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Final thesis

Designing the UpGrade project by Pleiadi in English

From CLIL to didactic
laboratories

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ABSTRACT

Teaching languages in 2019 is a challenge that the current generation of teachers is attempting to face in order to cope with a continuously dynamic and unstable world. One of these answers is CLIL, the acronym for *Content Language Integrated Learning,* a method consisting of integrating the learning of language and content: teaching the content through the foreign language and the language through the subject in a symbiotic win-win relationship. I have been working with primary, secondary and high school's pupils in the context of a didactic laboratory about financial education and entrepreneurship called UpGrade, provided by the Italian scientific organization called Pleiadi. The current UpGrade project is in line with the *Citizenship Competencies* for lifelong learning delivered by the Council of the European Union in 2018, except for the competence of communication in foreign languages. As a consequence, I decided to investigate on the possibility of implementing the project in the English language by delivering a questionnaire to the teachers that already knew the project, in order to understand if teachers were interested in a project complete of all competencies. The research highlights that the strengths of UpGrade in English are numerous, and concerns and holdbacks still portray the motives why these kinds of activity are not so extensive. This study focuses on an outline that might be a possible answer to the challenges that the new generations of students have to be prepared for, providing financial tools within the context of CLIL, in order to create the most engaging experience for all students.

INTRODUCTION

"It takes a curious mind to go beyond our boundaries and to become citizens of the world" (2019) Richard Collins[1], wisely reported and this sentence portrays the core of this thesis. In fact, curiosity for new notions, places or languages can cease the barriers and the differences that we think we have from those who are distinctive.

International surveys demonstrate that in present days, people are more likely to be bilingual instead of monolingual (Word Bank, 1995) and multilingualism is to be considered the standard rather than an exception (Valdés, 2012) as foreign language education is becoming more popular all over the world. However, the way languages are currently taught is utterly different from how they were taught once before, and the journey that has brought us all this way is very telling. Multilingualism is now at the very core of European identity.

At the same time, education is experiencing a revolution in terms of how technology is transforming every rule that was given for granted in the past. Ken Robinson (*Out of our minds*, 2011) notes that the increasing complexity of the world requires rising creativity for meeting the challenge, both in education and in the workplace. Successful people are creative, and creativity needs to be nurtured from a young age, starting from the education system. Lamentably, students continue to be instructed in the same manners as they were decades ago, through standardised curriculum and mechanical learning, following the philosophy that one-size-fits-all. Currently, a lot of students struggle as they are not motivated adequately and standard teaching does not engage them and, as a result, makes no sense today. As a matter of fact, modern students hold a different mindset, where the workplace is not stable but dynamic, and theoretical knowledge does not represent the first requirement. Education should teach students how to react to this sudden change instead of clinging to old methods. It should be concerned of providing students with the skills that lead to success and train their determination, as extremely various information is accessible but the key lays in using information cleverly.

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[1] *Richard Collins, director of Inlingua Verona.*

The *Partnership for 21st Century Learning* (P21) funded in 2002 for establishing a dialogue between teachers, business community, and policymakers, identified the four skills relevant in modern society: creativity, critical thinking, communication, collaboration. Education should be in charge for the development of such skills, and the educational system needs to be revisited, integrating new programs that can motivate our students and prepare them for the workplace. As a consequence, emotional intelligence (EQ) is considered essential today and it is shown through the ability to work in a team within a collaborative environment. The capacity to reflect critically employing creativity while collaborating with their peers, as well as communicating in a team establishes students' achievement in their future careers and promotes happiness and a healthy lifestyle.

The internationalization of the globe, is whatsoever implicating that the academic context needs to be more flexible, open and provide students with the tools for being citizen of the world. The number of exchange programs and partnerships are increasing as families are aware of the impact of international experiences in the curriculum of future employees, along with the extreme importance of being proficient in foreign languages. Language competencies combine tradition and intercultural ability. Developing such competencies involves further strengthening of the mother tongue along with foreign ones. It is extremely crucial for modern societies, intercultural perceptions and for broaden ones' opportunities. For this reason, foreign languages are gaining importance in the curricula, and English especially is considered more than ever one of the most important subjects.

Considering the changes of the society and the growing importance given to foreign languages, the changes that the education system has to accept and face for motivating students and provide them with the necessary tools for modern jobs, also the way foreign languages are taught needs to be revisited. Especially, foreign languages need to be integrated for generating a coherent and homogeneous didactic program. Frontal lessons and grammar are no longer accepted as an efficient way for promoting communicative competence in foreign languages and the education system is trying to find an answer to the challenge.

One possible answer is CLIL, acronym for Content Language Integrated Learning, a modern European programme in which foreign languages and curricular subjects are integrated and taught together. The novelty of CLIL in the Italian and European scene is one of the challenges our age is experiencing in terms of education, conducive for evolving at the same pace as our society. Language competencies are now more worthwhile for individual growth and from the societal point of view. English especially, is the global language, spreading like wildfire and likely to become the universal language and the symbol of globalization. Students will be asked to speak English fluently in order to be successful in their future as foreign languages are not an extra point anymore, an additional tool which makes persons different and extraordinarily specialized. Nowadays they are required for travelling, watching movies, reading a scientific text and for intercultural relationships. All teachers out there are facing a challenge: teaching English according to the new rules and teaching our students to be multicultural, and adaptive in society continuously evolving.

Concurrently, the digital revolution has played a relevant part in changing the rules in academic contexts, since students are far more prepared than their teachers, but still they need to strategically benefit from their situation. Schools cannot but break away from the traditional education system and provide new experiences, teaching methods, multilingual teachers for keeping up with the speed of the society's evolution. Teachers' role switches from disseminators of wisdom, the only possible source for acquiring knowledge, to guide or mentors, tutoring students and helping them find their way for learning. The Italian pedagogist Daniele Novara believes that "The school must be a laboratory, not a conference room, because we learn in sharing. Students learn from their companions, not from their teachers " (Milano, 14th of April 2018). Instead of struggling for providing new information, teachers should help and guide their students in making their own steps in the fields they prefer. They must themselves be learners, curios and open minded.

Pleiadi, is an Italian company devoted to scientific dissemination with a practical and modern educational philosophy. Pleiadi's explainers, travel from school to school and present engaging laboratories where students explore the subject from a different

perspective, trying at-hand through experiments and group activities, academic content. The explainers do not get in the way between teachers and students, but provide new tools for understanding different subjects, through practical and engaging experiences that will turn into life-long learning. Since I am an explainer, I decided to integrate in this work the notions I have learnt at University, and the notions I have learnt at work in a financial project called UpGrade.

This work is divided in five chapters: the first one concerning language learning, the history of language learning and the particular features studied in the past that are relevant for supporting CLIL studies; the second chapter elaborating on CLIL in depth; the third one describing Pleiadi and its philosophy and work attitude towards learning and education; the fourth focuses on the UpGrade project for all school ages and the last one pivoting on the research done for eliciting data. The research confirmed how students might benefit from this project from their teachers' point of view, enhancing their language skills and soft-skills. Yet, it highlights some concerns due to potential misinterpretation during the activity in the foreign language.

This dissertation focuses on combining a revolutionary method for language learning and an exceptional entrepreneurship didactic lab for consolidating new useful skills and promoting essential competencies. Accepting and admiring what is new and different is crucial for the promotion of a modern and open-minded society, and this project's goal is to design a project in line with the needs of students as individuals and as part of a society. Foreign languages are the key to the endless possibilities that this world offers, the key for opening infinite doors, friendships and hopes, and when combined with a project focused on self-promotion, they become a powerful tool for learning how to love yourself and others.

CHAPTER 1

I.   THEORETICAL FRAMEWORK

The first chapter of this research, aims at conveying a structural context of what it is meant for language education, its background history, and those especially relevant concepts that represent the pivot of CLIL methodology and research.

1.1 LANGUAGE EDUCATION

Language education studies the ability that "aims to convey the genetic faculty peculiar of the *homo loquens*, the faculty of language, that is the natural ability to acquire not only the native language but also other languages in the course of life, full or partial acquisition that is" (Balboni, 2012:5).

Nevertheless, what is language? Why and how do we learn it? The human capacity called "language" is a communication system that presupposes a code held by a social community in the response of the need for communicating messages (Georgie L. Trager, B. Bloch, 1942). Spoken languages imply written or spoken words combined according to the syntactical and grammatical laws that regulate the specific language. It is the outcome of culture, and since all cultures are diverse, every community presents its system of communication.

