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Thinking-for-speaking patterns in the L2 classroom: A mindful conceptual engagement approach to teaching motion events

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Inspired by sociocultural psychology principles applied to understanding language learning and conceptual development, this participatory action research illustrates a pedagogical intervention to teach motion events as conceptual categories in the Second Language (L2) classroom. The goal is to develop and implement conceptual engagement tasks that promote mindful understanding, application, and internalization of motion events as productive concepts in communicative tasks. This is the basis for a Mindful Conceptual Engagement (MCE) approach to L2 development. We focus on L2 Spanish classroom learners when asking-and-giving-directions. This task is conceptually challenging for First Language (L1) English L2 Spanish learners because it is connected to motion events and how Thinking-for-Speaking (TFS) patterns operate in L2 communication. Twenty-three L2-Spanish students from three different courses participated in the project. A selection of coded data and examples of graphic representations are analyzed. Findings illustrate how to teach motion events conceptually and how MCE promotes conceptual awareness and control of L2 communicative features. We also document the challenges of developing functional conceptual categories of meaning as they only emerge when mindfully applied in conceptual engagement tasks. L2 learners must create their own conceptual representations as learning tools to understand motion events. It is concluded that shifting L1 TFS patterns requires creative and mindful conceptual engagement by L2 learners.

KEYWORDS

mindful conceptual engagement (MCE), thinking for speaking (TFS), motion events, directionality, participatory action research

Introduction

In this participatory action research project (Colmenares, 2012), we focus on designing an intervention for the teaching of motion events (Talmy, 1985, 2000) in the Second Language (L2) classroom. Our goal is to document both the design of the pedagogical intervention and its pedagogical significance when conceptually teaching thinking and speaking relationships in L2 development. We first report on how to instantiate a Mindful Conceptual Engagement (MCE) approach for the teaching of significant concepts in L2 communication. Then we qualitatively illustrate L2 Spanish students' conceptual development with sample data from learners in three different L2 Spanish courses. From a Sociocultural perspective, the main goal of research is developing applicable practice. In this case, designing an intervention for the L2 classroom. The design and creation of pedagogical tasks, mediated by conceptual tools to promote internalization, is both a pedagogical approach and a research method to document mediation. Thus, in these pages, we consciously focus on both the pedagogical tools and the development more than the results of learning.

The connection between thinking and speaking has gradually gained visibility in the field of Second Language Acquisition (SLA). Slobin (1987) explains that the contents of the mind are encountered in a concrete way when they are being accessed for use, i.e., “the activity of thinking takes on a particular quality when it is employed in the activity of speaking” (435). He argues that each language offers specific options for the grammatical encoding of characteristics of objects and events. “Thinking for speaking” involves “picking those characteristics that (a) fit some conceptualization of the event and, (b) are readily encodable in the language” (435).

Jarvis and Pavlenko (2008) examine transfer in L2 learning and its consequences for language and thought. Han and Cadierno (2010)'s volume expands the analysis of this relationship between thought and language, in particular thought as shaped by First Language (L1) development and use, and its interaction with L2 use. The chapters in their collection empirically investigate the relevance of TFS to adult L2 acquisition. Pavlenko (2011) contributes to the sub-field of Bilingual Cognition Research with a focus on Slobin's Thinking-for-Speaking (TFS) and nominal and verbal semantics. Flecken et al. (2013) dedicate a special issue to the interrelation between language and the conceptual processes involved in language use, underlying issues of language typology.

As regards motion events, Montrul (2001) focuses on agentive verbs of directed motion (*march*, *walk*) and change-of-state verbs (*break*, *melt*) in Spanish and English to examine the effects of the L1 on L2 acquisition of argument structure. Gennari et al. (2002) investigated whether different lexicalization patterns of motion events in English and Spanish predict how speakers of these languages perform in non-linguistic tasks: recognition memory and similarity judgments. Their

results suggest that linguistic and non-linguistic performance are dissociable, but language-specific regularities made available in the experimental context may mediate the speaker's performance in specific tasks. From a cognitive typology perspective, Cadierno and Lund (2004) explore how Talmy (1985, 2000) typological framework and Slobin's (1996a,b) thinking for speaking hypothesis can be fruitful to examine how L2 learners of Spanish and Danish come to interpret and express motion in the L2. Similarly, through an empirical study which compares the expression of semantic components of Path and Manner of motion, Cadierno and Ruiz (2006) investigate how adult language learners come to express motion events in an L2 with (a) learners whose L1 and L2 belong to different typological patterns (Danish learners of Spanish); (b) learners whose L1 and L2 share the same typological pattern (Italian learners of Spanish); and (c) Spanish native speakers.

Talmy's and Slobin's ideas are also used as a point of departure by Ibarretxe-Antunano and Hijazo-Gascón (2015) in a collection of papers that explore how L2 learners acquire motion patterns through the study of basic notions such as Path or Deixis, among other concepts. Ji et al. (2011) analyze the expression of caused motion events in Chinese and English. The results of a cartoon-based production task disclosed that, although both languages tend to express equivalently the same set of semantic components for motion (Path, Manner, Cause, etc.), Chinese greatly differs from English in terms of where this information is encoded and how it is distributed across utterances. Thus, they suggest that it is better to understand Chinese on its own, as a language that shows both satellite- and verb-framing properties. Schmiedtová (2013) focuses on motion and differences in perspective taking for Czech and English L2 learners. This study documents that L1 English, unlike L1 Czech, prefers taking a phasal perspective in motion event construal. It concludes that, for highly proficient L2 speakers, conceptual restructuring in the direction of the L2 is possible, however limited. Benazzo et al. (2012) released a special issue on typological perspectives on SLA and TFS in L2 that includes three articles also regarding motion events, two of them among L2 French speakers (Carroll et al., 2012; Soroli et al., 2012) and one among L2 Russian speakers (Iakovleva, 2012). Bylund and Athanasopoulos (2015) study language and thought in monolingual speakers and L2 learners, with particular attention to the domain of motion, and discuss whether it is desirable to include the acquisition of language-specific thought patterns in curricular goals, and second, whether the understanding of language specificity in thought can be used in teaching as a means to facilitate learning.

With respect to TFS, motion events, and gestures, Stam (1998, 2006, 2010, 2014) longitudinally documents how patterns of thinking about motion change linguistically and gesturally for Spanish-speaking English language learners in their process of acquiring English. Also, Negueruela-Azarola et al. (2004) suggest that L2 Spanish speakers, even at advanced levels, have

difficulties manifesting L2 TFS patterns when gesturing and continue to rely on the patterns internalized in their L1 English.

From a pedagogical perspective on teaching and learning Spanish as a SL, Hijazo-Gascón (2021) looks into motion event typology and TFS among Spanish L2 learners. This monograph documents challenging aspects both for speakers whose first languages are typologically different and typologically close. It offers suggestions on how these challenges in the restructuring of meaning in L2 can be addressed in language teaching through translation exercises, mediation tasks [by using Filipović's (2017) Applied Language Typology], and focused attention to semantic contrasts in order to promote positive transfer in a bi/multilingual learner. Connecting with Hijazo-Gascón (2021)'s pedagogical preoccupation, this research project illustrates a pedagogical proposal for the teaching of directionality and motion events as conceptual categories in the Spanish L2 classroom.

Background

Motion verbs in Spanish and English and TFS patterns

Research in cognitive semantics explains why motion events are an intricate feature across typologically opposite languages (Talmy, 1972, 1985, 2000, 2009). When giving directions in English and Spanish, learners are dealing with the construction of space, motion, trajectories, and directionality in two different, conceptually opposite ways by changing their L1 thinking patterns to provide directions in their L2.

Talmy (2000, p. 26) distinguishes four components in a prototypical motion event:

Figure: an object moving or located with respect to another object (ground).

Ground: a reference object in relation to which the figure moves.

Path: trajectory or site occupied by the figure.

Motion: presence *per se* of motion or locatedness in the event.

Additionally, an external co-event expressing *manner* (the particular way in which motion is performed) or *cause* (the origin of a change in motion or location) may be present in a motion event (Talmy, 2000, p. 26).

Focusing on how differently languages express *path* trajectory, Talmy places English and Spanish as representative languages of each pole of a universal typology. This is based on how trajectories are encoded in English as a *satellite-framed language* vs. Spanish as a *verb-framed language*.

Satellite-framed languages like English and all other Indo-European languages except Romance languages as well as Chinese, conflate motion in the verb root with *manner* or

cause. For instance, in “*The rock slid/rolled/bounced down the hill*,” the verb integrates motion + manner, while in “*I pushed/threw/kicked the keg into the storeroom*,” the verb expresses motion + cause (Talmy, 1985, p. 63). Path is articulated through the use of a satellite word or particle such as a preposition or an adverb (*down* and *into* in the examples below).

Verb-framed Romance languages like Spanish conflate *motion* and *path* in the verb-root. Verb-framed languages require a separate subordinate clause or another independent constituent to articulate manner or cause, as in “*La roca se fue por la cuesta rodando*” (“The rock moved down the hill, rolling”). In Spanish, manner of motion, if relevant, is expressed through the use of another verbal phrase, generally in the form of a gerund. In “*Metí el barril en el almacén dándole una patada*” (“I moved the keg into the storeroom by kicking it”) the verb expresses path trajectory in Spanish, and cause of motion is expressed through the use of a gerund (*dándole*).

Directionality in L1 English in examples such as “*go up the hill*” is based on a verb expressing motion, the preposition *up* articulating a path, and a ground Noun Phrase: *the hill*. The verb may also indicate motion + manner such as in *walk into the building*. L1 Spanish would use instead a verb conflating motion + path: *sube la cuesta*. If relevant for the story, manner would be articulated through a gerund, for example *caminando*.

In sum, English encodes manner of motion, if needed, in the verb root meaning (roll, twist, creak, swing, rush, etc.) and path of motion (the direction of movement) in a separate particle associated to the verb, normally a preposition (a satellite) such as *down*, *into*, *out of*, *across*, etc. Spanish makes use of verbs of motion like *entrar*, *salir*, *subir*, *bajar* (go in, go out, go up, go down), which encode motion and path, and may leave out the manner of motion or encode it in an adverbial phrase (typically a gerund or participle) in examples such as *entré corriendo/rápidamente* (run/rush in(to) or *atraviese caminando* walk through/along).

