CL-ORIENTED APPROACHES TO TEACHING PHRASAL VERBS

A report on EFL classroom-based research

Enfoques lingüístico-cognitivos para la enseñanza de verbos compuestos:
Informe de investigación en el aula de Inglés como Lengua Extranjera

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ABSTRACT

This article presents some ongoing work that is part of a project on classroom-based research into CL-oriented activities for teaching/learning phrasal verbs in English. Framed in a three-month longitudinal study, this investigation reports on the design, implementation, and assessment of CL-oriented activities aiming at fostering awareness of the meaning of the particles IN/OUT and UP/DOWN with intermediate-level Spanish speakers of English (N=81). Results were described concerning two different methods used to measure students' learning gains: feedback from the classroom and formal assessment. Findings are discussed regarding the mismatch between results reported from the classroom and quantitative results.

RESUMEN

Este artículo presenta un estudio piloto de investigación en aula sobre actividades de corte cognitivo-lingüístico para la enseñanza/aprendizaje de verbos compuestos en inglés. Enmarcado en un estudio longitudinal de tres meses, esta investigación informa sobre el diseño, implementación y evaluación de actividades que fomentan el conocimiento del significado de las partículas IN/OUT y UP/DOWN con aprendices españoles de inglés de nivel intermedio (N=81). Los resultados se describieron según dos métodos utilizados para medir los logros de aprendizaje: retroalimentación de aula y evaluación formal. La discusión de los hallazgos atañe una incongruencia entre los resultados obtenidos de aula y los cuantitativos.

1. Introduction

Metaphor pervades language and thought, playing a fundamental role in human communication. For example, the English language is full of metaphors: ARGUMENT IS A BATTLE, 'shoot down'; ANGER IS EXPLOSION, 'blow up'; or LIFE IS A JOURNEY, 'pass away' (King, 1998). The theory that Conceptual Metaphor (Lakoff & Johnson, 1980, 1999) is a new way to fathom the world and our communication about it has been studied extensively in recent years. Above all, the ubiquity of metaphor in language has generated wide interest in research into metaphor in English Language Teaching (ELT). Knowledge of metaphoric language has great importance to mastery of foreign language (Littlemore & Low, 2006). Therefore, there has been a recent spate of interest in how to teach/learn metaphor in the second language (L2) classroom due to its pedagogical implications (Low, 1988).

Within the framework of Cognitive Linguistics (CL), in recent years, a good deal of research has provided evidence that learners at different educational stages can establish connections among the different senses of a word in an L2 (Boers, 2000; Piquer-Píriz, 2005, 2008, 2010). The idea of 'motivation' based on our physical, social, and cultural experiences –as opposed to linguistic 'arbitrariness' (Radden & Panther, 2004)– entails a whole new approach to lexis that explores the metaphorical motivation for the polysemous senses of highly frequent lexical items, e.g., prepositions and particles (Lindstromberg, 2010). Motivated polysemy generates the constructions of semantic networks where word meanings are not arbitrary but connected (Langacker, 1990).

In this respect, a large amount of research has shown how raising awareness in an L2 by enhancing understanding of these natural connections can facilitate the comprehension and memorization of linguistic expressions (Boers, 2001; Boers et al., 2004, 2008; Condon, 2008; Dirven, 2012; Lindstromberg, 1996; MacArthur & Littlemore, 2008; Saaty, 2020). The overall picture seems to be that these research findings may have important potential implications for language teaching. A great deal of attention has been paid to how L2 learners can be helped to develop metaphoric awareness and hence vocabulary growth in English with advances in the research aiming to explore effective methods to foster metaphor in instructed L2 settings, e.g., verbal explanation (Condon & Kelly, 2002; Littlemore et al., 2013), conceptual grouping (Boers, 2000; Beréndi et al., 2008), guessing strategies (Skoufaki, 2008; Verspoor & Lowie, 2003), pictorial elucidation (Boers et al., 2009), or Total Physical Response (TPR) (Lindstromberg & Boers, 2005).