Human beings acquire language naturally because of a device introduced by the linguist Noam Chomsky called LAD (Language Acquisition Device). It is a theoretical concept that holds fundamental rules for language and the explanation of why children possess an innate understanding of grammar and syntax. Chomsky (1976) argues that human beings possess the language faculty from within themselves. Language properties in the human mind create a *Universal Grammar* which can be applied at all languages and consists of a set of general principles. The development of the language faculty comes from genetic potential innate for all languages, which is triggered by the environment. In this sense, the language *grows* in people's mind: "a central part of what we call "learning" is better understood as the growth of cognitive structures along an internally directed course under the triggering and potentially shaping effect of the environment" (Chomsky, 1980:33). From this perspective, the theory of language learning is connected with biology and

acquiring languages means having a Universal Grammar inside the brain that sets the parameter for a particular language. All languages share identical acquiring processes henceforth didactic actions share the same scientific principles no matter in which language they are applied. (Chomsky, 1980). However, the cultural context is essential, and not only linguistic rules operate in communication but also social rules. *Pragmatics* is the field of linguistics encompassing language behaviour in different contexts, keeping reference to the identity of the speaker, the distance between speakers, ambiguity, formality, which of course changes from culture to culture.

The concept underlying language education is the idea of education aimed at achieving educational goals of culture promotion, socialization and self-promotion (Caon, 2015:12). Among the distinct types of situations involving languages, Balboni (2014) distinguished four:

- *Maternal language.* It is the one acquired during the childhood period for interacting with parents, relatives and friends in the surrounding context. Characterized by the natural origin of the acquisition given by a large number of inputs, the speaker identifies himself with the first language, also because the language contributes to shaping his/her *forma mentis*. Until the age of three, linguistic elements are stored in the cerebellum, and after this age called *critical period*, languages will be stored in the cortex and will be learnt rather than acquired. A person can be bilingual and have two or more mother languages.
- *Foreign language.* It exists in the country in question but is not the language of everyday communication, and instead, it is used at an academic level. It is learnt after the first language, and it is a voluntary choice that needs a mediator or a teacher.
- *Ethnic language.* It is the language associated with the cultural background of a family or country, related to religion, history and geography (Balboni, 2014).
- *Second language*. It is not the first language but is learnt after, usually as a foreign language. It is present in the environment and can be spoken in the learner's home country.

In this research, we focus on the case of English as a Foreign Language.

1.2 SECOND LANGUAGE ACQUISITION

Second Language Acquisition (SLA) refers to the process in which individuals learn a second language. It starts as the acquisition of the first language ends, and it pursues definite principles relatable to First Language Acquisition, from the cognitive abilities of language processing, the motivation of the learners, the context of exposure, to the instruction method. Disclosing these principles is the purpose of second language acquisition, being it, the scientific discipline devoted to this cause. It can be acquired at any age, for different reasons, in various manners, and achieving different levels. A distinction has to be made: for instance, second language learning can be *spontaneous* (untutored) or *guided* (tutored) (Krashen, 1981).

Between the extremes, there are many intermediate phases. It is spontaneous and called acquisition when:
- the attainment is a consequence of everyday communication in a natural pace;
- without guidance, but instead, following a natural process, it is unconscious, and for this reason, it has been called "natural" acquisition. For instance, while living abroad a person experiences the urgency to learn a new language for surviving in the new context, and eventually, s/he will manage to acquire some language through the occasional social contacts with the social community;
- it is not a uniform way of learning languages. It works as a circle: the communication allows the learner to start learning, and learning the language allows the development of communication skills;
- marginal attention is paid to language itself, and linguistic rules are often neglected;
- the acquisition is profound and stable.

There are two tasks, closely co-dependent that the learner encounters: the communication task and the learning task (Nunan, 1989). The first one is related to the child's previous knowledge, their ability to express himself with the available tools and his current repertoire. The latter refers to being able to reach the target language. As long as it serves its communicative function of being understood and getting the meaning across, it is valid no matter if it is not "proper language", as well as there is no requirement for

metalinguistic observation. Guidance is the domain of tutored language learning, even if it is significant when talking about spontaneous learning. It is indeed worth mentioning because even if the guiding is not systematic and intentional, it occurs.

On the other hand, guided learning is "the domestication of a natural process" (Klein, 1986) and detains the following characteristics:
- the learning process is conceived in an artificial setting with very different rules;
- the process is conscious;
- a great deal is put on grammar;
- more importance is placed on the correctness rather than on communication effectiveness;
- the learner is exposed to inputs given exclusively by the teacher;
- the teacher exposes pupils to material and content with no real connection with realistic everyday situations and thus corrects pupils' errors all in a defined timeframe.

It is difficult for learners to communicate naturally in the classroom, even if the teacher stimulates interaction. Despite the negative aspects of guided learning, not everyone has the opportunity to experience life in the target country, and this option represents the only opportunity for language learning.

1.2.1 Krashen's Theories of Second Language Acquisition

The Second Language Acquisition Theory developed by Krashen in 1981 is based on five hypotheses that we have partially mentioned; the whole theory based on the following principles:

1. *Monitor Theory.* Krashen introduced the idea of two independent systems concerning language abilities: subconscious language *acquisition* and conscious language *learning*. The learning function is an editor, or *Monitor*, for language use and monitors the output of the acquired system.

2. *Acquisition vs Learning.* Language learning applies to a formal learning method lodged in classrooms, while language acquisition does not assume formal instruction. In language learning, grammar is stressed over conversation. The teacher is the most significant authority, and errors are not contemplated.

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Moreover, it does not produce permanent acquisition. On the other hand, the acquisition process produces long-term knowledge, is unconscious and happens spontaneously without grammar lessons. It is the natural outcome of relations between people and cultural setting, which requires interaction and real communication.

3. *Comprehensible input.* For linguistic input is meant all the forms of language to which a learner might be exposed for acquiring a first or second language. According to Krashen's theory, the process of learning a second language is very similar and relatable to the one undergoing when children acquiring the first language. In fact, it develops with meaningful communication and follows a natural and predictable order. Furthermore, the input has to be comprehensible. When we understand what we read and what we hear, language acquisition is happening even if we are not aware of it, and it is the only mechanism that provokes an increasing development of the linguistic competencies. On the other hand, when the input is not comprehensible is not relevant for meaning. Along with this hypothesis, Krashen emphasises the relevance of learners' motivation: their attitude can play a decisive role in the learning success as it is commonly accepted that a situation of high stress harms learning outcomes.

4. *The natural order of acquisition.* The input acquires an essential role: it has to follow the natural order even when the language being taught is a second language. It has to be predictable for developing meaningful communication. The awareness of this specific knowledge is essential when teaching a second language, and moreover when teaching a subject through a second language: teachers need to provide students with relevant and comprehensible inputs following the order 'i + 1' from simple to complicated. Adopting this outline, learners understand without confusion, stress and sense of failure.

5. *Affective filter hypothesis.* The affective filter is a mental screen that is activated when the speaker encounters a state of anxiety or a stressful situation. When in a serenity state of mind our brain produces neurotransmitters that storage information; however, when the learner's mood is negative, anxious and in fear, steroids are produced provoking a fight between the amygdala and the hippocampus which renders information storage complications. When learning a

foreign language, students often experience anxiety, which slows down the learning process because they prevent inputs from being acquired and it blocks them. When students are relaxed, motivated and confident, the affective filter is low and does not interfere in the process.

Figure 1- *Image representing the Input Hypothesis Model*
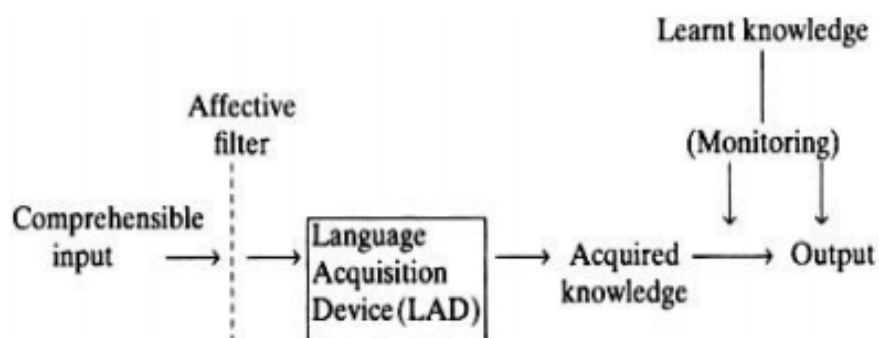
1.2.2 The Critical Period Hypothesis

Eric Lennenberg (1967) was the first scholar that recognised the critical role age plays when learning a language. In his book *Biological Foundation of Language* (1967) he states that human language is acquired naturally in a timeframe called critical period, beginning at the birth and ending at the adolescence because of the brain being particularly predisposed for gaining linguistic abilities. Once this window has passed, the capacity to learn language drops. Lennenberg proposed that the end of the critical period was characterised by "termination of a state of organizational plasticity linked with lateralization of function" (1967:176). The lateralization of cerebral functions in Broca's area provokes that the neural substrate required for language is not fully available once the critical period is over. The ability to develop a language is innate but closely related to the environment and its inputs. The end of the critical period causes a loss of Universal Grammar (Chomsky, 1980).