Drawing on cognitive semantics (Fillmore and Atkins, 1992), Slobin considers how typological conceptualization regarding motion verbs works differently in English and Spanish TFS patterns. Slobin (1996a, p. 76) hypothesis defines thinking-for-speaking as “a special form of thought that is mobilized for communication.” It should therefore be expected that L2 learners would have problems when providing written and oral directions (Slobin, 1996a, p. 89). Giving directions using satellite verbs cannot be experienced directly in L1 Spanish speakers’ “perceptual, sensorimotor, and practical dealings with the world” (Slobin, 1996a, p. 92). Similarly, L1 English speakers neither express manner through the use of a participle after the verb like in Spanish nor verbs that do not require a preposition to indicate path. According to Slobin (1996a, p. 90), “much of value for the thinking for speaking hypothesis could be learned from a systematic study of those systems in particular second languages that speakers of particular first languages find especially difficult to master.” Accordingly, this study

analyzes motion verbs in the teaching/learning of L2 Spanish and proposes conceptualization tasks to shift TFS patterns in the communicative act of giving directions.

Giving directions, motion events, and L2 Spanish teaching

Giving directions in a L2 is a concrete descriptive task when compared to hypothesizing, supporting an argument, or analyzing a poem. This task is placed at the intermediate level in the *ACTFL Proficiency Guidelines* (American Council on the Teaching of Foreign Languages) (2012, p. 7). Giving directions may not be so challenging for communicative task completion. Getting from A to B may be described with a few words and even some iconic exaggerated gestures. In this sense, it is probably a basic-intermediate task if the speaker compensates their lack of discourse complexity with their strategic competence. However, describing trajectories and motion using the L2 communicative resources is conceptually challenging for L2 learners from L1s which are typological opposites.

In Spanish language programs at North American universities, asking for and giving directions is a communicative task practiced in basic Spanish programs. It is rarely revisited in advanced courses, which focus instead on argumentative writing and interpretation of literature and films. However, previous research indicates that asking for and giving directions is conceptually challenging for L1 English/advanced L2 Spanish speakers. As documented in *Aguiló Mora and Negueruela-Azarola (2015)*, giving directions is conceptually complex because it is connected to motion events (*Talmy, 2000*) and TFS patterns.

The first step to implement this action research project was to analyze how motion events are presented in the conventional textbook presentations, and pedagogical tasks used in the L2 Spanish classroom. After a review, the instructor gained an awareness that the existing conventional models do not teach or focus on motion events and its connection to giving directions. Textbooks tend to place the “asking for/giving directions” tasks as communicative practice, or in the vocabulary-related sections of the chapter. These activities are usually assigned for lower levels of Spanish. Existing approaches to introduce and practice asking for or giving directions in L2 textbooks are based on presentations of basic prepositions and verbs as well as on communicative practice tasks using simplified city maps. Pedagogical explanations on giving directions are limited to a list of fixed expressions, mostly verb and prepositional phrases to express a question or a command/direction. These are to be memorized and practiced by L2 students.

As regards the tasks to be completed, we find maps that students should use as the basis for giving-directions practice through three options: (1) culturally and socio-historically

decontextualized role-plays; (2) fill-in-the-blanks writing; (3) listening activities. Occasionally, the maps are more authentic-like, but the type of pedagogical task proposed is also based on a pre-given list of expressions to memorize.¹ In a few cases, these same decontextualized maps are used to locate a specific place after a reading comprehension activity (*Aguiló Mora and Negueruela-Azarola, 2015*). In either of these cases, directionality and motion events are not presented as a concept. In this sense, its teaching/learning is somewhat encapsulated to basic skills and not connected to critical thinking and conceptual understanding (*Engeström, 1991*).

Sociocultural theory and L2 development: Teaching concepts for L2 communication

Sociocultural Theory (SCT) is a scientific psychological approach to the study of personality and mind as cultural phenomena mediated by symbolic tools (*Tomasello, 2019*). From an SCT psychological perspective, learning and development as any other human activity is mediated. Both processes are connected in instructional activity, but they are distinct (*Negueruela-Azarola, 2008*). On one hand, learning is about noticing and mastering skills, forms, content knowledge, and procedures. On the other, development is about conceptual transformations, the internalization of emergent categories: tools of the mind and thinking frames (i.e., concepts). These concepts are functional and dynamic ideas, which become powerful organizing and thinking devices (*Vygotsky, 1986; Kozulin, 1998; Salomon and Perkins, 1998; Negueruela-Azarola, 2008*).

A conceptual pedagogy for L2 communication centers on L2 learners mindfully engaging with psychological tools in conceptually meaningful activities (*Negueruela-Azarola, 2013*). The goal of a conceptually-based pedagogy is promoting internalization. Internalization is the process of appropriating and transforming psychological tools in communicative activity (*Negueruela-Azarola, 2003*). Conceptualization tasks foster the internalization of meanings with functional significance in communicative activity. These are constructed in the activity of verbal thinking: when ideas become tools for understanding (*Vygotsky, 1986*). These conceptualization tasks promote transformation and personal growth: the appropriation and internalization of new points of view, new ways of seeing the world, others, and oneself. However, this transformative

1 Examples of these can be found in a box of “Vocabulario útil”: “la esquina, la glorieta, la intersección, Salga de (!)...por..., Tome la calle..., Doble a la derecha/izquierda en..., Camine por... hasta, Cruce..., Siga por..., Siga adelante/derecho, Pase..., Esta calle lo/la lleva (directamente) a...” (*Terrell et al., 2009*).

internalization requires conscious awareness from the learner. It requires genuine engagement and a mindful use of concepts: a deliberate visible effort to use categories of meaning (concepts) as tools for understanding, i.e., to explain, understand, and orient performance.

Based on proposals generated by Negueruela-Azarola (2003), conceptual instruction should be part of the teaching of L2 communication. In the present project, motion events and directions can be taught through guided focus on conceptual categories. It is efficient and time-effective to structure the promotion of conceptual reflection in concrete communicative tasks in the L2 classroom.

Conceptual instruction is concretized in a Mindful Conceptual Engagement (MCE) approach to L2 development. MCE proposes creating, constructing, explaining, and using verbal and visual conceptual representations to think through communicative issues. An MCE teacher/practitioner (teacher/researcher) focuses on documenting changes in mediation in formative experiments designed to study how tools of the mind are (1) created, (2) appropriated, and (3) transformed to orient thinking in concrete communicative activity.

The teaching-presentation of meaning categories, that is, semantic or pragmatic reasons underlying complex communicative, textual, and grammatical meanings in an L2, is not just a matter of finding a perfect explanation to be given to L2 learners. Complex or elaborated explanations are not appropriate to foster conceptual internalization in MCE. Elaborate explanations are not functional conceptualizations in communicative activity. From a functional point of view, they are psychologically useless and pedagogically fruitless. As a matter of fact, a conceptual approach to teaching L2 communication is not about grammar rules to be applied in tasks. MCE is a non-mechanistic approach to promote conceptual internalization. Grammar explanations which are relevant as conceptual tools have to be meaning-based (semantic or pragmatic reasons for using grammar), brief, systematic, and applicable. In this sense, grammar rules are thinking devices –not only do they orient but they also construct our understanding or lack of. But concepts are not just representation or inert ideas.

From an MCE perspective, better explanations of complex communicative issues (pragmatic, textual, grammatical) need to be introduced to L2 learners not through long elaborate explanations but through visual aids, which help learners in constructing a functional understanding (Gal'perin, 1992). These material graphic representations may be presented to learners in the form of diagrams, flow charts, drawings, or schemas. Indeed, this is a research task for applied linguists.

Two principles are proposed behind materializing a complex semantic or pragmatic meaning: (1) capturing at a glance the meaning of a concept, which generally requires a long linguistic

elaboration, and (2) facilitating conceptual reflection based on this general and abstract notion. Learners need to engage in creating/transforming these representations through conceptual tasks where they are pushed to reflect on issues in “meaning-based ways.” This is challenging for most L2 learners, because it requires genuine conceptual thinking. It is thinking about grammar based on concepts and not on rules.

An MCE has already been used for the teaching of aspect (Negueruela-Azarola, 2003; Negueruela and Lantolf, 2006; García, 2018), modality (Negueruela-Azarola, 2008; Fernández-Parera, 2018), or the contrast *ser/estar* (Negueruela and Fernández-Parera, 2016). There is a need to design and develop more pedagogical interventions on meaningful aspects of language use –not necessarily grammatical. Textual or discursive components such as genre, coherence and cohesion, or pragmatic meanings as regards intentionality need to be explored from this perspective (Vílchez, 2021).

All in all, the key to MCE is to push students to reflect on L2 communication through reasons and not rules. In this process, language is at the same time the mode of representation and is a tool for reflection of L2 complex meaning such as story, interpersonal communication, text, metaphor, motion event, tense, aspect, and modality, genre, coherence, and intentionality. MCE is about creating models as thinking tools to orient activity, in which mediation itself changes the nature of the task. In other words, the goal of MCE is the development of the learner's capacity to actively use the concepts to mediate (i.e., self-regulate) their L2 communicative performance.

A participatory action research study: Methodology

This section illustrates through a participatory action research (Colmenares, 2012) project how to promote the creation of conceptual and functional representations for L2 communication in the L2 classroom. Conceptualization (graphic and verbal) is key to transform inert concepts –seen as declarative knowledge—into categories that are functional for L2 communication.

To be clear, the goal of this action research project is not to demonstrate the efficacy of MCE. First, because conceptual development is not explained by a simple cause-effect relationship. Second, because the goal of a participatory research project is to document the teaching practices so that future practitioners that wish to implement an MCE approach in the L2 classroom may be able to follow basic principles, sample tasks, illustration of protocols, and practical guidance.

In this research study we center on mediation, so that researchers and learners can observe how the individual's mediated activity operates both at the interpsychological and intrapsychological levels. The instructor-researcher achieves this by promoting the active internalization of learning units

(concepts). This is based on understanding that L2 research is a transformative process. It is key to document (a) how the symbolic representations that drive and regulate conceptual and communicative activity in different situations and contexts are created or transformed; (b) oral communication that emerges in pedagogical practices when internalized concepts are mobilized in social practice; and (c) the internalization (or not) of the learning unit through mediated activity. The documentation of this developmental process is both a research and a pedagogical task.

The pedagogical intervention reported here is framed and inspired by SCT principles from the field of psychology (Vygotsky, 1986). We ground this research project on the sociocultural argument that conceptual engagement tasks are the key to promoting internalization of new L2 TFS patterns (Negueruela-Azarola, 2013). Mindful conceptual tasks should enable L2 learners to appreciate how a different language expresses motion events and directions differently. The key to conceptual teaching in L2 development is mindful conceptual engagement by learners: the active creation of verbal/graphic representations to be applied as explanatory tools to communicative situations. This significant engagement—intense conceptual reflection (conscious awareness) by L2 learners—is promoted so as to functionally internalize relevant categories of meaning (i.e., concepts that can serve as tools for thinking).

