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The Role of Input in the Use of Metaphor in L2 Writing

La función del input en el uso de la metáfora en la producción escrita en L2

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Abstract: In comparison with the important number of studies devoted to metaphor comprehension by L2 speakers, scant attention has been paid to metaphor production, which would also require an account of where to find support for metaphor use. This paper explores the role that topic-based input may play in written learner discourse after exposure to metaphor-mediated instruction. MIPVU (Steen et al.), a well-known method to identify metaphor, was applied to one textbook unit as well as to essays on the same topic produced by L2 learners of English (N = 22) preparing for B2 level. The analysis revealed a remarkably high density of open-class metaphors ranging from 17.9% to 19.8% across both input and output texts. Furthermore, some similarities between input and output were found regarding not only metaphor density but also types (open- vs. closed-class metaphors) and distribution by word class. These findings suggest preliminary insights into how topic similarity may provide some support for metaphor use in metaphor-mediated instruction.
Keywords: metaphor; learner English; textbook; written production; input/output.
Summary: Introduction. Background. The Study. Method. Results. Discussion. Conclusions.

Resumen: En comparación con el importante número de estudios dedicados a la comprensión de la metáfora por hablantes de L2, su producción ha recibido menor atención, lo cual también requeriría una descripción de dónde encontrar apoyo para el uso del lenguaje metafórico. Este artículo explora la función que el input, bajo un enfoque basado en temas, podría tener en el discurso escrito del aprendiz tras una exposición a instrucción mediada por metáforas. MIPVU (Steen et al.), un método bien conocido para la identificación de metáforas, se aplicó a una unidad del libro de texto, así como también a redacciones sobre el mismo tema producidas por aprendices de inglés en preparación para el nivel B2 (N = 22). El análisis mostró una densidad notablemente elevada de metáforas de clase abierta de 17,9% a 19,8% en ambos tipos de textos, input y output, respectivamente. Además, se observó cierta relación entre el input y el output referente no solo a la densidad metafórica, sino también a los tipos de metáfora (clase abierta

frente a clase cerrada) y a su distribución por categoría gramatical. Los resultados sugieren algunas ideas preliminares sobre cómo la semejanza temática podría proporcionar algún tipo de apoyo para el uso del lenguaje metafórico en una instrucción mediada por metáforas.
Palabras clave: metáfora; inglés del aprendiz; libro de texto; producción escrita; input/output.

INTRODUCTION

It is now commonplace to state that metaphor is pervasive in everyday communicative exchanges. The application of metaphor identification procedures such as MIP (Pragglejaz Group) and MIPVU (Steen et al.) has revealed that metaphor accounts for a substantial minority of words across genres in English, e.g., 17.5% in academic texts, 15.3% in news, 10.9% in fiction, and 6.8% in conversation (Steen et al., 194–298). The ubiquity of metaphor in language use justifies its importance in foreign/second language development (Low), facilitating knowledge of the culture (MacArthur, "Languages and Cultures") or as a vocabulary builder (Boers, "Cognitive Linguistic Approaches"; MacArthur, "Metaphorical Competence"). By extension, becoming proficient users of metaphor has implications for competence assessment in English of speakers of other languages (ESOL) examinations.

Applied linguistic research into metaphor has generally focused on *how* to develop metaphor awareness in instructed second language (L2) settings. In the last three decades, a good deal of research has provided evidence of how L2 learners can be helped to deal with figurative meanings in English, with advances in the research aiming to explore effective methods of fostering metaphor, e.g., semantic and/or etymological elaboration (verbal explanation, as in Condon and Kelly; conceptual grouping, as in Boers' "Metaphor Awareness"; guessing strategies as in Verspoor and Lowie), pictorial elucidation (Boers et al.) or Total Physical Response (Lindstromberg and Boers). However, little interest has been shown in *what* metaphoric language to use at each level of English proficiency (MacArthur and Piquer-Píriz; Piquer-Píriz, "Motivated Word Meanings"). In general, the research focus has been on the intermediate CEFR level of English, i.e., B1 (Boers and Demecheleer; Littlemore, "Interpreting Metaphors") neglecting the upper-intermediate level (B2), which has been observed to be a crucial stage for metaphor burst in English learner discourse (Littlemore et al.).

Nevertheless, all this previous research has had virtually no impact on the design of mainstream textbooks, official language competence descriptors, or major examination boards (O'Reilly). Frank Boers has attributed this lack of impact (i.e., transferring theory into practice) to weaknesses in the design of some of the experiments used in pedagogically oriented metaphor research, i.e., these studies were carried out outside the range of normal instructional activities ("Cognitive Linguistic Approaches"). Other reasons such as the fact that they require instructors to be trained in the applications of Cognitive Linguistics (CL) to L2 instruction have also been suggested (Piquer-Píriz, "Cognitive Linguistics"). Yet, *where* L2 learners can find support for metaphor use still remains an open question in the context of L2 instruction.

In this light, the analysis of the input which L2 learners are exposed to may provide some initial ideas about how to start addressing this issue. The textbook is only one type of input, and other forms of support learners receive should be also accounted for. For instance, the amount of natural language input L2 learners may be exposed to inside and outside the learning environment and, indeed, instructor and peer language. However, the use of the textbook as the primary source of input for L2 learners of English seems to be fundamental in Spanish educational contexts, as both instructors and learners lean on mainstream materials specially designed for training.

Grounded in linguistic metaphor identification, this study explores the role of the textbook as a source of input aiming at developing metaphor use in the learner discourse of Spanish speakers of English. This paper aims to analyse L2 learners' exposure to the application of CL treatment to metaphors in a topic-based textbook, adopted by an instructor trained in CL inside the range of normal activities for ESOL preparation at B2 level.

This paper is divided into six sections. Section 1 provides a brief review of some of the research studies which have described and discussed the importance of metaphoric competence among L2 English language users. Section 2 describes the study and section 3 is concerned with the methodology used for the comparison of input and output discourse. Section 4 analyses the results of metaphor use and topic similarity found across input and output texts. Findings are discussed in section 5. Finally, the conclusion acknowledges some limitations and suggests future research directions.