However, the important findings these studies show have had very little impact on ELT materials or syllabus design (MacArthur, 2017). Some weaknesses in the design of some of the experiments used in pedagogically oriented CL research have been identified (Boers, 2011, 2013). These methodological pitfalls mainly respond to flaws in relation to experiment designs, i.e., lack of precise testing measures, or absence of control groups in short-term teaching interventions carried out outside the range of normal instructional activities. However, other reasons, such as the fact that they require L2 instructors to be trained in the applications of CL to L2 instruction, have also been observed (Piquer-Píriz, 2021). The critical review of research into metaphor in Teaching English as a Foreign Language (TEFL) has also shown that the neglect of metaphor might be also attributed to uneven research in this field (Martín-Gilete, 2017). The results are not very robust, which makes the findings less transferable to instructed L2 settings. So far, CL-oriented activities proposals (see Lazar, 2003; Rudzka-Ostyn, 2003) have not realistically reached the L2 classroom (Boers & Lindstromberg, 2008, MacArthur, 2010). Hence, a great deal of further research into actual classroom practice is needed in order to fortify previous results and examine whether a CL-inspired approach to teaching metaphor in L2 contexts is feasible and valuable.

This article reports on the preliminary results of a project that has been designed and conducted aiming at exploring some of the issues above mentioned. The implications of 'motivation' offer an alternative to the memorization of vocabulary lists to learn phrasal verbs in instructed L2 settings. This study explores the fostering of the underlying motivation of the polysemous senses of the particles in phrasal verbs and working with some of their figurative expressions to help L2 learners understand and recall these fixed linguistic expressions in English (Gardner & Davies, 2007; Garnier & Schmitt, 2016).

This paper is organised in the following way. Section 2 describes the study. Section 3 is concerned with the methodology used for the design and implementation of CL-oriented materials, and Section 4 provides a description of the methodology employed for the research design. Results obtained are reported in Section 5 from two different research angles: (i) feedback from the classroom and (ii) formal assessment. Finally, Section 6 discusses the findings and suggests future research directions.

2. Study

This study aimed to design, implement, and assess some CL-oriented activities as part of a pilot project to foster English as a Foreign Language (EFL) learners' vocabulary knowledge on phrasal verbs in instructed L2 settings from a longitudinal perspective. The project was coordinated by experienced metaphor researchers at the University of Extremadura who developed CL-oriented materials that were implemented by secondary education

teachers aiming at enhancing awareness of the underlying motivation of the particles IN/OUT and UP/DOWN in real L2 contexts.

For this purpose, one research question is addressed in this investigation: *To what extent does the application of CL-oriented activities in the real EFL classroom facilitate L2 learners' understanding and correct use of phrasal verbs?*

3. Method I: Design and implementation of CL-oriented materials

The development of the teaching materials was carried out following some of the main tenets of CL. The materials were designed and revised by the group of researchers and the EFL instructors based on the official syllabus, mainstream textbooks, and materials normally employed in their lessons.

Together with TPR and verbal explanation of the motivation of source domains, pictorial elucidation, i.e., using visuals to convey meaning, was applied as the main CL-inspired instructional method to foster awareness of the meaning of the particles IN/OUT and UP/DOWN (Boers et al., 2009). Pictures were designed with the graphic design platform *Canva for Education* according to the different senses of each particle (Rudzka-Ostyn, 2003; Dirven, 2012). Regarding the particles IN/OUT, the visual prompts were designed in terms of 'movement' (*put in*; *take out*), 'static' (*be in*; *be out*), and figurative meanings (*take in; speak out*). On the other hand, the particles UP/DOWN were pictured in relation to 'movement'' (*climb up*; *climb down*), 'quantity' (*turn up*; *turn down*), and figurative meanings (*cheer up*; *feel down*).

The implementation of these materials was conducted in a total of 10 one-hour-lesson sessions (five sessions per set of particles) that were taught following three teaching phases: presentation, practice, and production. The 10 sessions were carried out over three months: one session was used to TPR, two sessions to pictorial elucidation, and two sessions to the verbal explanation of the motivation of source domains. Table 1 and Table 2 show the overall implementation sequence of both sets of particles:

Table 1. Overall implementation sequence: IN/OUT

Teaching method explored	Sessions	Teaching phase	Aim of the activities
TPR	Session 1	Presentation	To introduce the particles IN/OUT with TPR while acting out the song "The Hokey Pokey with actions" by Debbie Doo Liberi TV.
		Practice	To reinforce the understanding of the particles IN/OUT with an adaption of the well-known pantomiming game *Charades*.
Pictorial elucidation	Session 2	Presentation	To introduce the particles IN/OUT with pictorial elucidation.
		Practice	To reinforce the understanding of the particles IN/OUT throughout the association/matching of illustrations with the correct verbs.
	Session 3	Production	To practice the written production of phrasal verbs with the particles IN/OUT while writing a story in about 100 words.
Motivation of source domains	Session 4	Presentation	To introduce the conceptual metaphors that explain the motivation of source domains with the particles IN/OUT.
	Session 5	Practice	To reinforce the understanding of the motivation of source domains of the particles IN/OUT.
		Production	To practice oral production of phrasal verbs with the particles IN/OUT in two-minute flash stories, supported with emojis to elucidate ideas for the stories.