As documented in previous research on MCE, it is a communicative and conceptual challenge to change the way learners think when they speak in a second language. Aguiló Mora and Negueruela-Azarola (2015) report on how advanced L2 learners exhibit difficulties manifesting L2 TFS patterns. L2 learners seem to continue to rely on L1 TFS patterns in L2 communication. Pedagogically, the instructional difficulty of this action research project is how to properly integrate meaningful conceptual reflective tasks that smoothly blend in with communicative agendas in the L2 classroom. Conceptual tasks are not the focus of instruction in most, if not all Spanish classrooms. Hence, the following sections detail a pedagogical sequence that may serve as a starting point for L2 practitioners interested in explicitly teaching motion events as a functional concept.

Research questions and hypothesis

Framed from a participatory action research perspective, the leading research question for this project is the following: How can we teach motion events as a conceptual category in a Spanish L2 university classroom? This question draws on sociocultural psychology principles to understand human consciousness, and the central role of concepts as mediational tools in thinking processes.

The pedagogical hypothesis in this action research study is that it is indeed possible to teach concepts in a L2 communicative classroom. We also hypothesize that it is difficult, but also possible to shift L1 TFS patterns in a communicative L2 classroom, if students focus on creating, designing, and constructing conceptual categories as tools for orientation. A conceptual focus is about students actively constructing a new understanding. In particular, an MCE approach to teaching motion events provides a specific sequence to help L2 Spanish learners realize how meaning is deployed in motion events in English and Spanish. We hypothesized that being aware of these opposite TFS patterns is one of the critical components to develop learners' giving-directions abilities in L2 communication.

In the present study, L2 Spanish learners are challenged by what to foreground in completing directions tasks, since choosing what to foreground is conditioned by the L1. A giving-directions task involves motion events, foregrounding and describing trajectories or not, including cause of motion or not and, in a few instances, highlighting manner of motion or not. All these require a combination of nominal and verbal phrases with prepositions in conceptual patterns that are quite distinct from the learners' L1.

The current research project also documents how L2 Spanish learners, fluent in their conversational abilities, are challenged to provide conceptually appropriate directions in their L2, and how MCE improves their awareness and performance in L2 translation and L2 performance tasks. As noted above, conventional ways of addressing directionality in L2 Spanish lessons and textbooks proved not to be fruitful among participants from a conceptual perspective. Therefore, we wondered if a conceptual approach to the teaching and learning of motion events would help toward the development of new and challenging L2 conceptual understandings in the area of TFS and motion events.

Methodology

Participants: Students and instructor

The original pool of this project comprised a total of 23 participants at a US university who participated in 3 different courses taught by one of the researchers at 3 different times. All of the participants were 18–21 years old, L1 English speakers, and fluent in their L2 Spanish. 12 participants were enrolled in an Intermediate-Advanced Spanish course (group A). 5 participants were enrolled in an Intermediate Spanish course (group B). 6 participants were enrolled in an Advanced Spanish course (group C). Groups B and C were at the time taking the classes in Spain as part of a Study Abroad program (see Table 1).

All classes were taught by the same instructor in the US and Spain. The instructor, teacher-researcher in this action research

TABLE 1 Participants in the study.

Group	Number of participants	L1	Proficiency	Study abroad
Group A	12	English	4th semester course	Yes
Group B	5	English	5th semester course	No
Group C	6	English	5th semester course	Yes

project, has been teaching Spanish for 12 years in institutions of higher education in North America. She has implemented a conceptual approach in her Spanish communicative classroom for 8 years now. It is important to realize that implementing a conceptual approach to teaching communication requires the professional development of the instructors in charge of instantiating conceptual sequences and protocols (Williams et al., 2013).

Data from all 23 L2 Spanish students were qualitatively analyzed and documented for this research project. Due to space limitations, only a significant selection of coded data and examples of graphic representations will be explicitly presented to illustrate findings and answer research questions.

Procedure: Pedagogical sequence for conceptual intervention

Inspired by the work and proposals of Vygotsky (1986), and Gal'perin (1992), Negueruela-Azarola (2003) develops a pedagogical protocol for the L2 classroom which comprises four pedagogical stages for promoting internalization of conceptual categories in the L2 classroom:

- (1) Minimal unit of instruction/analysis: abstract and general idea to be imitated, created, applied by learners—the concept;
- (2) Representation or materialization of teaching point;
- (3) Conceptualization: conceptual engagement through the creation of learners' own models through written and oral verbalization;
- (4) Articulation of conceptual categories. The pedagogical application/data collection procedure lasted two 50-minute sessions plus 1 session of homework tasks.

Table 2 below summarizes the timeline and tasks for the conceptual intervention.

Results and data analysis

Pre-task: Translation of motion events

A written translation task was introduced to check students' understanding of motion events and giving directions. Participants had probably completed similar giving-directions

tasks in their first or second semester of Spanish study at university. This task was inspired by Slobin (1996a,b), who comments that: “a useful way to explore the “rhetorical slants” of two languages is to compare a translation with an original, asking how each language accommodates itself to the demands of the other with regard to the same content” (1996b, p. 209). Pedagogical translation practices strengthen the semantic understanding of the L2 (Hijazo-Gascón, 2021). Slobin (1996a) argues that revealing and meaningful comparisons come from Spanish translations of English in order to answer the question: How do L2 Spanish speakers handle the large quantity of English locative detail through its use of satellite words? Whereas English translators seem to be able to follow the Spanish original, adding a few words, when necessary, Spanish translators have to make changes to English motion and path expressions. On occasion, they even need to slightly change the full path signification. Slobin (1996b) adds that, in quite a few cases, a full path-ground depiction translation is not even possible due to lexical and syntactic constraints (1996b: 210).

The translation task contained fifteen prompts in English to be translated into Spanish using the targeted linguistic forms expected to be challenging for L2 learners (see Appendix A for prompts and common prototypical translation by participants). All 23 participants, despite being fluent in Spanish as Intermediate, Upper-Intermediate, and Advanced learners, had still challenges in translating motion events given the conceptual complexity involved. 90% of them gave non-accurate translations in the items analyzed here.

For instance, for the direction statements (1) “Go up the hill” and (2) “Go downstairs,” Spanish L1 participants would use a motion verb expressing path in their root such as *subir/bajar*. L2 Spanish participants, however, produced utterances such as: (1) *Va(ya) arriba la colina* or (2) *Ve/Vaya abajo las escaleras*. Similarly, in (8) “Go across the gym,” Spanish, as a verb-framed language, expresses path in the verb root with the verb *cruzar* (*Cruza/cruce el gimnasio*). L2 Spanish student participants, L1 speakers of a satellite-framed language, translated the direction as (8) *Vaya a través del gimnasio*.

Examples below exemplify how verb-framed languages like Spanish require a separate subordinate clause or another independent constituent to articulate manner, such as a gerund or an adverb. Direction statements (5) “Swim across the river” and (13) “Run past the university” would translate in Spanish as: (5) *Cruza/Cruce el río nadando*, and (13) *Vaya/Ve corriendo y llegue/llega más allá de la universidad*. Thus, direct translations following L1 TFS patterns such as (5) *Nade a través del río* or (13) *Corre pasado la universidad* were very frequent (95% of participants). By incorporating manner in the verb (the appropriate option in satellite-framed languages such as English) with the use of, for example, *nadar* in (5), or *correr* in (13), participant had otherwise problems in expressing path since *a través del* or *pasado* do not express the path trajectory that *cruzar* does in (5) and *pasar (por)* in (13).

TABLE 2 Intervention timeline and tasks.

Lesson	Type of task	Description	Type of data collected
Day 0 (15')	Pre-task In class or as homework	Translation task (Appendix A)	15 prompts in English to be translated into Spanish using the targeted linguistic forms expected to be challenging for L2 learners
Day 1 (50')	Task 1. Homework correction/Reading discussion	Introduction-to- the-topic. Short story: “La curiosa complejidad de las direcciones”	Reading comprehension questions (Appendix B). The task moved from closed to open-ended questions that reflected on the concept of directionality in relation to cultures
	Task 2. Conceptual Modeling	Representation/materialization of concept to be taught underlying the teaching lesson	Instructor presents a new conceptual model or pedagogical diagram (Figure 1 below) to help learners materialize and internalize how motion verbs work concerning path and manner in English (a satellite-framed language) and in Spanish (a verb-framed language)
Homework	Task 2 (cont.) Conceptual Engagement	Learners' creation of their own models	Student participants were asked to manipulate the proposed model and create their own visual representation of the concept to be applied in a number of pedagogical communicative activities to understand, explain, and internalize directionality
Day 2 (30–50')	Task 3. Verbalization Tasks **A part of these tasks may also be done as homework.	Learners talking themselves into an understanding of the concept to be appropriated	Two forms of verbalization were carried out: (1) explaining the concept as such and (2) explaining one's performance through the concept in concrete communicative situations
Assessment and/of internalization	Task 4. Articulation of conceptual categories	(a) Verbalization tasks in mid-term exams/quizzes and homework activities (all groups) (b) Written performance tasks in mid-term exams/quizzes (all groups)	Through these tasks, this action research study focused on how instructors can assess the potential internalization of the concept
	Post-tasks	Translation task re-visited (all groups) and oral performance task in final exam (Group A)	

In (6) “Turn right/left,” the use of Spanish path verbs such as *girar* or *doblar* were often ignored and replaced instead by verbs empty of path trajectory such as *go*, *take* or *make* (*ir*, *tomar* o *hacer*). Example (10) “Cross the street” confirms the tendency to rely on L1 TFS patterns. Since “cross” is a path verb in English— i.e., not typologically different in Spanish—L2 student participants offered a functional translation in the L2: (10) *Cruce/cruza la calle*. Finally, prompts (14) “Go straight through the building, and up the stairs” and (15) “Go upstairs through the door into the building” suggest that L2 advanced learners face considerable difficulty when directions require boundary crossings. Whereas in English all the path significance falls on the prepositional phrases and, therefore, motion verbs do not need to be explicitly repeated, Spanish demands path verbs for each boundary crossing, which 99% of participants overlooked.

These examples illustrate how motion constructions are hard to internalize. L2 learners tend to maintain their L1 TFS patterns, as hypothesized by Slobin (1996a,b). L2 study participants are English-dominant as they think-talk about

motion in L2 Spanish despite having conversational abilities developed through the years of formal study of the language, as well as the experience of immersion when studying abroad. Their translations point to the fact that they seem to be unaware of alternative constructions for expressing motion, i.e., that Spanish is a verb-framed language that mostly uses path-conflated verbs and that expresses manner through an independent unit, usually a subordinate clause or a participle. Thus, by maintaining their L1-English TFS patterns, Spanish performances when giving directions tend to be semantically incoherent or pragmatically inappropriate translations of their English-as-a-satellite-framed TFS patterns.

