Developing the Bilinguality of Learners through the Expansion of their Communicative Repertoire within the Science Class

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Abstract

In this research, we analyze the process of expansion of the communicative repertoires during science teaching, observing how the bilinguality and literacy of the students are developed through this process. The context of the study is the English lesson integrated into the teaching of science at the Municipal School Jose Calil Ahouagi in Juiz de Fora (MG) within the project "Ensino de línguas para crianças na escola pública: abordagem CLIL" (Language teaching to children in public schools: the CLIL approach). Exploratory ethnography was the data collection and analysis methodology used.We conclude that students, in addition to learning the science content, also learned the English language, and were literate in various everyday practices, such as the understanding of the nutritional information of industrialized products, which contributed directly to the expansion of their communicative repertoires.

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Introduction

The way language flows in our society, as well as the way individuals use it in their daily practices, has been developing and changing in a fast and dynamic direction. It happens, certainly, because we live in a globalized world shaped by superdiversity (Vertovec, 2006), where changes occur and are constantly needed to capture the technological and communicational revolution that emerge on the contemporary scene. Thus, it is possible to say that we are gradually leaving behind the patterns related to homogeneity, stability and fixity to go in the direction of a new era, characterized by mobility, heterogeneity, and hybridity.

This new frame affects not only the interaction among people, but also the structure of the educational actions, since school is also influenced by such transformations as it is not detached from social changes and the consequent needs arising from globalization. In the Brazilian context, although communication has been understood by many as something totally and purely monolingual, we should not underestimate that communication is being influenced and even restructured by those new perspectives, albeit in a smaller scale compared to the scenario of other huge urban centers around the world. Thus, besides teaching our official language – Portuguese – other languages should be taught in elementary schools. In this way, it would be possible to expand the communicative repertoires (Rymes, 2010) of learners, making it possible for the student to become bilingual at some level. In this context, the student will be able to participate in the practices that rely on language use, through different contexts and use it in our globalized social and superdiverse contemporary world, making them also part of the scope of social literacy.

We do believe that one way that could make such a situation possible is bilingual education. Garcìa (2009) points out, "Bilingual education is the *only way* to educate children in this twenty-first century" (2009, p. 5). In a world strongly characterized by processes of cultural exchange and interaction, where the geographical boundaries are blurry and communication among people happens fast and diffusely, it is possible to say that "bilingual education that is adaptive, able to expand and contract, as the communicative situations shift and as the terrain changes, is precisely what all children in the twenty-first century need" (García, 2009, p. 8).

Considering this framework, we discuss the proposal of the expansion of the communicative repertoires (Rymes, 2010, 2014) as well as the development of bilinguality (Salgado & Dias, 2010; Savedra, 2009) and literacy (Freire, 1991; Street, 1984, 2003) of students through bilingual education (García, 2009) in a science class. In order to do this, we analyze English classes at the Municipal School Jose Calil Ahouagi in Juiz de Fora, Minas Gerais, Brazil, where the research project entitled "Ensino de línguas para crianças na escola pública: abordagem CLIL" − Language teaching to children in public schools: the CLIL approach" (Content and Language Integrated Learning) − was developed.

The current linguistic setting

We are living in the era of superdiversity (Vertovec, 2006), marked not only by spatial mobility, but also by cultural and linguistic mobility. In the late 80's and early 90's, a process characterized by a number of changes caused by a dynamic interplay of variables culminated in a transformation in the migratory patterns of various countries, giving rise to a diversification of diversity (Arnaut, 2012; Vertovec, 2006). This aspect includes, in addition to factors related to ethnicity and country of origin of immigrants, "[...] a variety of significant variables that affect where, how, and with whom people live" (Vertovec, 2006, p. 1). Therefore, we can glimpse a "new historical condition of transnationalism stemming from the fact that the global flows of people have been undergoing profound quantitative and qualitative changes" (Arnaut, 2012, p. 3).

