CLIL and translation in tertiary education[1]

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ABSTRACT

In the past decade, Content Language Integrated Learning (CLIL) has been steadily gaining ground in tertiary-level education, with an increasing number of programmes being implemented. However, and despite this growing trend, there is still a wide scope for research in this area. More specifically, one of the aspects which have hardly received any attention is the role of CLIL lecturers as translators. The aim of this paper is to prove how translation has a say in the quality and performance of lectures in this teaching context. For that purpose, a twofold approach has been followed. On the one hand, eight lecturers' actual production has been qualitatively analysed following the *phasal analysis* of lectures as proposed by Young (1994). On the other, the lecturers' recognition of their role as translators in CLIL lessons has been considered as well. To this double aim, lectures belonging to the fields of Physics and Engineering have been

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recorded, transcribed and analysed, with special attention being paid to phasal division. As for our next goal, the answers to a 26-item questionnaire addressed to lecturers and containing reflections on their translating activity have also been thoroughly studied. Findings show that translation does indeed play a pivotal role in the linguistic quality of lectures, with those phases in which translation applies resulting in lower levels of L1 interference. Further research on this area may indeed determine how valuable translation skills are in order to develop a higher efficiency in the preparation and delivery of university lectures.

Keywords: CLIL, translation, tertiary education, L1 interference, lecture.

1. Introduction

In the last fifteen years, Content Language Integrated Learning (CLIL) has been increasingly gaining in importance in Spanish tertiary education, with more and more English-based programmes steadily being implemented. In the case of the Comunidad de Madrid, this trend, initiated by technical degrees (Universidad Politécnica and Universidad Carlos III are pioneering in this respect), has spread to other specialties and universities (Economics and Psychology at Universidad Complutense de Madrid; Business Administration and Tourism at Universidad Rey Juan Carlos, among others)[2]. Needless to say, this situation has caught the eye of linguists, interested as they are not only in the *status quo* of this relatively novel medium of instruction, but also in the various discursive and linguistic features of the lectures given in these new contexts.

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[2]   This seems to be the tendency in other Spanish universities, too. The University of Oviedo, for instance, is planning to offer 100 subjects taught in English in the near future. These will be distributed between the 50 degrees this institution offers, which amounts to nearly 5% of all its courses. According to its rector, this initiative is intended to attract scientists to this particular region and "to bring down linguistic barriers" (our translation) (*La Nueva España*, 29/1/2010, <www.lne.es/oviedo/2010/01/29/universidad-oviedo-dara-ingles-cien-asignaturas-nuevos-gra dos/865848.html>.) Also, this university was among the first ones to confer a Master's degree in English language for the bilingual classroom in Secondary Education (<http://www.uniovi.es/descubreuo/ofertaformativa/masters>).

In this sense, one of the most recent studies is that of Aguilar & Rodríguez (2012), who focus on how students and lecturers at a Spanish university perceive their CLIL experience. Two years earlier, Lasagabaster & Ruiz de Zarobe (University of the Basque Country) had brought together the outcomes of CLIL implementation initiatives in different educational sectors in Spain, tertiary sector included. Their edited volume (2010) presents a critical look at a variety of teacher education models and makes practical suggestions, among them the need for appropriate teacher education programs. For its part, The CLUE Project at Complutense University has also explored the potential of CLIL and its linguistically learning experiences: two of its members, E. Dafouz and B. Núñez (see Dafouz *et al.*, 2007a, 2007b; Dafouz & Núñez, 2009; Núñez & Dafouz, 2007) mainly focus on methodological and linguistic issues within this particular environment, thus making a valuable contribution for practitioners, teacher educators and researchers alike. Additionally, Bellés & Fortanet (2005) shed some light on the features of lecturers in English, whereas Carrió & Gimeno (2007) call for collaboration between content teachers and language teachers as the most excellent way to guarantee quality control over the materials and the expected level of language proficiency.

However, and despite the fact research in the field is on the increase, hardly anything has been said about the relevance of translation in the overall teaching activity of the lecturers, or about the potential role these may have as Spanish-English "(self-) translators"[3]. Nonetheless, it is our belief that translation is undoubtedly an essential part in the elaboration and delivery of CLIL tertiary-level lectures. This statement is supported on two presuppositions, which are commented on in the next section.

2. Hypotheses and Aim

As just stated, we find the translating activity is inescapable in the everyday routine of CLIL lecturers. This is based on the two following hypotheses:

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[3] The lecturers' mother tongue was Spanish in all cases. According to Beeby (1993, p. 5) this inverse, service or "prose" translation combination is usually neglected by translation theorists.

Firstly, and given the demand in the implementation of CLIL programs in Spanish universities, some professors and lecturers have been compelled to "translate" part of their course syllabi, that is, they need to communicate now in English the contents they usually convey in Spanish in their regular classroom environments.

Secondly, and as a result of these new circumstances, translation has become a strategy that must be resorted to when elaborating materials and contents for lectures (sometimes with the visual aid of PowerPoint slides and handouts). Consequently, during the process of lesson deliverance, these new "translators" regularly make use of L2 (English) words and structures which show a striking resemblance with others existing in their L1 (Spanish). This interference reveals itself in the guise of structural, morphological and lexical calques, these being understood as "errors that show very closely a native language structure" (Odlin, 1993, p. 37[4]). If we assume that this interference might be the direct result of the translating activity they carry out, then translation could also be a way to improve the linguistic quality of the lectures.