Task 1: Introduction-to-the-topic activity: “La curiosa complejidad de las direcciones”

In the three courses that were part of these action research projects, all participants were given the same short story as part of the L2 Spanish course they were enrolled in. All courses

followed a Sociocultural and literacy approach to teaching communication and culture, and integrated different types of texts, including literary texts. A Sociocultural approach emphasizes the situated and cultural nature of texts and the significance of reading/writing as a developmental task (Connery et al., 2010).

For the specific session on giving directions, student participants were assigned the short story “La curiosa complejidad de las direcciones,” where Ambroggio (2013) reflects on the complexity of giving directions when traveling and interacting with other cultures. The story is about a group of neighbors in Miami who meet at a popular spot in Coral Gables. On this day, they talk about how we tend to give directions differently in each culture. Each neighbor tells an anecdote on the topic of directionality based on personal experiences in different parts of the world.

For homework, students had to answer the reading comprehension questions in APPENDIX B. Questions moved from closed to open-ended. They gradually led the L2 student participants into reflecting on the concept of directionality in relation to motion events and TFS patterns in typologically opposite languages. For question 7 of the reading comprehension tasks, participants were asked why the narrative voice affirms that translations complicate the act of asking for and giving directions. The two answers below illustrate prototypical responses from L2 participants:

Data sample (1)

*Creo que muchos términos se pierden en la traducción y es posible que no se *da la palabra correcta en el otro idioma.* (Participant 1, Group B)

I think that a lot of terms are lost in translation and it is possible that a non-exact word is given in the other language when translated.²

Data sample (2)

Cuando las direcciones no están en la lengua nativa de una persona, la situación puede estar complicada. Si estamos de acuerdo porque tuvimos problemas en Miami cuando el chofer no hablaba en inglés. (Participant 2, Group C)

When directions are given in a person’s non-native language, the situation can get complicated. We agree because we had similar problems in Miami with a driver that didn’t speak English.

Participant 3 (Group A) agreed:

Data sample (3)

...existe la barrera idiomática. Se hace más difícil la comunicación entre personas de culturas diferentes y especialmente en el área de pedir y dar direcciones.

...language barrier exists. Communication is more difficult between people from different cultures, especially in the area of asking for and giving directions.

Participants begin to realize that languages construct reality in slightly different ways. This fact complicates L2 communicative performance. Participant 4 (Group B) even reflects on which type of word categories make the task more complex. Consider these two data samples:

Data sample (4)

*Creo que no podía entenderlas porque ellos usaron palabras de vocabulario que yo no conocía. Por eso, creo que dar direcciones en español sería muy difícil. Es necesario que yo *aprendo más preposiciones si quiero dar y entender direcciones en español.*

I think I could not understand them because they used vocabulary that I didn’t know before. That is the reason why I think that giving directions in Spanish would be very difficult for me. I should learn more prepositions if I want to give and understand directions in Spanish.

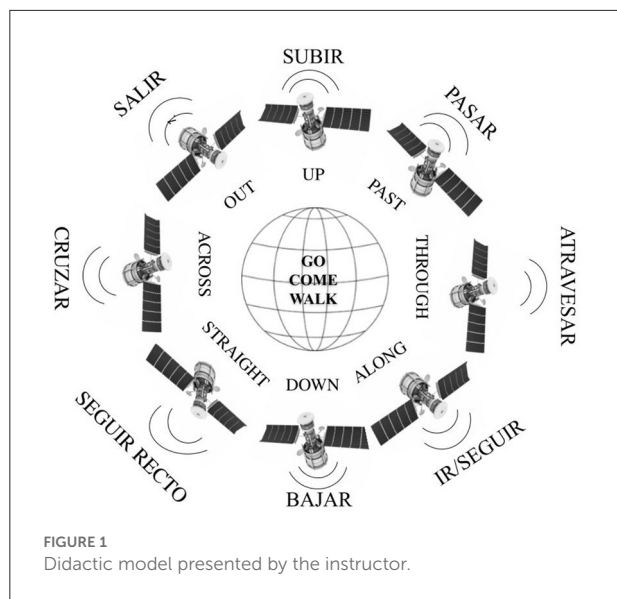
Data Sample (5)

*Según la lectura, dar direcciones no es fácil porque hay métodos diferentes en culturas diferentes. Por ejemplo, según la lectura, hay países que no utilizan nombres para las calles y, en lugar de eso, usan cosas en las calles para dar direcciones. Por ejemplo, un árbol grande. También, si las personas no hablan *la misma idioma necesitan usar movimientos con sus manos y brazos para explicar las direcciones y esto puede ser muy difícil y las personas pueden *ser muy confundidas. Estoy de acuerdo con la lectura. Para mí, es difícil dar direcciones en España donde *la idioma es diferente porque no sé todos los verbos de direcciones y si no sé un verbo para describir la trayectoria correcta, no puedo ayudar. También, la conceptualización de las direcciones es diferente.*

According to the reading, giving directions is not easy because there are different methods in different cultures. For example, according to the reading, some countries don’t use names for the streets. They use things in the streets to give directions, such as a big tree. Also, if people speak different languages, they need to use their hands and arms to explain the directions, and this can be very difficult as people can get confused. I agree with the story. I find it difficult to give directions in Spain where the language is different because I don’t know all the verbs that describe the right trajectories. So, I may be of no help. Moreover, the way we conceptualize directions is different.

As illustrated in these five data samples, the story was an appropriate pedagogical tool to become aware about how directions are complex. L2 learners still have to realize that learning to functionally communicate in an L2 requires engaging with conceptual categories so as to be able to construct meaning appropriately (Negueruela and Lantolf, 2006).

² All translations into English are ours.



Task 2: Representation/materialization of teaching point

The key task for the L2 learner to begin to appreciate a different concept is to engage in conceptual thinking. It is not to memorize a list of grammatical rules or key expressions.

As [Negueruela-Azarola \(2003, 2008\)](#) proposes, teachers/researchers need to determine a minimal unit of instruction: the concept of motion verbs for the teaching and learning of directionality in this action research project. This is the concept to be engaged by learners. The development and use of didactic models as psychological tools that capture the complexities of the concept is the next critical step. In this way, the conceptual task is twofold: (1) to construct an understanding which captures the meaning potential made available by the concept of motion verbs; and (2) to learn to engage and apply the concept in a way that is coherent with the communicative situation of asking for/giving directions.

On day 2 in these 3 interventions, the instructor first emphasized how verbs and particles express path and manner differently in English and Spanish. To that end, a new conceptual model, pedagogical diagram, was presented to learners to visually represent how to give directions based on the abstract and theoretical study of motion verbs in L1 and L2.

This model is an example of a didactic representation of the concept designed by the instructor and researcher at the time ([Aguiló Mora and Negueruela-Azarola, 2015](#)). The goal is to help learners visually materialize how motion verbs work concerning path and manner in English (a satellite-framed language) and in Spanish (a verb-framed language). [Figure 1](#) above depicts how Spanish and English contrast in their deployment of different grammatical resources when constructing a motion event. This particular model does not

focus on the conceptual meaning of a motion event (see [Negueruela-Azarola, 2003](#) or [Fernández-Parera, 2018](#) for other types of diagrams).

Then, L2 student participants were asked to change the proposed model and create their own visual representation of the concept. The new model has to be applied in a number of pedagogical communicative activities to understand, explain, and internalize directionality. In other words, learners had to utilize their own models to help create a semantic understanding of the concept that is at the same time abstract, coherent, and comprehensive ([Negueruela-Azarola, 2008](#)). Through their models, learners had to be able to generalize their use of motion verbs across different communicative circumstances. The development of these pedagogical materials is a research task in itself. Accordingly, from an MCE perspective, learners and instructors are also researchers of their own developmental process.

According to Gal'perin, learning that fosters development is first based on material aids that can be manipulated by learners to represent structural, procedural, functional and content properties of the subject of study (cf. [Karpova, 1977](#)). Although [Negueruela-Azarola \(2003\)](#) proposes that charts or diagrams are often better options to represent the properties of complex objects of instruction due to their quality (empirical or theoretical) and manner of presentation (prefabricated or exploratory), we added the option of a metaphorical representation that would embrace the conceptual category. In this way, and out of their comfort zone, learners were pushed to mindfully think through the concept through different visual representations.

Student participants were asked to create two different representations: first, an illustration of the concept, even metaphorical (for example through a drawing); and second, another representation through a diagram, flowchart, or schema that was more analytical in nature. [Figures 2–5](#) are samples of models that are informative of the conceptual category.

These representations are not just illustrations. Participants in this action research project were asked to apply these models to understand how motion is deployed through different structures in both languages. Through the engagement with the instructor model, and by creating new ones (see [Figures 2–5](#)) inspired by the instructors' model (see [Figure 1](#) above), students mediated their own developing understandings. These creative engagement tasks with their new models are the key to internalizing new concepts from the present perspective.

Learners were also asked to share their illustrations with the class. As a reminder, the principle behind materializing a complex meaning was to (1) capture at a glance the essence of an idea, which generally requires a long linguistic elaboration, and (2) facilitate conceptual reflection based on a general

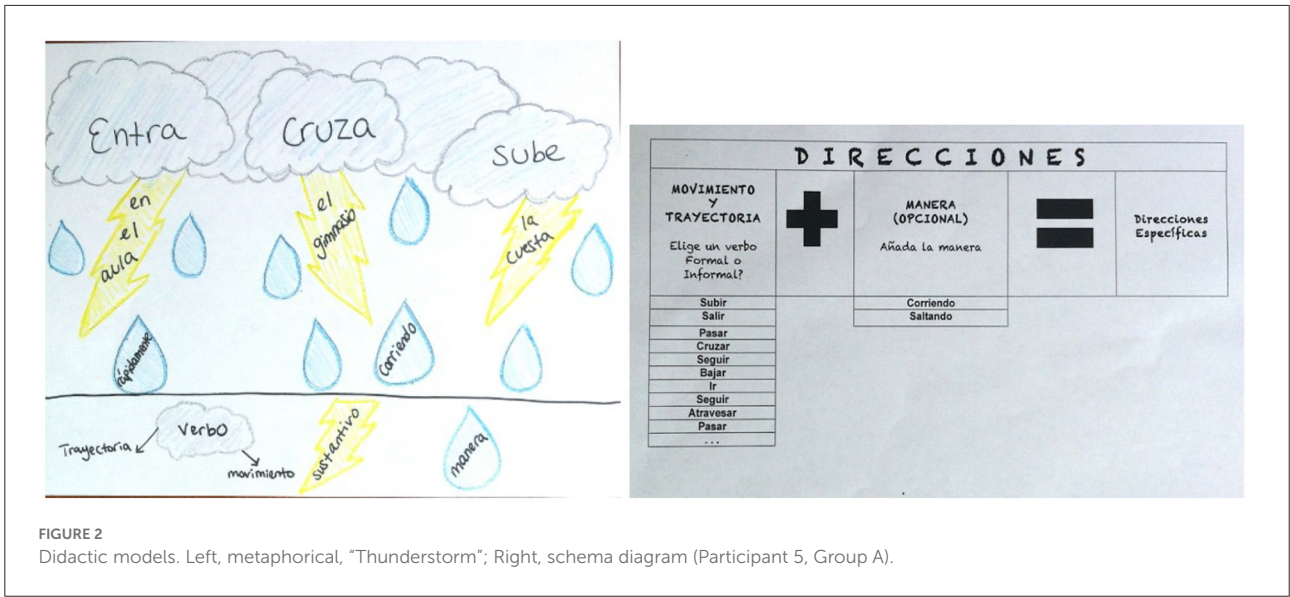


FIGURE 2 Didactic models. Left, metaphorical, “Thunderstorm”; Right, schema diagram (Participant 5, Group A).