Source: Own elaboration, 2022.

Table 2. Overall implementation sequence: UP/DOWN

| Teaching method explored	Sessions	Teaching phase	Aim of the activities
TPR	Session 1	Presentation	To introduce the particles UP/DOWN in with Total Physical response while acting out the phrasal verbs presented in flashcards.
		Practice	To reinforce the understanding of the particles UP/DOWN with an adaption of the well-known pantomiming game *Charades*.

Pictorial elucidation	Session 2	Presentation	To introduce the particles UP/DOWN in phrasal verbs with pictorial elucidation.
		Practice	To reinforce the understanding of the particles UP/DOWN throughout the association/matching of illustrations with the corresponding phrasal verbs.
	Session 3	Production	To practice the written production of phrasal verbs with the particles UP/DOWN while writing a story in about 100 words.
Motivation of source domains	Session 4	Presentation	To introduce the conceptual metaphors that explain the motivation of source domains with the particles UP/DOWN.
	Session 5	Practice	To reinforce the understanding of the motivation of source domains of the particles UP/DOWN.
		Production	To practice oral production of phrasal verbs with the particles UP/DOWN in two-minute flash stories, supported with emojis to elucidate ideas for the stories.

Source: Own elaboration, 2022.

However, it was the EFL instructor in each pilot group who decided the timing for the implementation of materials in each session to adjust them to the general syllabus. Only the 'presentation' and 'practice' phases of pictorial elucidation required the design of CL-oriented materials. In contrast, the teaching phases of 'motivation of source domains' strategy consisted of worksheet tasks containing exercises that are designed following such methods as verbal explanation, guessing strategies, and conceptual grouping. Similarly, the teaching phases of 'TPR' method did not require the use of visuals to elucidate the meaning of the particles explored in this study.

Regarding the presentation and practice phases employing 'pictorial elucidation' technique, the CL-oriented materials concerned a series of pictures that illustrate the different meanings of the target particles. Concerning the use of pictorial elucidation to foster awareness of the underlying motivation of the particles IN/OUT, students were presented with the meanings of the particles with illustrations that elucidate the different meanings of the target particles. First, the meaning of 'movement' was presented (see Figure 1): *in* entailing 'inward movement' (*put in*), whereas *out* refers to 'outward' movement (*take out*).
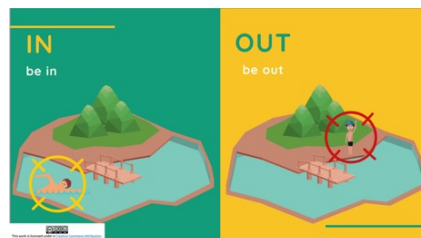
Figure 1. Meaning of 'movement': IN/OUT
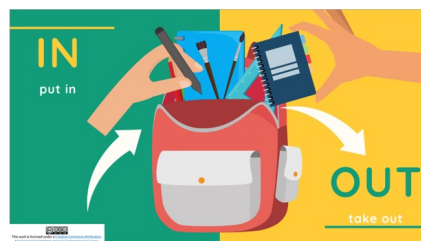
Source: Own elaboration, 2019.

Next, the 'static' meaning of the particles IN/OUT was elucidated (see Figure 2): *in* referring to 'being inside' (*be in*), while *out* expresses 'being outside' (*be out*).

Figure 2. Meaning of 'static': IN/OUT

Source: Own elaboration, 2019.

Finally, the figurative meanings were presented to enhance the underlying motivation of the particles IN/OUT (see Figure 3). On the one hand, *in* dealing with 'inclusion' (*be in*) and *out* with 'exclusion' (*be out*). On the other hand, *in* referring to 'understanding' (*take in*) whereas *out* to 'expressing' (*speak out*). Next, *out* meaning 'visible';

'known'; 'available' (*come out*). Last, *in* implies 'trying to find information or knowledge' (*look into*), while *out* refers to 'complete'; 'solve'; 'understandable' (*work/figure out*).

Figure 3. Figurative meanings: IN/OUT

Source: Own elaboration, 2019.