The aim of this paper is, precisely, to prove how translation has a say in the quality and performance of lectures in this particular teaching context. For this purpose, a twofold approach has been adopted. On the one hand, a sample of eight lecturers' actual production has been qualitatively analysed following the *phasal analysis* of lectures proposed by Young (1994) (see below), paying special attention to source language interference in the L2. On the other, the lecturers' recognition of their role as Spanish-English translators in their CLIL classes has also been taken into account by means of a 26-item questionnaire addressed to a number of CLIL lecturers. Results prove relevant for two main reasons: first, and most importantly, because they contribute to identify some of the linguistic-translation needs lecturers have in order to improve communication in the CLIL English classroom (Rabab'ah, 2008); and secondly, because this work

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[4] The categorization and description of the different types of calques present in the lectures (structural, morphological and lexical) are out of the scope of this article. See Braga & Domínguez (2010) for an illustrative detail of this classification.

adds a link between Contrastive Linguistics and Translation Studies which will hopefully inspire further studies in this line[5].

3. Methodology

As anticipated above, two tools were used in our attempt to demonstrate the role of translation in the deliverance of English lectures in CLIL environments: a sample of the lecturers' actual production and a questionnaire addressed to the lecturers themselves. In the following lines, both instruments of analysis will be briefly depicted.

3.1. The corpora

As already mentioned, the first part of the analysis focuses on data drawn from the lecturers' actual production. As a result, two different corpora have been gathered:

Corpus A: four Engineering lectures (25,997 words approximately) given during a course on the topic of Formula 1 cars held at Universidad Politécnica de Madrid. Each lecture lasted approximately one hour and was attended by 26 students of nationalities other than Spanish who used English as their lingua franca. Of the four lecturers who readily agreed to participate in the course, two had no previous experience in lecturing in a foreign language and all of them lacked translation training of any sort[6]. As self-reported, their level of English ranged from intermediate to high intermediate[7].

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[5] Fortunately, and as perceived by some scholars (Ramón García, 2002; Zlateva, 2002; Grammenidis & Nenopoulou; 2007; Rabadán, 2007), the traditional lack of cooperation between Translation Studies and Contrastive Linguistics seems to be coming to an end, especially after the boom of computerised language corpora. It is our point here to adopt Contrastive Linguistics as an estimated tool for Translation Studies, thus adding to the still scant literature in the field.

[6] The two only teachers in this specific corpus who also answered our questionnaire state they have never taken any kind of translation courses.

[7] For further information about this particular corpus, see Dafouz *et al.* (2007a, pp. 651-652).

Corpus B: four lectures (26,018 words approximately) given during an *Erasmus Mundus* Master's in Nuclear Fusion Science and Engineering Physics, held jointly at Universidad Complutense de Madrid, Universidad Politécnica de Madrid and Universidad Carlos III de Madrid[8]. As in the case of Corpus A, each lecture lasted approximately one hour and was attended by foreign students who used English as their lingua franca. The three lecturers who voluntarily agreed to participate had previous experience in lecturing in a foreign language but, as was the case in Corpus A, lacked translation training of any sort[9]. As self-reported, their proficient level of English had allowed them to carry out PhD studies abroad.

Due to space limitations, only the results deriving from the study of Corpus A will be presented here. It can be anticipated, though, that results from Corpus B show strikingly similar results in this particular aspect.

3.2. The questionnaire

For the second part of our study, we resorted to a questionnaire consisting of 26 questions intended to assess the lecturers' translation skill and practice. These questions were divided into two main blocks: the first one (items 1-15) deals with aspects concerning the participants' general background regarding their knowledge of English, their translation experience and the role translation plays in their CLIL lectures. The second part (items 16-26) focuses on the translation practice itself (frequency, tools and strategies, and their own assessment of the translating activity). A total number of thirty-four questionnaires were sent to an equal amount of potential participants, with only fourteen of them being

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[8]   <http://www.ucm.es/centros/cont/descargas/documento13414.pdf; http://www.em-master-fusion.org/index.asp.>

[9]   At least this is the information drawn from the responses of the only two teachers in this corpus who completed the questionnaire. Curiously enough, both of them translate outside their teaching activity, though they have never considered undergoing any sort of translation training. This is also the case in the rest of the degrees consulted: in Business Administration and Tourism, 9 out of 10 teachers use translation outside teaching, mostly on a monthly, weekly and daily basis. However, only 1/10 has received some specific training (two 15-hour

returned (41.1% of response rate). These fourteen lecturers carry out their teaching activity at Universidad Rey Juan Carlos (Business Administration and Tourism), Universidad Carlos III (Physics) and Universidad Politécnica (Aeronautics Engineering), all of them based in Madrid[10].

In the design of this questionnaire (see blank sample in the appendix), the hypothesis, purpose of the research and research problem were taken into consideration. However, and even though the authors' original intention was to pre-test the questionnaire with a representative sample, practical reasons forbade us from being able to pilot it.

3.3. Procedure

In order to achieve the first part of our goal, a sample of eight lecturers' actual production has been qualitatively analysed following the *phasal analysis* of lectures as proposed by Young (1994), in which the macro-structure of university lectures and the most striking features that contribute to this structure are described. According to Young, university lectures are configured into phases, or "strands of discourse that recur discontinuously through a particular language event and, taken together, structure the event" (1994, p. 165). The six phases that make up every university lecture are Discourse Structuring, Conclusion, Evaluation, Interaction, Theory/Content and Examples (*ibid.*, pp. 166-168). Each of these phases plays a different role within the lecture. With *Discourse Structuring*, the addressers "indicate the direction that they will take in the lecture" (p. 166), whereas the *Conclusion* summarizes the points made throughout the discourse. *Evaluation* serves to assess the information. The contact with the audience is maintained through *Interaction*, while *Theory or Content*

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courses on legal translation), and just 2/10 have considered receiving any sort of translation training (as an anecdote, one lecturer has thought about signing up for any kind of translation courses, but connected with English literature).

[10] 8 out of these 14 questionnaires were submitted by lecturers teaching Business Administration, which amounts to 57.1% of the total. The rest of the mentioned degrees is represented with a percentage of 14.2% each.

reflect the lecturer's purpose, that is, "transmit theoretical information" (p. 167), which is in turn illustrated thanks to the *Examples*.