Along with this framework, we note changes related to the form of communication among people, largely due to advances in technology, more specifically, facilities and innovations caused by the Internet. Blommaert (2012) refers to the emergence of a

process that reshapes the social life in the world, which results in new forms of human communication. This author points out, therefore, that the social changes go hand in hand with the sociolinguistic transformations:

> Linguistic resources enter a specific environment, acquire an indexical value relative to existing norms within that environment, thus shape new norms, and so acquire a potential to perpetually reshuffle the linguistic-symbolic hierarchies (Blommaert, 2012, p. 2).

Thus, social life, still according to this author, starts to be organized in relation to the most different sets of norms and niches, in a polycentricity (Blommaert, 2010). So, the ways used for communication bear traces of multiple environments, multiple orientations, changing from a communicative situation to another, according to the need of expression.

In this way, we can see a situation which covers potential and emergent linguistic contacts, forming a new growing and dynamic reality in times of superdiversity; times that characterize and govern the interaction in this society. Contributing to this process, besides the development of ways of communication, is the development of means of transportation around the world as a whole, which provides an intense circulation not only of people, but also of financial capital, goods, images and ideas (Rubdy & Alsagoff, 2014). Individuals, then, being able to move around different places carry with them more than one language, which do not dissociate from the marks and influences of the cultures from which they were originated. Such individuals end up being transformed by these linguistic and cultural experiences, which reflects in the way they communicate.

This complex context, influenced by changes that have never been seen before in the course of our history, in a complete "global mélange" (Pieterse, 2004), engenders changes in how language and culture have been addressed. It is not enough to simply identify which "language" is being used in the course of an interaction, but rather realize, as theorized Pennycook and Otsuji (2014), what is done with the language. In this sense, the language is not only considered in its traditional and entrenched conception of a political, pure, distinct and bounded entity. Given the superdiversity, fluidity, mobility and complexity that make up the environment in which the actions around the use of language occur, communication is not only restricted to the use and definition of a named language X or Y individually, but allows the presence of either one or the other or both at the same time connected to gestures, looks, ways of dressing etc. Therefore, when we intend to communicate something, we use not only the strictly linguistic resources, but also the non-linguistic features that have equal or greater power to lead to the desired goal in the interaction.

As a result of this configuration of the communication process, extralinguistic aspects also integrate and organize the interaction, which leads us to address the linguistic face of this superdiversified and globalized world under the perspective of the description of "how individuals deploy other modes of communication in addition to their multiple languages" (Rymes, 2014, p. 3), as discussed in the following section.

The use of language: the communicative repertoires

Considering this current linguistic setting, we note that the phonetic, phonological, semantic and grammatical aspects of the language as well as the political and ideological aspects underlying the use of a given language integrate the communication process. All these aspects are relevant to its development. It's worth highlighting that the language often appears linked to the identity of a nation, working as an "ideological construction historically tied to the emergence of the nation-state in the nineteenth century" (Blommaert & Rampton, 2011, p. 4). However, we can observe that the complexity that permeates the communicative act in this superdiversified context makes us overcome these aspects, looking for the social face that constitutes the language and the actions around it, and addressing, thus the extralinguistic aspects that are often neglected or poorly worked on studies of language. Therefore, converging with the theories of Ahearn (2012), we understand that "language is not a neutral medium for communication, but rather a set of socially embedded practices" (Ahearn, 2012, p. 20).

We realize, then, that speakers make use of fragments of language that coexist in harmony, without suppression of either language involved in the communication process. Thus, instead of using language as distinct entities, people have repertories. They do not use the whole of any language, but employ specific bits and pieces of language, so to speak, for many different purposes (Rubdy & Alsagoff, 2014). Each speaker builds a communicative repertoire, which is understood, according to Rymes (2010), as "a collection of ways individuals use language and literacy and other means of communication (gestures, dress, posture, or accessories) to function effectively in the multiple communities in which they participate" (p. 528).

