adopt good learning strategies while pointing out that Michel Paradis focuses on the importance of the proper functioning of the limbic system that controls emotions, desires and is at the source of motivation: "speech is immersed in a matrix of behavioral patterns regulated by the limbic system." (Cortillon, 2014, p. 126). At the basis of each intentionally produced utterance, we therefore find the participation of the limbic system that focuses attention on the message thanks to its emotional component and facilitates the development of procedural memory. Certainly, the information received, exploited and decoded contribute to bring meaning to the situations put in context because the operations of decoding and encoding information are linked and highlight the cognitive aspect but also the affective dimension in the development and management of the tasks to be performed.

In collaborative distance learning, the trainer encourages learners to work together to complete certain collaborative tasks. In this context, learners are invited to help each other overcome their difficulties. This collaborative approach has positive effects on learners while cultivating the notion of solidarity.

Teachers and learners manage to exchange experiences and share tasks without neglecting that the learner himself has the opportunity to self-assess by devoting personal time to self-study. Certainly, new IT tools and multimodal and open approaches can facilitate exchanges among subjects to put into practice pragmatic ways of learning and ensure new training requirements through the adoption of good educational practices cultivating a knowledge focused on creative potential.

The adoption of tactics to accomplish strategic experiential training encourages the class group to assume its responsibilities to interact in an atmosphere of collaboration and mental fulfillment. As Efthimiadou points out, "hot and cold cognition are associated and remain complementary in the interrelations between trainees and both their virtual and physical environment. With the use of collaborative online tasks, participants become actors and co-actors by cultivating their cognitive, socio-affective and transversal skills. However, the manifestation of anxiety associated with the lack of self-confidence leads to a discrepancy in action while at the same time risking of disruption. It is therefore necessary to become aware of the mental states of the participants, in order to engage and readapt them in hybrid learning context." (Efthimiadou, 2021, p. 5).

Therefore, acting and co-acting in a group face-to-face or even in the context of blended learning becomes a new challenge for oral learning, in order to take a reflective look at one's progress while allowing to better manage one's potential.

5. Discussion

The actional perspective places the learner at the heart of his/her learning by carrying out more or less complex tasks while allowing to exploit his/her hidden resources in order to lead to the quest for cognitive but also affective resources. What must characterize the interpersonal relationships of the members of a group is strategic cooperation and effective contribution in the execution of micro or macro-tasks. Bearing that in mind, the implementation of collaborative and interactive training makes it possible to arouse the creativity of the participants and to cultivate the creative slope, which is put into action while using self-paced learning to maximize training efficiency. In carrying out actional tasks, it is essential to cultivate a willingness to learn, since deadlocks can be overcome if a climate of balance and negotiation is established that promotes positive values such as the courage to undertake, the enthusiasm to intervene and the desire to gain transferable experience in both convergent and divergent fields. "This stimulation of the person also involves the construction and exploitation of new schemes, which broadens the prospects for training. Certainly, the pedagogical relationship is established not only on perception and the socio-affective dimension but also on behavioral values." (Efthimiadou, 2011, p. 166).

Thus, in a reciprocal relationship, the attitude adopted by each individual becomes a stimulus for the others because an interdependence is realized under the impulse of the subjects in their mutual exchanges. For this reason, it is essential to cultivate the willingness to learn, since deadlocks can be overcome if we establish a climate of balance and negotiation that promotes positive values such as the

courage to undertake, the enthusiasm to intervene and the desire to acquire experiences transferable to other areas.

Ultimately, the trainer's contribution proves to be essential to implement an actional pedagogy where participants will be able to optimize their expectations through the adoption of an interactive project pedagogy and the implementation of online collaborative tasks. As a result, the promotion of new training requirements through the adoption of good educational practices, cultivates the knowledge of an action-centred creative potential. Therefore, acting and co-acting in a group's face-to-face or even in a hybrid context becomes a new challenge for oral learning, since digital media can also condition the sensations but also the behavior of users, a fact which has consequences on the biological and neurological rhythm and psychological life of people involved in the learning process.

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