1. BACKGROUND

Applied linguistic research has shown that metaphor is an integral part of speakers' overall communicative competence (Littlemore and Low) and it applies to all language skills, contributing to all four dimensions of communicative competence in an L2 (Bachman and Palmer): grammatical, textual, illocutionary, and sociolinguistic. This has important consequences for L2 learners' development of metaphoric competence (MC), understood as how L2 speakers comprehend and produce metaphor. Considering L2 learners need to use metaphor appropriately in their speech and writing, a proficient level might be argued to be also dependent on becoming metaphorically fluent in the L2.

The importance of MC in L2 learning aiming at language proficiency has been acknowledged from different perspectives (Danesi; Littlemore, "Metaphoric Competence"; Low; Castellano-Risco and Piquer-Píriz).[1] So far, most attention has been devoted to the study of L2 learners' understanding of metaphor in English (Golden, "Grasping the Point"; Littlemore, "Use of Metaphor"; Piquer-Píriz, "Young Learners' Understanding") as well as research into metaphor comprehension and its use in combination (MacArthur and Littlemore; O'Reilly and Marsden, "Elicited Metaphoric Competence" and "Eliciting"). However, much less work has been carried out on the metaphorical language L2 learners actually produce.[2]

Previous research into MC has evidenced what instructors can expect L2 learners to be able to do over time in written discourse (Cuberos et al.; Hoang and Boers; Nacey, "Development"). Yet, particularly interesting are those observations at various proficiency levels, more specifically, at B2 level for the purposes of this study. For example, David O'Reilly and Emma Marsden have explored L2 MC in relation to outcomes in language competence, i.e., relationships between L2 MC, vocabulary knowledge, and general language proficiency. In their study, upper-intermediate learners have been shown to "recognise . . . metaphors with a moderate amount of accuracy, although they are more likely to struggle when producing metaphor within these types of item contexts" ("Elicited Metaphoric Competence" 31).

[1] See Hoang, and Nacey's "Metaphor Comprehension" for a more comprehensive review.
[2] See, however, Littlemore et al.; MacArthur, "Metaphorical Competence"; Nacey, *Metaphors*, "Development."

Additionally, Jeannette Littlemore and her colleagues' study of metaphor use has revealed how and why L2 learners of different L1 language backgrounds, who have successfully completed Cambridge ESOL examinations, use metaphor in their writing ("Investigation"). Findings show that at B2 level there are significant qualitative changes towards open-class metaphors (i.e., nouns, verbs, adjectives, and adverbs) and creative metaphor use due to L1 influence, as, at this level, students need to express their thoughts in a more sophisticated way, entailing a great use of open-class metaphors in comparison with closed-class metaphors (e.g., prepositions):

> [These qualitative changes are] likely to be a response to the tasks set, which generally require learners to state their opinions on certain issues and highlight their personal significance. This suggests that learners at FCE may be at an experimental stage of language development during which their task demands require them to experiment with new ways of using metaphorical language. (Littlemore et al. 128)

Littlemore and her colleagues have observed that learners at B2 level use metaphor at an increased rate (cf. Nacey, "Development") but "lack the support to do so convincingly" ("Investigation" 143).

We know little about *where* L2 speakers can be supported to develop MC in English. Previous studies into English learner discourse have attempted to tackle this issue but in two separate ways: by exploring metaphor use in L2 textbook discourse (Alejo-González et al.; Amaya-Chávez); and by analysing metaphor production in learner discourse (see above discussion). To the best of my knowledge, side-by-side investigation of learner discourse linked to meaningful discourse L2 learners are exposed to inside the range of normal instructional activities is still unexplored.

2. THE STUDY

In this article, I describe a study on the role of input in written learner discourse of L2 Spanish speakers of English in relation to metaphor use of one topic-based unit at B2 level. This study seeks to compare the input and output discourse in terms of metaphorical language on the same subject of discussion in the context of metaphor-mediated instruction of *careers and aspirations.* For this purpose, one main research question is addressed:

RQ1. To what extent does the discourse L2 learners are exposed to in one unit of the topic-based textbook bear any resemblance to their production of the discursive essays they write on the same topic in terms of metaphorical language, i.e., density, type, and distribution by word class?

3. METHOD

3.1 Participants

The sample consists of a group of 22 L2 learners of English, aged between 14 and 18, whose first language is Spanish. All participants were attending extracurricular English lessons encompassing training for the B2 First-for-Schools Cambridge exam. This exam follows the same format and level as B2 First—formerly known as First Certificate of English (FCE)—which is one of the most popular English language qualifications at Level B2 worldwide. The only difference is that the content and treatment of topics in B2 First-for-Schools are targeted at the interests and experiences of teenage learners.

This study used a convenience sample drawn from learners in their second year at B2 training. Participants were exposed to B2 exam preparation during the investigation by an instructor trained in CL. Prior to the investigation, parental/legal guardian authorization was requested, and participant informed consents were signed. All the data obtained from the participants was anonymised.

3.2 Data

To evaluate the input, a total of four texts containing 1,907 words were examined in the mainstream textbook used for the preparation for upper-intermediate level qualification of B2 First-for-Schools Cambridge certificate of English (Brook-Hart).

Based on the idea that topic affects the type (open- versus closed-class metaphors) and number of metaphors used in discourse (Deignan et al.; Golden, "Metaphorical Expressions"; Semino), this study limits itself to a single broad topic—*careers and aspirations*—in a unit entitled "Dreams of the Stars" (Brook-Hart 84–93). Throughout the unit, L2 learners were required to deal with varied oral and written input. Table 1 contains a full

description of the four input texts participants were formally exposed to in this unit.

