

The Usefulness of Different Forms of Translation in a CLIL Environment

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Abstract

This article aims to explore the role translation can play within a CLIL environment. The hypothesis that the research project, on which this paper is based, wanted to prove, was that the introduction of materials and activities informed by the use of various forms of translation could lead to an enhancement of the performance in students attending CLIL courses at the level of both content and language. As Snell-Hornby stated at the end of the twentieth century, the practice of translation in our society has increasingly acquired a fundamental importance. Yet, for many years, translation has often been excluded from the language class. However, in our multicultural society, translation has become an essential tool in various professional and social contexts, including the multicultural classrooms teachers act in. This article is based on my experience as a teacher trainer (English language and CLIL methodology) and on the results obtained during research which focused, in particular, on the use of various forms of translation in CLIL courses and which extended over the school years 2017-2018 and 2018-2019. As a result, this article argues in favor of translation in the CLIL class. On the basis of the outcomes obtained, it is my contention here that Learning Units such as those presented here, where translation works in synergy with CLIL methodology, are perceived as motivating by students, thereby facilitating the development of various disciplinary and communicative skills.

Keywords: interlinguistic translation, intersemiotic translation, intralinguistic translation, CLIL

1. Introduction: The *Rationale* Behind the Research

As Snell-Hornby maintained (1988), in a world that is rapidly growing smaller, international communication is gradually being taken for granted, and that means overcoming language barriers and cultural differences. Because of this, without translation the world of today, with its rapid exchange of information, would be unthinkable. Indeed, our contemporary world is characterized through and through by important migratory flows and innumerable occasions of mobility. It was precisely to equip future citizens with the necessary skills to cope with the challenges of this world that CLIL methodology was originally implemented (Marsh, 2013). It was actually recognized that this increased mobility, both inside and outside the European Union, required higher linguistic and cultural skills. CLIL was thus conceived as an answer to the needs illustrated in the Lifelong Learning Programme Proposal for all citizens developed by the EU (2007-2013), where multilingualism and multiculturalism were identified as means to promote integration, intercultural communication and mutual understanding (European Commission, 2001, online). Thus, even from these few words, it is easy to see how notions of interculturality and interlinguistics (which, as we shall see below, obviously entail interlinguistic translation) fall within the scope of CLIL. In actual fact, CLIL was conceived as an ideal environment to meet students' language learning needs and foster the development of their cultural and intercultural skills. As Lupia states, CLIL methodology encourages

not only language learning and the knowledge of specific disciplines, but other skills too: cognitive, metacognitive, life skills etc., achieving the formation of the citizens' competence within society, offering learners operative tools which will progressively encourage them to become independent lifetime learners. (2017, p. 77, my translation)

Even though researchers have often suggested the beneficial effects of CLIL at the linguistic proficiency level (Lasagabaster, 2011; Doiz, Lasagabaster, & Sierra, 2014), attention to issues of content has so far been rather scarce (Rosi, 2018, p. 29), despite the fact that scholars have pointed out the importance of focusing on it (Dalton-Puffer, 2008; Cenoz et al., 2014; Nikula, 2017). Teachers testify that the recourse to a foreign language necessarily simplifies and waters down the contents to be conveyed in that language (Note 1).

The evidence relating to the impact CLIL can have on students' learning is, in reality, fairly inconsistent. While researchers such as Serra (2007), Hopf and Haagen-Schützenhöfer (2014) and Canlas (2016) among others, have found positive results, for others such as Lim Falk (2008), Dallinger et al. (2016) and Fernández-Sanjurjo et al. (2017), the evidence is negative. Furthermore, yet other studies (Seikkula-Leino, 2007; Costa & Mariotti, 2017) have suggested that, as far as content is concerned, there are no significant differences between CLIL and non-CLIL students.

In relation to Italy, where my project was developed, it must be noted that although the research conducted by Ricci Garotti (2017) on the impact CLIL has in high schools suggests that CLIL students performed generally at the same level of their peers educated in Italian, the situation varies greatly from school to school. Indeed, since the teachers who deliver CLIL courses are subject teachers, who therefore specialize in non-linguistic subjects, they do not always have an adequate linguistic competence in the L2 (Note 2). Thus, the results often do not highlight positive effects. This appeared particularly true during the first few years that immediately followed the mandatory implementation of CLIL in Italian high schools on the part of the Ministry of Education (2010). As a consequence, the potential of CLIL in terms of language learning has not been exploited to its fullest. Students were often able to learn some new vocabulary. In spite of this, the results often showed that CLIL and non-CLIL students obtained a similar competence in English, whereas CLIL students turned out to be disadvantaged in terms of content.

This, however, was not always the case and certainly improved with time and the activation of methodological and linguistic courses on the part of individual universities, specifically dedicated to subject teachers who wanted to take on the CLIL challenge. Yet, the results on the positive and negative results obtained through CLIL teaching are still not uniform.

Clearly, the variables which determine the results of research in this field can be many: the schools themselves (in terms of the type of schools and/or socio-geographical setting, that is to say whether they are located in privileged vs underprivileged areas); the social and economic context the students belong to (which is certainly likely to have a bearing on the students' contact with foreign languages); the teaching style characteristic of each individual; the learning style of the individual students, etc. In actual fact, these differences have not received the critical attention they deserve yet, and, as Fernández et al. emphasise (2017, p. 3), the studies addressing issues such as the above are still rather scarce.

In order to minimize the impact these differences could have, I thus began to conduct my research in two neighbouring and similar towns, namely Parma and Piacenza (Italy), which formed a unique Duchy till 1859 (Note 3). Furthermore, the selected schools ("Liceo Romagnosi" in Parma and "Liceo Gioia" in Piacenza) are analogous in terms of typology (they are two high schools specializing in classical studies) and the students' socio-economic context (upper middle class).

The sample consisted of 90 students, aged eighteen/nineteen, who had a B2 level of English according to the Council of Europe's Common European Framework of Reference of Languages, with some students that presented a C1 level of English. The courses approached both scientific and humanistic disciplines.

The research combined both qualitative and quantitative approaches. The focus was often on issues of contextual, cultural and social aspects. At the same time, some quantitative instruments were adopted in order to collect data, in the form of questionnaires for teachers (generally conducted orally during meetings aiming at organizing the work to be completed in class) and a series of tests administered to students at the end of the CLIL course (Note 4).

Considering that, as mentioned above, various studies lamented the rather unsatisfactory results in terms of content (in that CLIL students did not seem to perform any better when compared to non-CLIL students), the research project was meant to explore the possibility of adopting new strategies which could render the impact of CLIL classes more effective in terms of both language and content learning.

To this end, Jakobson's taxonomy and his identification of the categories of (intralinguistic, interlinguistic and intersemiotic) translation (1959) appeared particularly interesting, since it seemed to open up a series of possibilities, in terms of both the selected materials to be used in class and the activities students could be asked

to perform. A good introduction answers these questions in just a few pages and, by summarizing the relevant arguments and the past evidence, gives the reader a firm sense of What was done and why (Beck & Sales, 2001, pp. 100-102).

2. Different Translation Types for Different Purposes

In this paper and the research on which it rests, the notion of translation is thus exploited in all its varieties. Certainly, as discussed below, both intralinguistic and, to a certain extent, intersemiotic translation can be easily exploited (and, on occasion, already are) by teachers at various levels and with different goals in mind. As this article puts forward in more detail *infra*, the beneficial effects of these forms of translation can be observed in CLIL classes. On the contrary, interlinguistic translation has often been ostracized and left out of the language classroom, and is seldom consciously resorted to in CLIL. However, evidence points to the beneficial effects of interlinguistic translation in language teaching too. Thus, it seems only natural to adopt it in a context such as CLIL, where the code-switch between the students' L1 and L2 is already accepted as the norm (Ariffin & Husin, 2011; Lasagabaster, 2013).

2.1 Intralinguistic Translation and Its Strategies of Amplification and Paraphrasing

As Hallet maintains (2002), in a CLIL environment teachers should translate very specific disciplinary ways of saying and expressing things into the learners' ordinary language, in order to allow them to comprehend it completely and encourage them to integrate this specific knowledge into their life experience and its language. Thus, teachers should "train the learners to integrate scientific concepts into their everyday language and develop methodological tools and design classroom activities that initiate semiotic translation processes" (2009, p. 2). As he states,

Teachers of content subjects tend to regard the languages of their discipline as the "natural" language of the subject they teach. By contrast, to the learners these disciplinary languages—the language of chemistry, the language of music, of art etc.—are often utterly strange and foreign; learners have to familiarize themselves with them and acquire them—very much in the manner of a foreign language. Implementing the notion of semiotic translation in teacher training therefore also introduces a reflexive dimension into teacher development, creating an awareness of the languages one uses and the disciplinary cultures from which they originate. (2009, p. 2)

This is why he considers translation skills fundamental. However, although Hallet terms this procedure in general terms as "semiotic translation" (2012), it is evident that this approach should be identified, more specifically, as intralinguistic (and, on occasions, intersemiotic) translation.