Knudsen (2004) introduces the concept of "multiple critical periods". According to him, it is reasonable to expect several temporal windows for the process of language acquisition, that separate the levels of brain maturation connected to the sections

associated with the elaboration of language. Another advocate of the multiple critical period perspective is Diller (1981:76) who records that pyramidal cells, linked with phonetic/phonological acquisition, evolve by age 6/8, whereas stellate cells, which he associates with higher-order capacities grow over two to three decades. He supposes that genuine L2 accent can be acquired only by young children, whereas relatively older people can learn cognitive features. As reported in many studies, children need to receive an exposition to inputs in a foreign language from a young age, even if the goal is not an exceptional level of proficiency. As inputs are provided from the environment in the modern society, schools have to adapt and provide an early learning path for foreign languages that will endure as life-long learning.

Figure 2- *The relationship between language performance score and age of acquisition of a second language (adaptation from Johnson and Newport, 1989)*
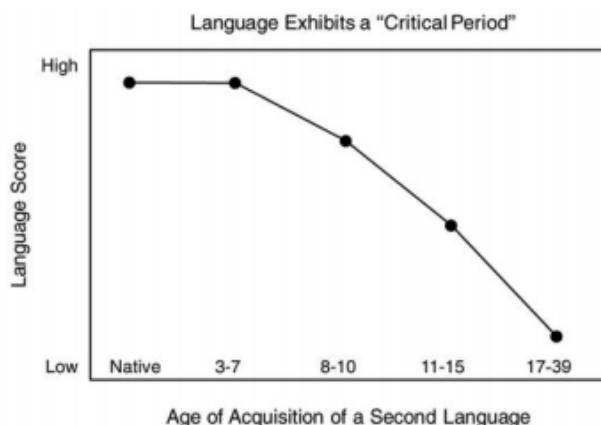
1.3 THEORIES OF SECOND LANGUAGE ACQUISITION

In the past there has been a huge number of different theories of language education, often one movement replacing the previous through a reaction of the perceived deficiencies of the former. Let us have an insight of what is the path that brought us today to language education methods.

Beginning with the *Grammar translation approach*, it is helpful to note that it looked at language through the lens of literature, grammar and culture, getting the sense of what truly mattered back in the 1880's. It is an old method in which a great deal of importance

was placed on translation and back translation where the learner was asked to take a text in an original language, turn it into their language and then translating it back into the original language of the text (Richards, Rodgers 2001). This process was supposed to help learners to precisely understand language forms and vocabulary with the belief that for every word there was a precise translation.

The next movement in the timeline story of theories of second language education is the *direct approach*, born from the examination of how languages were learned among children for stating that principles for first language acquisition might be applied to learning in a second. The best way to learn languages is directly through experience, and the realization of this principle is applicable in direct teaching using solely the target language. The idea of travel, of learning languages so that you can fully experience a culture is stressed. Reading and writing skills are not emphasized whereas speaking and listening are more on the focus (Richards, Rodgers, 2001). Nevertheless, there has been a lot of research that has allowed us to examine whether or not second language should be taught in the same way as the first one, and the answer is rather complex. It is indeed confirmed that learners go through a predictable development sequence just like children, but adults have resources and understanding that the child does not, and they do draw on their knowledge of their native language when trying to learn a new one.

Public schools in 1930's developed the *reading approach*, as a reaction from the direct approach given the fact that many people did not have the opportunity to travel. It was not an easy job to find teachers that knew the language and the advent of standardized testing became more and more prevalent. The teaching purpose became very practical and focused on the immediate needs. Being the probabilities of travelling very low, the goal was reduced to sitting, reading and passing the test. Albeit today the aim of language learning has changed, this method has given us many influential techniques such as skimming and scanning for getting information of a passage without reading the entire text carefully, extensive and guided reading. Certainly, general exposure to a language helps increasing understanding and acquisition and guided reading it is like reading with scaffolds.

In the '40s, at wartime, the need to have soldiers who could manage communication with French allies and interpretation of German messages grew rapidly. The need was to learn quickly and accurately focusing mainly on spoken language. The *Audio-lingual approach* was heavily influenced by the behaviorist theories of B.F. Skinner and as a matter of fact, it was based on the idea of language learning as a habit formation: from repetition to automatism. The task of the teacher was to help students form habits by providing repeatedly practice incorporating behavioural psychology using reward and reinforcements to help students form those habits.

Language studies were perceived as a severe discipline in the '60s with the *cognitive approach*. Many universities established linguistic, and language departments were provided with funding for investigative enquiry focused primarily on how the brain processes the language and how language structure and knowledge are acquired and remembered. Linguistic departments all over the world became avant-garde, leading to publications and an explosion of exciting research and fascinating ideas. Language learner strategies played a key role in this method: cognitive and metacognitive strategies that the learner uses in order to learn. For every kind of learner, there are different strategies and a different learning style.

The *affective humanistic approach* in the 1970's put great emphasis on student's feelings. The basic concept was to help students overcome their fear of language learning through an environment that would unlock the potential of their conscious and subconscious mind. It brought music, colors, food and stories, posters and costumes. The teacher was committed to student's feeling and used positive reinforcement for helping them taking risks and feel comfortable with making mistakes and dramatization to reinforce vocabulary and grammar items. An important concept was the one introduced by Krashen called the affective filter which was an attempt in explaining the emotional aspects connected with failure or success when studying a second language. It is a psychological filter that can inhibit or help the language production: when the filter is high the person experiences a situation of stress, lack of self-confidence, anxiety that leads to bad production. On the contrary when the affective filter is low, self-confidence helps the learner in the production as he is not inhibited and dares taking risks.

The *comprehension approach* is based on ideas and researches in linguistics specifically on language acquisition in children because according to Krashen's theories, students learn languages through comprehensible inputs like a child learns how to speak. An important aspect is the silent period that refers to the time when a learner is either not confident enough in his speaking ability or does not know enough language, so he is mostly silent. During this time, learners are exposed to multiples comprehensible inputs and are forming connections in their mind about grammar rules and vocabulary of the target language. As they learn the language they will begin to understand rules and when ready, they will try communication.

In the early '80s the focus on the overall goal of using language, is the communication of meanings. The approach that began to spread is called *communicative approach* and it is the one still preferred today. People began to realize that effective communication required more than just a knowledge of vocabulary and grammar along with various ways to communicate similar meanings. With globalization people were encountering situations where they needed to speak a foreign language for work or for travel. For this motive, learning material becomes as close to real world as possible (called authentic material) and the information is so abundant that is even hard to tell where to find it. Many strategies, many different groups with different purposes, different learning styles and teachers are expected to be experts of all these different contexts. The content is anything that helps connecting through language: books, magazines, movies, newspapers. This approach sought to learn from all the approaches in the past: in this path we have come through deductive grammar to inductive grammar, and from writing and translation as a primarily component to speaking and communication goal as focus of the whole learning.

1.4 COMMUNICATIVE COMPETENCE

The term *competence* is very controversial, as it is generally associated with Chomsky (1980), who drew the dual distinction between *competence* and *performance*. The first term is related to the person's knowledge of the language, and the latter is the actual use in authentic situations. Advocates of communicative prospects in linguistics, have refused

this idealized concept of purely theoretical competence and eventually replaced it with the more pragmatic conception of competence given by Hymes. Possessing *communicative competence* means "knowing when to speak, when not, what to talk about with whom, when, where and in what manner" (Hymes, 1974:227). Nowadays, this notion has to be revisited: this interaction must be face-to-face, and it needs an update to the complexity of intercultural aspects for rendering the communication fluent and modern (Byrnes, 2006). Linguistic competence concerns all features of the language, including sociolinguistic competence, which is the ability to manipulate appropriate language in terms of formality and politeness. In this way, communicative competence becomes "the ability to function in a truly communicative setting" (Savignon, 1972:8) and henceforth is a dynamic exchange defined by the context. Not only knowledge about the language is essential, but also the ability to employ knowledge in a communication situation. The language teaching intention of linguistic education is nowadays identifiable in having apprentices acquire communicative competence.