Table 1. Description of selected input texts for metaphor use in the textbook

Input Source	Title	Skill	Type of text	No. of words
Oral comprehension	"Ten Minutes of Fame"	Listening	Monologue	860
Written comprehension	"Five Young Actors"	Reading 1	Adapted article	835
	"YouTube Millionaire Celebrities"	Reading 2	Adapted article	184
	"Pros and Cons of Being Famous"	Writing	Essay instructions	28
Total				1,907

Source: Prepared by the author from data in Brook-Hart (84–93)

For the output data, 4,559 words were analysed from 22 written texts, specifically, discursive essays produced by L2 learners, ranging in length from 157 to 270 words. The output texts were produced as part of a writing task found in the same textbook unit aiming at practising essay writing skills, a compulsory task set to complete using neutral (i.e., non-emotional tone), and formal English in the Writing Paper of the B2 exam. These essays consisted of an argumentative discussion, i.e., students are asked to state their opinions and justify their personal views on a set question.

Learners were asked to address a compulsory essay statement on the same topic covered in the textbook unit about the pros and cons of being famous: *Being famous as a film star has both advantages and disadvantages. Do you agree?* (Brook-Hart 93). The writing instructions included a mandatory structure for all learners requiring them to discuss two given topics that supply ideas clearly linked to the essay question (*media attention; lifestyle*) and introduce a third additional idea of their own.

3.3 Procedure

The investigation was designed as a two-week study to run alongside the range of normal activities performed in the instructed L2 setting for B2 preparation in a one-hour class three times a week.

During the six sessions of this study, there was a particular focus on CL treatment of the metaphors found in the input texts of the unit "Dreams of the Stars" (Brook-Hart 84–93) by the instructor. Enhancing metaphor awareness among L2 learners was carried out by means of different CL-oriented approaches during the two weeks of investigation. On the one hand, "guessing strategies" and "verbal explanation" were applied to foster non-literal language found in the input texts of the Listening and Reading 1 tasks. Regarding the Reading 2 task, the conceptual metaphor CAREER IS A BUILDING was presented to show linguistic motivation by means of CL methods such as "pictorial elucidation", "guessing strategies" and "verbal explanation."

During the study, MacMillan Dictionary online (MM)[3] was consulted to confirm that metaphor use of the selected metaphorical expressions was conventional. Longman Dictionary (LM)[4] was also used to identify the meaning of expressions, phrasal verbs, and in those cases when senses were insufficiently defined in MM.

At the end of the study, participants were instructed to write the discursive essay contained in the textbook as a follow-up assessment activity right at the end of the unit. Learners were asked to write their essays in 40 minutes approximately under examination conditions, i.e., they were not allowed to use any language reference tools or consult any source of information on the topic. Besides, students were not encouraged at any time to use metaphorical language in the writing task procedure.

3.4 Data Analysis

3.4.1 Identification of Uses of Metaphor

The Metaphor Identification Procedure Vrije Universiteit (MIPVU [Steen et al.]) was employed for the reliable and valid identification of metaphors in the 26 texts examined in this study, consisting of 6,466 words.

[3] Macmillan Dictionary can be accessed at https://www.macmillandictionary.com/.
[4] Longman Dictionary is available at https://www.ldoceonline.com/es-LA/.

This method involves the identification of potentially metaphorically-used lexical units (LUs)[5] as metaphors in discourse following protocols across four consecutive phases: first, general understanding of the text; second, identification of all the LUs in the text; third, establishing the meaning of each LU in context, and decision of whether it has a more basic sense in other contexts; and, finally, decision on whether the LU has a metaphorical use, i.e., whether it is a metaphor-related word (MRW). This procedure identifies LUs as follows: *non-MRW*, when the LU is not considered as metaphorical; *indirect*, when the LU is considered MRW because it is potentially motivated by similarity and can be contrasted with the more basic meaning; *direct*, when the LU is considered MRW by means of some form of comparison expressed through direct language use, which may or may not be signaled by metaphorical flags (e.g, *like*, *such as*, etc.); or *implicit*, when the LU is considered as MRW by comparison of two things but by means of substitution or ellipsis –mainly, pronouns. To meet the objectives of this study, *implicit* metaphor was excluded from metaphor identification as the focus of the research was placed upon open-class metaphors. One exception was prepositions as the only case for analysis of closed-class metaphors due to their potential collocation with open-class metaphors.

To illustrate the procedure, consider the LU *star* in example (1) extracted from the output texts:

(1) In terms of being a well-known **star**, they need to be psychologically **prepared** to **resist** all *that* **pressure**. (ST02; my emphasis)

The contextual meaning of *star* in the example is "a famous and popular person, especially an actor, entertainer, or sports personality", the second entry sense in MM. In contrast, its basic meaning (i.e., the most physical/concrete, human-oriented, specific sense) corresponds to the first entry: "a very large hot ball of gas that appears as a small bright light in the sky at night". *Star* can be considered an *indirect* MRW as the contextual meaning is sufficiently distinct from the basic sense and is related by some form of similarity. That is, we view famous people in terms of SUCCESS IS LIGHT. Likewise, the LUs *prepared*, *resist* and

[5] The term "lexical unit" mostly refers to the orthographic word. However, MIPVU identifies phrasal verbs, compounds, some proper nouns and polywords as one single lexical unit (see Steen et al. 26–32).

pressure in example (1) are also *indirect* MRWs. The determiner *that* in "that pressure" can be also considered *indirect* MRW as it is a premodifier for something that is not physical. However, the analysis of the types of metaphors employed in this study does not concern the use of closed-class metaphors. In contrast, none of the other LUs in example (1) are MRWs as there is no contrast between their contextual meaning and more basic senses. It is important to note that *in* in (1) is not MRW because it is part of the polyword (fixed expression) "in terms of", which was analysed as one LU.

On the other hand, the LU *jobs* in example (2) from the output is considered *direct* MRW:

(2) Their lifestyle is **like** their **jobs**. (ST01; my emphasis)

The contextual meaning of *jobs*, "your duty in a particular situation or organization" (the third entry in MM), is sufficiently distinct from the basic sense and related by some form of similarity: "work that you do regularly to earn money", the first entry in MM. However, in this case, there is a direct reference to the comparison with "lifestyles" flagged by *like*, which alerts the reader to the non-literal nature of the job.