Thus, on the one hand, teachers will need to translate intralinguistically subject-specific language into ordinary language. On the other, if they want to "translate" the language of their specific discipline into a language that learners can recognize as theirs, they will have to select specific materials and teaching tools. In this sense, it is indisputable that multimodal materials and the adoption of a multimodal approach to the materials themselves could be extremely advantageous. As a matter of fact, subject-specific discourses are *per se* frequently multimodal, since they present not only written texts but include non-verbal, visual/audio material, graphic and symbolic representations (Unsworth, 2004; Leisen, 2005). Consequently, the methodologies adopted by teachers should equally rely on this idea of multimodality, which, as this paper suggests, often exploits different forms of translation.

The two forms of translation mentioned so far (namely intralinguistic and intersemiotic translation) actually work in synergy: language-teachers adopt intralinguistic translation in their lessons. Similarly, the language used in the audio-visual products discussed in this article (which can be understood as the result of a process of intersemiotic translation), can be conceived in terms of intralinguistic translation. Through these translation strategies, then, the language typical of specific disciplines is "translated" into plain English, that is to say the language commonly used by speakers in everyday life.

Intralinguistic translation can therefore become a valid tool at more than one level. It can in fact inform the teachers' selection of materials and the presentation of their contents, especially during the "analysis" phase. Furthermore, during the "production" phase, teachers can ask students to re-elaborate a text in different ways: re-writing it in a different form (for example creating subtitles or dialogues); adapting it to a different context in terms of geographical and/or temporal setting, or summarizing it. All these activities can indeed be viewed as forms of intralinguistic translation, which proves how essential this notion is within a CLIL environment, since the teachers' strategies of scaffolding and the tasks assigned to students make very frequently use of these practices. The way this type of translation can be integrated into a CLIL unit thus appears quite evident, in that it helps make

the content more accessible to students.

Moreover, thanks to the explanations/periphrases provided by teachers and the elaborations the students themselves are asked to complete, the latter are not only more exposed to their L2, but also encouraged to use it more extensively, in order to conceptualize the contents they have been previously confronted with, thereby leading to their assimilation.

As Steiner maintained (1975), every act of understanding involves an act of translation of one kind or another. Not only this, but, as Hanks suggests, intralinguistic translation is part of language itself. Thus, because intralingual translation is a “a design feature of language” (Hanks, 2014, p. 21) and plays “a crucial role in the social life of any language” (Hanks, 2014, p. 28), by resorting to this practice, both the contents of a CLIL unit and the specific language through which they are introduced, are expected to be perceived as more “ordinary” and “natural” by students.

This is the reason why this kind of translation fosters the creation of a more natural setting, which is deemed essential for language learning (Krashen & Terrell, 1995). As a matter of fact, this was precisely one of the reasons behind the implementation of CLIL methodology, and it becomes “one of the major platforms for CLIL’s importance and success in relation to both language and other subject learning” (Marsh & Langé, 2000, p. 3). Consequently, the exploitation of this form of translation falls naturally within the scopes of CLIL and is at the basis of its beneficial effects in terms of the creation of a more natural setting for students.

2.2 Intersemiotic Translation and Its Multimodal and Multimedia Input

Precisely because naturalness has by now been accepted as a key word, in language learning in general and, more specifically, in CLIL, it becomes evident that intersemiotic translation can equally become an important tool in a CLIL environment.

On the one hand, this type of translation can inform the tasks students are required to complete. For example, learners can be asked to describe a picture or a photograph using verbal language; find (or draw) images that could suitably represent a verbal text; compare different products that deal with the same topic, in order to appreciate the different strategies each genre exploits, and so on. These are some of the activities exploited during the course presented below, where students are for instance required to draw on paper how cells behave during the various phases of mitosis (see Table 5).

Certainly, intersemiotic translation can be beneficially exploited also at the level of the materials selected for a CLIL class. In particular, resorting to audio-visual products, which translate intersemiotically some of the disciplinary languages studied at school, can have very positive effects on the students’ learning process.

In actual fact, as discussed in details in various works (see for instance Canepari, 2013), in recent years we have witnessed the release of a plethora of products which translate the languages specific to particular disciplines intersemiotically (see for instance the language of chemistry, the language of physics, the language of history, etc.), inserting them in audio-visual fictions or documentaries/videos. By so doing, these subject-specific languages, which are normally found in written and informative texts, become source texts which, through the transposition into a different medium that relies not only on verbal language, but also on visual and audio codes, are translated into target (audio-visual) texts. In addition, during this process the language(s) under analysis undergo an intralinguistic translation too, since these audio-visual products tend to popularize the concepts of specific disciplines and their language.

Thus, the hypothesis of my research was that the exploitation of these materials would be fruitful at more than one level. As suggested above, they adapt better to the multimodality and multimediality students are these days exceptionally conversant with. By so doing, they were expected to be perceived as more motivational. Although various studies developed in different contexts prove that there is a definite connection between motivation and language learning (see for instance Masgoret & Gardner, 2003), research has provided rather contradictory results in terms of CLIL’s ability to foster higher motivation in students. As a consequence, the findings often confirmed that CLIL students did not feel more motivated than their non-CLIL peers when approaching specific disciplines (Heras & Lasagabaster, 2014). The goal of this paper and the research is rests on was therefore to assess whether intersemiotic and other forms of translation could enhance the student’s motivation and other affective factors, deemed essential in a learning setting.

Certainly, these audio-visual materials can help teachers create a more “natural” learning environment. If this is so, it is not simply because moving images, authentic voices and actual (albeit bi-dimensional) people on screen, can help create contexts students are likely to recognize as more familiar and natural (Note 5).

Thus, despite their fictionality, these products can be used to help students develop the right verbal and non-verbal

communicative behaviors, according to the context they find themselves in, and assimilate the content teachers are focusing on more easily. Indeed, the process of adaptation and intersemiotic translation on which these products rely often leads producers and directors to insert—within the intradiegetic narrative of the fiction itself—less expert interlocutors. The latter usually interact with the protagonist (who plays the role of the expert) and normally need clarifications, explanations, rephrasing and other forms of amplification and intralinguistic translation, in order to understand the processes discussed within the fiction itself and the terminology used by the specialist(s). Consequently, the viewers, including students, can identify with these characters, and the product itself can render the contents of a CLIL Unit that exploits these products easier to understand and assimilate.

Finally, as suggested *supra*, presenting on screen situations and uses of language that students might more easily relate to will have a beneficial effect on affective factors such as motivation.

This is why scholars such as Sherman (2003) and Shrosbree (2008) among others, consider audio-visual materials important tools in teaching a foreign language. Indeed, research has repeatedly demonstrated that resorting to audio-visual materials has a positive effect on students' understanding and performance in the language classroom (Keene, 2006; Çakir, 2006; Nalliveettil_& Alidmat, 2013, p. 90). This is why I believe the translation processes these products often rely on should be more systematically adopted as part of CLIL methodology.

Further to what was discussed above, if these products can be perceived as more natural (Möller, 2017), it is also because, by belonging, most of the time, to popular culture, they are already familiar to students, independently from their school career. As such, they can enhance learners' independence too, in relation to both content and language, thereby increasing their self-confidence.

Moreover, since these audio-visual products often introduce various social, cultural and ethical issues that are paramount in our society (the homeless, alcoholism, drug addiction, single parenting, euthanasia or environmental pollution), their exploitation in a learning environment can become extremely beneficial. Research conducted by Mureşean and Paştiiu (2016, p. 172) found that introducing controversial topics in a language class is highly motivational and advantageous, in that it gives students the possibility to develop not only their English language skills and, in the case of CLIL, their knowledge of discipline-specific contents, but also their critical thinking skills. In addition, working with these products can easily nurture the learners' intercultural abilities, as they encourage them to consider the way different cultures may approach the same issues and their implications.

Finally, intersemiotic translation can be extremely advantageous for teachers too, for more than one reason. As testified by some of the subject-teachers I worked with, these products are perceived as very useful, especially when the teachers' self-confidence in their language proficiency is low. In addition, intersemiotic translation offers a wide range of potential materials that could be suitably selected, in order to stimulate the students' re-formulation, cognitive and critical skills, in that—as Çakir maintains—“the use of video is a great help for foreign language teachers in stimulating and facilitating the target language” (2006, p. 1).

2.3 Interlinguistic Translation and Its “Mediating” Goals

Finally, since most of the time these audio-visual products can be easily enjoyed in both the source and the target language, they can become an exemplification of interlinguistic translation, which entails the rendition of a text written/spoken in one language into a text written/spoken in another language.