1.5 INTERCULTURAL COMMUNICATION

Intercultural communication is the ability to exchange powerful messages between two individuals with different mental softwares (Caon, 2015). The need to communicate leads to the birth of the concept of intercultural competence that differs from the simple concept of communicative competence. Relational skills are integrated, in the process of opening up to the difference that changes the mindset concerning the emotional reaction of cultural diversity. For developing intercultural skills, there are vital points to follow, a real guide that leads the individual to be citizen of the world. These principles are:

- acceptance of cultural models other than one's own.
- not feeling superior and better;
- suspend the judgment;
- get to know others;
- respect the differences;
- know how to challenge one's cultural parameters;
- knowing how to relativize one's system of ideas and values;
- reject dichotomous judgments and know how to put yourself in others' shoes;
- develop empathy.

The goal of intercultural education is breaking down prejudices and stereotypes so that students identify their cultural identity and appreciate to learn about new and different realities. Between linguistic and intercultural education, the intersection lies in the concepts of language and person that cannot be broken. A person's individuality is firmly formed by the spoken language, which influences the mental patterns and takes on a value dimension for the people who speak it (Caon, 2015). With intercultural education, can we aspire to a world in which what is different is also welcomed and is not an element to be rejected and despised. In a world like ours, it is essential to be able to relate to the different, and education is the solid basis that can lead to improvement. Culture is the basis for progress. It is ignorance, not knowing the difference that brings the world to fall, a failure to sustain change. When people are deprived of culture, they hate diversity because it is perceived as a threat. Through the reading of texts from other cultures, through the study of languages, knowledge succeeds in spreading and making students curious, open and accommodating. The cultural background that we carry as baggage, is part of our identity and can never be separated from it. However, it can grow, increase and improve. In this perspective, intercultural education is essential and offers a turning point in the history of education.

1.6 GICS AND CALP

There are two peculiar classes of language proficiency whose paternity is to be given to Cummins: BICS and CALP (1986). The first one indicates Basics Interpersonal Communication Skills, listening and speaking for communication in everyday life and interpersonal connections. It is acquired quickly, especially by those experiencing several inputs in the natural environment and for children, it takes two years of immersion for developing native speaker fluency. On the other hand, Cognitive Academic Language Proficiency refers to the specific disciplinary language that is essential in order to cope with the academic requests and takes from 5 to 7 years for establishing a native level. Hence, we cannot give it for granted that whoever attains a high level of fluency in colloquial English has the same level in academic English as one is the language for communication, and the other one is the language for studies (Serragiotto, 2014:8).

This differentiation is valid for every language but acquires more meaning in the teaching field as in language education both are present: BICS for managing the class, giving instructions, for the human relationship between teacher and students; and CALP is the specific language of the subject peculiar from field to field. In CLIL context, it acquires more meaning giving the fact that CLIL lessons are meant to provide academic content and the teacher needs to master both communication skills and academic proficiency, the first in the function of the latter. Hence, in CLIL lessons, students are asked to manage BICS competencies in the first place in order to understand and manage the content. In their path, when in CLIL settings, they will promote especially their academic language proficiency, learning the micro linguistic vocabulary and the specific terminology. Their capacity of communication will grow too, as a shadow of advanced academic language proficiency.

1.7 BILINGUAL EDUCATION

Bloomfield in 1933 reports that a bilingual person has a "native-like control of two languages". François Grosjean (2008) states that "bilingualism is the regular use of two or more languages (or dialects), and bilinguals are those people who use two or more languages (or dialects) in their everyday lives" (2008:10). It has been argued that this statement is not sufficient for considering a person bilingual, because feelings play their part. Liebkind (1995) suggests that if a person feels that s/he is bilingual and other people consider that person as such, he or she is bilingual.

Implication on bilingualism have been investigated for years, and even though it is now accepted that this situation is beneficial, it was not always the case. Before the '60s being bilingual was acknowledged as a negative thing. In 1890, Professor Laurie at Cambridge University announced that for a child, the fact of living with two coexisting languages, was the most unfortunate thing because s/he would have to separate rational and spiritual growth. "Monolingualism is much richer and fertile soil" (Laurie, 1890:15) underlying the fact that bilingual children were intellectually disoriented and cognitively impaired. From 1960 on, more researches were made on the topic, and no inconsistencies were estimated between bilinguals and monolinguals, on the contrast, past errors were emphasised, and it was ascertained that bilingualism was not a defect cognitively and

intellectually. The researchers Peal and Lambert (1962) commenced an investigation regarding 110 ten-years-old bilingual and monolingual children studying in French schools in the Canadian city Montréal. Eighteen variables were taken into consideration for the analysis, and bilingual students produced higher scores in fifteen tasks. Bilinguals' intelligence has been assessed as more varied, confirming that bilingualism is beneficial rather than disadvantageous. The advantages that have been detected are communicative competences, metalinguistic, cultural, intercultural, personality, cognitive and emotional advantages. Bilinguals are excellent listeners, and they will have more opportunities for building a strong relationship with others. They are more emphatic and welcoming towards other cultures, which facilitates tolerance towards different cultures and tradition. This quality is crucial in our multicultural society where even companies prefer hiring open-minded and tolerant employees. They think critically, associating and opposing social concepts, overcoming judgements such as racism, xenophobia and intolerance (Carpenter and Torney, 1974). Besides, they control two vocabularies holding them separate because of an ability called *cognitive decentralisation* (Sorace, 2011), which enables them to be more adaptable towards diverse perspectives.

It is not surprising that bilingual families want their children being bilingual and want to enrol them in bilingual schools. Even for monolingual families, it has become a frequent practice, due to the advantages that bilingual education provides for young learners. However, the term *bilingual education* is a simple label for a complex phenomenon (Cazden &Snow, 1990). The first distinction that has to be made is the one between *transitional* and *maintenance* bilingual education (Fishman, 1976), where the first one aims to exchange the child from his mother language through cultural and social assimilation, where the latter tries to encourage the minority language in the child. If the context of acquisition is school, a high level of competence is expected.

1.8 IMMERSION EDUCATION

In immersion education the conventional school curriculum is developed using the L2 according to the theory that "children are able to learn a language in the same way as they learn the first language: (a) by being exposed to authentic input in the second language and (b) by needing to use the second language for real communicative purposes" (Snow,

1990). According to some studies, immersion students obtain significantly better results in all the linguistic skills examined (Campbell, 1985; Genesee, 1987; Snow 1990). Moreover, at later stages, they manifest a meaningful profit in their aim to use the L2 outside the classroom context and an enhancement in their self-confidence in L2 use. These immersion programmes are highly acclaimed in Canada and by far are the most efficient and successful. The system behind supports the philosophy of the initiative, given the fact that in Canada, the national languages are English and French; hence, parents want to promote the use of both. Teachers are generally native speakers in the language of instruction. However, these conditions have little resemblance to the study of a language through CLIL programs as we will see later, especially in terms of sociolinguistic and sociocultural context in which the L2 is learnt, and the authenticity of the input, especially at a phonological level. Immersion teachers are native speakers, and the use of the language is ordinarily frequent in the surrounding community. The context in which foreign language takes place has been considered an essential agent in language achievement, as there are natural contexts and classroom contexts. In immersion programmes, those contexts are vitally linked and interconnected, given the fact that the language is also spoken outside the classroom, and plenty of inputs are available from native speakers.

CHAPTER 2

II.   CONTENT LANGUAGE INTEGRATED LEARNING

The second chapter aims at giving a broad perspective on CLIL programmes and represents the theoretical core and starting point of this dissertation. In modern society, CLIL depicts a valid option and avant-garde method for teaching languages, maintaining students engaged in the subjects.