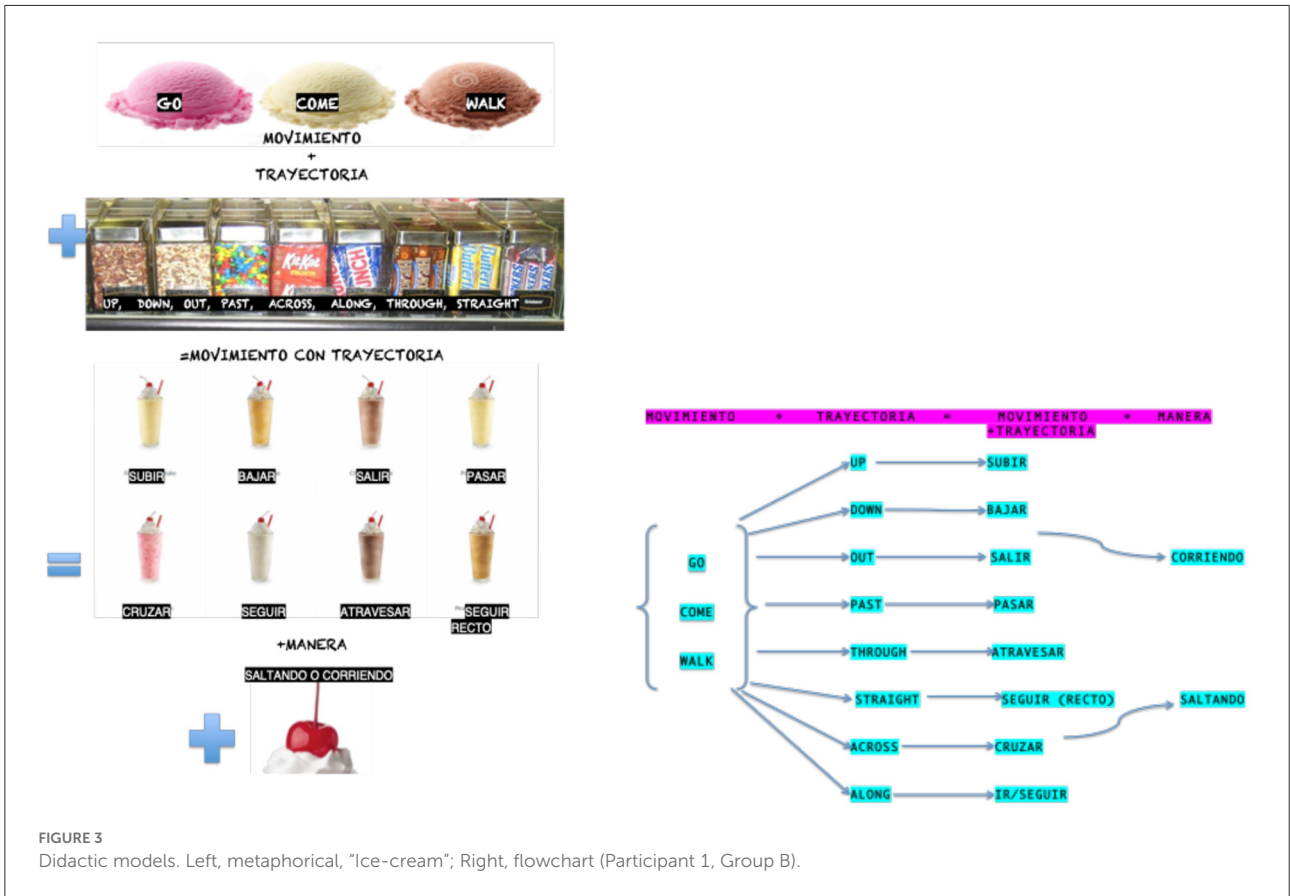


FIGURE 3 Didactic models. Left, metaphorical, “Ice-cream”; Right, flowchart (Participant 1, Group B).

and abstract idea. Learners needed to engage in creating and transforming these representations.

The instructor-researcher in the three interventions observed that students such as participant 7 (Group B)

that, at first, presented models that were not complete, systematic, and applicable, i.e., the ones that did not capture all the semantic and functional properties of the conceptual unit of analysis (motion verbs for directionality

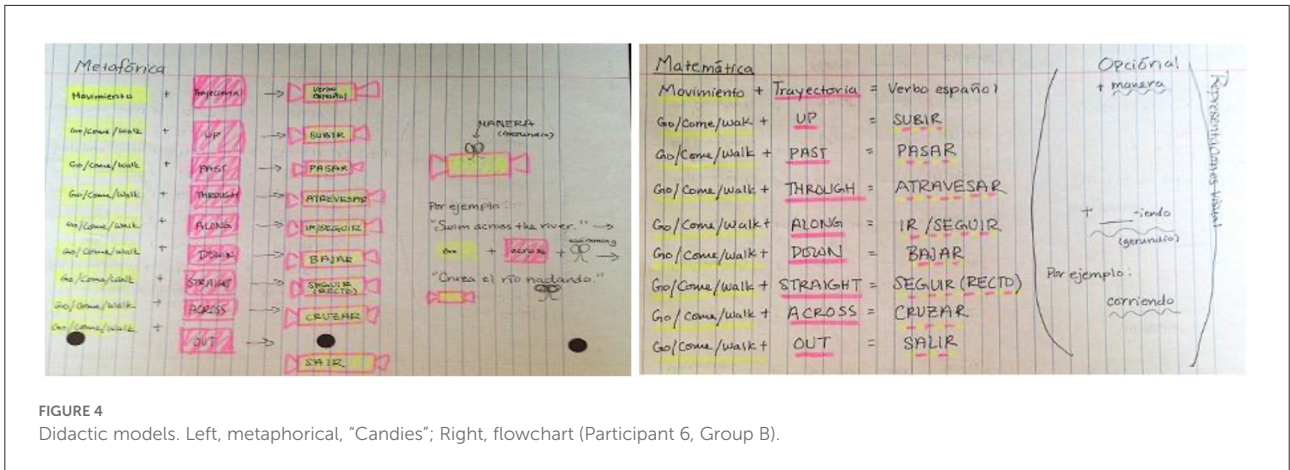


FIGURE 4 Didactic models. Left, metaphorical, "Candies"; Right, flowchart (Participant 6, Group B).

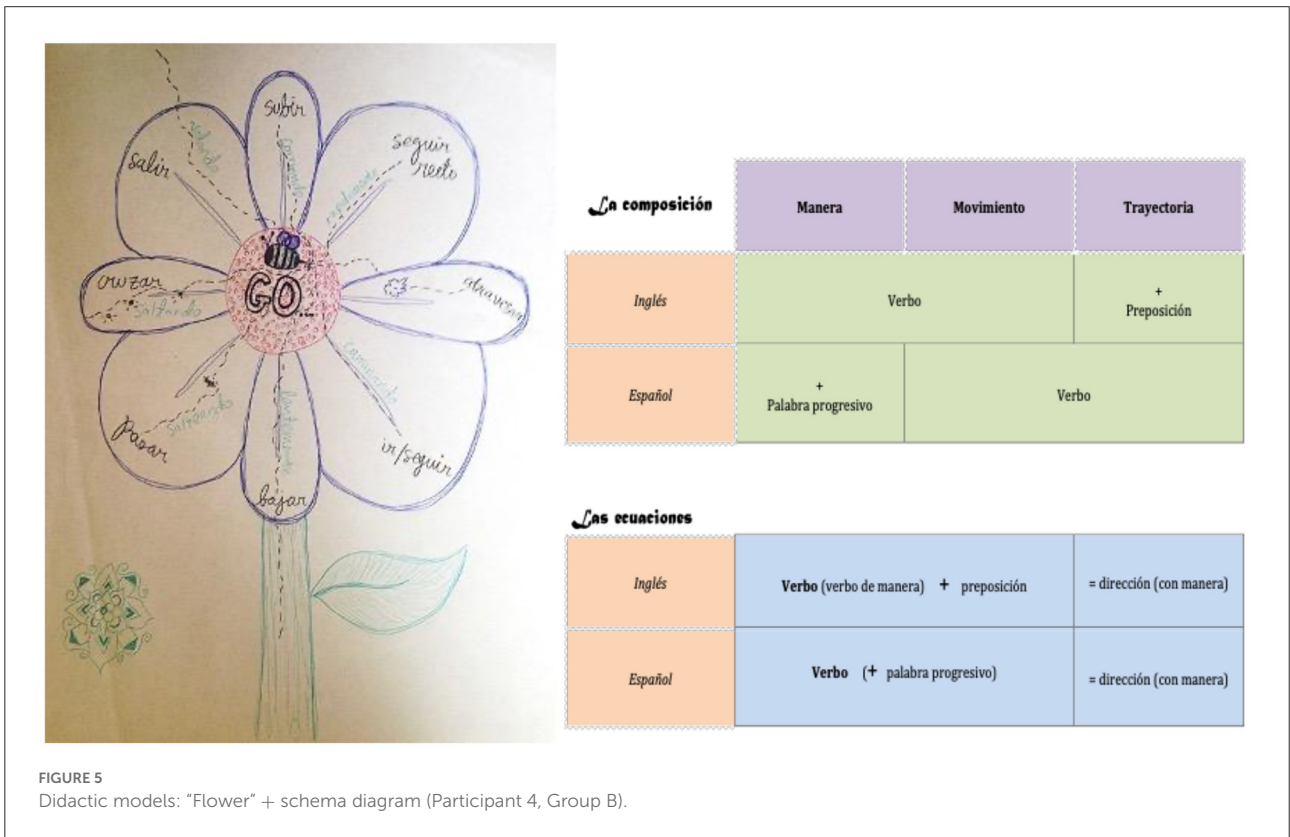


FIGURE 5 Didactic models: "Flower" + schema diagram (Participant 4, Group B).

in Spanish), were not able to talk through the concept in class and apply it to concrete utterances. In collaboration with peers and the instructor, this participant revised the model until it was more meaningful and functional (see Figure 6).