As Pym et al. (2013) eloquently point out,

The term “translation” is primarily taken here to include the reception and/or production and/or reworking of spoken or written bi-texts (paired discourses in two languages) within the classroom situation. This includes: Concurrent interpreting/translation, where everything said in one language is translated into the other, usually by the instructor; dual language preview-review; communicative translation and dialogue interpreting by learners (increasingly conceptualised as forms of “mediation”); identification of non-correspondences between languages, and their resolution as translation problems; identification of problems in machine-translation output, and their correction; the use and production of subtitled and dubbed video material. (2013, pp. 6-7)

It should be noted that, generally speaking, this research does not (or not only) advocate(s) “scaffolding” translation in terms of the interlinguistic translations teachers might provide in order to help students better understand the contents presented. As suggested above, and illustrated below, most of the time, the scaffolding in a CLIL environment should be provided in the foreign language and by relying on intralinguistic translation. However, interlinguistic translation can be used to stimulate the students' metalinguistic and intercultural skills (for example prompting them to consider the way different languages develop diachronically and/or focus on

issues of contexting). In this sense, presenting a text and analyzing it contrastively with its translated version, can become useful practice, stimulating students to perceive those differences that determine the use of specific lexis in different cultural contexts, and which might be overlooked in a strictly monolingual context.

In reality, the issue of whether to use translation in language teaching has been under discussion for the last couple of centuries (see Pym et al., 2013) and is still controversial (Källkvist, 2004, 2008). In actual fact, due to the scarcity of critical studies on the effects that it has on L2 proficiency, interlinguistic translation is still associated solely with the grammar translation approach and considered detrimental to the learning of L2, especially because it is seen as independent of the other language skills. Yet, various studies suggest a facilitative role of translation in students' language learning (Prince, 1996; Cohen, 2000; Cohen & Brooks-Carson, 2001). As Dagilene suggests,

translation activities are a useful pedagogical tool. When introduced purposefully and imaginatively into language learning programme, translation becomes a suitable language practice method for many students. When integrated into daily classroom activities translation can help students develop and improve reading, speaking, writing skills, grammar and vocabulary. Translation in foreign language classes enhances better understanding of structures of the two languages and also strengthens students' translation skills. It is an effective, valid tool in the foreign language learning. (2012, quoted in Conti, online)

As suggested by Steiner and Hanks above, translation, in reality, encompasses all cognitive and social skill. As Kern demonstrated (1994), as a mental activity, translation is omnipresent, even when learning a foreign language, and should therefore be considered as an inherent part of language learning (Pym et al., 2013).

This is the reason why Guy Cook advocates the re-establishment of translation as an essential part of modern language teaching and learning (2010), and why the Common European Framework of Reference presents various passages that indicate translation as part of the language learning process:

The language learner/user's communicative language competence is activated in the performance of the various language activities, involving reception, production, interaction or *mediation (in particular interpreting or translating)*. [...] In both the receptive and productive modes, the written and/or oral activities of *mediation* make communication possible between persons who are unable, for whatever reason, to communicate with each other directly. *Translation or interpretation*, a paraphrase, summary or record, provides for a third party a (re)formulation of a source text to which this third party does not have direct access. *Mediating* language activities—(re)processing an existing text—occupy an important place in the normal linguistic functioning of our societies [...] The learner does not simply acquire two distinct, unrelated ways of acting and communicating. The language learner becomes plurilingual and develops interculturality. The linguistic and cultural competences in respect of each language are modified by knowledge of the other and contribute to intercultural awareness, skills and know-how. They enable the individual to develop an enriched, more complex personality and an enhanced capacity for further language learning and greater openness to new cultural experiences. Learners are also enabled *to mediate, through interpretation and translation*, between speakers of the two languages concerned who cannot communicate directly. (CEFR 2.1.3-4. 2001, p. 43, my emphasis).

In actual fact, in the new version of the CEFR released in 2018, to which I had the opportunity to contribute as a consultant, the notions of mediation and translation are given even more emphasis (see sections 2.1.3, 4.4, 4.6.6) and appear in the new descriptors introduced, thereby suggesting the vital role played by these practices in language learning, especially in consideration of the development of intercultural awareness and communication skills, strongly advocated by the CEFR itself.

It therefore appears evident that CLIL—which came into being with the purpose of fostering the learning of foreign languages and interculturality in our societies—could represent an ideal environment to benefit from the introduction of interlinguistic translation.

In this sense, it is naturally essential to remember that students engaging in CLIL work should be identified as bilingual (Liebscher & Dailey O'Canin, 2005), and that the community created by the CLIL class is likewise bilingual (Zanoni, 2016). This is why various attempts to create class environments that could be recognized as monolingual, by using exclusively the L2, have often been unsuccessful. As various scholars have recognized (Ariffin & Husin 2011; Lasagabaster, 2013), code-switching and code-mixing phenomena should in reality be considered the norm, therefore positing the basis for a more systematic use of translation in CLIL.

In addition, considering the use of intersemiotic translation suggested in the previous sections, it is evident that interlinguistic translation could find a place in the selection of the materials to be utilized in a CLIL class too. On

the one hand, approaching materials which students have already enjoyed in one language in a different language can certainly help them improve their linguistic skills (listening comprehension, vocabulary, use of English and so on) and can become the starting point for many interesting activities. On the other hand, this type of analysis can encourage learners to acknowledge the Other's perspective and perceive, precisely as CLIL does, the same reality from a different cultural perspective. Thus, since interlinguistic translation has long since been posited essentially as a form of cultural mediation (Lefevere & Bassnett, 1990; Katan, 1999; Garzone, 2002), it appears in total agreement with the ultimate aim of CLIL: the constitution of a society based on integration and interculturality (Müters, 1998, p. 354).

Through translation, just as through CLIL, two cultures meet and are analyzed in order to bring to the fore common and distinctive elements. This, both at the level of lexical and morphosyntactic micro-choices, and at the level of macro-choices relating for example to issues of register, turn-taking (in spoken language) or paragraphing (in written language), information load, information packaging etc. Both translation and CLIL, in fact, aim at the creation of communicative exchanges that allow the transmission of information according to the modalities and the language that a community would normally adopt in equivalent situational contexts, thereby raising both linguistic and cultural issues.

In a CLIL environment, all the various levels of culture identified by Hall (1959) and Brake et al. (1995) among others, are represented (Note 6). Thus, the focus on cultural translation in CLIL can encourage students to learn about a different culture in a systematic and strategic way, and help them develop those linguistic and non-linguistic skills that nowadays our society renders necessary. In addition, interlinguistic translation allows for etymological and historical considerations, which in specific disciplines such as science play a fundamental role. Finally, the recourse to contrastive analyses between source and target texts can enable the development of the students' cognitive and metacognitive skills. In point of fact, since no perfect equivalence between two languages is possible (Jakobson, 1959; Nida, 1964), these practices necessarily stimulate the students' metalinguistic thinking which, as Cinganotto (2018) maintains, represents one of the goals of CLIL. By so doing, students are encouraged to discuss the textual contents critically, and assess them analytically, in order to complete the required activities.

3. Developing a CLIL Learning Module in Biology: A Brief Outline

In order to illustrate how translation could be usefully adopted in a CLIL environment, this section presents the outline of a CLIL module focused on the language of biology, in which various forms of translation are beneficially exploited. The module was used as an example during one of my training programs and on this "template" teachers then modulated some of their CLIL courses, the results of which are the basis of this article. The modules were distinguished by the subject(s) taught in English (physics and biology / history and philosophy) and the use teachers made of the various forms of translation illustrated above. All modules were developed in courses of 20 hours with the exception of one course, which took 40 hours (Note 7).

The module that is presented here and which served as a template for teachers is divided into three main units, for a total of 12 hours, on top of which extra hours have to be accounted for in terms of written tests and "debates". The module was conceived for students attending the fourth and fifth years of a high school specializing in classical studies, who therefore have some knowledge of biology in their mother tongue.

Given the need to motivate students and create an environment that could be as natural as possible, in its initial phase, the first unit of the module exploits an audio-visual product that can be understood as an intersemiotic translation of the language of biology. In addition, since the humoristic tones of situation comedies can help lower the affective filters discussed above, the unit exploits one of the most successful sitcoms recently produced, namely *Scrubs*, aired on ABC from 2001 to 2010. This is a product that students are bound to be already familiar with, and which—since it is set in a teaching hospital—often offers intralinguistic translations of the language specific to the discipline.

In this initial phase, the emphasis is therefore on motivation, in an attempt to achieve a global approach, and create a unit that could be perceived by students as stimulating and interesting. In order to help students feel at ease with the study of biology in a foreign language, at the very beginning the teacher illustrates the general plan of the module and its expected outcomes, emphasizing the fact that during each phase the students will be required to perform different activities, either individually or in groups, resorting to different aids (new technologies, charts or diagrams). Emphasis is given to the idea that, during the module, different types of materials will be used (written texts, audio-visual products, images etc.) and that all the linguistic skills (listening and reading comprehension, use of English, written and spoken production) will be involved. Many of the materials exploited, as we shall see, can be understood in terms of intersemiotic and intralinguistic translation

and, just as it is recommended in CLIL work, they are used to meet the different learning styles that might characterize students, by putting forward the same content in different forms. Indeed, various neuroscientific research, has demonstrated that “significant increases in learning can be accomplished through the informed use of visual and verbal multimodal learning” (Fadel, 2008, p. 12) and, as suggested above, it is precisely this type of multimodal and multimedia learning (and teaching) that has often led to positive results in terms of the students’ performance (Mayer, 2009).