2.1 CLIL

CLIL is the acronym for *Content Language Integrated Learning* and refers to a European programme which encourages the use of foreign languages by implementing one, for teaching non-linguistic subjects. It has a dual focus to the teaching, and it became popular in the '90s when the use of a vehicular language was perceived as a tool for developing linguistic competencies while teaching curricular content (Coonan, 2010). CLIL consists of teaching mathematics, biology, history, and other subjects through the use of a foreign language already known at a basic level so that the focus is not on the language being used but on the content. There are two important definitions that we need to mention for understanding its methodology, the first one (Eurydice 2006: 8) where the vehicular responsibility of the language is stressed:

> *The acronym CLIL is used as a generic term to describe all types of provision in which a second language (a foreign, regional or minority language and/or another official language state language) is used to teach certain subjects in the curriculum other than the language lessons themselves.*

The second definition highlights the educational function and stresses out the difference between *being taught* a language and *learning* a language. The weight is placed on the methodological issues correlated with the program:

CLIL and EMILE[2] refer to any dual-focused educational context in which an additional language, thus not usually the first language of the learners involved, is used as a medium in the teaching and learning of non-language content.

The language is learnt through the content in the CALP level (Cummins, 1986) and the content through the language, in a symbiotic relationship. Collier (1995) stresses the fact that there are four preconditions to be fulfilled for guaranteeing the success of CLIL programs: a supportive socio-cultural environment; students with the first language developed to a high cognitive level; regular education integrated with the mother tongue; and cognitively challenging tasks but thickly contextualized. The theory behind these principles is given by Cummins (2000:25) saying that "the first language must not be abandoned before it is fully developed, whether the second language is introduced simultaneously or successively, early or late, in that process". The knowledge of one language reinforces other languages: this theory is commonly called *linguistic interdependence* (Cummins, 2000). For this reason, when the lack of continuous first-language development is noticed, the growth of the second language proficiency is discouraged.

Globalization and technology innovation have changed the way people learn, quite dramatically. It is crucial to take into consideration our target students: they belong to the so-called *Generation Z*[3] with a specific culture where they are particularly more comfortable with the Internet from a young age which entails technology and social media mostly. In 2001, Marc Prensky called this generation of *digital natives,* describing people growing in the digital age and acquiring familiarity with the system as children. Dealing with this generation of students means that the educational system has to undergo

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[2] *EMILE, L'enseignement d'une matière intégré à une langue étrangère*, refers to a project with the same goal as CLIL, using French as a vehicular language.

[3] *Gen*eration Z is the generation that starts from the mid-1990s to mid-2000s as starting birth years and that follows the Millennials. They have been exposed to an unprecedented number of technologies in their childhood. They are also described as a more educated but also stressed and depressed generation.

a revolution in many aspects. The way people think has changed, the way people work, tools and skills we use in the workplace. Technology needs to have a primal role, and the importance of English is stressed. Modern students are driven by active learning, collaboration, social engagement and of course, new technologies. CLIL methodology is very close to the needs of the digital generation and promotes meaningful use of technology also outside the classroom. For this reason, I pivoted my thesis on a CLIL research, as I think it is a powerful method for combining different subjects, topics, for opening students' minds and provide them with challenging inputs that eventually stimulate and motivate them to uncover their passions, in a context that is similar to them.

2.2 CLIL IN THE EUROPEAN LANDSCAPE

In the '90s, there is a shift from bilingual programs taught in the second language (L2) of the country or area under consideration to bilingual programs using a foreign language (FL) (Coonan, 2014). The positive impact of bilingual programs in border areas where learners were exposed to the L2, pressured the beginning of programs with this philosophy. Besides, in the '90s, we encounter a spreading urgency for selecting an educational model suitable for the variety of European programs, guaranteeing proficiency in more than one foreign language. The EU emboldens all citizens to be multilingual, aiming at mastering practical skills in at least two languages in addition to the mother tongue, for embracing linguistic diversity. The Eurobarometer survey conducted in 2013 makes a very crucial statement: 98% of Europeans consider useful being proficient in a foreign language for the development and growth of their children. These data are telling and showing the urgency for creating the right educational system that fosters immersion and the development of foreign languages. CLIL has become popular in European school systems as an ultimate solution for teaching languages and promoting multiculturalism.

Vehicular languages used by members of the EU in CLIL experiences can be classified in two different branches: the first ones used by native minorities officially protected, and the second ones, community languages chosen by cultural circumstances. For what concerns the first group, it refers typically to border languages, and the distribution of them is particularly sensible. For instance, in Austria they have selected Slovenian,

Croatian, Hungarian and Czech; while in the UK, the L2 are Welsh, Irish and Scottish Gaelic. Languages chosen by cultural circumstances are typically related to English, followed by Spanish, German, French and Italian. The chosen subjects differ from school to school and from class to class; nevertheless, the most popular subjects are geography, history, biology and maths.

The Eurydice research on the diffusion of CLIL in Europe (2017) restates the decisive role played by the program in accomplishing European Union's objectives in terms of language learning. CLIL depicts the teaching method that can enhance students' engagement in languages, especially helping those who do not perform well in the first language for boosting their motivation and level of self-confidence. Moreover, CLIL offers the opportunity for language exposition without the addition of further hours in the curricula.

2.3 CLIL IN ITALY

In Italy, students state that despite having studied English throughout many schooling years they lack in confidence and do not feel proficient in the foreign language. The Eurobarometer survey conducted in 2013 shows that only 22% of the Italian respondents claim to be proficient in at least two languages (European Commission, 2013). For this reason, it is necessary to find prompt solutions that will provide Italian students with tools for feeling as proficient as other European students. However, numbers show a noticeable improvement since 2005 percentages have raised from 16% to 22%, making Italy the country in which the growth was most marked. Not only it is a prerogative, but European citizens also need to be able to communicate with each other if the belief of EU is strong. Besides, the promotion of multilingualism for an integrated Europe and CLIL are solutions that mirror European language policy.

In Italy, CLIL has been used in the past involving the second language of the area, for instance, the bilingual Italian province Bolzano has a program in which German and Italian are used for the instruction of curricular subjects. The theoretical principles behind the approach suggest that by exposing students to the language, the development of such is guaranteed. Furthermore, it has been part of the Italian curriculum for almost 30 years

with the introduction of new experimental high schools in which it was employed with the novelty of using a FL as a vehicular language. Italy is the first country in the European Union in which it was adopted in high schools (Scuola secondaria di secondo grado). In 2010, the approval of legislation (DPR 89/2010) consolidated the program, and the implement of CLIL was established in high schools, in different ways for Licei Lingusitici, Licei and Istituti Tecnici.

2.4 CLIL METHODOLOGY

CLIL programs are meant to be faithful to specific characteristics: it is both languages enhanced, and language sensitive (Coonan, 2010), meaning that is it a program whose focus is agreed upon, and in the same way, there is awareness on the difficulty of genre texts. Integration of language and content, from the point of view of the teacher, means that his/her work is previously studied *ad hoc* for drawing attention to specific terminology and on the other hand, from the student's point of view, the language is new. In this way, a profound link between cognitive aspects and language is performed, and academic linguistic competence is enhanced and developed.

Numrich (1989) directs the attention to specific procedures for enhancing CLIL comprehension. The first one is called *Expectancy grammar[4] a*nd relates to the ability to predict what the teacher is saying based on prior knowledge and anticipate what will be read next. Moreover, it is indeed essential for the teacher to check comprehension by asking questions and using statements for assuring that all students are following. Text organization is essential for grasping specific patterns.

The concept of gradually giving information plays a great deal as long as CLIL is concerned. CALP needs a discrete amount of time for developing, and it needs to follow a path of increasing complexity, giving inputs step by step. The subject teacher has to cooperate synergistically with the foreign language teacher for setting up a syllabus based on a continuum from basic to complex, from general to specific.

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[4] The concept called *Expectancy Grammar* has been introduced by John W. Oller in 1979.

The choice of strategies plays a vital role in the success of a CLIL programme; it is indeed the most crucial factor. For getting around the problem of the class being in a second language, it is vital to integrate CLIL lessons with graphics, images, giving explanations and examples, and providing references. There are three main rules to be followed:

- Pre-reading and pre-listening activities for giving students comprehensible inputs (Krashen, 1985) activating pre-existing knowledge and creating expectations (Expectancy Grammar).

- During reading and listening activities: for supporting the comprehension and giving some directions to the learner. The first readings can be quick and are called skimming and scanning. They occur when the reader is trying to grasp the general meaning of the text, without focusing on the details.

- Post-reading/ post-listening: for concluding and checking the comprehension.

For all the subjects that do not need the support of texts due to their nature, such as mathematics, science, physics, it is indeed suggested to give the input in other forms. Some ideas can be: brainstorming, completing tables, regulating, selecting the right answer. The goal is to stimulate attention and to attract students cognitively. It is essential to give students a choice and to give them variety.

