

The acquisition of Spanish as a foreign language: a lexical-enactive approach

Floriana Di Gesù¹

Abstract

The purpose of this article is to demonstrate how the environment is responsible for the construction of the lexicon in the acquisition of a foreign language and, in particular, Spanish as FL. Our study focuses on the acquisition of Spanish by Italian learners. It takes into consideration the existence, for these learners, of a unique conceptual system, but with branches for the acquisition of a foreign language that arise, not so much from the conceptual system directly, but from the L1. We who are not native speakers can come into contact with our lexicon through the experience we have had with the L1. Whoever learns an L2, especially at an A1-A2 level, looks for expressions in his L1 to translate them into the L2 through their mental construction, while a native will extract the information directly, concretizing the experience of emotion without going beyond the L1: all this is regulated, at a neurophysiological level, by the prefrontal cortex that controls the lexicon. What we will try to argue in this article is the way in which a lexical-enactive approach in teaching Spanish as FL can be very useful when acquiring lexical competence in a foreign language.

Keywords: Lexical-enactive approach – Spanish as FL – 4E framework

Résumé

L'objectif de cet article est de démontrer comment l'environnement est responsable de la construction du lexique dans l'acquisition d'une langue étrangère et, en particulier, de l'espagnol en tant que langue étrangère. Notre étude porte sur l'acquisition de l'espagnol par des apprenants italiens. Elle prend en considération l'existence, pour ces apprenants, d'un système conceptuel unique, mais avec des ramifications pour l'acquisition d'une langue étrangère qui proviennent, non pas tant du système conceptuel directement, mais de la L1. Nous, qui ne sommes pas des locuteurs natifs, pouvons entrer en contact avec notre lexique grâce à l'expérience que nous avons eue avec la L1. Quiconque apprend une L2, surtout à un niveau A1-A2, cherche des expressions dans sa L1 pour les traduire dans la L2 par le biais de leur construction mentale, tandis qu'un natif extraira l'information directement, concrétisant l'expérience de l'émotion sans aller au-delà de la L1 : tout cela est régulé, à un niveau neurophysiologique, par le cortex préfrontal qui contrôle le lexique. Dans cet article, nous tenterons de démontrer qu'une approche lexico-active dans l'enseignement de l'espagnol langue étrangère peut s'avérer très utile pour l'acquisition de compétences lexicales dans une langue étrangère.

Mots-clés : Approche lexicale-enactive – Espagnol comme langue étrangère – Cadre 4E

¹ University of Palermo (Italy); e-mail: fdigesu@unipa.it

1. 4E cognition and learning

The purpose of this article is to show how the environment is responsible for the construction and use of the lexicon in the acquisition of a foreign language and, in particular, Spanish as foreign language (FL²). What is sought is the possibility of applying an enactive approach for the acquisition and proper use of vocabulary in for adult learners at an A1-A2 level of the Framework.

To reach such an explanation, it is necessary to take some steps that will lead us to that argumentation taking into account that language gathers cultural wisdom, while cognition develops mental representations that model the surrounding world and adapts cultural knowledge to the specific circumstances of life.

As for the relationship between cognition and language, if we also want to reference some cognitive theories, we cannot forget Piaget, whose approach can be defined as enactive *avant la lettre*. Indeed, Piaget argues that the human being is a living organism that comes into the world with a biological inheritance that influences intelligence. According to Piaget (1970), human organisms share two “invariant functions”: organization and adaptation. The function of adaptation in psychological and physiological systems is carried out through two complementary processes: Assimilation and Accommodation. The first process pertains to how an organism deals with an environmental stimulus based on its existing organization. A straightforward way to grasp the concept of assimilation is to view it as the mechanism through which new information aligns with pre-existing schemas. Accommodation entails adjusting to the demands of the environment. It is the process of adapting to external conditions. In summary, accommodation is the process of modifying schemas to adapt to new information.

Applying these two concepts to the acquisition of a foreign language by a late bilingual, Assimilation corresponds to the process of creating the mental lexicon in the native language. Meanwhile, the Accommodation process will be activated when the learner, stimulated by input in the target language, modifies Assimilation by transposing it to adapt to external conditions.

Among the many theorists who have referred to the relationship between cognition and language Ellis (2019) argued that our linguistic competence rests on the conspiracy of our language experiences and emphasized several Essentials of language cognition: our Embodiment, Enaction, Environmental Embeddedness, and Enculturation.