During this first phase, the teacher also explains how s/he intends to assess the students’ work, especially in relation to group assignments or pair work, for which the individual student should be made accountable and responsible too.

Clearly, the topics that could be addressed in a CLIL module exploiting various forms of translation are numerous. Consequently, each teacher was able to decide to focus on particular disciplines and, within those, on specific topics, on the basis of the program they were carrying out during the school year, the students’ prior knowledge of the discipline and their level of English.

In this specific instance, it was decided to focus on blood cells and their degeneration. Thus, the general structure of the module, was as follows:

Unit 1 (4 hours): The sitcom *Scrubs*: The language of humor and its strategies.

Unit 2 (4 hours): *Scrubs—Season 2, Episode 12*: Cells and tumors

Unit 3 (4 hours): Issues of register: The relationship between doctors and patients across cultures.

Assessment: classroom observation; final written tests; final oral debates.

Expected outcomes: by the end of the module, students will have learned some new idiomatic expressions and some vocabulary specific to the discipline of biology; they will be able to understand the mechanisms of word formation and identify the origin of specific words, also from a cross-cultural perspective; they will have learned how to present and defend their opinions; they will have acquired some soft skills in order to communicate, in the L2, effectively and harmoniously with their peers, adopting useful strategies of intralinguistic translations; they will have exercised their critical thinking and developed cultural and intercultural skills; they will have learned how a scientific article is organized in L2.

3.1 Unit 1: *Introducing Scrubs*

Once these basic pieces of information are illustrated to the class, the teacher shows the theme song from the television series under study (available at: <https://www.youtube.com/watch?v=v9EekEUz0t8>).

On this basis, students are asked to identify the main topic of the television series. Naturally, in sitcoms, puns, wordplays and humoristic uses of language are paramount. Thus, this particular genre presents difficulties other than those related to a specific discipline. However, the goal of CLIL is twofold, focusing both on content and language. Thus, this textual type can be effectively exploited to introduce ordinary and idiomatic expressions, which can be analyzed from an interlinguistic perspective too, which are bound to prove interesting for students, and which can put at their disposal some extra tools to acquire that fluency and easiness of communication often deemed essential in intercultural exchanges in the L2.

The first unit of the module therefore focuses on the title itself, which exemplifies how language is regularly used pragmatically by native speakers, in order to convey meanings which are not necessarily openly stated. The word *Scrubs*, in fact, can give rise to interesting discussions, providing students with the opportunity to both assimilate new lexis and ponder about issues of register.

A warm-up activity consists in asking students to explain the reasons behind the choice of this word as a title. Despite its simplicity, this first assignment requires some research on the students’ part and enables them to have a first, soft approach to the subject, thereby containing their difficulties and lowering their anxiety level. As part of the activity (which requires learners to perform an intralinguistic translation of the selected lexical item), students are also asked to rely on intersemiotic translation in order to find images that could translate intersemiotically the various meanings the word “scrub” might assume in different contexts. Through this task, the students’ sense of responsibility and their autonomy is encouraged, as they are required to rely on new technologies in order to put together a small corpus of images, which might include the following:



Figure 1. Scrubs for sale



Figure 2. Scrub brush



Figure 3. Scrub character



Figure 4. Body scrub



Figure 5. Doctor in scrubs

In addition, it might be interesting to provide a few recipes to create their own facial or body scrub, such as the following:

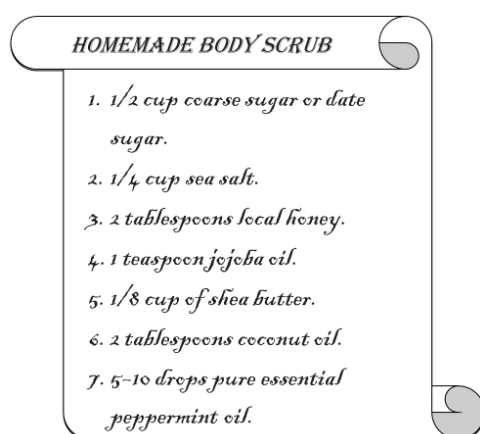


Figure 6. Ingredients for a facial scrub

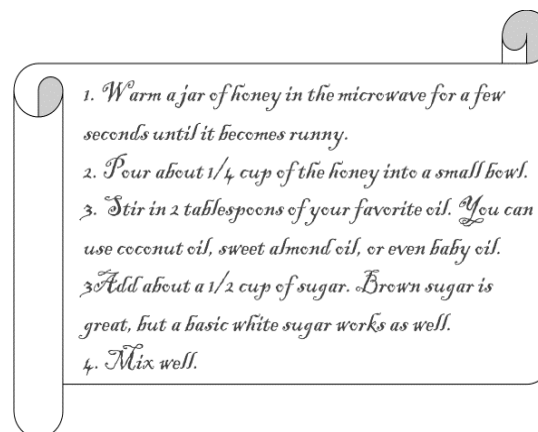


Figure 7. Method for a body scrub

This way, students can learn some basic terminology typical of the language of science, which can therefore be applied to various situations in which the language used belongs to a scientific discipline, even though it does not constitute the “core” of the language of biology. Verbs such as “pour”, “stir”, “add” and “mix” are actually common to any chemistry or physics lab activity and can therefore be used by students in a number of different contexts.

Depending on the time at their disposal, teachers ask students to find other recipes and make their own facial or body scrub either at home or, depending on the equipment provided at school, in the chemistry lab, under the supervision of a technician or a teacher. This way, students “learn by doing” and can immediately use the words they have learned.

Students can then bring their products to school and present them to the class, creating a suitable advert for their “merchandise”. A brief competition can be organized, where each scrub is evaluated by a jury made up of other students, who evaluate the product on the basis of properties like smell, color and texture, and the “selling strategies” adopted in their advertising. The creativity required by the production of this type of text, can indeed stimulate the students’ attention to the formal aspects of language, encouraging them to work through synonyms, antonyms, hyponyms and superordinates, in order to obtain a short text which, possibly through rhymes or alliterations, might prove to be attractive and captivating to the potential “buyers”.

During this phase, no explicit use of translation is required, even though the questions students and teachers were asked at the end of the module (Note 9) emphasized that the mental translation processes described above were very much active throughout the completion of this task. This, not only in relation to the specific lexis introduced, led students to associate English verbs of manipulation to the Italian correspondents, but also—and foremost—in

connection to the creative use of language.

Through these first activities, students acquire a basic knowledge of the word “scrub”. Afterwards, they are asked to explain why in their opinion the word was chosen as the title of the television series. The students can easily make the connection to the coat worn by doctors and nurses, and the fact that surgeons scrub their hands and forearms before entering the operating theater. Further to this, by showing them a picture such as the following or a similar one, it is possible to expand their ordinary and informal lexis.

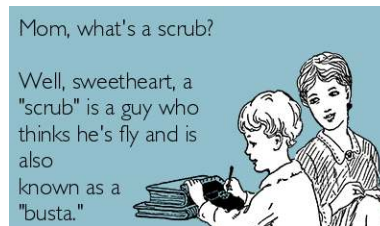


Figure 8. Scrub, fly and busta

By asking students to rely on new technologies in order to provide an intralinguistic translation of lexical items such as “scrub”, “fly” and “busta”, teachers activate the students’ metalinguistic skills and raise various pragmatic issues closely connected to the notion of register and situational context, enhancing their ability to act in a (culturally) appropriate way in informal intercultural situations. Teachers can then show various definitions of the word “scrub”:

A scrub is a now generalized term used as a synonym for a “noob” or “newb,” which is someone who is bad at a video game or activity in general.

Most of the definitions here, surprisingly, have nothing to do with the actual term. The original definition is related to a person who makes a mistake in a video game, which is such a bad mistake that it is clearly wrong, yet they persist in making it. The term derives from Street Fighter II, to describe some players that were so bad that they would mash their hands across the control pad, an act known as “scrubbing,” because it relates to scrubbing a car or other object with a sponge. Thus they were deemed “scrubbers,” or “scrubs” for short. Over time this term expanded throughout the gaming world, and then the real world, and lost its original meaning.

Figure 9. Definition of “scrub”

A scrub is a more derogatory form of the slang “noob”, “nub” etc. and is primarily used in video games, particularly those which are multiplayer based.