The CLIL approach is based on the principle introduced by Krashen (1982) in which the linguistic input given by the teacher to the students has to be comprehensible and meaningful. The teacher is in charge of giving such input. Concerning this issue, CLIL approach follows several aspects of the sheltered approach in which the teacher renders the text available for the specific audience and makes it more accessible depending on the level of linguistic competencies of the students, creating new texts. In other words, the teacher highlights core language in the content subject and makes this language available to learners. Such an operation is called *scaffolding*.

Navés (2002) states that teachers' behaviour has to inspire students to do the same, active teaching and active learning is essential: giving clear instructions, maintaining learners' engagement, communicating expectations, demonstrating, outlining, building redundancy, rephrasing scaffold. Immediate feedback is helpful for students to monitor their development. Linking every input to cultural references is vital for creating

connections to the real world, and keeps students engaged along with experiential learning tasks and problem- solving tasks. All of this will lead to collaborative learning and autonomous learning at the same time.

When CLIL is involved, language instruction is designed around non-linguistic topics and themes rather than around regular language matters. The target language becomes a tool employed by which geography or mathematics is presented. Liss Kerstin Sylvén states that "one of the most influential factors in vocabulary acquisition, and consequence in communicative competence, is the amount of exposure to the target language" (2006:48). Given the fact that CLIL students have substantially more exposure to the target language, it is clear how this method can be beneficial for developing and increasing students' range of vocabulary. Conclusively, proficient CLIL programmes experience the following ten innovations: (Navés, 2002):

1. admiration and maintenance of the learner's first language and culture;
2. mainstream elective courses;
3. long-term permanent plans and teaching staff;
4. dually adequate teachers in content and language;
5. availability of quality CLIL teaching materials;
6. qualified bilingual teachers, thoroughly expert in the language of instruction;
7. participation and leadership of educational authorities, administrators and teachers;
8. parents' assistance for the programme;
9. high teaching expectations and standards;
10. accurately fulfilled CLIL methodology.

2.4.1   Dual focus

CLIL is nonetheless a foreign language learning method, and as such, it requires to establish a bond among language curriculum and subject matter. The connection is made in an on-going manner to meet the language demands of the pupils. These requirements have to be recognised before the lesson begins, but also throughout its development as a language learning support system is built by this synergy. The purpose is, as a matter of fact, to integrate the development of both content and language. In reality, CLIL claims

to be a potent system which is more powerful than its two components, as the education provided goes beyond the language and content goals (Coyle, 2010). The innovation is balanced between the two components of CLIL, language and subject that need to be nurtured concurrently for developing students' knowledge in both fields. Moreover, its *dual focus* characteristic refers to how CLIL students process communication in a foreign language while acquiring new information (Sajda, 2008).

In many unfortunate cases, where CLIL does not uphold positive effects, the language fostering process is reduced to simple instructions as a consequence of poor language awareness that cannot bridge the goal of language enhancement along with subject improvement.

2.4.2   Rule of Forgetting

In 1983, Krashen introduced the concept called *Rule of Forgetting,* which entails the idea that the acquisition of a language is more natural when the learner forgets s/he is acquiring a language. This idea is at the bases of ludic didactics and the theoretical principles of many practical pedagogies. Being concentrated on the operative and pragmatic aspect of learning, renders the learner inattentive to the linguistic content, but at the same time, the learner uses language for managing his task. This principle is very much related to the affective filter because both principles relate to a stress-free environment. Ludic behaviour in all people, has tremendous intrinsic potential when the learner is the central subject of the whole process and, the activity is the means through which language (or some other skill) is learnt. Engaging in a playful activity distracts from the strictly linguistic content of the task since the focus is on the immediate objective of the game and its dynamics (Caon, 2004). This principle is closely connected with CLIL hypothesis: the learner forgets what s/he is genuinely learning, focusing on the content and not on the language that, nonetheless, it is acquired.

2.4.3   Organization of a CLIL module

When planning a CLIL project, there are diverse aspects to take into consideration, and that will determine its success, be it an academic unit, a module, or the whole academic year. The most critical elements to take into consideration are motivation, the context of

the country in which we are operating, organizational and methodological structures and assessment.

Believing in the project has to be the starting point: both pupils and teachers have to believe in the positive outputs that might stem from it. Motivation is undoubtedly the energy that helps students and teachers carrying and believing in such a great chance. During the very first stage of the planning, it is necessary to strategically elaborate a cultural program that has to be to integrated into the context of teaching as learning has to be perceived as a social process (Piaget, 1972). Teachers have to be aware of the intensity of the challenge and ready for handling improvements and complications. The socio-linguistic dimension of the territory is the starting point for further considerations such as human resources that will carry on the project, the selection of the chosen classes and the length of the project, be it short-term or long-term. It is essential to put emphasis on the intercultural, contextual, and linguistic benefits that could arise from a program of this kind so that students understand the importance of participating actively. What is undoubtedly peculiar about CLIL lessons is the context of instruction: classes are designed for being input-rich environments and immersion-like settings with distinct weight on meaning over form.

The second phase is more dedicated to the internal environment of the school, and the outside context, the city, the region, the country, focusing on the opportunities of the creative, organizational and methodological development. It is indeed essential to resolve the needs of the students, the appropriate content, set intentions, define teaching methods, principles for assessment and alternative strategies for guaranteeing success. It is the time for selecting, adapting and integrating materials for the formulation of a unique syllabus. CLIL students necessitate suitable material to learn English and content. The starting point has to be the content: what are my objectives? What are the learning outcomes? The next stage is linking content with communication, what kind of language do my students need? The process of selecting materials is rather demanding, as it is not sufficient to use a textbook used in the UK for instance, since the cultural approach might be different and the scholastic systems do not coincide.

Furthermore, it is unfortunate that the amount of available material suitable for satisfying the need for teaching English and content is little. Teachers will have to create their authentic material suited for the specific context and the specific students. This operation requires a great deal of time even more so because extralinguistic[5] elements will play a decisive role in making the content comprehensible and more accessible.

Graziano Serragiotto (*CLIL: apprendere insieme una lingua e contenuti non linguistici*, 2003) suggests a checklist for examining criterion and create some guidelines during the process of adaptation of the materials (look at appendix A). The principle behind it is that comprehensible inputs have a higher chance to be absorbed and learnt (Krashen, 1982) and it is indeed pointless to bombard students with too much information that will induce chaos and ineffective teaching. For this reason, nothing has to be left to chance, and every detail is meaningful. The contextual benefits are to be intended as favouring relationships between countries in the European Union, and for developing profiles of European citizenship, aware of the importance of a community (Eurydice, 2017).

The linguistic dimension intends to develop linguistic competencies of students, using the language as a tool for learning the subject. *Learning by doing[6]* suggests learning a language by studying a curricular subject, introduces a critical confrontation between the L2 and the mother tongue. It allows teachers to do a metalinguistic activity, thinking about language and raising awareness, making languages a concrete subject matter.

The third and conclusive phase is decisive for assessment and evaluation of the signs of progress noticed in the course, related to the objectives and aspirations set at the beginning (Serragiotto, 2014). The probability of gaining soft skills, both for students and teachers are high and the evidence that the more the school engages with recent projects and new horizons, the more our students will be open for new opportunities and equipped with competitive advantages and relevant interdisciplinary skills.

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[5] *Extralinguistic elements:* specific features in the communication process not strictly related to the language itself. For instance: body language, eye contact, distance between interlocutors, artefactual communication.
[6] Concept introduced by the philosopher and pedagogist John Dewey in 1916 that entails the idea that a learner acquires better while doing the activity himself, rather than listening. Active learning is preferred over passive learning and produces long-term knowledge.

For avoiding that the objectives in the curricular subject prevail in the process of language learning, it is rather useful to keep in mind Bloom's categories of cognitive processes. Those six operations in the taxonomy are: remember, understand, apply, analyze, evaluate, and create (see Chapter 3 for further description). The very last cognitive process is the end of the circle and is possible only when the others are settled. In fact, to create means to reorganize elements together into a coherent and harmonious new pattern, possible only when the level of motivation is high, enhancing language structures.

2.4.4   Use of the L1 in CLIL

The tendency has always been to give inputs in the target language without exceptions, for promoting the natural acquisition of the foreign language. Recently, however, the L1 is seen as a resource for teaching, as can be used as a tool and can help for creating connections between notions already evident in the L1 and moreover can enhance students' metalinguistic awareness. It is important to underline that teachers have to use the L1 with thriftiness and caution. As a matter of fact, the input has to be comprehensible for being effective (Krashen,1982), otherwise, it has no meaning and effect on students, but it is indeed confusing.