The bibliography regarding the applicability of the enactive approach to various fields of knowledge is extensive. In this context, we want to highlight an interesting critical study regarding the application of the enactive approach in foreign language acquisition. The study is titled “Embodied learning and teaching approaches in language education: A mixed studies review” (Jusslin et al. 2022), this mixed studies review combines and reviews empirical research, published from 1990 to 2020, using embodied learning approaches in language teaching/learning. The results reveal that the studies align with two strands: (1) embodied

² From this point forward, the acronym FL will be used to refer to the foreign language. We also use the acronym TL to refer to the target language.

learning through orchestrating embodied language learning and teaching, and (2) embodied learning in naturally occurring language learning interactions.

This fascinating and comprehensive study precisely examines the added value of an embodied approach in language teaching. Regarding vocabulary instruction, it argues that “There was a trend to focus on vocabulary learning across the educational levels, emphasizing the trend to apply embodied teaching for beginner learners. An interpretation for why such a large focus was on vocabulary is that language education with beginner learners devotes much time to developing vocabulary.” (Jusslin et al. 2022: 12). Therefore, the theories under consideration agree in asserting that a lexical approach in beginner learners is the most widespread method for building linguistic competence. However, it observes that this type of approach is almost exclusively used with child learners, and the current state of the art of empirical research on embodied learning lacks studies on the application of such an approach to the context of adult learners.

The conclusions that this study arrives at are very stimulating because they present the reader with a question, namely: “How can embodied learning approaches to language education be understood and characterized as embodied language learning?”

To answer that question, it is necessary to start from the assumption that many cognitive factors affect language learning and that human mental states are regulated by their correlation with other mental states or with the external world. An approach that can be considered an excellent framework for analyzing the “who” questions regarding the relationship between cognition and language is the 4E cognition approach. This 4E stands for: embodied, embedded, enactive and extended, and it is a quite young and flourishing field of interdisciplinary research. It argues that cognition is influenced by dynamic interactions between the brain, body, and both the physical and social environments.

Schiavio & van der Schyff (2018) in their interesting paper “4E Music Pedagogy and Principles of Self-Organization” provide an illuminating synthesis of the four principles by stating that cognition is:

Embodied: Cognition cannot be fully described in terms of abstract mental processes (i.e., in terms of representations). Rather, it must involve the entire body of the living system (brain and body).

Embedded: Cognition is not an isolated event separated from the agent’s ecological niche. Instead, it displays layers of co-determination with physical, social, and cultural aspects of the world.

Extended: Cognition is often offloaded into biological beings and non-biological devices to serve a variety of functions that would be impossible (or too difficult) to be achieved by only relying on the agent’s own mental processes.

Enactive: Cognition is conceived of as the set of meaningful relationships determined by an adaptive two-way exchange between the biological and phenomenological complexity of living creatures and the environments they inhabit and actively shape. (2018: 2)

The reflection that the authors offer on the acquisition of musical competence can be entirely applied to that of linguistic competence. By arguing that “Skills are acquired and developed in the sense that they are self-constituted by the entire living organism in its embodied relationship with the environment”, they reinforce the concept that learning is a continuous process of interaction between the internal and external worlds, seeking a balance among identity, historical and cultural background, and emotional life.

An adult beginner language learner is constantly engaged in negotiating between his/her experience of the mother tongue and its configuration in the target language, with the aim of conveying intentions, emotions, and motivations. These elements then return to the learner transformed in the form of new *intake* through interaction with external *input*.

2. Through a lexical-enactive approach to Spanish acquisition

The phenomenon of the acquisition of a lexicon in a FL can be contemplated from the perspective of enation, meaning that the enactive approach can be considered a neurophenomenological expansion of the neurophysiological thesis of the existence of a mental lexicon based on the first language (MT or NL³) for L2 learners. This is done to explain the relationship between cognitive processes and first-person experience. Specifically, in the case of late bilingual learners, the conceptual system is indirectly connected to the FL and the access to it occurs through the filter of the MT. The role of the filter is crucial, serving as a kind of selection mechanism, either facilitating or inhibiting access to information that the learner himself enters into his learning circuit. To confirm all this, we can refer to the Full Transfer Hypothesis (FTH, Schwartz and Sprouse 1996) which postulates that, in adult learners, the acquisition path of an L2 begins with the configuration of the parameters specific to the first language, representing the initial state from which acquisition originates.