We can see that not only the purely linguistic factors are taken into account, but also the communicative elements that transcend language. The notion of communicative repertoire fills in the gap left by the failure to consider extralinguistic factors. Otsuji and Pennycook (2010) also consider this notion characterizing it as "conventionalized constellations of semiotic resources for taking action − that are shaped by the particular practices in which individuals engage" (p. 248).

Taking into account the new forms of communication in today's world, the communicative repertoire includes contemporary trends, covering the polycentricity (Blommaert, 2010) of the social life of our time, as defined in section 1 above. From this point of view, Rymes (2014) posits that:

> [...]One's repertoire can include multiple languages, dialects, & registers, in the institutionally defined sense, but also gesture, dress, posture, and even knowledge of communicative routines, familiarity with types of food or drink, and mass media references including phrases, dance moves, and recognizable intonation patterns that circulate via actors, musicians, and other superstars (p. 4).

The concept we are focusing upon here is associated, therefore, to the daily practices that constitute the social life of individuals. In this way, it is also associated with an anthropological perspective concerning the study of language, within which, "every aspect of language is socially influenced and culturally meaningful. To use language, therefore, is to engage in a form of social action laden with cultural values" (Ahearn, 2012, p. 27).

It is also worth mentioning that the communicative repertoires may be expanded, which allows, in a large extent, that the speaker can act in the world, in the activities that are anchored in language use. One way to promote this expansion is learning and / or acquiring languages. It is what we will discuss in the next section.

The expansion of the communicative repertoires: the development of bilinguality and literacy

In superdiversified times, the communicative repertoires can - and often need to – be expanded. So that, individuals can be bilingual in a certain degree, that is, they can have their bilingualities developed, and can be inserted in different areas of human activity by communicating in various scenarios. This happens, of course, during the acquisition or learning of a foreign language. It takes the speaker to the social literacy, as it enables him/her to extrapolate the areas of reading and writing while linguistic artifacts, while mere autonomous technologies. In this sense, the speakers are provided with conditions to act with language in the social practices, considering the "social uses of reading and writing" (Street, 1984, p. 1).

One way to expand these communicative repertoires and develop the speaker's social literacy, ensuring his/her agency in the superdiversified and globalized world of today, marked by new communicational needs, is bilingual education. But, before we talk about bilingual education, we need to define briefly what we consider here as bilingualism and bilinguality. According to Myers Scotton (2006, p. 2), "bilingualism is the term for speaking one or more languages". This does not mean, however, that these individuals can communicate, understand, read, and write perfectly in these two languages. Recent research considers bilingualism to be the condition that enables an individual to communicate in more than one language at any level. Thus, this person starts to appropriate this language or these languages and make use of them in manifestations that cannot be considered strictly linguistic, but also instruments of political and cultural ideology. With the advances in the area of communication, this concept is even more justified. It is increasing the number of people who say they do not know how to speak another language, but at the same time they can watch sitcoms, read newspaper articles or play online games in several languages. Then, it is possible to think about the concept of bilinguality. According to Savedra (2009), bilinguality is the individual manifestation of a bilingual situation. It is the individual's ability to be bilingual in the languages in contact in the context of bilingualism. Because of this individual dimension connected to the context, bilinguality is an unstable, impermanent and changeable condition. Therefore, it is individual and will develop differently in each learner.

In this context, bilingual education can be considered as an alternative to the empowerment of the individual, who will have access to a range of cultural, economic, social, and ideological commodities circulating in our society today. Mehisto, Marsh & Frigols (2008, p. 10) state that "the world is quickly becoming a mixed global village" and as a result of this the interest in programs that adopt bilingual education is increasing more and more.

When we expand the communicative repertoire, putting into practice the bilingual education, we are also promoting the development of the bilinguality of the students (Salgado and Dias, 2010). It gives learners the opportunity to express themselves using

language resources from different languages, without excluding either language that is available in a communicative situation. Therefore, the learner can act with the language through a language taken individually or a mixture of linguistic codes. It depends on what best fits and suits the goals during communication, consolidating stages of bilingualism and being, then, a bilingual individual in a certain degree.