Of these six phases a lecture is composed of, there are three in which a translation process L1-L2 can be particularly noticeable. These three phases, which are Structuring, Content and Exemplification, will be so labelled "self-translation phases" as opposed to the other three, or "non-translation phases". If, according to Martínez & Hurtado (2001, p. 280), strategic competences are used in translation to make up for the deficiencies and solve the problems arising from any of the other sub-competencies (proficient knowledge of a language, for instance), *a priori* we should expect lower interference levels (that is, better linguistic quality) in words, phrases and structures present in the so-called "self-translation phases".

As for the second approach, the responses to the 26-item questionnaire addressed to lecturers and containing reflections on their translating activity when preparing and delivering their lessons have been quantitatively studied. The analysis of both types of data will be dealt with in the following section.

4. Data Analysis

4.1. Lecturers' production, phasal analysis and translation

After a thorough search of instances of calques in the lectures included in Corpus A (which, as we have said, is the one used for illustrative purposes), and bearing in mind Young's classification, the following distribution of calques can be found: Content, 55 instances; Discourse Structuring, 22 instances; Interaction, 49 instances; Evaluation, 26 instances; Exemplification, 6 instances; Conclusion, 16 instances. Self-translation phases reveal a total number of 83 calques (syntactic, morphological and lexical), whereas non-translation phases show 91 calques. In this respect, it is necessary to point out that only calques which sound odd or inaccurate in the L2 have been taken into account. Errors of a different nature (due to overcorrection, for instance) are not dealt with[11]. Figure 1 below

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[11] Identical calques produced throughout the discourse only count as one. One striking example is the phrase "so that" with the meaning of *así que* ("so"), which is repeated 25 times in a single lecture.

shows the distribution of calques depending on the kind of phase (self-translation or not). Table 1 focuses on the self-translation phases (Discourse structuring, Content and Exemplification) and reveals the results of calques per phase in absolute terms.
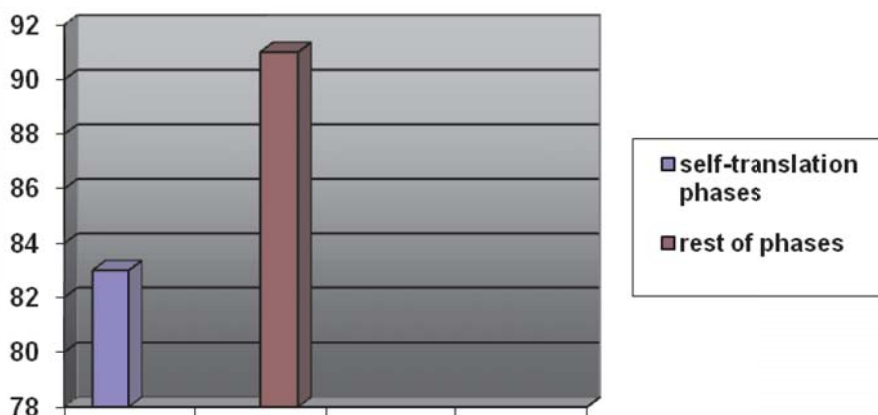

Figure 1. Global number of calques in Corpus A

Phases	No. of calques	% of self-translation phases
Discourse Structuring	22	26.5%
Content	55	66.2%
Exemplification	6	7.2%
Rest of phases	91	

Table 1. Self-translation phases: distribution of calques (Corpus A)

As seen in Table 1, Discourse Structuring contains 22 calques (26.5% of the total number of calques in the self-translation phases as a whole). Content is the phase in which calques are most numerous (55, which amounts to 66.2%). Finally, Exemplification shows the lowest figures, with just six calques (7.2%). Nonetheless, this is not the perceived trend in the non-translation phases, where the number of calques is slightly higher. This is particularly evident in the case of syntactic calques as shown in Figure 2:
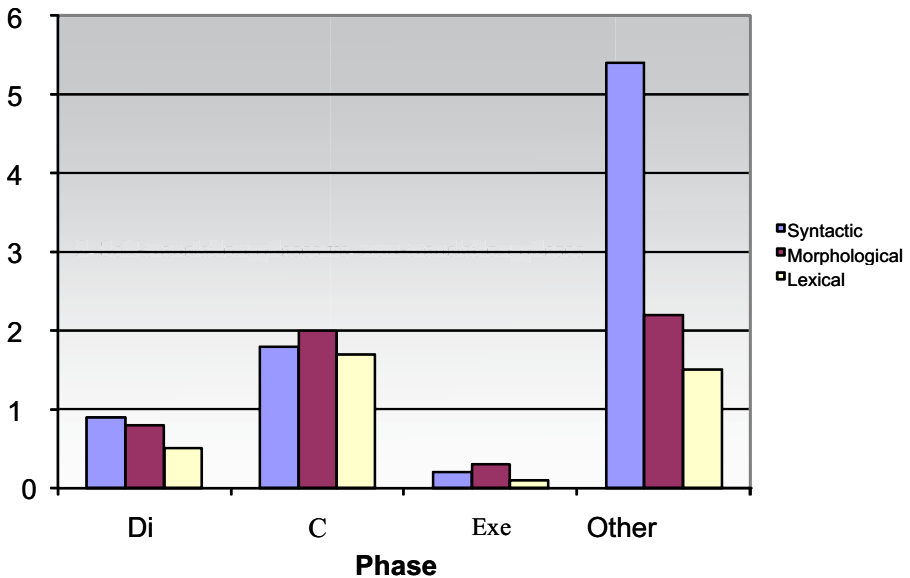

Figure 2. Self-translation phases vs. non-translation phases: calque distribution

As shown, self-translation phases contain a lower number of calques. This fact should not be surprising: although translation can be guilty of high doses of interference, it is equally true that lecturers most probably look more closely into the language when some rendering is required, rather than in spontaneous spoken speech.