Moreover, pictures illustrating the meanings of UP/DOWN were used to foster understanding of these particles. In the first place, the meaning of 'movement' was presented (see Figure 4): *up* entailing 'upward movement' (*climb up*), while *down* implies 'downward movement' (*climb down*).
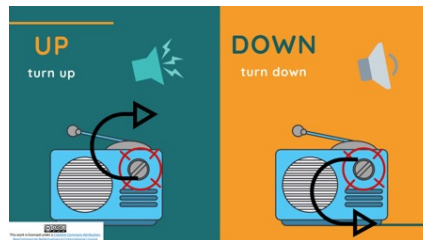
Figure 4. Meaning of 'movement': UP/DOWN
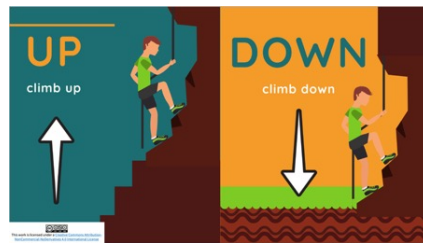
Source: Own elaboration, 2019.

Next, the meaning of 'quantity' was presented to elucidate the meaning of the particles UP/DOWN (see Figure 5): *up* referring to 'increase' (*turn up*) and *down* to 'decrease' (*turn down*).

Figure 5. Meaning of 'quantity: UP/DOWN

Source: Own elaboration, 2019.

Finally, students were exposed to fostering of the figurative meanings of the particles UP/DOWN (see figure 6). First, *up* means 'approach' (*come up*). Next, *up* refers to 'better status' or 'importance' (*look up to someone*), whereas *down* means 'worse status' or 'unimportance' (*look down on someone*). Then, *up* referring to 'good mood' (*cheer up*) and down to 'bad mood' (*feel down*). Last, *up* means 'start' (*take up*).

Figure 6. Figurative meanings: UP/DOWN
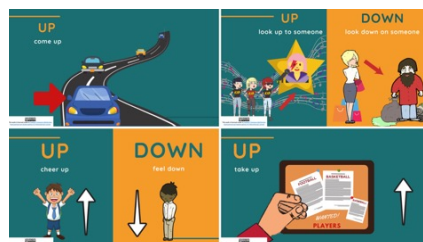
Source: Own elaboration, 2019.

As explained above, all these illustrations were also employed in the practice phase of 'pictorial elucidation' technique. The same pictorial prompts were adapted and used as flashcards to reinforce the understanding of the particles IN/OUT and UP/DOWN throughout the association and matching of the illustrations with the corresponding phrasal verbs.

4. Method II: Research design

4.1. Participants

The proposal to introduce CL-oriented activities in real L2 classrooms was implemented by three EFL teachers who were trained in a four-hour course on the applications of CL to L2 instruction before the implementation of teaching materials.

A total of 81 intermediate-level Spanish learners of English, aged from 14 to 16 years old, at two local state secondary schools (n=62) and one private language school (n=19) participated in this pilot study. Furthermore, a control group from a different local state secondary school also took part in the research project with a sample of 26 L2 learners (all native speakers of Spanish) and 1 EFL instructor who was not aware of CL tenets. Prior to the investigation, parental/legal guardian authorization was requested, and participant informed consents were signed.

4.2. Procedure and instruments

A three-month longitudinal study was carried out aiming to enhance awareness of the underlying motivation of the particles IN/OUT and UP/DOWN with systematic and continued implementation of the type of activities described above (see Section 3) in real L2 classrooms by the instructor for the acquisition of phrasal verbs in English.

The assessment of CL-oriented approach to teaching/learning phrasal verbs was gathered in two ways: (i) feedback from the EFL instructors after completing teaching sessions; and (ii) formal assessment of L2 learners' knowledge of the particles. Concerning teacher feedback, active participation and direct observation were employed to collect qualitative data in their L2 classrooms. After each teaching session, the teachers were asked to complete an online form to record the different CL-oriented activities that were taught. Instructors were required to provide a precise report on students' performance and any potential learning gains.

For the formal assessment of the learning of the underlying motivation of the particles IN/OUT and UP/DOWN and their awareness of polysemy, in the pre-test phase, L2 learners were assessed with a specially designed multiple-choice test, which was previously piloted. A different version of the same test was administered in the post-test phase (delayed post-test), which was conducted four months after the pre-testing. Test-takers were given a choice of six particles (*off*, *in*, *down*, *out*, *up*, *on*) to complete 15 decontextualised fill-the-gap sentences. The particles *off* and *on* were included as distractors. However, students were informed that all the given options did not necessarily have to be used. No time limit was set to complete the tests.