Here, we will discuss a bilingual educational program with a heteroglossic focus, that is, a program that acknowledges that many children already have a certain degree of bilinguality and that this should be developed in the additional language teaching (García, 2009, p. 129). The approach chosen to be used in this program is the CLIL (Content and Language Integrated Learning), which will be discussed later.

Methodology

The research context

To illustrate our study, we present the project "Language teaching to children in public schools: the CLIL approach" (CLIL – Content and Language Integrated Learning). This project – an action research - happened with a pilot group (it started when the group was in the 2nd grade of elementary school) at the Municipal School José Calil Ahouagi, in Juiz de Fora, a medium size city in Brazil, between September, 2011 and July, 2013. The main goal of this project was to apply in a public school what had been observed in an English course from the same city, when another project (*Bilingual education: understanding processes of language acquisition and the training of specialized professionals)* was developed. In this course, the learning process of the children was fast and consistent, based on the CLIL approach. Mehisto and Asser (2009, p.9) define CLIL as "an educational approach with dual focus, in which an additional language is used to learn and teach both content and language." Thus, during the interventions done by scholars in this school, the English teaching happened integrated to school subjects of each year, allowing the students to go through different areas of knowledge such as Science, Geography and History.

Data Collection

The data were collected from an action research developed inside the classroom. To achieve our goals, the methodology used was an exploratory study of an ethnographic bias based on a qualitative approach. Thus, we "study things attempting to make sense of, or interpret phenomena in terms of the meanings people bring to them" (Denzin & Lincoln, 2004, p. 2). Considering an ethnographic perspective, we assume that this kind of research involves social actors with active and dynamic participation, and it enables the development of reflection and restructuring of the investigator's questioning process (Erickson, 1986). In educational settings, an ethnographic research should involve a concern about thinking of teaching and learning within a broad cultural context (Ludke & André, 1986).

In this way, the activities developed at the school were all recorded in audios and videos. The researchers involved registered their impressions and observations on many field notes which generated expanded notes even more detailed. The project started in September, 2011 and the pilot group was in the 2nd grade of elementary school. The group was chosen because of the number of students and their disciplinary issues. The interaction between scholars and students happened in English. During the interventions, the whole group was divided in two and each had about 20 minutes of contact with the

language per week. Despite the lack of time and proving wrong some pessimist expectations, the group has improved and they soon started the pre-production process, where it was possible to observe many occurrences of *code-mixing* and *code-switching*, all of them registered in the expanded notes.

Unlike traditional methods of language teaching, the CLIL approach is not focused on teaching separately the lexicon, the grammar, or specific skills. It is focused on the student's learning, so the language becomes the means by which the student builds his/her knowledge. This approach was chosen because it was the best one to fulfill certain demands of the superdiversified world, such as making language teaching more attractive and objective for the learner, promoting interdisciplinary teaching within the school and developing the bilinguality in the individual.

The success of the research made the school adhere to the subproject PIBID / English, expanding the use of the CLIL approach and the participation of scholars in the classes from the 6th to 9th grades of elementary school. It is worth mentioning that PIBID means Programa Institucional de Bolsas de Iniciação à Docência (Scholarship Program of Introduction to Teaching). It is an initiative of the Brazilian Federal Government that aims at improving and enhancing the teacher education for basic education. The students who graduated are placed in the school routine of public education and have the opportunity to participate in the interventions with students, experiencing methodologies and teaching practices studied in their undergraduate programs, while seeking to overcome the difficulties encountered in the daily life of school.

Data analysis

We analyze the data collected in such projects. Here, we analyze part of an intervention that covered three years of elementary school and involved notions of Science and nutrition based on research done by students from the 9th grade on school meals, and the organization of a supermarket model within the school, which was made with empty packages collected by scholars working in the school.