A priori, the pretty narrow numerical difference in the number of calques in self-translation and non-translation phases (83 vs. 91) might be misinterpreted as a roughly equalitarian distribution of calques in both cases. However, in this respect, it is paramount to consider two main aspects. First, a mention must be made to the number of phase instances in each category: 196 instances of self-translation phases can be counted as opposed to 147 non-translation phases. It is only natural that a higher number of instances should lead to a higher presence of calques, although, as demonstrated, the opposite is true in our case. Secondly, the number of words contained in each of these phases must also be borne in mind, which is higher in self-translation phases: given the teacher-fronted orientation of all the lectures in Corpus A, the transmission of information, that is, Content (with 83 phases), reveals itself as the one concentrating more words. We can take as an example one of the lectures in Corpus A: 3099 of the 5416 words it is made up of exclusively belong to Content, which represents 57.2% of the total number of words in that specific lecture. All this being considered, it seems that phases in which no translation process applies are more likely to show L1 interference; hence, translation contributes to reduce the number of calques in L2.

Nevertheless, this correspondence between the number of calques and the number of phases seems to enter in conflict with the fact that Discourse Structuring, with an also elevated number of phases (72), presents a remarkably inferior presence of calques (22, 26.5%). Two reasons may account for this numerical difference: first, the already mentioned length of the Content phases in number of actual words; secondly, the unique nature of this phase, in which references to the organization of the lecture and content merge. For its part, the low number of calques in Exemplification does not allow us to draw definite conclusions. Finally, we appreciate a significant difference in the number of syntactic calques in the self-translation phases, as opposed to cases involving morphology and lexis. Given the scientific nature of the course contents, the closeness in morphology and lexis between scientific English and Spanish has probably made lecturers give more emphasis to syntactic aspects.

Having completed this first part of the data analysis, we can partially conclude, as announced in our hypotheses, that translation is actually a fact prior to lecture delivery in our corpus, as made manifest in L1 interference in both self-translation and non-translation phases. We also anticipated that this translating activity could

be a way to improve the linguistic quality of the lectures: if we bear in mind that self-translation phases, despite having a higher number of words, contain fewer cases of calques, it can be assumed that translation helps to diminish levels of interference, contributing so to improve the lecturers' performance in their L2.

Analysis of questionnaires I: General background (knowledge of English, translation experience and the role of translation)

This second section in data analysis will focus on items 1-15 in the questionnaire (see Appendix). Items 1 to 5 were intended to collect demographic information such as the participants' place of work, sex or mother tongue. Regarding the lecturers' mother tongue, it is important to mention here that we observe a lack of variables since all of them speak Spanish as their first language. Items 6 to 8 focused on the number of years participants had been studying English as well as on their translation background (i.e. courses they had taken or were planning to take in the future), namely:

6. How many years have you studied English?
    0-5 years   6-10 years   10 or more years

7. Have you ever taken any translation courses?
    Yes   No
    If the answer is Yes, mention which courses you have followed:

8. Have you considered taking any translation courses in the future?
    Yes   No
    If the answer is Yes, mention which courses you would like to take in the future:

Regarding item 6, 84.6% of the participants claim to have studied English for ten years of more but, quite surprisingly, in response to question 7, 92.3%

stated that they have never taken any translation courses or are planning to do so in the future (77% gave a negative answer to question 8). Finally, items 9 to 15 were devoted to more specific aspects regarding the participants' translating activity (e.g. their translating needs, how often they have to translate, the tools they use, etc.)

With respect to the participants' translating activity, a distinction between the lecturers' needs outside the classroom (e.g. for professional reasons) and inside the classroom must be made. This difference was reflected in the questionnaire by items 9 and 11, reproduced below:

9. Do you need to use translation in your regular professional activity outside teaching?

    Never   sometimes   monthly   weekly   daily

11. How long have you been translating for professional reasons?

    0-5 years   6-10 years   10 or more years

As for the frequency with which they need to translate for the CLIL classes, this was measured by items 12 and 13, as reflected below:

12. Do you need to use translation for your content-language classroom activity?

    Never   sometimes   monthly   weekly   daily

13. How long have you been translating for your content-language classroom activity?

    0-5 years   6-10 years   0-10 or more years

Inspection of the data reveals that, outside the CLIL environment, the majority of the lecturers admit they have to translate at least occasionally. As for their need to translate for their CLIL teaching, results show that there is a remarkable higher frequency (64.2% of the participants answered they needed to translate "weekly" for their lessons). Their professional need for translation,

however, takes place over a slightly longer time than their teaching need for it. Hence, 54% admit they have been translating for professional purposes for a period ranging between six or ten years while 61.5% has been using translation for the CLIL lectures just for a period below five years. This must be in part due to the relative youth of CLIL at tertiary level in Spanish universities.

Item 10 intended to find out what language(s) were involved in the participants' translation habits:

10. From what language or languages do you translate? (more than one answer possible):
    (1) Spanish-English.
    (2) English-Spanish.
    (3) Other combinations (Specify: _____).

Results show that only two participants claim to translate exclusively from English into Spanish –the rest of the lecturers completing the questionnaire admit they use both English-Spanish and Spanish-English. Two of them also translate occasionally from other languages (French).

Finally, items 14 and 15 aimed to explore the frequency and the type of helping tools employed in the participants' translation habits. Item 14 was also formulated on a four-point Lickert scale, as illustrated below:

14. Do you use any tools to help you in your translation activity?
    Never   sometimes   usually   always

Not surprisingly, the data reveal that all the participants make use of tools, although a much higher percentage in the first option –i.e. "always"– was expected. However, this option (i.e. "always") only got 23% of the answers as opposed to the two most favoured options available; namely, "usually" (with 46%), followed by "sometimes" (31%). None of them replied they "never" used helping tools when translating. It may be speculated that those participants who answered "usually" and "sometimes" feel slightly more confident in their use of

English, this being the reason why they do not always need to resort to helping tools.