This study applies a slightly adapted version of MIPVU to the linguistic data identified in the present L2 discourse of English. While tagging of linguistic metaphors and the resources for metaphor analysis (dictionaries employed) were maintained, minor modifications were applied to address constraints in L2 language use –similar to Littlemore and her colleagues' study when researching with non-native speakers of English ("Investigation" 121). The decomposability of phrasal verbs is an example of one of these adaptations as there was a special focus on identifying them as two LUs. L2 learners frequently use the wrong particle attached to the verb, suggesting that they process phrasal verbs as unfixed expressions or novel compounds, rather than fixed chunks of language as L1 speakers do (MacArthur and Littlemore). The phrasal verb *bring in* in (3) from one of the written input texts is an example:

(3) A video of around a million views which is typical for popular YouTubers may **bring in** about a thousand dollars. (Reading 2; my emphasis)

In my analysis, to determine the basic meaning of the verb *bring*, the basic sense documented in LM for the lexical verb was looked up rather than the basic meaning registered for the phrasal verb itself. Then, the adverb *in* was identified as a separate LU (MacArthur, "Linguistic Metaphor" 297).

Furthermore, another modification applied in this study concerned prepositions. "Of", "for", and "with" were discarded for metaphor analysis due to the difficulty in pinpointing their basic meanings.

Unlike Susan Nacey's study on metaphors in learner English ("Development" 180–1), this study adopted a specific approach to the treatment of learner errors in metaphor identification. Misspelled words were not corrected in standard orthographic form if they were not documented words in the dictionary. Although L2 learners might have known the word, LUs were discarded for metaphor analysis if the intended word was differently, incorrectly written. The rationale behind this decision was to determine competence assessment as part of B2 training. For instance, consider the intended word *recieve*, as opposed to the correct form "receive", in example (4):

(4) On the other hand, they **recieve** love. (ST20; my emphasis)

However, if the misspelled word was codified in the dictionary, e.g., *dub* for "doubt", then MIPVU was applied to the intended word as example (5) illustrates:

(5) There is no **dub** that all your life is conditioned . . . (ST05; my emphasis)

Although this participant could only have meant "doubt", *dub* was consulted in the dictionary.

Moreover, irregular constructions such as coinages were discarded for metaphor analysis if they were not recorded in the dictionary. Neologisms were not corrected in standard orthographic form. An example of coinage is the intended word *amisties* ('amistades' in Spanish) instead of "friendships" in (6):

(6) . . . famous people have to be careful with their **amisties** they **do**. (ST05; my emphasis)

In contrast, irregular constructions resulting from ostensible L1 influence were accepted for metaphor analysis if they were documented words in the dictionary. The verb *do* in example (6) illustrates non-native-like phraseology. The Spanish phrase 'hacer amistades' seems to have been directly translated into English using the verb "do" ('hacer') instead of "start" in the correct phrase "to start a friendship." For the purposes of this study, no further analysis was conducted to explore the potential novel use of non-native-like phraseology (see Nacey, *Metaphors*) because the sample size was too small to reveal any patterns in the novel use of metaphors. However, it would be interesting to analyse a larger body of learner discourse from this perspective.

To increase the reliability in metaphor identification, two external researchers with extensive training in metaphor identification collaborated in the metaphor identification procedure in the initial stage of metaphor analyses of input texts. Just like Littlemore and her colleagues ("Investigation"), this study used group discussion to reach agreement on MRW cases when there was a lack of full consensus (122).

3.4.2 Analyses

To address RQ1, metaphor density of the input and output texts was measured by dividing the number of MRWs by the total number of LUs in the examined texts and the score was multiplied by 100. Concerning the comparison of types of metaphor in both metaphor sources, this study focused on tokens rather than word types to calculate the proportion of metaphors, which were grouped into open- and closed-class metaphors. The tokenization process was carried out using CLAWS provided by Wmatrix5[6] and, subsequently, manually checked to meet MIPVU guidelines. Token-Type Ratio (TTR)[7] of metaphor use by word class, i.e., the relationship between the number of types and the number of tokens, was measured to calculate lexical variety within input and discourse texts.

Additionally, manual examination of MRWs (types) used concurrently in input and output texts was conducted. By looking at individual MRWs, both types of discourse were compared in terms of word class, occurrence, contextual meaning, and similarity to the topic covered in the textbook.

[6] Wmatrix5 is available at http://ucrel.lancs.ac.uk/wmatrix/.
[7] TTR = (number of types/number of tokens) * 100.

4. RESULTS

Data will be described regarding metaphor use and topic similarity found across input and output texts.

4.1 Metaphor Use in B2 Discourse: Input versus Output

To answer RQ1, three different aspects are addressed to present the overall picture of metaphor use across input and output discourse at B2 level: metaphor density, types of metaphorical language, and distribution of metaphor by word class.

A preliminary description of the input and output data is presented to offer an overview of the average results across texts, as shown in table 2.

Table 2. Descriptive statistics: Metaphor use across input and output texts

Measures	Discourse	Total	Mean	Min.	Max.	SD	Texts
LUs (Tokens)	Input	1,886	237.7	25	855	430.4	4
	Output	4,307	193.6	149	252	30.1	22
LUs (Types)	Input	658	137.5	23	344	155.6	4
	Output	728	111.5	73	154	20.4	22
MRWs (Tokens)	Input	337	130.4	40	337	73.4	4
	Output	854	47.6	20	464	11.3	22
MRWs (Types)	Input	179	31.98	4	90	42.4	4
	Output	245	28.05	10	49	9.97	22

Source: Prepared by the author from quantitative data.

The average ratio of LU types was higher (137.5) in input as opposed to output (111.5) texts, whereas the average number of MRW types was similar in both types of texts (31.98 versus 28.05).