We could observe that children of this municipal school were not satisfied with the school menus and when asked what kind of meal they would like to have for lunch or during the break, they always mentioned food containing a lot of sugar and fat, such as hamburger, chocolate truffles and ice cream. Based on these data, the teacher in charge of the English classes decided that she would like to work with nutrition in the 7th and 8th grade, and the scholars were responsible for planning the interventions accordingly. In the 7th grade, the first step was to introduce students to the food groups and familiarize them with the amount of daily servings that should be consumed in each group. Activities such as building a food pyramid and the division of food into categories were conducted in order to explore a little bit more the content. Such activities allow the students to become aware of what kind of food they consume in their daily life. In doing so, besides learning the name and categories of food in English, something extremely important to the expansion of their vocabulary, students are also reflecting in a critical way about the amount and quality of food that they should eat according to a well-balanced diet. This is far more than just learning a list of words and structures in a foreign language for specific didactic purposes. Such kind of information might – and should – be used in their everyday life, even changing the way that they consume and think about food.

It is also important to say that using the mother tongue and the English language while building knowledge about nutritional aspects in the Science class expand the communicative repertoire of the students, developing their bilinguality once they are allowed to be bilingual in this specific context. Using English in the study of science does not make the mother tongue be seen as prejudicial in the learning process, as it happens in other language-teaching approaches that see the mother tongue as a crutch, not as a tool to learn the target language – in such approaches the student should communicate and receive input only in the foreign language, never in their mother tongue. The use of both languages contribute directly to the expansion of students' communicative repertoires, developing their literacy while practicing language use because they truly participate and negotiate meanings, surpassing classroom boundaries and expanding their awareness of social life.

With the students from the 8th grade a review of these topics was done, since they had already studied the subject in the previous year. The concepts of *whole food* and *food products* have been introduced as well as an analysis of the nutritional information of the kinds of foods they bought daily at the supermarket. In order to make a reflection on each of the components called *food products,* the video *Label Reading 101* was used. The students were instructed to observe the nutritional information that appeared on the label of certain packages taken to the classroom on flashcards. The group was also instructed to think about the consequences of the high intake of sugar and Trans fat for our bodies, for example.

Students were later taken to visit the model of a supermarket that was set up at school a few days earlier by the team from the English project that worked in the afternoon. This group had students from different years – namely, 6th and 7th grades – and they made posters, price tags and gave a name to the supermarket. At the end of the activity, they also did some exercises involving nutrition. We focus on the activities developed with the 8th grade, which resulted in a six-month term lesson plan that started with reading nutritional information and then discussed diseases that can be influenced by poor diet, the human body study and the importance of physical activities for health.

Besides the integration of content, language, and Science the student is taken outside the classroom boundaries, due to the reflection made about the food studied. Furthermore, the comprehension of food labels with nutrition information from the food products that the students used to buy at the supermarket proves us that they are, for sure, being bilinguals at some level. Both languages involved in the Science teaching are not at the same level of proficiency, but they still represent a bilingual context considering that being bilingual does not mean using two or more languages at the same level as we have explained before.

In the first intervention of the 8th grade, the contents of language, nutrition, and mathematics were integrated. The students are divided in four groups that chose different products in the supermarket built at school. After this, they should fill in a worksheet with content from the video mentioned before. Thus, the students should look for specific information in the food labels, according to the instructions, as you can see below:

1. Go to the supermarket and choose a product. Answer the questions below:
- What product have you chosen?

- Is it whole food or a food product?

- Is the nutrition information based on a 2.000 calories diet?

- Is sugar one of the first three ingredients in this product?

-Can you identify HIGH FRUTOSE CORN SYRUP among the ingredients?

- Are the serving size and the serving per container the same?

- In case they are different, write down the values of each one:
     Serving Size: _____Serving per container: _____

- What is the amount of calories in the product? _____

-What is the amount of calories from fat in the product? _____

- What is the percentage of TRANS FAT in the product? _____

-What does it mean? _____

- Concerning Oils and Fats, how can you classify this product?