As such, the creation of these visual representations works as an assessment tool *per se*. From an MCE perspective, the conceptual explanation through didactic models becomes not only a tool for result, but also a tool and result (Negueruela-Azarola, 2008) toward conceptual

understanding and application, which in the end is the source of internalization.

Task 3: Verbalization of concepts as psychological tools for meaning making

Verbalization or conceptualization tasks are opportunities for learners to talk themselves into an understanding of the concept to be appropriated. Verbalization is an instructional tool for attention focusing, conceptual application, and meaningful

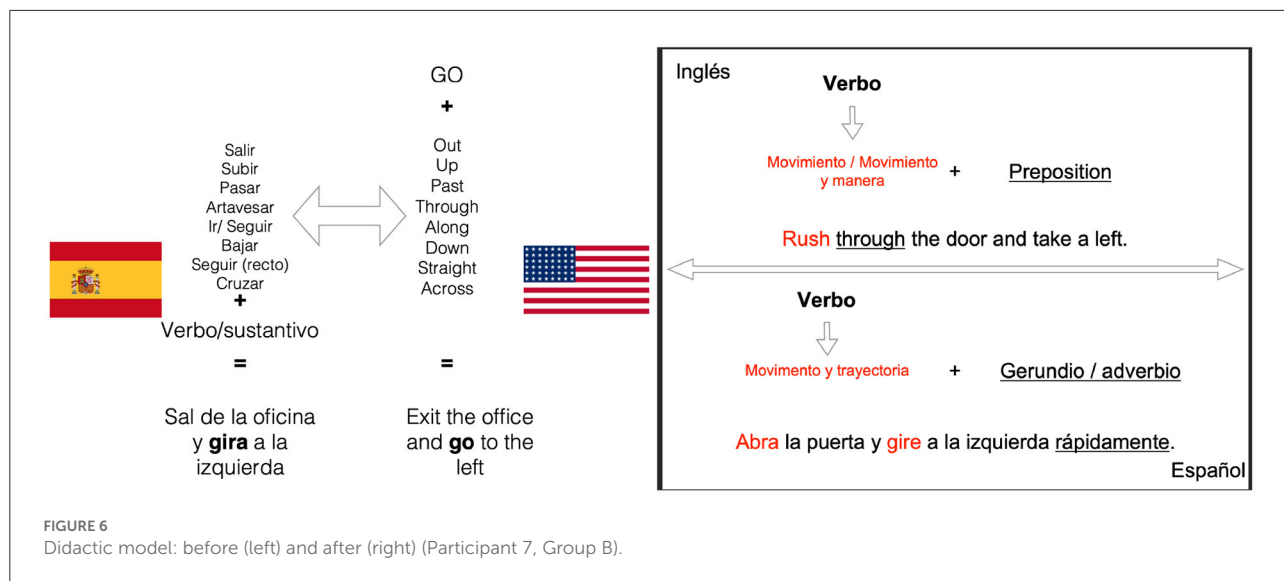


FIGURE 6 Didactic model: before (left) and after (right) (Participant 7, Group B).

synthesis. Thus, it is directly connected with internalization and concept formation. In MCE, significant verbalization implies conceptualization: the intentional use of overt self-directed (i.e., private speech) to explain concepts to the self in a concrete task where the concept is applied. Two forms of verbalization were carried out in this action research project: (1) explaining the concept represented in the model created by the learner; and (2) explaining one’s performance through the concept in a concrete communicative situation.

As a prototypical example, data sample (6) from participant 5 (Group A) explains the concept through the model (see Figure 2) via a video recording:

Data sample (6)

Este es mi dibujo sobre las direcciones. Yo usé ejemplos específicos de la clase y entonces dividí las direcciones en diferentes partes. Las nubes representan el verbo. Incluyen la trayectoria y el movimiento y el relámpago significa el sustantivo de la dirección y las gotas de lluvia representan la manera. Así, por ejemplo, “Entra en el aula rápidamente.” “Entra” es el verbo, “en el aula” es el sustantivo y “rápidamente” es la manera.

This is my drawing on directions. I used specific examples from the classroom and then, I divided the directions in different parts. The clouds represent the verb. They include the trajectory and the motion, and the lightning means the noun of the direction, and the raindrops symbolize manner of motion. So, for example, “Entra en el aula rápidamente.” “Entra” is the verb, “en el aula” is the noun and “rápidamente” is the manner of motion.

Learners were asked to verbalize their understanding about motions and directions through their own visual models. In their written verbalization task, students were asked to reflect on how motion events related to L2 TFS patterns when giving directions. L2 learners were given one transcription in Spanish of a past student performance when giving directions (Aguiló Mora and Negueruela-Azarola, 2015).

Model provided to be followed by students:

Para llegar a X, tienes que ir directamente hasta esa pared y tomar una derecha y después ir debajo de las escaleras y después caminar directamente hasta el bar y después cuando llegas al bar hacer otra derecha y caminas más directamente pasando todas las palmas y después, a tu derecha, al lado de X, vas a ver la biblioteca.

To get to X, you have to go straight up to that wall and turn right. Then, go downstairs and then, go straight up to the bar. Turn right again and continue walking straight past the palm trees and, then, on your right side, next to X, you’ll see the library.

Then, they were asked to answer the following question:

Prompt:

Después de haber estudiado los verbos de movimiento en clase, ¿por qué dirías que esta forma de dar direcciones suena extraña en español?

After studying motions verbs in class, could you explain why this way of giving directions does not sound accurate in Spanish?

By thinking *through* the concept of motion and with the aid of their didactic models, L2 learners who properly engaged

with models and produce consistent explanations were able to explain why this way of giving directions sounded incoherent and pragmatically non-functional:

Data sample (7)

*“Suenan extraña porque, en inglés, usamos el verbo ‘ir’ para muchos verbos de movimiento. *Añadamos un adverbio a ‘ir’ para incluir la trayectoria. Por ejemplo: ‘ir abajo’ en inglés significa ‘go down.’ En español puedes decir solo ‘baja’ porque incluye el movimiento y la trayectoria. También puedes cambiar ‘caminas más directamente pasando’ a ‘pasa caminando’ porque el verbo tiene trayectoria y movimiento y ‘caminando’ significa manera.”*

(Participant 5, Group A)

It sounds unnatural because, in English, we use the verb “to go” for many motion events. We then add an adverb to include trajectory. For example, “ir abajo” in English is “go down.” In Spanish, you just need to say “baja” because this web includes motion and trajectory. You may also want to change “caminas más directamente pasando” into “pasa caminando” because the verb has trajectory and motion and “caminando” indicates manner.

With the help of the conceptual model explaining verbs of motion, L2 student participants used abstract understanding to reflect on their communicative performance when giving directions after reading their own directions. They may also reflect through the concept when having to give feedback to other learners’ who have carried out the same activity.

A second question in this written translation task was:

QUESTION FOR STUDENTS:

¿Qué diferencias hallamos en los verbos de movimiento en español y en inglés? Explica. ¿Cómo se ven reflejadas estas diferencias en el párrafo siguiente? Traduce el párrafo al español. Luego, explica las diferencias en los verbos de movimiento en español y en inglés tomando ejemplos de este párrafo en concreto.

What is the difference between motion verbs in Spanish and English? Explain. How are these differences reflected in the following paragraph? Translate the passage into Spanish. Then, explain the differences between motions verbs in English and Spanish using examples from this specific paragraph.

Students were also given a paragraph in English to be pushed to convey “manner” in their translation (see model below).

MODEL:

In case of fire, rush out of the room, hurry along the hallway, run your way down the stairs, kick the door open if needed, and run out of the building. Go into the room again only when it is safe. Walk home so that you get some fresh air.

Student participants had to explain the concept and then talk through the concept in the translation task. Data sample 8 below from participant 8 (Group B) is a prototypical example of 90% of responses from all participants in s 3 groups:

Data sample (8)

“En inglés, los verbos de movimiento tienen una manera implicada, pero en español, algunos verbos no tienen la manera implicada, así que se necesita un adjetivo o progresivo [sic]. También, en inglés, los verbos usualmente no tienen trayectoria así que tienes que añadirla con una preposición. Al contrario, en español, la mayoría de los verbos tienen trayectoria. En el párrafo anterior, los verbos ‘rush,’ ‘hurry,’ y ‘run’ tienen una manera implicada. En español, se necesita añadir una palabra de manera, como ‘rápido’ o ‘corriendo.’ También, las frases ‘rush out’ y ‘run...down’ necesitan una palabra de trayectoria, pero en español, los verbos ‘salir’ y ‘bajar’ implican trayectoria.”

In English, motion verbs may include manner of motion, but in Spanish, some verbs do not include manner, so an adjective or gerund is needed. Also, in English, motion verbs do not usually express trajectory, which needs to be expressed through a preposition. On the contrary, in Spanish, most of the verbs include trajectory. In the previous paragraph, the verbs “rush,” “hurry,” and “run” include manner of motion. In Spanish, we need to mark manner with a word such as “rápido” or “corriendo.” Also, the phrases “rush out” and “run...down” need a word that signals trajectory, but in Spanish, the verbs “salir” and “bajar” already mark the trajectory.

Student participant 8 (Group B) translated the model above into Spanish:

“En el caso de fuego, sal del aula corriendo. Sigue recto por el pasillo rápidamente, baja las escaleras corriendo, abre la puerta si es necesario y sal del edificio rápido. Entra la aula [sic] cuando es segura. Camina a tu casa así puedes sentir el aire fresco.”

In this action research project, participants seemed to end up showing a conceptual understanding of the minimal unit of analysis, the concept of motion, when applied to concrete communicative activities: giving directions. But, as explained before, in some cases this required back-and-forth feedback on the creation of the conceptual models in the verbalization tasks.

To be sure, the key development moment for conceptual internalization is found in conceptually mindful engagement tasks, which serve as a conceptual-awareness practice for both the L2 learners and the instructors. On one hand, L2 learners are pushed to reflect on their grammatical choices based on conceptual reasons. On the other, L2 instructors can observe if the verbalization is based on a conceptually coherent reason.

If there is an instance where a student does not explain the conceptual meaning behind the use of motion events evidences lack of transformative application of the concept as a thinking tool. It is in the conceptual task of explaining through a meaning-based reason, a concept, where learners develop a meaningful understanding of motion verbs. Students then had to think through the concept with/through the models as thinking tools in actual performances with specific communicative intentions.