Whilst a noob is generally considered one who is new to the game, and as a result not proficient, a scrub need not necessarily be new. It may imply that the person accused is forever a noob, regardless of how much they may practice. Ex: *“Why am I always on the scrub team?!”*

A scrub is a guy, also known as a buster (player). He tries hitting on every girl and gets no love from anyone of them. Also has no car, and hollers at everyone looks like trash lives with his mom. Also a guy with no money. Ex: *“Hey sexy lady, wanna give me your number?” “Ew, no, you’re a scrub”*

Figures 10-11. Definitions of “scrub”

A scrub is a guy who mooches off of everyone else and has nothing going for him in life. Probably still lives with his mama, doesn't have a car, a job, or a plan.

Ex: *Mhmm Gurl, I had some scrub try to holler at me from his friend's car yesterday.*

Figure 12. Definition of “scrub”

These definitions—which involve references to videogames, how-to-pick-up girls etc.—enable teachers to stimulate the students' interest, as they can easily relate to their everyday lives. Students are then divided into groups of 3 or 4 and are asked to work out the meaning of these definitions, providing one or more words which in Italian would communicate the same meaning. Intercultural issues of register and pragmatic uses of language are therefore brought to the fore.

In approximately 72% of cases, the students suggested, in their translations, Italian terms that had a slightly vulgar meaning, and that therefore could not be considered real equivalents. This therefore gave the possibility to ponder on the differences which, given a similar context of situation, different cultures can have in relation to the language used. Not only this, but having considered the various meaning “scrub” assumes in the series, the students came to the conclusion that no single Italian word would cover all of them, requiring on the contrary the use of different lexical items to indicate the various connotations expressed by the English word. This was extremely important, in that it introduced the notions of “untranslatability” and translation loss, which were recognized as unavoidable in most (if not all) translation and intercultural activities. This aspect was particularly relevant for the students attending the CLIL module in history and philosophy. In these disciplines, in fact, this idea of “untranslatability” has been often used metaphorically to refer to the fact that, throughout the centuries, imperialistic powers have often tried to “translate” and assimilate into their own languages and cultures, human beings that belonged to other cultures (Note 8). Notions of interlinguistic and cultural translations, then, served to develop the students' critical approach to fundamental issues, which appear vital in our contemporary societies too.

Further along in the CLIL course, the teacher makes the students acquainted with the various characters of the situation comedy under study by preparing brief videos and showing them to the class (available at: <https://www.youtube.com/watch?v=0qDXO0agufk> and <https://www.youtube.com/watch?v=9puBsViY1V8>). To facilitate the students' general comprehension of the filmic texts, teachers adopt audio-visual translation strategies and insert the English subtitles in every video used with students, making sure that the subtitles coincide as much as possible with the audio the students are exposed to. As Caimi maintains, “This is the crucial point in monolingual subtitling for learning purposes, because if there is no biunique correspondence between spoken text and written text, comprehension is undermined and students' feedback is exposed not only to phonological and orthographic inaccuracies but also to semantic confusion” (2006, p. 90).

The use of subtitles in a language teaching class can actually have extremely positive effects, in that it provides an additional channel through which the same message can be communicated. As such, the use of subtitles takes into account the different intelligences characterizing different students (Gardner, 1993) as well as the recent cognitive theories concerning language learning (see for example Williams & Burden, 1997). Thus, despite the risks of encouraging students to be lazy and rely too much on the written text rather than the spoken word (Cook, 2010, p. 150), as Vanderplank (1988) and Chapman state (2017), among others, subtitles enable to impart information that is more comprehensible.

Thus, in CLIL classes, they can represent a valuable asset, offering alternative presentations of content, helping students in developing note-taking skills, refining the ability to select important details etc. As Caimi underlines,

monolingual subtitling used for learning purposes represents one of the many ways through which second language learners are helped to overcome the challenges of listening comprehension. It is a way of reinforcing foreign language understanding through the support of the written reproduction of the oral text during a recreational activity. (2006, p. 88) (Note 10)

After this phase, students are asked to re-consider the reasons that in their opinion lie behind the word that works as the title of the television series. The Unit ends with an open discussion during which the various groups identify those characters that in their opinion can be defined as “scrubs”, explaining their reasons.

Through this intralinguistic and intersemiotic effort, students are therefore able to re-elaborate the audio-visual materials they have watched, assimilate some new lexis of general English and focus on the pragmatic uses of language and the humoristic strategies adopted by some of the characters on screen. Furthermore, the production phase, which required them to justify and explain their views, enabled them to create a brief argumentative text and exercise their speaking skills.

3.2 Unit 2: “Cells Gone Bad”

The second Unit of the module begins by watching with students another brief video, created by cutting and pasting some of the salient moments of the twelfth episode of the second series of *Scrubs* (available at: <https://www.youtube.com/watch?v=r8Jt19jG1yg>).

This is the Unit more directly related to the language of biology *per se*. Before showing the video, the teacher gives

the students a table and creates small groups of 3 or 4.

Table 1. Understanding the setting



This way, students will watch and listen for general information and, through collaborative learning, fill in the table with the information required. With the first viewing, students then understand the main topic of the Unit, namely cancer.

Clearly, teachers should remember that for students, spoken language is, even in non-fictional situations, more complex to grasp due to its grammatical intricacy (Halliday, 1985; Crystal, 1996), its structure (often characterized by false starts and sudden changes in topic) and its ephemeral nature, which generally does not allow receivers to stop, go back or start again. Yet, by encouraging students to rely on digital technology, these problems can be, at least partially, overcome. Naturally, it might become necessary to view the extract more than once. Furthermore, to facilitate this listening activity, teachers can create a cloze test on the basis of the script, in order to allow students to focus on the essential information, and to analyze the situation in all its aspects (setting, characters, etc.):

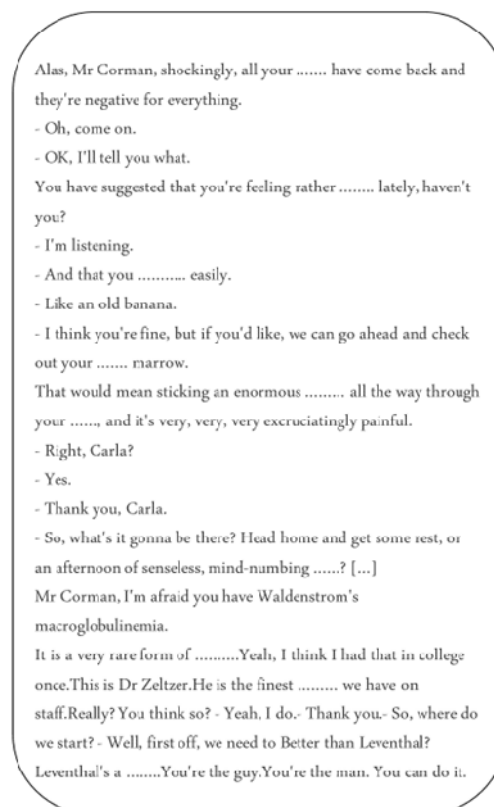


Figure 13. Cloze test

Teachers then require students to provide the subtitles to the brief extract they have watched. Clearly, teachers have to assess whether the linguistic skills of the class allow for this kind of task. Before the activity, the teacher recalls the subtitles used in the previous video extract and explains that, given the limited space on screen and the

time it takes viewers to read them, subtitles usually work on the basis of synthesis and condensation. Forming groups of 3 or 4, the teacher therefore asks students to evaluate the information that should be inserted in the written text and the information that—through some of the procedures typical of audio-visual translation such as omission and dramatic synthesis—could either be left out or summarized. This way, students have the opportunity to re-elaborate and translate intralinguistically the spoken text, and collaborate with others in order to synthesize it, giving priority to the information they unanimously consider more important.

On the basis of the script provided beforehand, students can then be asked to identify some of the characteristics of the language used in biology. Certainly, their prior knowledge of scientific disciplines, is retrieved, and this mental interlinguistic process enables students to recognize some of the main features of this language. Presumably, they will therefore notice the adoption of eponyms (“Waldenström”), the use of words of Latin or Greek origin (“biopsy”) and the exploitation of compounds (“macroglobulinemia”). This activity therefore prompts the students to notice the feature of “transparency” which is often ascribed to the language of biology (Note 11).

Afterwards, the teacher can ask students to find the compound words in the text and analyze them, identifying their etymology. By querying resources such as *The online etymological dictionary* (<https://www.etymonline.com>), students can compile a list of words that exploit the same affixes that they might already be familiar with. Students are then asked to provide the Italian translation of such compounds in order to focus on the similarity and/or differences in the etymology of words and on the meanings that affixes and suffixes acquire in the two languages. Contrary to obsolete ideas, according to which the introduction of this type of translation hampers the acquisition of a second language (Gatenby, 1948/1967, p. 66; Mackey 1953-5/1967, p. 34), in a language class, these interlinguistic activities

allow[s] students to compare and contrast the L1 and target language playing a positive role compensation and social strategies. [Students] feel more endorsed in learning process noticing the equivalent of the target structure in their mother tongue and practicing those in communication (Calis & Dikilitas, 2012, p. 5083).