4.3. Data analysis

Statistical analyses were performed with SPSS (v. 25.0) to explore the significance of the difference between L2 learners' results in the pre-test and post-test in order to measure L2 students' learning of the underlying motivation of the particles IN/OUT and UP/DOWN.

5. Findings

Results will be described in relation to the two different methods used to measure students' learning gains: (i) feedback from the classroom; and (ii) formal assessment of L2 learners' knowledge of the particles.

5.1. Feedback from the classroom

The systematic and detailed record of the implementation of CL-oriented activities provided some feedback from the classroom from the perspective of the EFL instructors. In general terms, the development of these activities in these instructional L2 settings showed that the designing of these CL-oriented materials seems to be initially very attractive to EFL students and positively valued by EFL teachers. However, it was also found that factors such as the timing for implementation, class timetable, the ratio of students, length of activities, and learners' attitudes towards them are also important factors to take into account for a successful implementation of these kinds of activities.

On the one hand, the activities were positively introduced in the real L2 contexts as they were inspiring for both teachers and L2 learners. Spanish EFL students often have great difficulty with learning phrasal verbs due to their polysemous nature or cross-linguistic differences (Alejo-González, 2010). However, the teachers positively reported on the understanding and recall of phrasal verbs throughout the designed CL-oriented activities.

In contrast, some limitations due to pedagogical difficulties which lie in different aspects of the teaching-learning process were observed during the implementation of these teaching activities. For example, concerning the class timetable, research carried out in the early morning (i.e., in the first periods of the school day) or at the end of the school year do not seem to be the best timing for implementation. Teachers reported that both factors seem to have negative effects on L2 learners' attention span or attendance levels, respectively.

Regarding student ratios, smaller groups were found to be more suitable to present content since this scenario encourages students' active participation with their cognitive engagement. Even though the CL-oriented activities were attractive to L2 students, teachers reported fatigue and lack of sustained attention when learning with one-hour lessons leading to cognitive engagement. Similarly, the instructor's guidance and help are required to successfully carry out the tasks, which also suggested the procedure was tiring for teachers.

Teachers also observed that the design and implementation of the CL-oriented materials with the use of three different teaching techniques independently seemed to interrupt students' learning process. That is, the teaching methods explored (TPR, motivation of source domains [verbal explanation, conceptual grouping, guessing strategies], and pictorial elucidation) were not combined in the design and implementation of the CL-oriented materials at any teaching phase. Instructors reported on the fact that the separation of the teaching techniques might focus students' attention on *how* instead of *what* to learn.

Feedback from the classroom also showed that students occasionally felt lost during the sessions; not because of the complexity of the contents but due to the decontextualised materials. Even though the design of the CL-oriented activities was based on the official syllabus, it was not topic-based. That is, the CL-oriented activities were not implemented as part of the coursebook lesson plans.

Overall, although teacher feedback acknowledged some limitations in the CL-oriented activities because of pedagogical difficulties met in the teaching-learning process, the formative assessment of the CL-oriented activities performed throughout the study and the summative assessment of end-of-unit tests showed students' increased understanding and recall of the senses of the particles.

5.2. Quantitative results

Turning to quantitative results, the exploration of the significance of the difference between L2 learners' results in the pre-test and post-test aiming at measuring students' learning of the underlying motivation of the particles IN/OUT and UP/DOWN revealed significant but negative results.

The global statistical analysis results of the particles test showed a significant decline of 1.41 points in participants' performance in the particles tests (see Table 3).

Table 3. Particles pre-test and post-test: Global situation

	n	M	SD	Min	Max	df
Pre-test	104	9.37	2.67	3.00	15.00	-1.41*
Post-test	104	7.96	2.77	1.00	14.00	

Source: Own elaboration, 2022.

Likewise, results showed a decline in points concerning the comparison of control and pilot groups in both pre-test and post-test of particles (see Table 4). Whereas control groups presented roughly consistent results with the pilot group in the pre-test (9.38 versus 9.37), a significant difference of 1.23 points was found in the post-test in favour of the control group (8.88) as opposed to pilot group (7.65).

Table 4. Particles pre-test and post-test: Control-pilot groups comparison

	Control	Pilot	df
Pre-test	9.38	9.37	0.01
Post-test	8.88	7.65	1.23*

Source: Own elaboration, 2022.