     ( ) healthy   ( ) not as healthy   ( ) Not healthy

- Is the amount of sodium low or high? (Remember: it is recommended to eat less than 2400 mg of sodium in a day). _____

- Are there 3 grams or more per 100 calories per serving? _____

2. Complete the chart below:

Is sugar one of the three first ingredients of this product?	( ) yes ( ) no
Is the percentage of TRANS FAT 0%?	( ) yes ( ) no
Is the amount of dietary fibers enough for a day?	( ) yes ( ) no

- How often do you think you should eat this kind of food?
( ) every day   ( ) sometimes   ( ) I'd better not eat it

As you can observe by the questions above, much more than studying a language under a metalinguistic perspective was done. The lesson aimed to teach a content in a foreign language. The content not necessarily was known by the students in their foreign language, but we can say that it is relevant to their daily life, apart from being presented in a didactic way, so the student could understand the topic even when they do not know the meaning of every word used in the sentences. Much more than dividing words

according to their grammatical category in a decontextualized way is being presented, what is done here is something in the bias of meaning negotiation, allowing the students to understand and systematize the content studied.

Results

During the development of the activities, the students did not seemed to be resistant or scared of using the target language. The opposite happened, in fact. When they were not able to produce statements by themselves, they switched the codes to use the words that they knew in English. Thus, we could identify sentences like *Teacher, me dá um help?* (Teacher, can you help me?) or *Como eu acho a quantidade de trans fat nessa lasagna (pronunciation in English)* (How do I find the amount of trans fat in the label of this lasagna?). It makes us believe that the students were much more worried about the kind of activity that they were doing than with the language they were using itself.

It is important to mention that the scholars tried to help their production using some techniques, such as *recasting/repetition* and *prompting*, when it was possible. Their goal was to develop, even in a subtle perspective, the metalinguistic awareness of the students to the language structure, improving their learning process. For instance, when a student tried to say a sentence in the target language but switched between Portuguese and English, the scholar reformulated the whole sentence and asked the student to repeat it. It happened in the following cases:

Situation 1: A girl is doing an exercise and realizes she needs a pair of scissors.
Student: Tia, você tem uma tesoura?
Scholar: Scissors, please!
Student: Scissors, please!
Scholar: Here you have...

Situation 2: Two boys are drawing a poster for the supermarket and one of them makes a mistake.
Student: Teacher, você tem uma eraser?
Scholar: Teacher, do you have an eraser?
Student: Teacher, do you have an eraser?
Scholar: Here you have…

Situation 3: Some students associate the word SALE to the word PROMOÇÃO, in their mother tongue. But they do not know how to write it.
Student: Como a gente escreve SALE?
Scholar: How do you write SALE?
Student: How do you write SALE?
Student 2: Você escreve SALE – S/A/L/E. **(pronunciation in English)**

It is important to say that during the process the scholars avoid breaking the recasting and asked the students to repeat the whole sentence. This contributes to the internalization of metalinguistic traits of the target language.

On the other hand, when students tried to say in their mother tongue sentences that they could clearly produce in English, the scholars motivated them to say that in the target language, as we could observe in the situation below:

Situation 4: A student is coming back to the classroom from the break and he wanted to go inside. Another student was standing by the door blocking his way and did not seem to notice that.
Student: Dá licença, ow.

Scholar: Come on. You know how to say that in English.
Student: Excuse me, ow!
Scholar: Very good… And …
Student: Thank you.
Scholar: Very good!

Although it might seem that it is not *natural* to correct them using these strategies, we should bear in mind that they need to receive *input* to develop their repertoires and it is all based in a contextualized environment. Thus, the techniques work as a kind of scaffolding that helps students to achieve the next level in the target language and make them produce faster.