Focusing exclusively on metaphor density across input and output texts (see table 3), the overall trend in the data showed rates ranging from 17.9%, in the case of the textbook, to 19.8% in the written discourse by Spanish speakers of English. A breakdown of data by participants revealed roughly similar results, being the exception of participant ST22 (9.9%). Based on this general consistency, output data will be explored as a group henceforward in comparison with general input discourse.

Table 3. Metaphor density: Input versus output discourse

		No. LUs	No. non-MRWs	No. MRWs	MRW %
Input	Overall	1,886	680	337	17.9
	Listening	855	268	149	17.4
	Reading 1	825	314	144	17.5
	Reading 2	181	87	40	22.1
	Writing	25	11	4	16.0
Output	Overall	4,307	1,212	854	19.8
	ST01	196	50	45	23.0
	ST02	178	54	41	23.03
	ST03	252	61	57	22.6
	ST04	158	53	39	24.7
	ST05	180	44	23	12.8
	ST06	244	56	58	23.8
	ST07	201	60	46	22.9
	ST08	223	74	35	15.7
	ST09	185	48	39	21.08
	ST10	180	59	34	18.9
	ST11	190	30	47	24.7
	ST12	157	33	28	17.8
	ST13	202	44	37	18.3
	ST14	213	63	36	16.9
	ST15	209	50	50	23.9
	ST16	223	77	41	18.4
	ST17	209	63	34	16.3
	ST18	149	67	20	13.4
	ST19	171	57	30	17.5
	ST20	189	44	48	25.4
	ST21	247	66	51	20.6
	ST22	151	59	15	9.9

Source: Prepared by the author from quantitative data.

Turning to the exploration of metaphor types, similar consistency in the results was found in the analysis of open- versus closed-class metaphors in both types of texts (see table 4).

Table 4. Metaphor types in input and output:
Open- versus closed-class metaphors

	Type of Metaphor	No. LUs	No. non-MRWs	No. MRWs	MRW %
Input	Open-class	1,076	640	250	23.23
	Closed-class	178	38	87	48.9
Output	Open-class	2,425	1,174	685	28.24
	Closed-class	348	37	170	48.8

Source: Prepared by the author from quantitative data

Although a predominance of open-class metaphors (i.e., LUs) was observed in both sets of texts, metaphor density for closed-class metaphors (i.e., prepositions) was found to be highly frequent, representing 48.9% and 48.8% in the input and output discourse, respectively. In contrast, the rates of open-class metaphors were lower, ranging from 23.3%, for input, to 28.24% in the case of output discourse. Overall, closed-class metaphors are characterised by higher rates for metaphor density, which is roughly double the data found for open-class metaphors.

Table 5. Distribution of open-class metaphors by word class:
Input versus output

	Word Class	Total Types	No. non-MRWs	No. MRWs	MRW %
Input	noun	190	152	43	22.6
	verb	119	68	66	55.5
	adjective	75	56	23	30.7
	adverb	54	44	14	25.9
Output	noun	175	123	62	35.4
	verb	135	68	81	60.0
	adjective	83	56	32	38.6
	adverb	70	57	14	20.0

Source: Prepared by the author from quantitative data

The analysis of metaphor types employed across input and output texts will concern the use of open-class metaphors, i.e., nouns, verbs, adjectives, and adverbs (shown in table 5), which are mostly used by L2

learners at B2 level (Littlemore et al., "Investigation" 127–8) and are semantically full words (Deignan).

Regarding the density of open-class metaphors in terms of types, an evident predominance of metaphorical verbs was observed across the texts examined. These data showed similar rates ranging from 55.5% in input to 60% in output texts. On the one hand, the overall distribution of the rest of word classes was quite balanced in both types of texts, except for the case of nouns which showed a higher rate in output (35.4%) as opposed to input discourse (22.6%). Additionally, different patterns for the distribution of the rest of word classes were shown in both types of texts. Regarding input texts, a predominance of adjectives (30.7%) was found, followed by adverbs (25.9%) and nouns (22.6%). Similarly, output texts indicated an irregular distribution, also led by adjectives (38.6%) but followed by nouns (35.4%), and adverbs (20%).

A comparison of individual LUs in input and output discourse allowed the observation of differences in relation to TTR of metaphor use by word class: nouns (see Appendix 1), verbs (see Appendix 2), adjectives (see Appendix 3), and adverbs (see Appendix 4). Overall, TTR rates showed a higher lexical variety within input as opposed to output discourse. As table 6 shows, input texts roughly doubled the rates for output texts in each word class.

Table 6. Type-token ratio of metaphor use by word class: Input versus output

Word Class	Input TTR	Output TTR
Nouns	55.8%	25.3%
Verbs	56.9%	26.0%
Adjectives	65.7%	38.09%
Adverbs	63.6%	32.6%

Source: Prepared by the author from quantitative data

By looking at input TTR, nouns (55.8%) and verbs (56.9%) indicated consistent results. However, vocabulary variation was found to be relatively higher for adjectives and adverbs, representing 65.7% and 63.6%, respectively. Likewise, a close look at output TTR allowed the observation of similar rates for adjectives (38.09%) and adverbs (32.6%), whereas lower TTR was found in nouns and verbs (25.3% versus 26%).

4.2 Topic Similarity: Input versus Output

An analysis of the MRWs (types by word class) used concurrently in input and output discourse can also provide some insights into the role of input in L2 learners' written production of metaphor at B2 level (see Appendix 5). A total of 50 MRWs were found to occur in both types of texts, which account for 7.6% and 6.9% of the total input and output MRWs types, respectively. These rates showed that, in general terms, the MRWs appearing in both types of texts were similar regarding occurrence.