In their hypothesis they give reasons supporting the conceptual plausibility of the FT/FA hypothesis over other partial L1 influence hypotheses, like Minimal Trees (Vainikka and Young-Scholten 1994.) or Weak Transfer (Eubank 1993/94).

We agree with the authors that, especially in the early stages, when L2 learners are still seeking even the most basic vocabulary items, it cannot be expected that all utterances reflect what Interlanguage would characterize as grammatical sentences. Moreover, the desire to communicate early often prompts L2 learners to try to do more than their current competence allows. This means that there can be a significant gap between what learners are capable of doing and what they actually do.

The assumption underlying the formulation of the Full Transfer Hypothesis (FTH) is that, in L2 – and in our case FL – learners in general (and this concept could be even more applicable to typologically related languages such as Spanish and Italian), there is a complete transfer of functional semantic and syntactic elements necessary for interpretation into the L2. And this is absolutely true, but in another step, theorists also assert that: “It is essential to recognize that the debate about the L2 initial state is not just about what L2ers do (and don’t do) at the very earliest stages; this is one type of data to look at, but there may well be numerous (nonlinguistic) reasons why L2ers do not produce certain things at the earliest stages...”. (Schwartz and Sprouse 1996: 67)

Therefore, it is from this recognition of the existence of numerous elements that are not “strictly linguistic” that we want to start asserting the crucial role of experience and its related emotions.

³ From this point forward, the acronyms MT or NL will be used to refer to the native language.

This role is not only in structuring an individual's mental lexicon but also, and above all, in its transfer to the L2 to be acquired.

In another context (Di Gesù 2016: 72), we argued that in a situation of learning Spanish as a foreign language by an Italian-speaking learner who already has a pre-formed and structured conceptual system resulting from the interaction between his mental world and the social environment, the construction of this new linguistic system is the outcome of transfer. This leads to the formation of an interlanguage system that will not be free from interferences, but these are considered as positive transfers.

In this context, we need to make an effort to move away from the definitions that have been provided for the concept of interference as a deviation from the norm (Weinreich 1970). Doughty and Williams (1998: 226) emphasize that a learner's existing linguistic knowledge influences the acquisition of a new language in a systematic, though not necessarily straightforward, contrastive manner. This influence can be either positive or negative. It is deemed positive when the learner's knowledge of his first language (L1) enhances his ability to comprehend the second language (L2). Conversely, negative transfer occurs when the learner's knowledge of L1 hinders the ability to understand L2. Consequently, several scholars (such as Lado 1957, Corder 1967, among others) posit that language transfer serves as a source of errors among second language learners in cross-linguistic and cross-cultural studies.

The field of applied linguistics is rich with enlightening studies on the relationship between interference, interlanguage, error analysis, but in this context, we want to focus, first, on the distinction proposed by Kellerman and Sharwood (1986: 21) between interference as a linguistic outcome due to the influence of the first language (L1) on the target language (TL), and transfer as a psychological process that precedes interference. And, specifically, what we intend to do is to reframe this psychological process from an enactive standpoint, meaning to observe it as a socio-emotional-cognitive phenomenon.

But, before making this transition, we consider it important to refer to some concepts that, in some way, pave the way for this enactive reframing. First and foremost, we are talking about the concept of psychotypology developed by Kellerman himself (1977), considered as the subjective perception of the similarity between the linguistic systems, both the mother tongue (NL) and the foreign language (TL). According to Kellerman the success of a transfer depends on the learner's perception and becoming aware of the interlinguistic similarity, i.e., linguistic distance (Kellerman 1983). He argued that L1 transfer was mainly determined by two factors. One is learner's perceptions of their L1 (Prototypicality) and the other is learners' perception of NL-TL distance (Psychotypology).

One could argue that it is only the lack of linguistic-lexical competence in the target language (TL) that leads the learner to "import" certain lexical structures from their first language (L1), according to different degrees depending on the similarities or differences between the two languages under consideration. Obviously, the first-language lexicon is larger and contains more information than the second-language lexicon, and the first language is always accessed faster and is always the primary language.