To end this block, item 15 was targeted at ascertaining the tools employed by the participants in order to carry out their translations. Informants were originally provided with four options (of which they could as many as they wished) but were also asked to specify whether they used any other tools, as follows:

15. Which tools do you resort to for this activity?
    1. Dictionaries.
    2. Glossaries.
    3. Machine translators.
    4. Web pages.
    5. Other (Specify_____).

Results show that there is a clear preference for the use of dictionaries and web pages (84.6% and 77%, respectively) in detriment of others such as glossaries (remarkably much less chosen, with 23% of the answers) or machine translators (38.4%). We may assume that lecturers are more familiar with the first two types of tools whilst glossaries might be less known to them. Our guess is that they do not advocate the use of machine translators either, given their well-known unreliability. Other helping tools the informants report they regularly use (in 15.3% of their answers) include, for example, course books written in English.

Analysis of questionnaires II: Translation and preparation for lectures

Items 16 to 26 were targeted at gathering more detailed information regarding the role of translation in the process of lecture preparation. On the whole, inspection of the data reveals that translation emerges as a powerful tool in the preparation for CLIL lectures. In the following paragraphs, a more detailed analysis of the answers to each of these 10 items of the questionnaire will be provided.

Thus, item 16 was intended to determine the frequency with which participants use translation for the preparation of their L2 lectures, namely:

16. How often do you **translate in preparation for lectures** in your second language?

Never   For every lecture

☐ 1   ☐ 2   ☐ 3   ☐ 4

The data reveal that all the lecturers asked claim they *always* resort to translation for this particular purpose. In fact, none of the respondents selected option 1 ("never"). However, the most chosen option was number 3 (43% of the answers) whilst 28.5% admit they use translation for the preparation of every single lecture they give and also 28.5% opted for option 2.

Item 17 (repeated below) questioned the participants about the source materials they resort to when preparing their L2 lectures. Once again, they were offered a range of choices:

17. Indicate the sources from which you translate (more than one answer possible):

1. My own notes in Spanish.

2. Books written in Spanish.

3. Books written in other languages.

4. My own handouts written in Spanish.

5. My own PowerPoint slides written in Spanish.

6. Other (Specify: _____).

Results show that the source materials they resort to are usually their own notes (85.7%) and books (64.3%) written in Spanish, which they regularly use for their Spanish-oriented classes. 57.1% also claim they reutilize the information contained in their Spanish PowerPoint slides. Less popular, however, are books written in languages other than English (35.7%) and original hand-outs (21.4%).

The following items (18 to 20) were aimed to find out about the specific linguistic resources at the time of translating. For the sake of clarity, these items are reproduced here:

18. Indicate on the scale **to what extent you use the following materials in your translating activity:**

	Never used		very much used	
Monolingual dictionary (English)	☐ 1	☐ 2	☐ 3	☐ 4
Monolingual dictionary (Spanish)	☐ 1	☐ 2	☐ 3	☐ 4
Bilingual dictionary (Spanish-English)	☐ 1	☐ 2	☐ 3	☐ 4
Thesaurus	☐ 1	☐ 2	☐ 3	☐ 4
Technical dictionary (monolingual)	☐ 1	☐ 2	☐ 3	☐ 4
Technical dictionary (bilingual)	☐ 1	☐ 2	☐ 3	☐ 4
Glossaries	☐ 1	☐ 2	☐ 3	☐ 4

Other (Specify_____).

19. Indicate on the scale **to** what extent you use the following **hardback materials** in your translating activity:

	Never used		very much used	
Collins English Dictionary (mono.)	☐ 1	☐ 2	☐ 3	☐ 4
Longman Dict. of Cont. E. (mono.)	☐ 1	☐ 2	☐ 3	☐ 4
Oxford English Dictionary (mono.)	☐ 1	☐ 2	☐ 3	☐ 4
Oxford English Dictionary (mono.)	☐ 1	☐ 2	☐ 3	☐ 4
Merriam-Webster Dictionary (mono.)	☐ 1	☐ 2	☐ 3	☐ 4
Collins Dictionary English-Spanish)	☐ 1	☐ 2	☐ 3	☐ 4
Gran Diccionario Oxford (Eng-Spa)	☐ 1	☐ 2	☐ 3	☐ 4
EDAF English-Spanish Dictionary	☐ 1	☐ 2	☐ 3	☐ 4
Cambridge Spanish-English Dictionary	☐ 1	☐ 2	☐ 3	☐ 4
Diccionario técnico inglés-español (Beigbeder Atienza)	☐ 1	☐ 2	☐ 3	☐ 4

Other (Specify_____).

20. Indicate on the scale **to** what extent you use the following **online materials** in your translating activity:

	Never used			very much used
Collins English Dictionary online	☐ 1	☐ 2	☐ 3	☐ 4
Longman English Dictionary Online	☐ 1	☐ 2	☐ 3	☐ 4
Oxford Online Dictionary	☐ 1	☐ 2	☐ 3	☐ 4
Cambridge Dictionary Online	☐ 1	☐ 2	☐ 3	☐ 4
Merriam-Webster Online Dictionary	☐ 1	☐ 2	☐ 3	☐ 4
IATE (former Eurodicautom)	☐ 1	☐ 2	☐ 3	☐ 4
Diccionarios elmundo.es	☐ 1	☐ 2	☐ 3	☐ 4
www.wordreference.com	☐ 1	☐ 2	☐ 3	☐ 4
www.thefreedictionary.com	☐ 1	☐ 2	☐ 3	☐ 4
www.answers.com	☐ 1	☐ 2	☐ 3	☐ 4
www.wordnik.com	☐ 1	☐ 2	☐ 3	☐ 4
www.diccionarios.com	☐ 1	☐ 2	☐ 3	☐ 4
www.yourdictionary.com	☐ 1	☐ 2	☐ 3	☐ 4
www.xlation.com	☐ 1	☐ 2	☐ 3	☐ 4
www.foreignword.es	☐ 1	☐ 2	☐ 3	☐ 4

Other (Specify_____).