Task 4. Articulation of conceptual categories

Data collection/documentation and the assessment of the developmental process of learning was continued in two more tasks. From a conceptual perspective, there is a need to consider the integration of motion events into other conceptual units in the course and the curricula. A conceptual approach to L2 classrooms should also consider organizing the curriculum based on categories of meaning and their connections (see also Hijazo-Gascón, 2021, p. 273). That is, a curricular progression that moves from the more abstract communicative concepts such as communication, text, context, role to more concrete conceptualizations such as tense, aspect, modality or motion events (cf. Davydov, 1988; Marková, 1991). Conceptual categories such as aspect or motion do not function in isolation from other issues such as text, genre, tense, or modality, and all intertwine in the more abstract notion of communication. This is in itself a research task for applied linguists.

As stated in Negueruela-Azarola (2008), structural L2 curricula follow formal features to articulate the pedagogical sequences in courses (e.g., first present tense, then, past tenses, and then more complex syntactic structures). Communicative curricula since the 1970s gradually replaced a structural organization of courses by a thematic organization of programs (e.g., technology, pastimes, travel) and communicative functions and tasks (e.g., giving opinions, narrating a story, describing your family). From a conceptual perspective, there is a need to articulate a conceptual curriculum for the L2 classroom to appreciate the implications and influence of a concept-based instruction approach to L2 development. For now, and on these exploratory projects, teacher-researchers may start by introducing conceptual interventions and different types of conceptual tasks in conventional communicative or grammar courses.

For example, written verbalization/conceptualization tasks may be introduced in homework, quizzes, and exams to check for the conceptual reasoning behind the use of certain grammatical features of a concept. In the action research project described here, a verbalization task was included in one of the mid-term quizzes of Group B. Student participants had to explain how motion verbs are conceptualized differently in English and Spanish with their preferred graphic representation in mind. Alternatively, students use visual representation

provided while answering questions. These verbalizations may be done in the L1 or L2 of learners. The two examples below are illustrative of the answers provided by participants in a quiz:

Data sample (9):

“En inglés hay dos palabras para dar direcciones. Uno es el movimiento (con la manera) y la otra la trayectoria. Necesitas las dos. En español, hay una palabra para el movimiento y la trayectoria. Si quieres, hay una palabra separada para la manera.

Inglés: go down the stairs = baja (bajar) las escaleras

Inglés: walk out of class = sal (salir) de la clase”

(Participant 1, Group B)

In English, there are two words to give directions. One is the motion (with manner) and the other one is the trajectory. You need both of them. In Spanish, there is one word for motion and one for trajectory. If needed, there is a separate word for manner.

English: go down the stairs = baja (bajar) las escaleras

English: walk out of class = sal (salir) de la clase

Data sample (10):

“...cada idioma tiene sus propias formas de dar direcciones. ...la conceptualización en español es diferente que en inglés. Por ejemplo, en inglés se necesita un verbo y una preposición para explicar el movimiento y la trayectoria. El movimiento podría tener la manera también. Pero en español, el verbo tiene el movimiento y la trayectoria juntos y si necesita la manera, la manera necesita estar en la última palabra en una forma de gerundio, por ejemplo.”

(Participant 4, Group B)

...each language has its own ways of giving directions. ...conceptualization in Spanish is different from English. For example, in English a verb and a preposition are needed to explain motion and trajectory. Motion verbs may include manner as well. But in Spanish, the verb has both motion and trajectory and, if manner is needed, this is expressed in the last word, as in a gerund, for example.

From the point of view of curricular articulation, it is also critical to think about how to integrate conceptual tasks in assessment instruments. For Group A, students completed the task in Figure 7 in a mid-term quiz:

Two sample answers for this quiz task are transcribed here.

Participant 3 (Group A) answered:

Data Sample (11)

¡Hola, María! Quieres ir desde tu casa hasta el cuarto de un amigo, ¿verdad? Primero, sal de tu cuarto de dormir y baja las escaleras sin prisa. Sal de la casa y camina hasta la calle. Gira a la derecha antes de cruzar la calle. ¡Cuidate! ¡Hay un carro que va a doblar enfrente de ti! Solo una milla hasta la destinación. ¿Todo bien? ¿Sí? Bueno, tienes que atravesar el río. ... Sigue recto hasta el edificio en que vive tu amigo y entra.

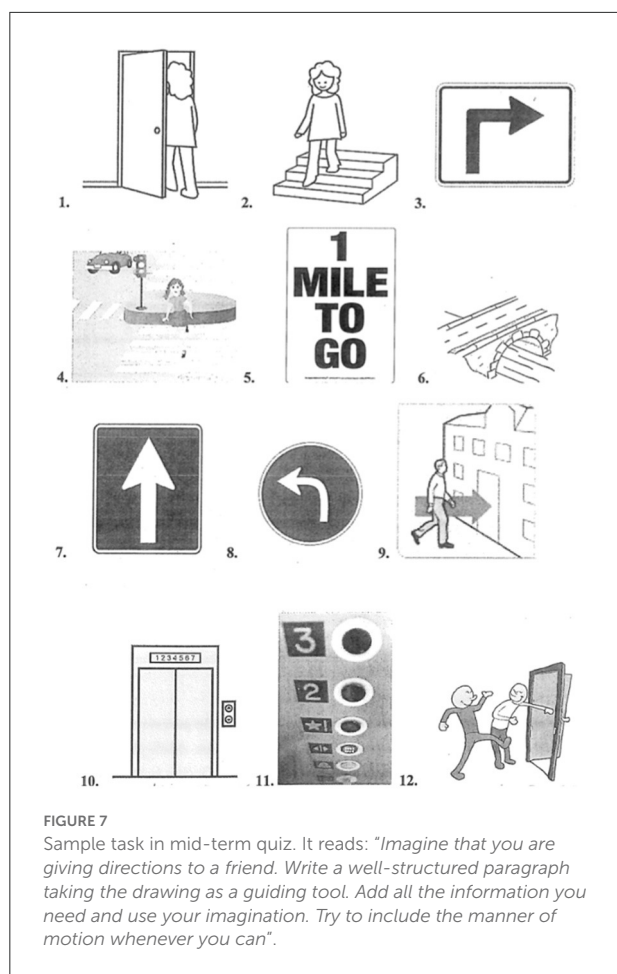


FIGURE 7
Sample task in mid-term quiz. It reads: "Imagine that you are giving directions to a friend. Write a well-structured paragraph taking the drawing as a guiding tool. Add all the information you need and use your imagination. Try to include the manner of motion whenever you can".

Coge el ascensor hasta el tercer piso y camina hasta el cuarto 314—tu amigo te dirá: ¡Hola!

Hi, Maria! Do you want to go from your place to your friend's room, right? First, leave your room and go down the stairs. Leave the house and walk up to the street. Turn right before crossing the street. Be careful! A car will turn right in front of you! Now you are one mile away from your destination. Everything fine? Well, now you need to cross the river... Continue straight until you get to the building where your friend lives. Enter the building. Take the elevator to the third floor and walk to room 314, where your friend will greet you!³

³ This translation is meant to express the meaning of the performance. The point of this study is to show how English and Spanish are typologically opposites as regards motion events and, thus, they require different linguistic structures when giving directions. Therefore, a literal translation would not make sense. Data samples 11-17 show how participants managed to use the linguistic structures that are characteristic of verb-framed languages as regards motion, and are also translated so that the reader understands the meaning but structures will not be parallel to the original Spanish performance.

Participant 9 (Group A) answered:

Data sample (12)

*¡Voy a darte direcciones para llegar al apartamento de mi prima que está enferma! Sal por la puerta con cuidado. Baja las escaleras caminando. Dobla a la derecha y sigue recto hasta que llegues a la calle. Entonces, cruza la calle corriendo hasta que llegues al puente que está a una *mile. Atraviesa el puente rápidamente y sigue recto *el misma calle hasta que llegues a la calle ocho. Dobla a la izquierda y entra en el edificio negro. Se llama "The Big Black Apartments." Sube al ascensor apurado hasta el *tercero piso. Al frente del ascensor está la sala 301. Entra en la sala y por favor ayuda a mi prima para mejorarse.*

Let me give you instructions to get to my sick cousin's apartment! Go out the door carefully. Walk down the stairs. Turn right and continue straight until you get to the street. Then, run across the street until you see a bridge one mile away. Run across the bridge and go on in the same street until you arrive at Calle Ocho. Turn left and go into the building. It is called "The Big Black Apartments." Run into the elevator up to the third floor. Room 301 is just opposite the elevator. Go into the room and please help my cousin get better.

Although data samples 11-17 show how participants managed to use the linguistic structures that are characteristic of verb-framed languages, the focus is on the importance of integrating conceptual thinking and reflection in/as assessment tasks.

Post-task: Assessment and/of internalization

A translation post-task was used to document if translations were semantically and pragmatically appropriate after the pedagogical intervention. In the final exam, participants were given the same translation task for giving directions (APPENDIX A). 98% of participants conceptually verbalize why they were initially wrong in their use of motion verbs in Spanish.

For example, participant 9 (Group A) that had initially translated (1) "Go up the hill" into (1) *Va arriba la colina* explained that the most appropriate translation is *Sube la colina* because "En español necesita el verbo que indica el movimiento y la trayectoria."

Participant 10 (Group A) who provided the same answer (*va arriba*) stated that "En español el verbo tiene la trayectoria y movimiento. Aquí hay un anglicismo porque hay dos palabras solo necesita una. 'Subir' tiene trayectoria que 'va' no incluye: *Sube la colina.*"

For sentence (4) “Swim across the river,” students that had previously answered (4) *Nada/e a través del río* now explain that “*En español se necesita un verbo que indica trayectoria y no es necesaria la manera. ‘Cruza’ indica la trayectoria y ‘nadando’ la manera*” (Participant 1, Group B).

For sentence (5) “Go across the gym,” which had been mostly translated into “*Va al otro lado del gimnasio*,” we find now appropriate translations as “*Atraviesa/Cruza el gimnasio*,” and explanations like “*El verbo ‘ir’ no tiene la trayectoria que cruzar o atravesar sí tienen*” by participant 10 (Group A) or “*Necesitas usar ‘cruzar.’ No usas ‘ir’ porque no tiene trayectoria. Puedes añadir manera con ‘andando’*” by participant 5 (Group A).