And certainly, it is indisputable that this situation frequently occurs, but what we want to argue is that this subjective perception (Psychotypology) of the distance between the two languages can be read through the lenses of the 4E approach.

The process of acquiring linguistic competence in a target language by a non-bilingual adult individual cannot be solely understood in terms of abstract mental processes; it involves the entire mind-body system.

It is embodied to the extent that an individual's mental processes are influenced by their own perception, actions, and e-motions in a specific context.

It is embedded in that there is a co-determination between the learners and the physical, social, and cultural context in which they find themselves interacting, leading them to establish adaptive behaviours to interact with this external world.

It is extended because, by transitivity, this search for "linguistic homeostasis" extends to other cognitive contexts, revealing significant interactions. Finally, it is enactive because in its pursuit of "linguistic homeostasis" in the target language, the subjects play an active role in shaping the context in which they are immersed.

Previously, we discussed the fact that language education with beginner learners dedicates a significant amount of time to developing vocabulary. Many investigations confirm the crucial role of a lexical approach in beginner learners, as it is the most widespread method for building linguistic competence. The lack of studies on the application of such an approach to the context of adult learners was emphasized.

As for the lexical approach, it has been systematized by Lewis (1993) and it is well-received by many teachers who highlight lexico-semantic knowledge in their teaching. It consists of 9 methodological principles and 10 methodological implications. Cardona (2005: 106) gives a very exhaustive definition of the Lexical Approach debating that:

Il lexical approach proposto da Lewis si colloca all'interno degli approcci comunicativi con una forte valenza umanistico-affettiva, in quanto la competenza socio-pragmatica e la competenza comunicativa sono assunte come base e non come prodotto della competenza grammaticale; la lingua rappresenta dunque una risorsa personale e non una rappresentazione astratta. Inoltre, tra i principi metodologici fondamentali del lexical approach emerge con evidenza il superamento della tradizionale dicotomia tra lessico e grammatica. La lingua non è infatti costituita da una grammatica con un lessico, bensì da un lessico grammaticalizzato. A partire da questo postulato fondamentale il lessico non può essere considerato come un insieme di parole a se stanti da imparare in modo atomistico attraverso liste di vocaboli monoreferenziali. La natura del lessico è molto più articolata e si organizza in unità lessicali complesse (prefabricated multiword chunks).

Therefore, the Lexical Approach aims to overcome the conception of acquiring linguistic competence as mere knowledge and application of grammatical rules, this approach focuses on instructing commonly used fixed phrases in conversations, as Lewis argues that these constitute a larger portion of speech compared to individual words and sentences. The underlying idea of the lexical approach is that students should not remember the structure of various lexical chunks, for there are far too many to remember, but that they become aware of the structural nature of the language beyond the traditional grammar structures.

In our hypothesis of structuring a lexical-enactive approach, we started from the same consideration made by Lewis, namely the necessity of organizing a grammaticized lexicon for

the purpose of implementing linguistic competence. But then, we did not apply the 9 methodological principles and 10 methodological implications to our approach, precisely because it is based on the enactive reinterpretation of the central role of the mother tongue in acquiring vocabulary in the target language.

In this paper, we aim to outline the application of a lexical-enactive approach with university students of Spanish as a foreign language at an A1-A2 level of the framework. It is important to consider in doing those considerations, that the Lexical Availability changes, because learning a language within the host family is not the same as doing so in the university setting. At this point in the discussion, we should open a lengthy parenthesis on the concept of Lexical Availability. However, the exploration of this topic is too complex and deserves a separate discussion. We can only hint that it is a methodology that originated in France during the mid-20th century. Its goal was to achieve a lexical selection deemed suitable for establishing the progression and type of vocabulary to be acquired in a foreign language. In other words, it involves choosing fundamental lexical units of a language, deemed more suitable for teaching at the early stages of learning. Research on Lexical Availability holds significant promise for delving into and enhancing our comprehension of productive vocabulary proficiency in a second or foreign language.

2.1 Spanish as FL for beginners' Italian university students

The hypothesis we start with for our investigation is to show that the learner, in the process of structuring a lexicon in the L2, is likely to be driven to seek and use, in the target language -both at the morphosyntactic and lexical-semantic levels – a variety of expressions that reflect his/her lived experience. All of this is done to be able to communicate and interact with others.