Indeed, students declared that by pointing out the differences in use in L1 and L2, these translation activities, rather than interfering with the learning of their second language, helped them memorize the new words in the target language too, and this aspect was proved by the results obtained in the final tests by the students attending translation-informed CLIL courses.

During the following phase, students are faced with a more challenging task, during which the teacher presents an example (Table 2) and a list of affixes (Table 3), asking them to identify the meaning of some words (Table 4) and translate them intra- and interlinguistically:

Table 2. Example

Acromegaly	
Prefix:	
Prefix definition:	
1st root word:	acr/o
1st root definition:	extremities; top; extreme point
Suffix:	-megaly
Suffix definition:	enlargement
Intralinguistic translation:	enlargement of the extremities

Table 3. Affixes

Affix	Meaning
alge(si)-	pain
-oma (singular), -omata (plural)	tumor, mass, fluid collection
-aemia	blood condition
-penia	deficiency
-tomy	incision, cutting into
hemat-, haemato- (haem-, hem-)	of or pertaining to blood
lymph(o)-	lymph
my(o)-	of or relating to muscle
myc(o)-	fungus

Table 4. Words to be analyzed and translated intra- and interlinguistically

Anaemia, analgesic, hematology, myasthenia, tracheotomy.
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Once this work on compounding is finished, teachers can focus on the main topic of the video above, namely cancer. Assuming students have already come across the biology of cells in their school year, s/he can ask them to do a revision activity based on the picture below. The students presumably already know the fundamental vocabulary relating to cells in their source language, and they are bound to recall the appropriate lexical items, which can thus guide them in their completion of the first activity. Interlinguistic translation (which the students activate, perhaps unconsciously, in order to complete the assigned task), thus becomes a useful tool, helping learners to complete the picture by labelling the different parts of the cell correctly. In addition, students once again have to retrieve their previous knowledge, adapting the notions they already know to a new context, thereby exercising their transversal skills and their flexibility.

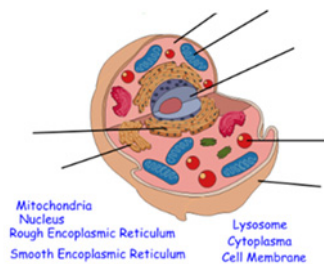


Figure 14. A human cell

After this activity is completed, the teacher assigns a more challenging task and presents a written text on the cell cycle and the causes of cancer. The scaffolding provided during the previous phases (either through the teacher’s direct input or the activation of the students’ prior knowledge), enables students to engage with more sophisticated notions and terminology. The teacher therefore asks students to read a more specialized text, which will be broken down into different parts, in order to enable learners to assimilate the contents and the terminology more easily.

After a section in which the process of cell division and the cell cycle are explained, the text illustrates the various phases of mitosis.

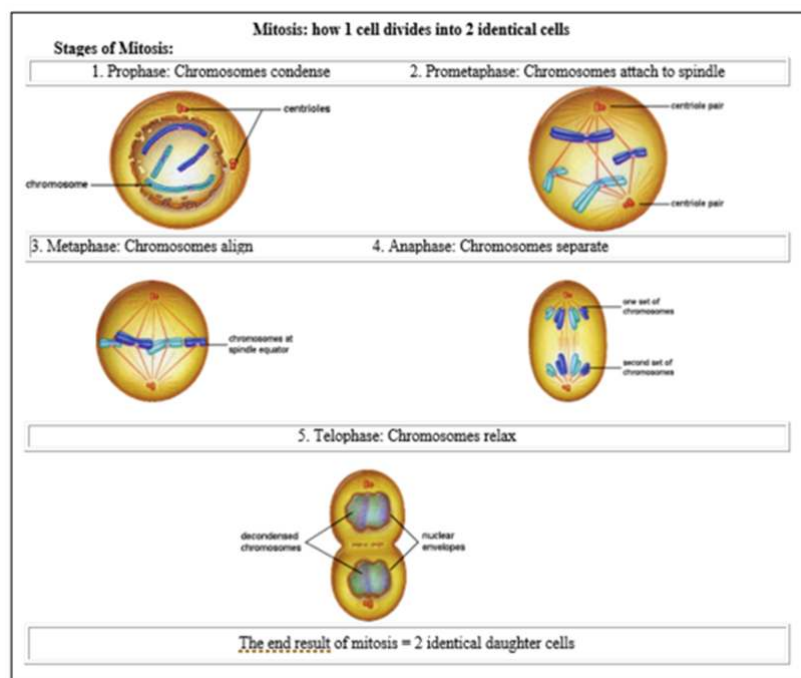


Figure 15. The phases of mitosis

Given the high density of specific terms and notions, in order to hold the students' attention and lower their affective filters, the teacher shows a very short video, extracted from the sixth episode of the second season of the situation comedy *The Big Bang Theory*. At this stage of the television series, all the characters consider the protagonist Sheldon Cooper to be asexual, and therefore unable to reproduce like human beings normally do. Thus, his friend Leonard dreams of Sheldon reproducing through mitosis (available at: https://www.youtube.com/watch?v=HhA_jPptBKw).

In this brief filmic text, the enunciation is very clear and easy to grasp, while verbal humor works in synergy with elements of physical comedy to create an enjoyable final product. Students can therefore be asked to explain in more scientific terms what happens to Sheldon's cells in the video, thereby translating the audio-visual text intersemiotically and resorting to intralinguistic translation in order to explain the process in their own words.

After this "ludic interlude", which can effectively work as a remedial activity, students are asked to translate the various phases of mitosis intersemiotically by drawing them on a chart. This way, students will be able to revise and memorize the specific terminology relating to mitosis and its meaning:

Table 5. The different phases of mitosis

	What happens	Draw me here
Prophase	Chromosomes condense	
Prometaphase	Chromosomes attach to spindles - Nuclear envelope breaks down	
Metaphase	Chromosomes align on the metaphase plate (cell's midline)	
Anaphase	Chromosomes separate - pulled apart into daughter chromosomes	
Telophase	Chromosomes relax . Nucleus re-forms. Cell pinches in two (cytokinesis)	

Once this activity is over, the teacher presents another part of the text, dealing more directly with the issue of cancer:

Cancer cells escape from the controls on cell division:

1. What is cancer? Cancer is essentially a **disease of mitosis** - the normal 'checkpoints' regulating mitosis are ignored or overridden by the cancer cell. Cancer begins when a single cell is **transformed** or converted from a normal cell to a cancer cell. Often this is because of a change in function of one of several genes that normally function to control growth. (ie. the cell cycle gene **p53**, the "guardian of the genome" that is mutated in over 50% of all human cancers) or suppress tumor formation (ie the "Breast Cancer Gene" **BRCA 1**). Once these crucial Cell Cycle genes start behaving abnormally, cancer cells start to proliferate wildly by repeated, uncontrolled mitosis.

Unlike normal cells, cancer cells ignore the usual **density-dependent inhibition of growth**, multiplying after contact with other cells are made, piling up until all nutrients are exhausted.

2. Tumors - Good Cells gone Bad...? The cancer cells proliferate to form mass of cancer cells called a tumor. As the tumor grows larger, it begins to release proteins from the cell to attract new blood vessel growth (this is called "angiogenesis").

Benign: tumor cells remain at original site.

Malignant: some tumor cells send out signals that tell the body to produce a new blood vessel at the tumor site. These cells not only have a food and oxygen supply, they also have an avenue for **escape** to a new part of the body - through the new blood vessel and into bloodstream. Cells that break away from the tumor begin to spread to surrounding tissues (via the bloodstream or lymph) and start new tumors = **metastasis**.

3. Unusual features of Cancer Cells.

Cancer cells are frequently "**immortal**": whereas normal cells divide about 50 times and then die, cancer cells can go on dividing indefinitely if supplied with nutrients.

Cancer cells often have unusual numbers of chromosomes or mutations in chromosomes. **Aging** (production of toxic oxygen "free radicals"), exposure to **toxins** (like components of tobacco), **mutagens** (like ultraviolet light) all cause mutations in genes, but normal errors in DNA replication can lead transformation of the cell if they occur in a crucial gene.

Cancer cells may also have an abnormal **cell surface**; instead of "sticking" to its neighboring cells, cancer cells tend to "round up" and break attachments its neighbor cells, allowing for metastasis.

Figure 16. Cancer cells

As part of their homework, the teacher asks students to answer a series of open questions ("Which are the main similarities and differences between cancer cells and normal cells?" and "What causes metastasis?", etc.). The answers to these questions, which were conceived to enable students to understand the text fully and assimilate it through re-elaboration, are then corrected in class, so that the teacher can resort to intralinguistic translation and explain the sections or the words which might have hindered the students' comprehension of the written text.

Before completing the Unit, teachers might consider organizing some additional remedial work, in order to allow students to revise and use the vocabulary they have learned.