A general overview of answers to item 18 reveals that dictionaries are the most oft-used material, though the frequency rate ranges considerably. On the other hand, glossaries or web pages are virtually absent as an option. Thesauri are mentioned just three times. Regarding hardback materials (item 19), the use of traditional dictionaries (both monolingual and bilingual) seems to be the norm (e.g. *Collins, Cambridge, Oxford, Longman*). Practically non-existing is the case of informants who make use of various resources for their activity since, as already commented, the majority sticks to one or two dictionaries. Quite remarkably, it is thus far from coincidental that the only lecturer who uses more specialized materials for her translating activity (*Diccionario técnico inglés-español Beigbeder Atienza* and *Diccionario de términos jurídicos inglés español*, by E. Alcaraz) is

also the one who specifically received some training in translation prior to her CLIL teaching activity.

With regard to online materials (item 20), they seem to be quite popular, with usually more than three options marked. There is only one respondent who affirmed to never use them. However, far from being specialized resources[12] –as expected given the nature of the contents taught– the online dictionary *Wordreference* appears as one of the most popular tools, with four very frequent users and another three who sometimes look up information in this dictionary. *Merriam-Webster Online Dictionary*, *Collins English Dictionary Online* and *Cambridge Dictionary Online* are also usual sources for consultation. The poor results concerning the use of technical dictionaries and more specialised resources might actually be the reason why lexical calques are so frequent even in the so-called self-translation phases.

The six final questions of this questionnaire (items 21 to 26) were included in order to assess both the lecturers' need for translation and their competence in it. The first one in this block (question 21 below) was intended to measure the lecturer's need to look up unfamiliar words when preparing a lecture, namely:

21. Indicate on the scale how often you need to look up unfamiliar words and expressions when translating for a lecture.

All the time   Never

  1   2   3   4

As can be seen, the participants were once again given a 4-point Lickert scale to measure the frequency with which they need to check out unfamiliar words when preparing an L2 lecture. Most of the answers were rated a 3 (61.5%), which is not surprising if bearing in mind that all lecturers have a good command of English and especially of their subject. Only one of the informants

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[12] It is indicative that only one lecturer suggests a specialized dictionary as an option, more specifically *IATE* (former *Eurodicautom*). As an example of more "exotic" materials, we can mention the online dictionaries provided by the Spanish nationwide newspaper *El Mundo*.

chose value 4 ("never") –coincidentally the one who has been teaching CLIL courses the longest[13].

Questions 22 and 23 in our questionnaire were targeted at measuring the extent and importance which the respondents' attached to translation in their L2 lectures, namely:

22. Indicate on the scale to what extent the information in the English lectures is based on the translation of materials written in Spanish.

Very high   Very low

1   2   3   4

23. Indicate on the scale how important translation is in the preparation of lecturer's transparencies/ PowerPoint slides, hand-outs or other visual aids.

Very important   Not important

1   2   3   4

Results for item 22 did not match our expectations. We assumed that most of the materials used in their L2 lectures would be in English, this being customary in international research publications in the field of economics or engineering. As in the previous question, they were provided with a 1 to 4 scale, value 4 being the lowest ("very low") and 1 ("very high"). Thus, more than half of the participants agreed that they do not *usually* translate from Spanish materials since many of their reference materials are already in English. In other words, 36% and 21.5% of the respondents chose answers 3 and 4, respectively. However, more than 30% of the answers reflect that this is not always the case. In fact, 28.5% and 14% of the participants chose answers 1 and 2, indicating that, in their case, the extent to which the information in their L2 lectures is based on the translation of Spanish materials is high or very high. This seems to be the case especially when dealing with subjects such as Law in Tourism or Spanish

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[13] Results are as follows: 1: no answers; 2: 5 answers; 3: 8 answers; 4: 1 answer.

Financial Systems –these subjects demand an extra effort on the part of the lecturer, who presumably has to adapt the existing Spanish materials[14].

As for the importance of translation itself (item 23), participants were again required to respond in a 1-4 scale, with 1 being the value "very important" and 4 "unimportant". In this case, results were clearly the opposite; that is, the majority of participants believe translation is extremely important when preparing their visual aids, with almost half of them rating the question with 2 (42.8%). Only three of the participants thought that translation was irrelevant when dealing with visual aids[15].

Question 24 was oriented to find out the degree of difficulty informants face when they translate their L1 materials into English, that is:

24. Indicate on the scale how difficult it is to translate materials for the English lectures.

Very difficult   Easy

   1   2   3   4

As for the problems to be tackled when translating, responses show (with the exception of one blank answer) that not many difficulties arise on the whole. In fact, 61.5% of the answers are rated with value 3 or 4 on a 1-4 scale, with 1 standing for "very difficult" and 4 for "easy"[16].

Finally, the last two questions of the questionnaire focus upon the effect of translation on the learners: whether lecturers choose words and expressions that might be easier to understand by their learners –especially if these are Spanish– and whether a good translation was (un)important for a better understanding of the contents taught, namely:

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[14] Very high: 2 answers (Econometric and Law in Tourism), with 14.2%; Somehow high: 3 answers (Spanish Financial System, Aeronautics and Marketing Research), with 21.4%; Somehow low: 4 answers, with 28.5%; Low: 5 answers, with 35.7%.

[15] Results are as follows: 1: 2 answers (14.2%), 2: 6 answers (42.8%), 3: 3 answers (21.4%), 4: 3 answers (21.4%).

[16] Very difficult: 0/13, Somehow difficult 4/13, Somehow easy 5/13, Easy 4/13.