The epistemological premise from which we started is the possibility of considering the process of enaction as an “epistemological possibility” that could constitute the phenomenological infrastructure of the manifestations of interlanguage and interference. In this sense, the acquisition of lexical competence in the target language could be read through the lens of the 4E approach.

We indeed support the likelihood that the use of language by a learner of a foreign language at an A1-A2 level of the Framework can be viewed as a social faculty that reveals a potential for actions, since, as argued by López García-Molins: “el lenguaje es una realidad de dos caras, sirve para comunicarse y para conocer el mundo, es decir, tiene una dimensión social y una dimensión mental” (2017: 23). It connects all possible actions within a network and expands the meaning of individual experiences. In this sense, the subject’s understanding of linguistic expressions is not only an epistemic vocation but is interpreted as a way of being that depends on the interaction between the subject and the world.

Another foundational concept is that of the autopoietic dimension of the mind as a system capable of giving meaning to experience, where language will no longer have only a denotative function but will also be endowed with a connotative, internal function.

The subject, through interaction with the world, carried out through his/her native language, has gradually constructed his/her mental image of it. This is the result of a simultaneous

enactive process between the Cartesian *res cogitans* and *res extensa*. For quoting López García-Molins (2017: 36):

La enacción es la única relación biunívoca [...] la mente incide en el mundo corporal y personal del hablante a través del lenguaje (lenguaje → cuerpo) y el lenguaje refleja a su vez dicho mundo (cuerpo → lenguaje), en un ir y venir continuo del cuerpo a la mente-lenguaje.

So, what does the lexical-enactive approach consist of? It is an approach that is based, first and foremost, on the reinterpretation of transfer through the lens of the 4E approach. That is, transfer as a product of *embodied*, *embedded*, *extended*, and *enactive* cognition.

The situation of the Italian learners of Spanish as a foreign language is such that they have at their disposal a mental lexicon based on the first language (MT or NL). They are also aware that, given the typological affinity between the two languages, the decoding of many terms will be almost transparent. Besides, during their learning process, they will also realize that this supposed affinity is the major pitfall in acquiring correct linguistic competence, which can lead to interferences and errors. However, we will not only observe phenomena of interference or interlanguage but also an operation that could be defined as “neurophenomenological transference” (Di Gesù 2016). It is a linguistic-semantic switching resulting from a “refill” of the conceptual cognitive system to the lexicon of L1 and, through enactive properties, to that of L2.

The application of a lexical-enactive approach consists of educating towards a conscious use of the lexicon, viewed as a transposition into the target language of the experience gained in the first language, to convey intentions, relationships, emotions, etc.

This lexicon transferred into TL will be *embodied* because the subject will have experienced it in his/her everyday life and will express, in lexical terms, a response to an emotional experience. It will be *embedded* because it will depend on the particular situation in which it is used; it will depend on the interaction with the world. Changing the situational context will change the lexicon used. It will be *extended* because its use doesn't only concern an individual but can be extended to other people and things in the environment. Finally, it will be *enactive* because its use in a specific context and circumstance will make it inter-act, transforming it, potentially giving it a new meaning that will return to the subject in the form of a new *intake*.

The question that now arises spontaneously is what role a teacher plays in the process of implementing this approach with the students. The teacher's responsibility will be, first and foremost, to make the student aware of the mother tongue's lexical usage that has been “transferred” into Spanish. This operation is defined as “consciousness raising” and is considered the key to language acquisition. The teacher plays a crucial role in aiding students to enhance their “noticing” skill, which means transforming the lexical language input (stored in the mental lexicon storage of the student) into a conscious lexical language intake in the Spanish language. Ideally, the improvement of students' ability to notice will extend beyond the classroom and take place whenever they come across the language. In this sense, according to the 4E framework, we can talk about an *extended* lexicon.

The teacher must instruct the learners on gradually adjusting the use of vocabulary, starting from its use in their mother tongue. Moreover, the coach (so, this is how the teacher must be seen at this point) should encourage the students to progressively step out of their comfort zone

and explore the pragmatic dimension of language, emphasizing the significance of context in determining meaning.