3.3 Unit 3: Doctors/Patients Communication

After finishing the second Unit, the last phase of the module begins. In this phase, the focus is initially on issues of register and the way doctors relate to patients in different cultures. This aspect is particularly relevant in the context under study, where the relationship between the two interlocutors is often unequal and brings to the fore issues related to the “specialization”, or “popularization”, of the language typical of this field. The way this relationship is represented for example in *Scrubs*, can thus be approached from the perspective of the register adopted. The way the “tenor” (Halliday 1978) determines the choice of register is easily noticeable on screen and can be recognized by students as part of their own experience too, thereby making the topic more motivating and concrete for them.

The teacher recalls the videos students have watched at the beginning of the second Unit, and shows the following (available at: <https://www.youtube.com/watch?v=8AlcHs9-1PE&t=3s>)

Afterwards, s/he asks students to identify the salient elements that, in their opinion, determine the relationship between doctors and doctors, doctors and nurses, doctors and patients, as represented on screen. In order to facilitate their task, teachers provide a very simple table that students have to fill in:

Table 6. The interlocutors of different communicative exchanges

Dr Cox	Carla the nurse	Other doctors/interns	Patients
Which register does the doctor adopt with the others? Formal/informal/colloquial			
Which terms of address does he resort to when addressing other people?			
Does he use specialized lexical items?			
Does he use intralinguistic strategies (such as the use of “ordinary” words, metaphors etc.)?			

This short video can work as a prompt to make students notice the way the disciplinary language changes according to the situational context, the specialization of the interlocutors, their level of education and their age.

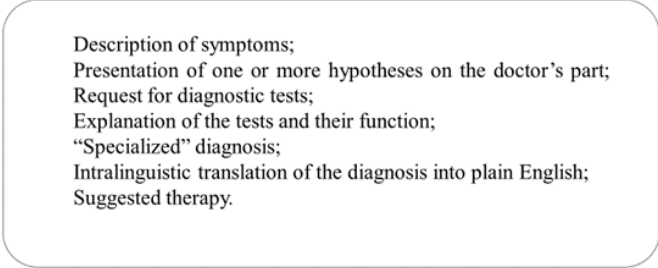
By resorting to interlinguistic, audio-visual translation, the teacher can then show the dubbed version of the scenes under study (available at: https://www.youtube.com/watch?v=Lv5_F_7RnQ8&t=1s). This way, students can notice that in this specific case the disease is named in the same way across different cultures (Note 12), provided that an interlinguistic translation strategy of re-ordering (Malone, 1988) is applied to adhere to the target language structures and conventions. In addition, they are encouraged to notice that, from a pragmatic perspective, the turn-taking system and the information load might change, according to the conventions characteristic of a particular culture.

Students are then stimulated to share their experience in terms of doctor/patient consultation. They might relate this to their own experience or some of their family members'. In order to facilitate this written production, the teacher prepares a series of questions which should work as a guide in the assignment “Which register does your doctor usually adopt during consultations: Formal/informal/colloquial/neuter?”; “Which level of linguistic intimacy does your doctor adopt: Frozen/familiar/intimate?”; “How much information is your doctor willing to share during the different phases of the consultation?”, “Does your doctor use specialized terms or does he/she translate them intralinguistically?” etc.).

Students can thus be encouraged to consider the ideological implications that different uses of language entail—an aspect largely studied by such scholars as Wodak (1997), Roberts (2000), Adegbite and Odeunmi (2006), Li et al. (2007), Belder et al. (2013). Teachers then show a brief video that simulates a bad consultation (available at: https://www.youtube.com/watch?v=dSguszd_A8g). In this case too subtitles are provided, to render the learning experience less stressful. Students are then required to notice those elements that in their opinion represent bad practices in the relationship between doctors and patients, focusing in particular on pragmatic aspects of language such as turn-taking mechanisms, the use of repetition and intralinguistic strategies such as rephrasing etc. During this phase, students are also required to put these aspects in relation to their own experiences and share them with the rest of the class. Naturally, students will have to consider the cultural differences that might have a bearing on the register adopted in different languages in equivalent situations. Since in our society, various cultures are usually represented in a single class, this kind of exercise can result extremely effective at more than one level. In

terms of language learning, it prompts the students to observe different pragmatic uses of language. From the perspective of critical thinking and the development of Higher Order Thinking Skills (Bloom, 1956), it encourages them to discuss a fairly controversial topic. In terms of cultural translation and intercultural communication, it encourages them to consider the same issues from different perspectives, thus facilitating their ability to put themselves in the place of the other.

These tasks can therefore serve as a prompt for a rather challenging activity. The students work in pairs and prepare a brief script which reproduces a doctor/patient consultation. On the basis of this script, each couple will then role-play their dialogue. The teacher offers a series of topics in terms of illnesses and diseases and some main points that students should respect in the composition of their script:



- Description of symptoms;
- Presentation of one or more hypotheses on the doctor's part;
- Request for diagnostic tests;
- Explanation of the tests and their function;
- "Specialized" diagnosis;
- Intralinguistic translation of the diagnosis into plain English;
- Suggested therapy.

Figure 17. Activity

Since, to complete this task, students base the activity on their own real-life experiences, which naturally are experienced in their first language, this type of exercise, while not focusing overtly on translation, necessarily involves a form of interlinguistic (mental) translation. Not only this. In order to complete this assignment (some of which is given as homework) students have to do some research and look for the symptoms of specific conditions, the necessary tests to diagnose them, and the possible treatment required. However, in order to produce an exchange that can be deemed acceptable within the given situational context, they also have to work intralinguistically in order to translate into plain English some of the terms they might find during their searches. For example, given the condition "arthritis of the hip", students have to translate intralinguistically some of the specialized terms that relate to the anatomy of the hip joint. For instance, "acetabulum" can be translated as the plain English "socket", whereas "femur" might be rendered as "thigh bone". By using translation this way, each pair of students enriches their vocabulary, and during the role-play activities, the rest of the class shares their results. Students are thus asked to compile a list of the words that indicate specific symptoms and conditions, as well as the diagnostic tests (often abbreviated in acronyms) generally used to ascertain those conditions (for example: MRI, namely Magnetic Resonance Imaging). Since the teachers' list contemplates rather normal conditions and diseases (flue, broken bone, dislocated shoulder, appendicitis etc.), the students are able to relate what they have learned to actual situations and their own experience. Furthermore, they will have some of the vocabulary they might need once they travel abroad.

As a final activity, teachers ask students to skim through the following text, focusing in particular on the structure of the article and relating it to the structure of the episode on which the module is mainly focused.



Figure 18. A scientific article in English

Students will then be encouraged to notice that whereas the scientific article introduces the disease from the very beginning, and then proceeds to illustrate the symptoms, the diagnostic tests and the possible treatments, the television episode follows, at least partly, a reversed order, presenting in the first place the symptoms, the tests and the diagnosis. Also, it won't go unnoticed that, among the various symptoms, the character of the television series presents only a few, and that the prognosis is not mentioned. This is mainly due to the fact that the television series is, after all, a situation comedy, and that it therefore has to adhere to the conventions of this particular genre and its time constraints.

By accomplishing a contrastive analysis of a text in Italian which describes the same disease (available at: <http://www.ematologia-pavia.it/it/Patologie/-Macroglobulinemia-di-Waldenstr%C3%B6m-/>), interlinguistic translation can become a useful tool to emphasize similarities and differences between scientific prose in the two languages as far as structural, lexical and morpho-syntactic aspects are concerned (i.e. use of active vs passive forms; information load; use of metaphors etc.). This part of the course is completed orally, in order to bring the students to express their observations more freely. As the analysis is carried out, teachers organize a collaborative task that the students are required to complete: having prepared a chart, which is projected on the Interactive white board, the students fill it in on the basis of their observations, in order to compile a contrastive list of the typical features of scientific articles in the two languages.

4. Findings and Discussion

Once the various activities have been completed, students are required to take a final test on the contents and the linguistic aspects of the objects of analysis. In addition, as part of the final test, the students who belonged to the experimental groups were required to answer a short questionnaire on the usefulness of the various forms of translation (intralinguistic, intersemiotic and interlinguistic) exploited during the courses.

The results were rather encouraging, both in terms of content and language. The final tests took in fact into consideration the assimilation of specific notions as well as the linguistic accuracy and the use of specific terminology. In addition, other aspects such as the students' communicative skills, their ability to work as part of a team, their capacity to retrieve information, their ability to state and defend their opinions, etc. were assessed, either on the basis of the work carried out during the courses or the final debates which, on some occasions, served as a final test.

Overall, few students have failed the tests, irrespective of the type of CLIL course attended, even though, in this

case too, the percentage is lower in the classes that attended CLIL courses that implemented all the types of translation activities described above. 17% of the students who attended CLIL courses in which translation activities were reduced to a minimum or not present, failed, whereas 15% of students attending translation-based CLIL courses obtained the same result. The passing grade (Note 13) was obtained by 32% of the students attending non-translation CLIL courses, but this percentage diminishes considerably in translation-based courses, where only 20.5% of students obtained a pass. The percentage of students who obtained good and top marks, on the contrary, increases. Thus, whereas 38.5% of students attending non-translation based CLIL courses obtained good results, 43% of students attending translation-based courses obtained grades in the same range. Finally, whereas 17.5% of non-translation CLIL students obtained top marks, this percentage increases to 21.5% for students attending translation-based courses.