25. Indicate to what extent, when translating, you choose words and expressions which might be easier to understand by your students.

Very high   Very low

  1   2   3   4

26. Indicate how important a good translation is for a better understanding of your lectures in English.

Very important   Unimportant

  1   2   3   4

Regarding the extent to what lecturers choose words and expressions to facilitate learners' comprehension (question 25), most of them agree that they "adapt" their vocabulary in class in order to facilitate comprehension. Only one participant affirms not carrying out any adjustment, whereas two of them do so in a low degree (coincidentally they teach international Masters with an international audience and therefore assume their students have a higher level of English). However, the majority rate their answers 1 or 2 (35% and 42% respectively)[17].

A close look at the analysis of both questionnaire sections also reveals conclusive evidence regarding our initial presuppositions. First, a significant amount of lecturers admit that they often resort to materials originally written in Spanish for their classes. Second, as predicted, translation appears as an established and relevant mechanism for content preparation and the elaboration of visual aids for class use, which is apparently the reason behind the cases of interference in the data. However, at the same time, translation seems to be responsible for the lower calque statistics in the so-called self-translating phases (as opposed to the non-translation phases), which corroborates our hypothesis about the direct correlation between translation and linguistic quality. What is more, the lecturers' use of very general reference sources and their lack of any translation training might well explain why calques are still present to an important extent.

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[17] Results are as follows: 1: 5 answers (35.7%), 2: 6 answers (42.8%); 3: 2 answers (14.2%); 4: 1 answer (7.1%).

5. Conclusions

Content Language Integrated Learning has been gaining strength in Spanish universities, and consequently many studies regarding this particular kind of instruction are now seeing the light. However, the function of translation in CLIL lecturing has hardly received any attention. This article has precisely attempted to shed some light on a striking aspect of this kind of linguistic transference: the competence of the practitioner, the important role that such rendering plays and how translation seems to diminish source language interference, thus enhancing the linguistic quality of lectures. For this purpose, a twofold approach has been followed. On the one hand, two four-lecture corpora have been selected for calque analysis, and Young's systemic analysis of phases has been applied; on the other, responses from 14 questionnaires in which CLIL lectures were asked about translating practice in their teaching activity have been analysed in detail.

A close analysis reveals, first, that translation may have a say in the fact that the "self-translation phases" present less interference than those in which no translation process is applied. In fact, and focusing on corpus A, the overall figures show a reduced presence of calques in self-translation phases, even bearing in mind that one of the phases in this group, Content, presents a higher number of instances and words. As for the specific type of calque, translation seems to reduce syntactic calques dramatically.

Secondly, the 26-item questionnaires submitted by 14 CLIL lecturers show that translation is a regular practice in their teaching activity, which they usually reckon as quite important since they resort to it on a weekly basis (justified by the fact most of their source materials are their own notes and books written in Spanish). An added difficulty is that the target language is not their mother tongue and all but one of the respondents lack translation training of any sort. This might explain why they typically use web pages and, above all, dictionaries, as consultation tools, the latter being mostly unspecialized, bilingual dictionaries. Lack of knowledge of specialized online resources also seems to be common. One of the reasons for this poor use of materials (lack of training aside) might be the fact that they consider translation quite an easy task. Paradoxically, the majority of informants are of the opinion that a good translation is essential for

the students' better understanding of the contents and in the preparation of visual aids for class use; what is more, they even admit in this rendering that they choose words and expressions that could facilitate understanding on the part of the audience. All this leads us to conclude that a better training in translation would certainly lessen the impact of source language interference in the selected phases.

Although modest, these initial findings have proven our initial presuppositions right: not only is translation commonly used by CLIL teachers at university, but also a mechanism that has a positive effect on L1 interference reductions and lecture enhancement.

This paper intends to be a starting point to demonstrate how translation is an effective mechanism to improve the quality of L2 lectures. Despite the fact that neither the size of the corpus nor the number of questionnaires is consistent enough to draw definite conclusions, future studies on wider corpora and varied disciplines may well support the vital role that translation plays in CLIL lessons. An analysis of the lecturers' shortcomings might call for a need to assist them with tools, resources and strategies which can facilitate the acquisition of the competences required to carry out their translating task with high doses of accuracy[18] (for further detail on translation competence see Beeby, 1993; Hurtado Albir, 2001; Martínez Melis & Hurtado Albir, 2001; Pym, 2003). Translation knowledge and skills are capital ingredients to be acquired by these practitioners (Alves *et al.*, 2001), who ultimately must face the obstacles that this sort of translation entails. A more accurate analysis of the competences to be acquired by these lecturers will be the focus of further investigation.

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Appendix

[No. _____] – do not fill in

Dear lecturer

This anonymous questionnaire is part of a research project investigating lectures' translation competence in non-language courses taught in English in higher education. Your answers will help us learn more about the translation skills required by lecturers in such courses.

Thank you for your assistance

1. University/college _____
2. Content-language courses given _____

QUESTIONS ABOUT YOUR BACKGROUND

4. Are you: ☐ Male ☐ Female
5. What is your first language? ☐ Spanish ☐ English ☐ Other (Specify) ____
6. How many years have you studied English?
   ☐ 0-5 years ☐ 6-10 years ☐ 10 or more years
7. Have you ever taken any translation courses? ☐ Yes ☐ No
   If the answer is Yes, mention which courses your have followed:
8. Have you considered taking any translation courses in the future?
   ☐ Yes ☐ No
   If the answer is Yes, mention which courses you would like to take in the future:
9. Do you need to use translation in your regular professional activity outside teaching?

Never	sometimes	monthly	weekly	daily
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

10. From what language or languages do you translate? (more than one answer possible).

☐ 1 Spanish-English

☐ 2 English-Spanish

☐ 3 Other combinations (Specify_____).