The theory underlying the exploration of the pragmatic dimension of language is Lexical pragmatics (Blutner 1998, Carston 1997, etc.) a swiftly advancing area of linguistics focused on examining the ways in which linguistically defined word meanings undergo modifications in actual usage. It is a field of research that seeks to provide a methodical and explanatory description of pragmatic phenomena associated with the semantic underspecification of lexical items. This area of study tackles inquiries concerning the application of language in actual communication, investigating how speakers express meaning beyond the literal, dictionary definitions of words. Lexical pragmatics aims to comprehend the functioning of words and expressions in communicative contexts, considering the nuanced and context-dependent aspects of meaning that extend beyond their literal definitions.

The teacher, therefore, will work operationally with the concepts of *Lexical narrowing*, and *Lexical broadening*. The first occurs when a word is employed to express a meaning that is more specific than its inherent one, resulting in a more limited denotation. The second occurs when a word is utilized to communicate a meaning that is more general than its encoded one, leading to an enlargement of the linguistically specified denotation. *Approximation* and *metaphorical transfer* can be considered as types of broadening, where a word is employed to express a more general meaning, leading to an expansion of the linguistically specified denotation.

Just to give an illustrative example that could clarify the role of the lexical-enactive approach in acquiring lexical competence in a foreign language, we can take into account the case of polysemic words. From a lexical-enactive point of view, the teacher will have the task of correctly incorporating into the mental lexicon of the Italian student learning Spanish as FL, through a task-based approach, those lemmas that they have experienced in their L1 but which, in the target language, take on an additional meaning beyond the one already known. For example, consider the lemma “cometa”, which, as a shared lexical entry with the Italian language, has the meaning of a celestial body orbiting around the sun: *Vi un cometa con el telescopio*. The added meaning in the target language is that of: “A flat and light toy that is thrown into the air for the wind to lift.”: *El niño perdió su cometa atrapada en un árbol*. Or consider the case of the lemma *Manzana*, which has the shared meaning of “fruit of the apple tree”, but the added meaning in the target language is: “Urban space, generally quadrangular, delimited by streets. For example: *Mi madre vive en la manzana de mi casa*. Another interesting case that also involves the realm of so-called *false friends* is the word “tienda” since, for an Italian speaker, it almost has the same signifier in the L1 but a different meaning in the target language.

Indeed, what is a “tenda” for an Italian speaker is a “cortina” for a Spanish speaker. But returning to polysemy, the word “tienda” in the dictionary indicates: 1. Frame with rods and fabric for camping outdoors: *Por las noches, dormiremos en una tienda al lado del río Pisuerga*. The other lexical entry is: “A place where commercial products are sold at retail”. For example: *Voy a la tienda de chinos de aquí abajo a comprar unas cosas*. The Italian term for saying

“tienda” is “negozio”, which in Spanish poses another recoding issue, as its meaning is “actividad”, “empresa”, etc.

Hence, by examining the phenomenon not only through the lens of interference but also applying the previously discussed “neurophenomenological transference”, it can be inferred that the learner’s acquisition of these new terms is fundamentally enactive. If we consider, for example, the use of the term *manzana*, we could say that the experience of this lemma in the L1 is *embodied* since the subject will have experienced it in his/her everyday life, engaging the five senses. It will be *embedded* because it will depend on the particular situation in which it is used. Regarding *Lexical broadening*, we witness a metaphorical transfer of this word when we talk about the apple as the *fruit of sin*. Moreover, it is extended because its use can be extended to other artifacts made with the apple, such as *cider* or *face masks*, etc. Finally, this lexical acquisition is enactive due to the fact that the subject who has experienced this term in his/her L1 sees it return in the form of a new intake in the target language with the meaning of a *city block* in terms of urban planning.

3. Conclusions

Attempting to draw some considerations on the use of the lexical-enactive approach in teaching Spanish as FL to Italian-speaking university students, we could assert that it can be considered an implementation within the framework of competency-based teaching. This approach seeks to challenge the notion that acquiring linguistic competence is simply about knowing and applying grammatical rules. Moreover, in exploring our hypothesis, we began with a fundamental premise: the belief that the linguistic didactics for Italian speakers learning Spanish and vice versa should be distinctly grounded in a contrastive context. Indeed, in the literature, there are numerous studies aimed at demonstrating that the vocabulary acquired in a foreign language is characterized by elements that reveal a direct connection with the vocabulary of the native language, especially when analyzing two typologically similar languages. In particular, in this study, we sought to highlight how the internal structure of the vocabulary in the second language reflects, at least in part, the semantically based structure of the mental vocabulary of the native language.