Naturally, the causes for these differences, as suggested above, might have to do with the personal style of the teachers, the individual “style” of the schools themselves and other socio-economic and cultural elements. However, these preliminary results are certainly interesting and point to the effectiveness and validity that introducing various forms of translation can have in a CLIL environment.

It must be added that throughout the courses some situations of code-switching occurred in all the classes, even when it was not required or prompted by interlinguistic translation tasks. This is particularly true for some of the activities students were required to complete (for instance the role-plays activities similar to n. 18 above or the contrastive analysis of activity 19). However, the occurrences were kept to a minimum and, just like the translation tasks, helped students to lower their anxiety levels and therefore perform better in the end.

Indeed, the general opinion of students was that recurring to translation made them feel more at ease and less apprehensive, thus encouraging the learning process. Certainly, the use of audio-visual and graphic materials helped raise their interest and, because of the products selected, managed to make them more autonomous and independent, while at the same time motivated and less anxious. Some of the intralinguistic tasks were perceived as rather difficult (see for instance Table 2 above), even though once they completed the exercises they felt satisfied and self-confident. Not only this, but also interlinguistic translation was considered very useful in terms of lowering the students’ affective filters, and their acquisition of new vocabulary in L2 and of the different nuances English words can have when used in different contexts. In addition, teachers too felt that being able to introduce some materials in their first language and being able to resort to interlinguistic translation-tasks could be of great help in managing the CLIL class in their subject.

5. Conclusions

As I hope this article has demonstrated, resorting to this type of product and the different forms of translation it relies on can help students’ learning process and can make them appreciate aspects of communicative situations that may go unnoticed in everyday life. Naturally, the educational value of some of the popular intersemiotic translations exploited can only be defined as “incidental” (Kerka, 2000). Yet, if properly adapted by CLIL teachers, they can become valuable tools in the development of various skills, which relate to both language and content.

As this article suggests, working with different forms of translation enables teachers to stimulate different skills: linguistic, metalinguistic, disciplinary, cognitive, cultural, intercultural, digital, critical and others. As such, modules similar to the one presented here are able to satisfy the various requirements that the learning process puts forward in the 21st century, and which CLIL equally aims to meet (Attard Montalto et al., 2014).

The results obtained by this research are, as mentioned above, preliminary. However, they certainly emphasize the worthiness of this area of study and justify the protraction of the project, which is being carried on in both (and other) schools. By so doing, further data will be soon available, on the basis of which it will be possible to elaborate new models of CLIL in which the various forms of translation will be given an important role.

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Sources of Figures (accessed 27 September 2019):

Fig. 1: www.walmart.com

Fig. 2: <https://www.homedepot.com/p/HDX-Scrub-Brush-with-Iron-Handle-252MBHDXRM/204357208>

Fig. 3:

https://www.google.com/search?q=scrub+brush+cartoon&tbm=isch&tbs=rimg:CX3FYIC5ZOjWljiZyzzE8ALVA28ZPsnJ76mO1GN3r_19OwCAIY4F420eIMe6JRRx9fm3MsWcp65b7iwh9DoZH9vvbCoSCSjnlPMTwAtUEYePIXI23_1X9KhIJDbxk-yenvqYR2hXe0OBTTB4qEgk7UY3ev_107ABF2Bxku86f1QSoSCYCVjgXjBR4gEYrycXedyThgKhIjx7olFHH1-bcRoe2GypuzwKMqEgkyxZynrlvuLBGHj5VyNt_11_1SoSCSH0Ohkf2-9sEUUIuXMkgA-6&tbo=u&sa=X&ved=2ahUKewjhoq3lg_PhAhWQMewKHf02DyYQ9C96BAgBEBs&biw=780&bih=330&dpr=1.75

Fig. 4:

https://es.123rf.com/photo_14965554_disposici%C3%B3n-de-los-cosm%C3%A9uticos-faciales-con-exfoliante-de-albaricoque-limpiador-facial-espuma-facial-y-mou.html?fromid=Tmc1WW0wczRIVHinc29Da0d2MnNldz09

Fig. 5: <https://www.pinterest.it/pin/231583605817403626/?lp=true>

Fig. 6: <https://draxe.com/homemade-body-scrub/>

Fig. 7: <https://www.liveabout.com/body-scrub-recipes-346791>

Fig. 8:

<https://www.someecards.com/usercards/viewcard/mom-whats-a-scrub-well-sweetheart-a-scrub-is-a-guy-who-thinks-hes-fly-and-is-also-known-as-a-busta--59336/>

Fig. 9: <https://www.urbandictionary.com/define.php?term=Scrub&=true>

Fig. 10-11: <https://www.urbandictionary.com/define.php?term=Scrub&=true>

Fig. 12: <https://www.urbandictionary.com/define.php?term=Scrub&=true>

Fig. 13: <http://exchange.smarttech.com/details.html?id=0a4f9ae4-84b2-44f2-85b5-653e80dc4a35>

Fig. 14: <https://www.biology.iupui.edu/biocourses/N100H/ch8mitosis.html>

Fig. 15: <https://www.biology.iupui.edu/biocourses/N100H/ch8mitosis.html>

Fig. 16:

<https://www.cancer.net/cancer-types/waldenstrom%E2%80%99s-macroglobulinemia/diagnosis>;

<https://www.cancer.org/cancer/waldenstrom-macroglobulinemia/detection-diagnosis-staging/signs-symptoms.html>;

<http://www.bloodjournal.org/content/109/12/5096?sso-checked=true>.

Notes

Note 1. This fact was proved by various personal communications I had with the teachers of the schools I decided to use as a testing ground for my research. Indeed, 9 teachers out of 14 declared they had to simplify the materials and the explanations of the disciplinary subjects approached in English.

Note 2. CLIL methodology can obviously work in all linguistic areas. Yet, this paper presents the CLIL modules carried out in English in the schools selected for this project.

Note 3. As a consequence, the two cities share part of their historical background. Naturally, through time, they developed differently. Nonetheless, they maintained a similar core, in terms of extension, social and economic substrata.

Note 4. Some of these tests were completed orally in the form of debates, which were recorded and could therefore be analyzed in detail.

Note 5. It is important to notice that, both some of the authentic materials used during the courses—such as the recorded speech of American President Woodrow Wilson (1918) which was used during a history CLIL module—and fictional products such as television series or films, cannot in reality be considered spontaneous or truly natural. If this is so, it is because these products, while exhibiting features typical of spoken language (O’Connor & Arnold, 1961; Brazil, 1985), make use of a language that is originally “written” to be spoken.

Note 6. The cultural triad elaborated for example by Hall in 1959 distinguishes: “technical” culture (which corresponds to scientific communication); “formal” culture (which identifies how a certain community does things) and “informal” culture (which accounts for the way speakers relate to both general and specific communicative behaviors).

Note 7. On this occasion, the CLIL module was organized as an interdisciplinary activity, which involved various subjects (physics, biology, history, art history).

Note 8. At this stage of their school career, the students had already approached the topic of colonialism and the British attempt to build a small Empire wherever they went, often using various forms of translation (see Canepari, 2013). In addition, they were studying the Second World War and the rise of Nazism (which often equally relied on linguistic and translation-based strategies) and the de-colonization process that led to India’s independence in 1947.

Note 9. A sample of the questions teachers were asked is: “How many translated-based activities did you ask your students to perform?/What kind of activities were there and which type of translation did they require?”. An example of the questions from the students’ questionnaire is: “How often do you think you resorted to translation (either consciously or unconsciously) during the completion of the tasks assigned?”, “Which are the activities in which you relied most on translation, even though the assignment did not explicitly ask you to do

so?”.

Note 10. “In specialized literature English as a second language (ESL) is used when people learn English in an English-speaking country. English as a foreign language (EFL) is used when people learn English in a non-English-speaking country. In this paper the two definitions may be considered interchangeable.” (Caimi, 2006, p. 96)

Note 11. Compounds can in fact be decoded almost mechanically, by interpreting the single elements that make up the word in its entirety. Each part brings specific meanings to the lexical item, determining its overall sense (Gotti, 1991, p. 24).

Note 12. Teachers should emphasize, however, that this is not always the case. As Gotti points out, the same scientific discovery is often claimed by various researchers, so that the same condition is identified by a multitude of names, according to the culture. For example, *megacolon* is named *Hirschsprung disease* by the Danish, *Ruysch disease* by the Dutch and either *Battini disease* or *Mya disease* by the Italians”. (Gotti, 1991, pp. 36-37, my translation).

Note 13. In the Italian system, teachers can rate from 1 to 10, 6 being the passing mark. Thus, fairly good results correspond to 7/10, good to 8/10, excellence or top marks to 9/10 and 10/10.

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