A description of the most frequent MRWs used in both types of texts allowed the observation of patterns concerning the frequency by word class and topic similarity. Concerning nouns, the high frequencies of *show* and *star* were not found in both types of discourse. In the case of input texts, the relative frequency (RF) values of *show* (3.3%) differed from its rare use in output texts (0.1%):

(7) He prepared for the **show** by learning large numbers of trivial facts from the newspapers. (input text, Listening; my emphasis)

(8) . . . because always has to attend to the media **shows** like "El Hormiguero." (output text, ST18; my emphasis)

Similarly, *star* was found with an RF of 5.06% in output as opposed to 0.3% shown in the input texts:

(9) . . . if they are **stars** is because they have a talent. (output text, ST03; my emphasis)

(10) I really liked the idea of being a famous well-paid TV **star** in a drama series. (input text, Reading 1; my emphasis)

From these examples, however, it can be observed that the most frequent MRWs in each type of discourse concerned the topic covered in the textbook.

Moving to MRW verbs, *get* was the most frequent verb (3.7%) in the input texts whereas *have* showed more occurrences in the output (14.4%). Once again, different frequencies of these MRW verbs in the opposite discourse were observed: *get* with an RF value of 0.5% and *have* of 1.1% in output and input, respectively:

(11) The amount of money you earn is determined by the number of views you **get**. (input text, Reading 2; my emphasis)

(12) It goes without saying that thanks to them stars **get** their fame. (output text, ST01; my emphasis)

(13) There have many success stories of people who started at home with just a webcam and **have** now huge followings. (input text, Reading 2; my emphasis)

(14) . . . that these film stars **have** different types of lifestyles. (output text, ST02; my emphasis)

In the case of *get*, example (11) did not entail an MRW meaning related to the topic as it referred to the second entry sense in LM: "to obtain something by finding it, asking for it, or paying for it." In contrast, example (12) did refer to the topic of the textbook: "to achieve something," the ninth entry in LM. On the other hand, examples (13) and (14) illustrate how *have* showed some relation to the topic covered in both types of discourse.

Additionally, the results on frequently used verbs indicated that the LUs *star* and *show* were also found as MRW verbs in both types of texts with similar lower RF values in input (0.4%) and output texts (0.2%), however.

Regarding adjectives, high frequencies of MRWs were observed again in distinct types that did not occur with similar RF values in both types of texts. As an example, the use of *great* in input was more frequent (4.3%) than that of output texts (0.7%):

(15) It gave her a **great** introduction to the profession. (input text, Reading 1; my emphasis)

(16) Lifestyle takes a **great** importance talking about the world of films. (output text, ST07; my emphasis)

By comparison, *good* was more frequently used in output (4%) rather than in input texts (0.9%).

(17) Being a famous star gives **good** opportunities and fantastic moments. (output text; ST04; my emphasis)

(18) He thought she'd look **good** on TV. (input text, Listening; my emphasis)

These examples show that MRW adjectives were used in the context of the discussion set. However, input texts showed a preference for a non-gradable adjective whereas output texts were more limited to a gradable adjective—*great* and *good* respectively.

As for MRW adverbs, *really* was the highest frequent adverb (4.2%) in the input while *out* revealed a similar value of RF in the output (4.4%). In line with the previous word-class cases, these high frequencies were not found in the opposite type of discourse: *really* with an RF value of 2.4% and *out* of 0.8% in output and input texts, respectively:

(19) Stage acting is the only thing I have ever **really** wanted to do. (input text, Reading 1; my emphasis)

(20) . . . but it is still a **really** enjoyable job. (output text, ST09; my emphasis)

(21) I took a year **out** to go travelling. (input text, Reading 1; my emphasis)

(22) If you like to be walking on the street and stand **out**, you would love being famous. (output text, ST13; my emphasis)

In the case of MRW adverbs, there was evidence that their use was contextualized in the topic covered in the textbook. However, examination of examples allowed the observation of identifying *out* as a particle for phrasal verbs exclusively in the case of output texts. As an example, consider (22) with the phrasal verb *stand out.*

5. DISCUSSION

The present study aimed to explore input and output discourse in terms of metaphor use in metaphor-mediated instruction at B2 level. Findings can be considered meaningful in at least two major respects: use of metaphorical language and topic similarity.

As shown in the literature review, metaphor is pervasive in different types of English discourse (Steen et al. 194–298). In the case of learner discourse at B2 level, the current study shows that metaphor density is not

only found with similar rates in input and output discourse but can also be considered ubiquitous in both types of texts in line with the results found in the different types of English registers studied by Steen et al. A possible explanation for a notable use of metaphor in L2 discourse may be attributed to the type of task set, i.e., discursive essay, which triggers abstract language use as L2 learners must state their personal opinions on the topic (Nacey, "Development" 186). But there are other possible explanations for this finding. For instance, essay writing involves certain fixed expressions containing MRWs, e.g., "It is widely believed that . . ." (Littlemore et al., "Investigation" 128), and these findings may be a result of L2 learners' attempt to outperform by using more sophisticated language, as observed in Nacey's study (*Comparing Linguistic Metaphors*).

Although the results obtained on metaphor density are not consistent with Littlemore and her colleagues' observations on higher metaphor density of open-class metaphors ("Investigation" 127–28), they do support relatively frequent metaphor use at B2 level. The metaphor density rates found in this study with a homogenous group of learners preparing for the B2 level, however, were higher (17.9% for input and 19.8% for output discourse) than the 9.9% and 11.62% shown in the essays produced by Greek- and German-speaking learners, respectively, who had successfully completed the Cambridge B2 exam ("Investigation" 125–26). Similarly, the rates of 15.5% for metaphor density found in Nacey's research on non-academic essays with Norwegian learners of English are lower than those of the present study (*Metaphors* 139). These differences in metaphor density could be explained in part by the method employed. The number of participants and L1 backgrounds analysed were different in previous research studies on metaphor production in learner discourse. However, another possible explanation for this inconsistency might be L2 learners' exposure to CL-oriented pedagogical practices in the context of topic-based instruction in the present study. Further work with the use of control/experimental groups is required to establish this.