The aim of this proposal to use an enactive lexicon with beginner Spanish students is to restore the role of the native language “filter” even in intermediate and advanced levels. This could be achieved through enaction, understood not only as an autopoietic process but also as a facilitator of a lexical mapping process organized by word families. These families would construct a semantic chain of meanings and sentence structures, correlated with a network of synaptic circuits and thus a mnemonic process. Moreover, the 4E approach could be a methodology that inspires every reflection on the relationship between cognition and language learning, serving as an inclusive framework for understanding the mechanisms underlying the acquisition of a foreign language.

Bibliography

BLUTNER, Reihard. (1998). Lexical pragmatics. *Journal of Semantics*, 15: 115-62.

- CARDONA, Mario. (2005). Applicazioni dell'approccio lessicale nell'insegnamento dell'italiano L2. Available at : <http://babylonia.ch/fileadmin/user_upload/documents/20053/Baby3_05Cardona.pdf>.
- CARSTON, Robyn. (1997). Enrichment and loosening: Complementary processes in deriving the proposition expressed? *Linguistische Berichte*, 8: 103-127.
- CORDER, Pit. (1967). The Significance of Learners' Errors. *IRAL*, 5: 161-170.
- DI GESÙ, Floriana. (2016). *Linguistica contrastivo percettiva*. Palermo: Palermo University Press.
- DOUGHTY, Catherine, WILLIAMS, Jessica. (eds.). (1998). *Focus on Form in Classroom Second Language Acquisition*. New York: Cambridge University Press.
- ELLIS, Rod. (2019). *Task-based language teaching: Theory and practice*. Cambridge, UK: Cambridge University Press
- EUBANK, Liam. (1993/94). On the transfer of parametric values in L2 development. *Language Acquisition*, 3: 183-208.
- KELLERMAN, Eric. (1977). Towards a characterization of the strategy of transfer in second language learning. *Interlanguage Studies Bulletin*, 2: 58-145.
- KELLERMAN, Eric. (1983). Now you see it, now you dont. In Gass, Susan M. and Selinker, Larry (eds.), *Language Transfer in Language Learning*. (112-134). Rowley, MA: Newbury House.
- KELLERMAN, Eric, SHARWOOD SMITH, Michael. (1986). *Crosslinguistic Influence in Second Language Acquisition*. New York: Pergamon Press.
- LADO, Robert. (1957). *Linguistics Across Cultures: Applied Linguistics for Language Teachers*. Ann Arbor, MI: University of Michigan Press.
- LEWIS, Michael. (1993). *The Lexical Approach*. Hove, UK: Language Teaching Publication.
- LÓPEZ GARCÍA-MOLINS, Ángel. (2017). Enacción, funciones ejecutivas y léxico. In López García-Molins, Ángel et Jorques Jiménez, Daniel (eds), *Enacción y Léxico*. (21-56). València, Tirant Humanidades.
- JUSSLIN, Sofia, KORPINEN, Kaisa, LILJA, Niina, MARTIN, Rose, LEHTINEN-SCHNABEL, Johanna, ANTTILA, Eeva. (2022). Embodied learning and teaching approaches in language education: A mixed studies review. *Educational Research Review*, 37: 1-21.
- PIAGET, Jean. (1970). *Science of Education and the Psychology of the Child*. New York: Viking Press.
- SCHIAVIO, Andrea & VAN DER SCHYFF, Dylan. (2018). 4E music pedagogy and the principles of self-organization. *Behavioral Sciences*, 8. (8), 72, 2-15.
- SCHWARTZ, Bonnie. D., SPROUSE, Richard. A. (1996). L2 Cognitive States and the Full Transfer/Full Access Model. *Second Language Research*, 12: 40-72.
- VAINIKKA, Anne and YOUNG-SCHOLTEN, Martha. (1994). Direct access to X'-theory: evidence from Korean and Turkish adults learning German. In Hoekstra, Teun and Schwartz, Bonnie, (eds), *Language acquisition studies in generative grammar: papers in honor of Kenneth Wexler from the 1991 GLOW workshops*. (265-316). Philadelphia PA: John Benjamins.
- WEINREICH, Uriel. (1970). *Languages in contact*. The Hague-Paris: Mouton.