Concerning the worksheets, all the students used the target language on the majority of their answers – although some students also used some Portuguese to answer specific items. We highlighted some answers to exemplify their production:

Student 1:
What product have you chosen? Torradinha (Toast)
What is the percentage of TRANS FAT in the product? 0%
What does it mean? This not good.

Student 2:
What product have you chosen? Sucrilhos[1]
What is the percentage of TRANS FAT in the product? 0%
What does it mean? Gordura muito forte.[2]

Once more it is possible to observe that the students are able to understand what they read and they give the expected answers to the exercise – even though they choose to use Portuguese sometimes. They are oriented to use the language that they feel more comfortable, what means that it is a good sign the fact that they are choosing English, but not an obligation.

Discussion

Bearing in mind the superdiversified world and the consequent sociolinguistic setting that emerges from it, we can observe that the students not only understood the input they were receiving, but also could make sense of it, performing everyday tasks in a foreign language. This can be illustrated by the fact that they could really understand the nutritional information of industrialized products bought in the supermarket they built inside the school. Another example of it is the use of the word *sale*, originally an English word that is used in Brazil to announce discounts and once again contextualized in the students' supermarket without any interference of the teachers.

The work done in the highlighted activity (the transcribed worksheet) enables a formal English learning, which certainly has its place and relevance. But it does transcend, in a large extent, the strictly linguistic phase of the learning process, contributing directly to the expansion of the communicative repertoires of the students and consequently to the development of their bilingualities. These aspects make them bilingual individuals at a given degree and also qualified speakers to act with the language in the globalized contemporary world.

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[1] Cereal.

[2] Too much fat.

In addition to this, as the students use different languages and pieces of languages in the communication process, expanding their repertoires, these students are also languaging, as García (2009) points out. According to this author, the term "languaging" has been adopted by many sociolinguists in order to emphasize the arrangement of speakers in an ongoing process of construction of meanings. And "translanguaging", therefore, has to do with the multiple discursive practices in which bilingual individuals engage in order to make sense in their bilingual worlds. It is much more than code-switching – despite it includes it too.

When students make a poster with the lines *Noodles: two por one* they are not only code-switching languages, but also using a daily practice of their mother tongue in another language – what means that they are acting through language, expressing a social activity of their lives in another code. When they use expressions such as *excuse me, ow*! They are using the foreign language to reproduce their daily behaviors, as far as *ow* is a very common expression in the variety of Portuguese that we use in Minas Gerais, where the research took place. These are not only examples of code switching, but also a picture of how these bilingual kids see the word that they live in – a mixture of codes, languages, fragments of languages and, consequently, points of view that coexist and build their perspectives in life. Examples like these reinforce the importance of expanding communicative repertoires in a superdiversified word like ours and the relevance of promoting such learning environments to the development of bilingual individuals in the 21st century.

Conclusions

What we have studied in this paper, analyzing the expansion of communicative repertoires within the learning/acquisition of a foreign language in a science class – something extremely important in our contemporary world – lead us to conclude that the students, more than just learn a scientific content and a language different from their first language, were also developing their literacy in many daily practices. An example of it is the awareness of what is healthy or not and how much of each food group they could eat according to a healthy diet.

In addition to it, it is possible to observe the development of contextualized and, somehow, phonological awareness to language use – as saw in the example of the student that used both languages in his communicative repertoire at that specific moment and produced the sentence *Como eu acho a quantidade de* trans fat *nessa* lasagna (English pronunciation)? – along with spontaneity in the production of such sentences and expansion of their metalinguistic knowledgment. Furthermore, the comprehension of the content presented – nutrition information of industrialized products, for example – shows us that they were able not only to identify the input given, but also to attribute a meaning to that, making it possible to do ordinary tasks in a foreign language.

Thus, we conclude that the students, in addition to learning the science content, learned the English language, and also became literate in various everyday practices, what can be observed, for example, in their comprehension of the nutritional information of industrialized products, which contributed directly to the expansion of the communicative repertoire and, consequently, the development of their bilinguality.

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