2.5 CLIL TEACHER

In every learning process, be it general or CLIL, three main factors are in relations: the student, the teacher and the content. Balboni (2015), suggests a diagram to manifest their relationship: an equilibrium between content and student, where the teacher plays the role of a director, keeping the balance between the other two poles.

Figure 3- *taken from "Le Sfide di Babele" showing that the teacher entails the role of keeping the balance between student and content*
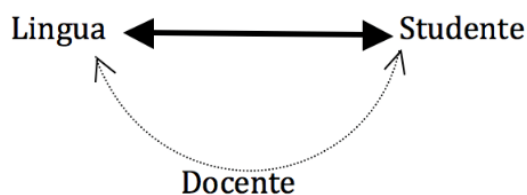
Teachers' principal qualities are the first determinant factors for students' accomplishment (Clewell & Campbell, 2004). When the context is CLIL, the situation is even more problematic. The student is not a native speaker of the vehicular language, and that is an objective supplemental difficulty, joined to the fact that the experience has to be felt with a positive attitude, and not as a constricted madness of the school system. Besides, the teacher has to manifest confidence both with language and content. The profile of the CLIL teacher has linguistic, disciplinary and methodological characteristics along with enthusiasm, loyalty, dedication and openness to change. Pedagogical and theoretical aspects of language education need to be mastered, according to Montague (1997).

There are several factors except linguistic competencies which play an essential role in this particular way of teaching: the ability to disclose an educational approach integrating language and content, collaboration with colleagues of other disciplines, technological competencies for favouring the CLIL course and lastly an understanding of a coherent, shared and integrated assessment. Not only teachers have to be proficient in the second language, but also, they have to be aware of the cognitive and psychological aspects of second language acquisition and feel involved in the project together with other teachers. The meaning is to guide students and follow their pace for avoiding an overload of stimuli and the failure of the program. Besides, the teacher's communication approach is crucial for the comprehension of the notions; idem for the way the matters are reported.

Also, teachers have to *understand how different learners learn differently* (Bradley Horn, 2010), meaning that different apprentices will advance through content and language at different steps and will necessitate many sorts and amounts of scaffolding support for managing both targets. They will need to support students for making them understand in which way they acquire best and help them finding their learning strategies.

2.5.1 Teachers' training

In Italy, the reform does not concern foreign language teachers, but the responsibility is given to non-language teachers who are required to have a specific qualification for teaching a subject in a foreign language.

The regulation proposes the attendance of a "Corso di Perfezionamento" provided by Universities in which the C1 level is a requirement for enrolment. This course is meant to prepare professors for CLIL teaching by instructing them with an articulated path of 60 CFU including 12 credits (300 hours) of formative stage. The process is different for teachers already teaching that would have to attend a 20 CFU course for mastering methodological and didactical skills. It is stressed that the CLIL teacher has to co-work in synergy with other professors.

In 2014, several courses for language and methodological advancement were established and activated for over 10.000 teachers with the clarification that also teachers with a B2 proficiency level in the language were admitted in the 20 CFU course. Moreover, language courses are taught in a blended modality: online and in presence. CLIL programs can be taught by a single teacher that in Italy has to be qualified both for the non- linguistic subject (normally geography) and for the linguistic one (commonly English). However, it can also be taught by two distinct experts in direct collaboration and cooperation throughout the course with the focus either on the language subject or on the non-language one. Teachers can be competent in different fields, or they can be of different age groups so that the youngest being brought up with high exposure to the new technology and with elastic mindset can help out older generations. They have to agree on objectives and goals from the beginning and work together *in itinere*. It is indeed required that teachers provide competent and methodical instructions for proving their high-quality profile. A key aspect for ensuring positive outcomes from these programmes is that it needs to be a long-term path: students do not learn overnight, and the teacher does not learn how to improve their teaching methods overnight. It is essential that the teaching team remains stable and continuously cooperates (Navés & Muñoz, 1999).

2.5.2 *Linguistic competencies of a CLIL teacher*

Knowing the vehicular language does not necessarily mean being equipped with the communicative linguistic competencies that are imperative for teaching. The Italian law (D.M. 10th of September, 2010, n. 249) contemplates that the CLIL teacher has to master a C1 in the foreign vehicular language, and for certain situations, a B2 level is enough (D.M. 20th of November, 2013, n. 89). Not only vocabulary is vital for teachers but the

language in its macrolinguistic context: grammatical structures and specific characteristics of text genres. For teaching in CLIL settings, language proficiency has to be developed: the teacher has to think about content, show, exemplify, describe, define, explain, reword, paraphrase, in other words, has to be able to reshape language in the most appropriate way and for every need. Linguistic flexibility plays a huge role when giving a lesson because unexpected questions can arise. Furthermore, the teacher has to follow a spontaneous approach if s/he wants to be reliable and followed by the pupils, and it is possible only when language is mastered.

It is indeed more than necessary for the teacher to be fluent and to be able to manipulate the language and create sentences without pausing or hesitating, but with a sense of self-confidence. A first official reference mentioning the topic can be found in the QCER (Decreto Direttoriale 16 aprile 101, n.6) where it is specified that the teacher needs to possess an adequate mastery of the subject matter and the specific lexicology of the foreign language. CLIL teachers are requested to master not only the vehicular language but also the mother tongue of the students in order to meet student's needs and answer in case of necessity.

2.6 CLIL STUDENT

Each teaching and learning approach that found a way in the last 20 years stresses the fact the students need to be autonomous in their learning, meaning that they are responsible for their learning (Serragiotto, 2003). This ability needs a long time for developing, and the degree of autonomy that a student develops during the CLIL program is unequivocal. It promotes autonomy in learning, meaning that the responsibility of learning is not on the teacher, but it implements motivation for developing active long- term learning. When the pupil is motivated and participates actively in the process of learning, his motivation will likely lead to active learning. However, it is not always the starting point, and many students feel the task difficult, more demanding and are demotivated. It is proved that this fear should not stop students from being motivated to learn a language and a subject synchronically, because if the teacher guides his students throughout their journey and helps them giving comprehensible inputs, their motivation will grow as soon as they realize they are learning. Teachers have to respect a first period connoted by silence, give

students their time for consolidating and processing new information and eventually be ready for creating language and content.

Cohesion and acceptance characterized the ideal class environment; every pupil needs to feel accepted and part of the class for the lesson' success. Also, the atmosphere has to be positive and cooperative so that different linguistic competencies are considered a wealth for the group and not a competitive reason for dividing the class. The more reasons pupils have for communication, the better, as it is their chance of mastering the content they have learnt (Coonan, 2010).

2.7 PARENTS' INVOLVEMENT

It may not be discernible; however, parents play a consistent role in setting and supporting CLIL programmes. Effective CLIL agenda demands shared resolution by all means involved. The most successful programmes were established because of the active parental request in enriching their children's education and curriculum. Parental involvement is crucial as parents are a very treasured resource, and when school and family cooperate, students' success is likely to happen (Montemayor, 2004). The most striking example is the Canadian French immersion case where parents strive for providing the next generation with the chance of learning a second language at a proficient level. Regarding this topic, Cummins (1996) says that "Culturally diverse parents' strong desire to contribute to their children education…care passionately" stressing the fact that involved families are key for success in the program. Moreover, when parents have bilingual backgrounds or come from different countries, their concern for their childrens' bilingual education is even greater.

2.8 ADVANTAGES

It is tricky to evaluate the linguistic gains of a CLIL programme, making a separation from its content. A research conducted in 2000 at the University of Nottingham called CLIP (Content and Language Integration Project) collected qualitative and quantitative data on how to support teachers and engage more learners and it indicated that CLIL is successful. CLIP research data were semi-structured interviews, lesson observations and were analysed using context-based analysis. The research proved that learners learn how

to use language in different contexts and different ways and that learners have a higher level of comprehensions, which enables them to deal with complex information (Nuffield Foundation, 2000).