Findings not only suggest that input and output discourse bear resemblance regarding metaphor density but also in relation to metaphor type and distribution by word class. Input and output texts seemingly match in the higher use of closed-class metaphors (i.e., prepositions) as opposed to open-class metaphors, characterised by an evident predominance of verbs found in both types of texts. These findings suggest that metaphorical discourse at B2 level was primarily used in terms of

simple actions, as adverbs were not found to be abundant at this level in either type of texts. Despite having found some adverbs used as particles in phrasal verbs, these were notably limited in both types of discourse. Furthermore, the findings for TTR of metaphor use suggest that there was greater lexical variety in input as opposed to output discourse to deal with the topic of *careers and aspirations*.

On the other hand, the comparison of input and output discourse regarding the most frequent MRWs (types) co-occurring across texts suggested topic similarity in almost every example analysed, as expected, because the topics in both types of texts were related. However, these high rates were not used with the same frequencies in the opposite type of discourse. It seems that L2 learners did not produce the same MRWs they had been exposed to with similar frequency, but they did use other MRWs dealing with the topic given for discussion. Considering Elena Semino's remark on metaphor density in English discourse generally, "[m]etaphors can make topics clearer, more accessible, and easier to imagine and remember" (148), metaphor use can be argued as a topic facilitator for written discussion at B2 level. However, results from the analysis of MRWs used in both types of texts indicated that insufficient attention might have been paid to fostering polysemy in relation to word-class boundaries in the study. Further research is required to explore this aspect.

Overall, these findings are preliminary but point to the possibility that attention to metaphor in topic-based instruction may provide some form of starting help to use metaphor in context and contribute to addressing the target topic presented in the task set at B2 level.

CONCLUSIONS

In this article, I have explored the extent to which incorporating metaphor awareness in the primary input source, namely, the textbook, for L2 Spanish speakers of English preparing for B2 examination may provide some support for metaphor use in the context of topic-based metaphor-mediated instruction. This study has shown apparent similarities between input and output texts in terms of metaphor use: density, types, and distribution of metaphorical language by word class. That is, L2 learners were exposed to a high density of open-class metaphors, mostly verbs, in the input discourse, which were subsequently used with similar rates in their written production. The comparison of input and output texts has also

revealed an interaction between both in relation to the MRWs co-occurring, which suggests topic similarity.

The present study provides some insights into the implications of side-by-side investigation of learner discourse linked to meaningful discourse that L2 learners are exposed to inside the range of normal activities performed in instructed L2 settings. This investigation has demonstrated the specific high metaphor use material designers consider that teenage L2 learners will need to use in English about the topic *careers and aspirations*. Furthermore, the findings from this study indicate preliminary evidence of what metaphorical language B2 learners actually produce when having been exposed to the active use of the textbook by an instructor trained in the applications of CL to real L2 learning contexts. In general, it seems that topic-based metaphor-mediated instruction of course contents may provide some initial support to develop L2 learners' metaphoric competence to write at B2 level. However, given the absence of a control group, these findings should be interpreted with caution and any conclusions drawn about the relationship between support and learner production could only be tentative.

There are some limitations to this study. The analysis only addressed the issue of *where* to find support for metaphor use by examining the input and the written production of essays in one topic of the textbook. The findings of this study are restricted to findings on metaphor density measured in a small-scale, short-term study. No evidence of linguistic patterns among participant groups were found. A wider research scope is required for further work. A future study shall explore L2 learners' metaphor use at B2 level in a longitudinal study including both control and experimental groups, analysing different broad topics, and with varied task types including a focus on the oral mode. More compelling evidence is needed to gain an accurate picture of the role of input in metaphor-mediated instruction and provide L2 learners with meaningful support to develop metaphor use.

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APPENDIXES

Appendix 1

MRW Nouns: Input versus Output

MRW Nouns	Input Types	Total Input Tokens	Output Types	Total Output Tokens
	accident	1	*advantage*	2
	advantage	1	*air*	1
	attention	1	*attention*	19
	basis	1	*balance*	2
	chance	4	*behaviour*	1
	click	1	*blaze*	3
	company	1	*blue*	1
	contact	1	*boat*	1
	corner	1	*brand*	1
	course	4	*care*	3
	day	3	*centre*	1
	degree	1	*chance*	2
	fact	4	*characters*	2
	heart	1	*contrast*	2
	industry	1	*cultures*	1
	introduction	1	*day*	5
	knowledge	2	*difficulty*	1
	matter	1	*end*	1
	mixture	1	*experience*	2
	occasion	1	*eye*	2
	outlet	1	*fact*	15
	part	1	*future*	1
	press	1	*glory*	3
	producer	4	*goal*	1
	screen	1	*hand*	7
	sensation	1	*hour*	1
	sense	1	*idol*	1
	series	1	*job*	2
	show	13	*journey*	1
	star	1	*key*	2
	step	1	*knowledge*	1
	stories	1	*level*	1
	street	1	*life*	16
	system	1	*love*	2
	taste	2	*model*	2
	thing	5	*moment*	2

	time	2	*network*	1
	traffic	1	*place*	3
	view	2	*point*	8
	visitor	1	*pressure*	4
	way	1	*privacy*	1
	year	1	*problem*	7
	youth	1	*public*	2
			relationship	2
			role	2
			routine	1
			show	1
			side	2
			spotlight	1
			star	39
			street	3
			stress	1
			style	1
			thing	17
			time	21
			top	3
			view	3
			vocation	1
			walk	1
			way	3
			word	1
			world	5
Total	43	77	62	245