11. How long have you been translating for professional reasons?

☐ 0-5 years ☐ 6-10 years ☐ 10 or more years

12. Do you need to use translation for your content-language classroom activity?

Never	sometimes	monthly	weekly	daily
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

13. How long have you been translating for your content-language classroom activity?

☐ 0-5 years ☐ 6-10 years ☐ 10 or more years

14. Do you use any tools to help you in your translation activity?

Never	sometimes	monthly	weekly	daily
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

15. Which tools do you resort to for this activity?

☐ 1 Dictionaries

☐ 2 Glossaries

☐ 3 Machine translators

☐ 4 Web pages

☐ 5 Other (Specify_____).

QUESTIONS ABOUT YOUR TRANSLATING ACTIVITY WHEN PREPARING LECTURES FOR YOUR CONTENT LANGUAGE CLASSES.

16. How often do you **translate in preparation for lectures** in your second language?

Never			For every lecture
☐ 1	☐ 2	☐ 3	☐ 4

17. Indicate **the sources** from which you translate (more than one answer possible).

☐ 1 My own notes in Spanish.

☐ 2 Books written in Spanish.

☐ 3 Books written in other languages.

☐ 4 My own handouts written in Spanish.

☐ 5 My own PowerPoint slides written in Spanish.

☐ 6 Other (Specify:_____).

18. Indicate on the scale **to what extent you use the following materials in your translating activity:**

	Never used		very much used	
Monolingual dictionary (English)	☐ 1	☐ 2	☐ 3	☐ 4
Monolingual dictionary (Spanish)	☐ 1	☐ 2	☐ 3	☐ 4
Bilingual dictionary (Spanish-English)	☐ 1	☐ 2	☐ 3	☐ 4
Thesaurus	☐ 1	☐ 2	☐ 3	☐ 4
Technical dictionary (monolingual)	☐ 1	☐ 2	☐ 3	☐ 4
Technical dictionary (bilingual)	☐ 1	☐ 2	☐ 3	☐ 4
Glossaries	☐ 1	☐ 2	☐ 3	☐ 4

Other (Specify_____).

19. Indicate on the scale **to** what extent you use the following **hardback materials** in your translating activity:

	Never used		very much used	
Collins English Dictionary (mono.)	☐ 1	☐ 2	☐ 3	☐ 4
Longman Dict. of Cont. E. (mono.)	☐ 1	☐ 2	☐ 3	☐ 4
Oxford English Dictionary (mono.)	☐ 1	☐ 2	☐ 3	☐ 4
Oxford English Dictionary (mono.)	☐ 1	☐ 2	☐ 3	☐ 4
Merriam-Webster Dictionary (mono.)	☐ 1	☐ 2	☐ 3	☐ 4
Collins Dictionary English-Spanish)	☐ 1	☐ 2	☐ 3	☐ 4
Gran Diccionario Oxford (Eng-Spa)	☐ 1	☐ 2	☐ 3	☐ 4

EDAF English-Spanish Dictionary	☐ 1	☐ 2	☐ 3	☐ 4
Cambridge Spanish-English Dictionary	☐ 1	☐ 2	☐ 3	☐ 4

Diccionario técnico inglés-español
(Beigbeder Atienza)   ☐ 1   ☐ 2   ☐ 3   ☐ 4

Other (Specify_____).

20. Indicate on the scale **to** what extent you use the following **online materials** in your translating activity:

	Never used		very much used	
Collins English Dictionary online	☐ 1	☐ 2	☐ 3	☐ 4
Longman English Dictionary Online	☐ 1	☐ 2	☐ 3	☐ 4
Oxford Online Dictionary	☐ 1	☐ 2	☐ 3	☐ 4
Cambridge Dictionary Online	☐ 1	☐ 2	☐ 3	☐ 4
Merriam-Webster Online Dictionary	☐ 1	☐ 2	☐ 3	☐ 4
IATE (former Eurodicautom)	☐ 1	☐ 2	☐ 3	☐ 4
Diccionarios elmundo.es	☐ 1	☐ 2	☐ 3	☐ 4
www.wordreference.com	☐ 1	☐ 2	☐ 3	☐ 4
www.thefreedictionary.com	☐ 1	☐ 2	☐ 3	☐ 4
www.answers.com	☐ 1	☐ 2	☐ 3	☐ 4
www.wordnik.com	☐ 1	☐ 2	☐ 3	☐ 4
www.diccionarios.com	☐ 1	☐ 2	☐ 3	☐ 4
www.yourdictionary.com	☐ 1	☐ 2	☐ 3	☐ 4
www.xlation.com	☐ 1	☐ 2	☐ 3	☐ 4
www.foreignword.es	☐ 1	☐ 2	☐ 3	☐ 4

Other (Specify_____).

21. Indicate on the scale how often you **need to look up unfamiliar words and expressions** when translating for a lecture.

All the time   Never
☐ 1   ☐ 2   ☐ 3   ☐ 4

22. Indicate on the scale to what extent the **information in the English lectures is based on the translation of** materials written in Spanish.

Very high   Very low

☐ 1   ☐ 2   ☐ 3   ☐ 4

23. Indicate on the scale **how important translation is in the preparation of lecturer's transparencies / PowerPoint slides, hand-outs or other visual aids**.

Very important   Not important

☐ 1   ☐ 2   ☐ 3   ☐ 4

24. Indicate on the scale **how difficult it is to translate materials** for the English lectures.

Very difficult   Easy

☐ 1   ☐ 2   ☐ 3   ☐ 4

25. Indicate to what extent, when translating, **you choose words and expressions which might be easier to understand by your students.**

Very high   Very low

☐ 1   ☐ 2   ☐ 3   ☐ 4

26. Indicate how **important a good translation is for a better understanding of your lectures in English.**

Very important   Unimportant

☐ 1   ☐ 2   ☐ 3   ☐ 4