In the same exam, students were asked to give directions from a contextualized specific point A to a specific point B they were familiar with:

Data sample (13)

*Abre la puerta y sal de la clase. Dobla a la derecha y sigue recto y cruza la calle. Dobla a la izquierda hasta la parada del autobús. Toma el autobús número cuatro hasta la comisaría y baja *el bus. Cruza la calle y sigue recto hasta la calle de Marqués de la Hermida. Dobla a la izquierda. Sigue recto hasta el edificio número 26 y entra.* (Participant 1, Group B)

Open the door and leave the classroom. Turn right and continue straight and cross the street. Turn left until the bus stop. Take the number 4 bus until the police station, then go off the bus. Cross the street and continue straight until Marqués de la Hermida Street. Turn left. Continue straight until number 26 and go into the building.

Data sample (14)

Abra la puerta y salga ‘por la puerta.’ Gire a la derecha y baje por el ascensor al primer piso. Salga del ascensor y salga del edificio por las puertas de cristal. Siga hasta la calle. Cruce la calle y gire a la izquierda y siga hasta la parada del autobús. Espere por el autobús y cuando el autobús llegue, móntelo hasta el estadio y pase los jardines. La playa está enfrente de usted.

(Participant 2, Group C)

Open the door and go out. Turn right and take the elevator down to the first floor. Go out the building through the glass doors. Continue to the street. Cross the street and turn left and continue to the bus stop. Wait for the bus and when the bus arrives ride it to the stadium and past the grounds. The beach is in front of you.

In this final task, 98% of student participants seemed to be aware of how motion verbs work differently in English and Spanish. This awareness of motion events and TFS patterns may have helped learners produce more meaningful and accurate performances in giving directions. The inclusion of these exercises in the final exam points to the significance of working on learners’ visual representations and verbalizing *through* the concept of motion events.

This project also illustrates how to assess students’ performances from an MCE perspective. Assessment starts in the creation of the visual representations, and ends with their performances in communicative and contextualized tasks. From a conceptual perspective, the point is not only to evaluate the results, but also to document the creation/manipulation and understanding of conceptual categories as both tools for understanding *and* as the very result of learning. In other words, the point is to assess not only the result but the process itself.

This action research study also focuses on how instructors can assess the functionality of a concept. With Group A, at the end of the semester, a month after intervention had taken place, the instructor took the students outside of the classroom and asked them to give directions from point A to point B (from a building on campus to the library). The three data samples below showcase prototypical answers spontaneously produced by L2 learners:

Data sample (15):

-Hola, perdone, ¿cómo puedo llegar al edificio Cox?

*-Sigue recto en este pasillo hasta que llegues al edificio de *Physics y doblas a la izquierda. Continúa caminando y sube las escaleras y abre la puerta y entra en el edificio de Cox.*

(Participant 5, Group A)

-Hello, excuse me, how can I get to the Cox building?

-Keep going straight in this hallway until you reach the Physics building and turn left. Continue walking up the stairs and open the door and enter Cox building.

Data sample (16):

-Buenos días, ¿dónde está la biblioteca?

*-La biblioteca... a ver... Aquí puede caminar toda a la izquierda y sigue este camino bordeando los árboles y sigue por allá y atraviesa por *la edificio de Ashe. Y por dos o tres minutos sigue en este camino y la biblioteca es *la edificio en su derecha. Cuando esté aquí, dobla a la derecha y abre las puertas y ya está.*

(Participant 10, Group A)

-Good morning, where is the library?

-The library... let’s see... Here you can walk all the way to the left and follow this path around the trees and continue through there and through Ashe’s building. And for two or three minutes continue on this road and the library is the building on your right. When you are there, turn right and open the doors and you’re done.

Data sample (17):

-Buenos días, ¿puede ayudarme? Necesito direcciones para llegar a Mahoney Pearson.

*-Sí, claro. Continúa caminando en este pasillo y baja las escaleras a la derecha y continúa caminando recto hasta llegar al centro de comer y cuando *llegar al centro de comer continúa caminando y puedes ver el edificio.*

(Participant 11, Group A)

-Good morning, can you help me? I need directions to Mahoney Pearson.

-Yes of course. Continue walking in this corridor and go down the stairs to the right and continue walking straight until you reach the dining hall and when you get to the dining hall keep walking and you can see the building.

L2 Spanish participants in group A were able to give directions in Spanish as a verb-framed language, using verbs indicating path trajectory like *atravesar*, *bajar* or *doblar*. Participants also crossed boundaries in an appropriate, meaningful way in the L2:

Data sample (18):

“*Súbelas, abre la puerta y sal del edificio.*” (Participant 1, Group B)

Go up the stairs, through the door, and out the building.

Data sample (19):

“*... sube las escaleras, abre la puerta y entra en el edificio.*” (Participant 5, Group A)

Go upstairs, through the door, into the building.

The emphasis on each boundary crossing was put on the verbs expressing path trajectory, which is indicated by the prepositional phrases in English.

Preliminary results based on frequencies of participants' answers show that the documentation of the mediated process by the learners themselves seems to help them produce more meaningful and exact performances when giving directions, and promotes on the part of the researcher the focus on the process of transformation and the mediating activity/tool, as a driver of the change and as a potential result of learning itself.

Discussion and conclusion

From a Vygotskian perspective, pedagogical research-practice moves away from paradigms focused on the measurement of isolated data. The proposed MCE approach focuses instead on mediation, so that researchers and learners can observe how the individual's mediated activity/mind works and develops both at the interpsychological and intrapsychological levels. The development and investigation of the conceptual exercise of the mind is carried out through activities mediated by cultural tools, such as semiotic representations, and require investigative methods that preserve and document the unity of analysis/learning that allows conceptual development (representative and socio-communicative). Documenting the qualitative and transformative changes that learners experience in their process of learning and internalization of the concept is key. Therefore, instead of the final product, the focus is

on the processes of change experienced by the learners-participants during the pedagogical intervention. The idea is to observe how learners become active and conscious participants in the transformation they experience through their own mediated activity. The instructor/researcher is therefore expected to obtain a more complete view of their developmental process.

Scientific activity, then, becomes a praxis where the research design is committed to the pedagogical intervention. In it, the researcher/instructor/learner has a mediating role between sociocultural knowledge and the development and internalization processes of the participants, who document the changes they experience in the classroom. In this way, learners are not mere observers, but active agents, intentional researchers who become aware of their own developmental process through the adaptation, manipulation and creation of cultural tools of communication and regulation of thought, without ignoring the mediating role that language itself plays through verbalization/reflection practices for data collection.

As documented in this participatory action research project, to instantiate an MCE approach in the L2 classroom, instructors need: (1) a complete brief conceptual explanation of a minimal unit of instruction, (2) a concise visual representation or materialization of the explanatory concept to be used as a psychological tool and promote sense-making activity in L2 learners, and (3) finally and most importantly, to introduce conceptual reflective tasks that foster mindful conceptual engagement (MCE).

From MCE perspective, L2 grammatical development is not only the learning of endings (morphology) or word order sequences (syntax) but also internalizing new concepts (complex reasons) in order to deploy complex meanings (semantics) in real contexts to enact intentionality (pragmatics). To be sure, MCE in the L2 classroom is a pedagogical approach for promoting the internalization of L2 meanings connected to thinking for speaking, communication, and literacy. Transformative and engaging conceptualization tasks (graphic or verbal) seem to be the key to create functional conceptual categories. Transformative conceptualization tasks, which promote genuine intellectual engagement, help learners focus on mediation, which is the place/time where researchers/practitioners may see how the mediated mind works.

An MCE approach to teaching L2 communication makes a critical teaching proposal for L2 instructors: the quality of explanations provided to L2 learners –in textbooks, notes, examples, tasks, and classroom presentations– have a definitive impact in L2 development. Explanations become not only ideas that learners use to orient and make sense of their performance but they also construct language as a simplistic rule-based sentence level structure. If language is not a structure but a set of communicative practices based on conceptual choices, then teaching may need to

present grammar and reflective tasks differently. In this sense, instructors may need to engage learners in the development of new concepts as concrete tools for orientation in practical communicative activities.

The present research proposal is that studying and understanding L2 development is about promoting the internalization of concepts (complex categories of meaning) in the L2 communicative classroom (Negueruela-Azarola, 2003). The use of concepts as tools for making sense of a particular communicative issue promotes: (a) the transformation of visual representations and (b) the use of a concept as the tool to explain language used based on meaning and not on rules. In the end, MCE is about conscious focus on symbolic mediated activity. It has the potential to be a transformative approach to teaching communication, writing, and grammar in L2 communicative classrooms.

Some challenges arise when implementing MCE. L2 learners are not used to conceptualizing activity. For instance, learners tend to provide quick justifications to grammatical points. Oftentimes, L2 learners use simple grammatical rules with tricks and shortcuts, and do not explain the meaning or conceptual reasons behind their communicative choices. Some learners do not push themselves to conceptualize linguistic issues based on conceptual reasons. This is also the case of L2 instructors. It may happen that they are not used to working with models of language as functional models for thinking. This action research study is still one of the first steps for the implementation of an MCE approach in L2 courses. MCE requires active and conscious intellectual participation in the learning process by learners and instructors alike. Conceptual engagement needs to be mindful because it requires thoughtfulness. This is in itself a valuable learning goal for any educational effort. There is a need for the creation of repositories in which these and other designed units and materials to apply MCE pedagogies would be openly available for teacher training and use. Finally, the study would prove to have some limitations in the way it is presented if it leads to an excessive instrumentalization of the aforementioned methodology, because this may lead to a fictitious correlation or direct causality between its mechanical application and the internalization of the learning unit. This causal relationship would not explain the mediated activity by the proposed thinking tools.

Future research may expand the study of motion events and consider gesticulation (Aguiló Mora and Negueruela-Azarola, 2015). McNeill and Duncan (2000) draw attention to the different fashion in which Spanish and English speakers gesticulate with motion verbs. Spanish speakers have a tendency to focus their path gestures on path verbs in which *motion* and *path* are merged (e.g., *entrar, subir, bajar...*) or on ground NPs, and they usually mark *manner* lexically gesturally or through

an amalgamation of both. English speakers focus their *path* gestures on satellites or ground NPs (*go down this hallway, take a right, down the stairs*) and express *manner* in the verb where *motion* and *manner* merge (*roll, rush, swing...*). By documenting the gestures used by speakers, we may observe when L1 English speakers give directions in L2 Spanish and, more importantly, may seek to observe how TFS differences in these two languages can have an effect on gesticulation. It would also be pedagogically relevant to reflect on the teaching implications for noticing gestures in giving-directions tasks.

Data availability statement

The original contributions presented in the study are included in the article/Supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

FA-M and EN-A contributed to conception and design of the study, collaboratively analyzed and selected the data, and wrote the first draft of the manuscript. The theoretical framework and the conceptualization of the MCE approach drew upon EN-A previous academic works. FA-M carried out the pedagogical intervention and collected the data. Both the authors contributed to manuscript revision.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fcomm.2022.867346/full#supplementary-material>

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