Source: Prepared by the author from quantitative data

Appendix 2

MRW Verbs: Input versus Output

MRW Verbs	Input Types	Total Input Tokens	Output Types	Total Output Tokens
	accept	1	*abuse*	2
	admit	3	*accept*	1
	adore	1	*admire*	2
	agree	1	*agree*	1
	apply	1	*appear*	1
	ask	1	*appreciate*	1
	be able	2	*ask*	3
	belong	1	*base*	1
	bring	2	*be able*	1
	build	1	*bear*	2
	come	3	*bring*	6
	change	1	*catch*	1
	compete	1	*change*	1
	consider	1	*come*	1
	determine	1	*concentrate*	1
	discover	1	*condition*	1
	eat	1	*consider*	4
	end	1	*do*	1
	enter	1	*deal*	1
	expect	2	*define*	1
	feel	1	*determine*	1
	find	1	*draw*	1
	focus	1	*dream*	2
	forget	3	*enter*	1
	give	5	*enjoy*	1
	get	10	*expand*	1
	go	2	*experience*	1
	have	3	*express*	1
	hook	1	*fail*	1
	join	1	*feel*	1
	know	2	*find*	1
	learn	1	*follow*	2
	leave	2	*forget*	1
	let	1	*get*	3
	listen	1	*give*	6
	live	1	*go*	20
	look	2	*have*	83
	love	3	*handle*	1
	make	5	*hit*	9

	miss	1	*hurt*	1
	offer	1	*hold*	1
	perform	7	*judge*	1
	pick	1	*keep*	3
	plan	1	*know*	5
	prepare	1	*lead*	2
	pursue	1	*leave*	1
	reckon	1	*live*	9
	record	2	*look*	1
	refuse	1	*love*	3
	reject	1	*make*	8
	see	3	*miss*	1
	show	1	*move*	1
	star	1	*overcome*	1
	stand	1	*pay*	1
	stop	1	*point*	6
	study	1	*prepare*	1
	think	1	*present*	1
	strip	1	*provide*	2
	take	4	*recognise*	3
	travel	1	*record*	2
	turn	1	*relax*	2
	wait	1	*resist*	2
	trust	1	*respect*	1
	win	5	*result*	2
	wonder	1	*say*	21
	work	1	*see*	7
			show	1
			speak	14
			spend	6
			stand	1
			star	1
			stay	1
			support	1
			take	20
			talk	1
			think	1
			turn	1
			understand	1
			use	3
			walk	1
			watch	1
Total	66	116	81	313

Source: Prepared by the author from quantitative data

Appendix 3

MRW Adjectives: Input versus Output

MRW Adjectives	Input types	Total Input Tokens	Output types	Total Output Tokens
	afraid	1	*awesome*	1
	bad	1	*bad*	11
	big	3	*big*	10
	brutal	1	*bright*	1
	early	1	*clear*	1
	general	2	*comfortable*	1
	global	1	*dark*	1
	good	1	*full*	1
	great	5	*good*	11
	keen	1	*great*	2
	live	1	*hard*	4
	long	1	*heavy*	1
	negative	1	*high*	1
	nervous	2	*huge*	1
	old	1	*incredible*	2
	open	1	*inspirational*	2
	perfect	1	*known*	1
	popular	3	*perfect*	1
	prepared	2	*pleasant*	2
	primary	1	*popular*	2
	small	2	*positive*	2
	strange	1	*possible*	1
	typical	1	*private*	3
			rough	1
			safe	6
			simple	1
			social	5
			strict	1
			sure	1
			tired	4
			unique	1
			worth	1
Total	23	35	32	84

Source: Prepared by the author from quantitative data

Appendix 4

MRW Adverbs: Input versus Output

MRW Adverbs	Input types	Total Input Tokens	Output types	Total Output Tokens
	about	1	*away*	1
	ahead	1	*clearly*	3
	alone	1	*downhill*	3
	around	1	*hard*	3
	away	1	*long*	1
	behind	1	*on*	2
	down	2	*only*	1
	in	1	*out*	11
	off	1	*overall*	1
	on	3	*personally*	4
	out	1	*really*	6
	outside	1	*together*	1
	really	5	*up*	1
	up	2	*widely*	5
Total	14	22	14	43

Source: Prepared by the author from quantitative data.

Appendix 5

MRWs (Types) Used Concurrently in B2 Discourse by Word Class: Input versus Output

Word Class	MRW	Freq. Input	RF Input (in %)	Freq. Output	RF Output (in %)
nouns	*advantage*	1	0.3	2	0.3
	attention	1	0.3	19	2.5
	chance	4	1.01	2	0.3
	day	3	0.8	5	0.6
	fact	4	1.01	15	1.9
	show	13	3.3	1	0.1
	star	1	0.3	39	5.06
	street	1	0.3	3	0.4
	thing	5	1.3	17	2.2
	time	2	0.5	21	2.7
	view	2	0.5	3	0.4
	way	1	0.3	3	0.4
verbs	*agree*	1	0.4	1	0.2
	ask	1	0.4	3	0.5
	bring	2	0.7	6	1.05
	come	3	1.1	1	0.2
	determine	1	0.4	1	0.2
	feel	1	0.4	1	0.2
	find	1	0.4	1	0.2
	forget	3	1.1	1	0.2
	get	10	3.7	3	0.5
	give	5	1.8	6	1.05
	go	2	0.7	20	3.5
	have	3	1.1	82	14.4
	know	2	0.7	5	0.9
	leave	2	0.7	1	0.2
	live	1	0.4	9	1.6
	look	2	0.7	1	0.2
	love	3	1.1	3	0.5
	make	5	1.8	8	1.4
	prepare	1	0.4	1	0.2
	record	2	0.7	2	0.4
	see	3	1.1	6	1.05
	show	1	0.4	1	0.2
	star	1	0.4	1	0.2
	stand	1	0.4	1	0.2
	take	4	1.5	20	3.5
	think	1	0.4	1	0.2

	turn	1	0.4	1	0.2
adjectives	*bad*	1	0.9	11	4
	big	3	2.6	10	3.6
	good	1	0.9	11	4
	great	5	4.3	2	0.7
	perfect	1	0.9	1	0.4
	popular	3	2.6	2	0.7
adverbs	*away*	1	0.8	1	0.4
	on	3	2.5	2	0.8
	out	1	0.8	11	4.4
	really	5	4.2	6	2.4
	up	2	1	1	0.4

Source: Prepared by the author from quantitative data.