Moving to the comparison of the evolution, negative results were obtained in both control and pilot groups, -0.5 and -1.597, respectively. Furthermore, these results suggested that participants in the control group significantly outperformed L2 learners that were exposed to CL-oriented approach in the L2 classroom, as the difference in points was -1.09*.

Table 5. Particles pre-test and post-test: Evolution of pilot groups

	Pre-test	Post-test	df
Pilot Group 1	7.8	6.43	-1.37*
Pilot Group 2	10.08	8.82	-1.25*
Pilot Group 3	9.58	6.68	-2.9**

Source: Own elaboration, 2022.

Similarly, a breakdown of the data per pilot group allowed the observation of negative inconsistent differences in the evolution across treatment groups in Table 5. Despite pilot group 1 and pilot group 2 presenting significant balanced results (-1.37* and -1.25*, respectively), a major significant difference was found in pilot group 3 (-2.9**).

Overall, from a quantitative perspective, the preliminary results obtained from L2 learners' assessment of the underlying motivation of the particles IN/OUT and UP/DOWN revealed that there were no gains in learning.

6. Discussion and future directions for research

The results obtained from the two different research angles (feedback from the classroom-based research, and from a quantitative perspective) to test learning of the particles IN/OUT and UP/DOWN were found significant but incongruent. Considering the highly positive report from the teachers on L2 learners' understanding and recall of figurative meanings, the preliminary quantitative results were rather disappointing and suggest that the testing method was incongruent with the teaching method, leading to no apparent learning gains. That is, statistically significant results were not obtained to support the better performance of the pilot groups. Therefore, from a quantitative perspective, the results in learning were unexpected.

A possible explanation for a mismatch between the results reported from the classroom and the formal gap-fill test might respond to the already-mentioned limitations found in the implementation of the CL-oriented activities throughout the teaching-learning process: the timing for implementation, class timetable, the ratio of students, length of activities, and learners' attitudes towards them (see "Section 5.1." above). Additionally, this incongruity in the results may be the result of the little time devoted to CL-oriented activities in the L2 classroom. Findings suggest that the design, implementation, and assessment of this pilot study need to be carried out in a different way. A period of three months is not long enough to foster awareness. Besides, this pilot study had a narrow focus of research as just one aspect of language, i.e., learning/teaching phrasal verbs, was examined in flexible implementation of independently designed activities which were not topic-based. Along with the problem of timing, there is a constant mismatch of the CL principles with the official syllabi and TEFL coursebooks.

Further research is required to be conducted for a longer period of time, aiming at establishing teaching and learning routines fostering cognitive engagement in the teaching interventions, which were observed to be quite time-consuming. Although this investigation has contributed to providing feedback from the classroom on the development of CL-oriented materials, further collection of qualitative data from the perspective of L2 learners is required for a student-centred design of materials and a more fine-tuned design of teaching interventions. More compelling evidence of qualitative data is needed to assess other affective factors of classroom-based research.

Furthermore, the incongruence in the results obtained could be attributed to some limitations in the quantitative testing measures. It seems possible that the traditional design of the formal assessment (Boers, 2011, 2013), i.e., the gap-fill pre-tets-test and post-test of particles, may not measure what was expected. A striking contrast between the formal measures and the teaching methods employed in the pilot study was observed. The multiple-choice cloze does not seem to be the most appropriate way to measure any learning gains as it is not congruent with the teaching method, i.e., it is not adapted to classroom-based research. The test employed to measure learners' learning included decontextualised sentences to be completed with the given particles. However, this assessment did not fit the teaching done in the real L2 classroom. Future directions of research are suggested to explore how to create pre-

tests and post-tests more congruent with the teaching methods. For example, analysis of learner discourse that matches assessment with the tasks performed in the instructional L2 setting.

Bringing CL-oriented activities into real classrooms was found challenging. More explicit teacher training in the applications of CL to L2 instruction is required with clear, precise guidelines and well-developed activities, or even lesson plans (Piquer-Píriz, 2021; Piquer-Píriz et al., 2022). Likewise, there is a need for adapted tests that address these failing assessment tasks and include a CL-oriented approach in the assessment of learning gains (Llopis-García et al., 2022). This pilot study cannot provide definite conclusions about the efficiency of these CL-oriented activities. However, the designed materials are proposed as an initial source to contribute to the field.

Future directions for research are suggested to research into the sharp contrast between the formal assessment of learning and the constant mismatch of CL with TEFL.

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