Motivation, which is a crucial part of language learning, increases in CLIL contexts (Lasagabaster, 2009), students live the opportunity as a challenge, and it allows to raise awareness on the difficulty of their curriculum, which leads them to accept the challenge and put much more effort in their studies. The psychology of motivation defines the behaviour which drives people to reach specific goals. Motivation is defined as the "activating orientation of current life pursuits towards a positively evaluated goal state" (Rheinberg and Vollmeyer, 2018). The interpretation of two aspects is essential for drawing this accurate definition; for instance, the "positively evaluated goal state" may indicate that unwanted circumstances are to be avoided for success. The other part of the definition which brings up the goal-oriented nuance of the significate has to be handled cautiously. It is not always an activity merely instrumental in accomplishing that goal state. Two fundamental sorts of motivation are active in language learning: integrative motivation (the wish to be integrated in the target language culture) and instrumental motivation (the willingness to learn languages for individual development) (Gardner 1985, Greenfell 2002). CLIL, providing a true reliable context for language use, raises motivation converting the language as a means rather than the goal for learning, reducing anxiety and negative behaviours (Lasagabaster, 2009).

The opportunity of working autonomously, being able to make choices in their learning activities, give students the power of controlling and feeling in charge of the decision. Positive feedbacks by teachers and peers are essential for developing relevant competencies. Pertinent and challenging tasks increase the feeling of competence. Several studies (CLIP project, 2000; Jonhson & Swain, 1997; Wesche, 2001) have confirmed that engagement is best triggered in CLIL settings: confidence in language grows, and students' skills will progress more quickly due to their strong motivation working as the driving force which leads to better performances and the rise of self-appreciation. However, it happens only when the environment in the class is supportive, secure and accepting. It is shown that CLIL increases learners' confidence along with

making feel "special" and in a unique and positive situation the learner because students feel the seriousness of what they are studying.

The behavioural engagement involves students' effort, concentration, attention and willingness to asking questions. There is a secure connection between CLIL experiences and the rise of self-confidence, self-esteem and self-efficacy. These terms are interconnected but do not coincide as one. The first one, according to the Oxford dictionary, is "the feeling of trust in one's abilities, qualities and judgement". The second term is related to the subjective evaluation of one's worth from the definition given by Ulrich Orth and Richard W. Robins (2014); and the latter is the belief of one's ability to cope with stressful situation (Luszczynska, Aleksandra, Scholz, Urte and Schwarzer, Ralf, 2005, p 439).

Moreover, CLIL experiences help students broaden their perspectives on culture, life, and real-world knowledge. It boosts academic success as the mastery of academic vocabulary and critical thinking skills render curriculum more exciting and successful. Undoubtedly, it is a challenge, and for this reason, CLIL provides students with a sense of achievement and accomplishment for being able to discuss a specific topic in a foreign language.

Furthermore, CLIL strengthens interpersonal skills through collaboration. For instance, working in pairs and creativity, are both a must in our society. Culture is the underlying concept for content (subject matter, language), communication and cognition. Cultural context, content, cognition and communication are the cornerstone that makes it possible engagement to happen, leading for an accepting and motivating environment. All these concepts are connected by a set of shared attitudes and characteristics that define a group such as food, religion, language, economy, education, which means that there are multiple opportunities for linking content and culture for accomplishing specific CLIL aims. The most stressed ones are the opportunity for building intercultural knowledge, acceptance of diverse cultures, appreciation of the foreign, the development of intercultural communication skills and ultimately it contributes to study content through divergent viewpoint.

Besides, it has already been noted that CLIL is extremely European oriented (Wolff, 2007) and was born for creating cultural interconnections, for learning about different nations, for arising curiosity and shaping multicultural minds of our future by highlighting cultural awareness. It promotes multilingualism and its intercultural understanding promotes social cohesion. The comparison between different countries and the contact with native speakers are essential for understanding our society, so that learning languages becomes useful not for the sake of learning a language but for answering questions, hence language is contextualised.

It has already been mentioned that nowadays, the goal of language teaching is communicative competence. To a reasonable extent, the acclaim that CLIL is currently holding in Europe arises from the belief that this learning method ensures to develop the learners' capacity to communicate in ways that regular foreign language education does not. Its strength, is that the integration of content and language guarantees the authenticity of the purpose, in contrast to the undefined purpose of many communicative classrooms (Greenfeel, 2002, Graddol, 2006). CLIL fights the need for connection of language teaching built on grammatical progression (Lasagabaster, 2009). Furthermore, the integration of two curricula helps learners and teachers to have a whole impression of the curriculum rather than independent subjects. It contributes to creating opportunities for cross-curricular work.

2.8.1   *The development of linguistic competencies*

There are five theoretical principles that if followed, lead the program to success for what concerns language learning and are: *comprehensible input, noticing, automation, comprehensible output and exploratory talk*.

The hypothesis of the comprehensible input given by Krashen (1982) postulates that the more inputs a person is exposed to, the more he will absorb and learn. Moreover, the inputs have to be comprehensible for creating comprehensible knowledge and this second part might be rather tricky in a CLIL program where students are exposed continuously to unfamiliar vocabulary, but teachers have to guide their students in this challenge.

The phenomenon of noticing happens when the learner notices he still has a partial knowledge of the language, which is the starting point for acquisition and noticing new language features. Writing and speaking without a complete language system is unquestionably rising the noticing phenomenon of students and helping them in being conscious and aware of what they lack and what they need.

Automation implies that the learner's focus passes from strictly controlling the linguistic production to informal and meaningful communication. It happens when the language is practised for an extended period, and the learner can produce comprehensible outputs, in other words, a rich and grammatically correct language. Gradually the learner will stop using mimics and gesture and will be able to find the right words and the right grammatical structure for expressing his thoughts.

The last principle that enhances language learning within the context of CLIL programmes is *exploratory talks* (Lantolf, 2000), suggesting meaningful discussion between students to confront thoughts, opinions, learning from other pals. It represents the moment when content and language are assimilated, one whole delivery in which language is the instrument of communication, along with the subject matter, instrument of learning and cognition. Compared to *presentational talk* where the student proves his/her knowledge, exploratory talks are the moment in which a secure connection between language and content occurs as language becomes the instrument for meaningful communication (Coonan, 2014).

Jim Cummins from the University of Toronto (1991), proposed a four charts graphic where in one hand we observe a development from low linguistic demands to high linguistic demands and on the other hand, we discern development from low cognitive demands to high cognitive demands. In order for learning to take place, the teacher has to start from low cognitive demand tasks followed by low linguistic demands and only then the teacher will present tasks that are cognitively demanding but not linguistically demanding. At last, it will be the time for reaching cognitively demanding tasks using demanding language, which is CLIL highest goal (Coonan, 2014).

Figure 4- *taken from the website Generalitat de Catalunya gencat.cat representing the four charts graphic presented by Cummins in 1991*
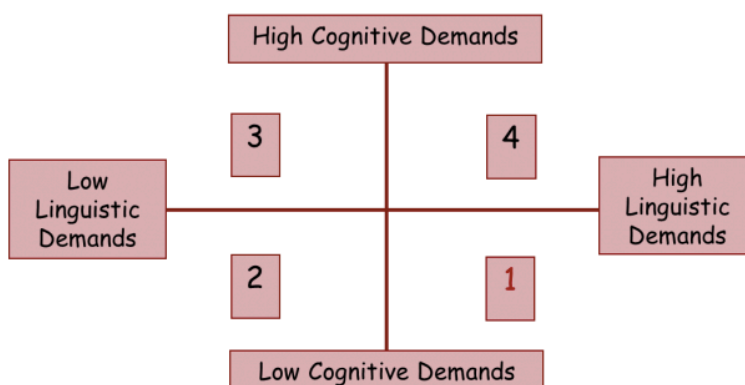
2.8.2   The cognitive impact of CLIL

There are two aspects, one positive and one negative, connected with the cognitive impact of a student learning in a CLIL context. It is positive when the objective of CLIL is fulfilled: the student discovers the second language through learning the subject, and the final competencies are more amplified from what it would be in a traditional approach. The positive impact is due to the cooperation of the cognitive processes through the language and the authenticity of the disciplinary contents, allowing them to be concrete or abstract depending on the subject. Cognitive development is fostered by the flexibility of CLIL nature and its naturalistic environment, which recognise language (mother language and foreign language) as a fundamental tool for learning. Besides, cognitively challenging tasks in authentic communicative contexts (Greenfeel, 2002, Cummins and Swain 1986) provide opportunities for developing cognitive skills. The negative consequence is the result of the complexity of learning a subject through an unfamiliar language: grammatical and lexical limitations can generate a cognitive overload: the scholar strives with paying attention to language and content concurrently, and the learning is undermined.

2.8.3   The emotional impact of CLIL

The involvement of a new language when studying a curricular subject elicits extra concerns that could be either positive or negative. Positive when the experience is identified as a new favourable opportunity with beneficial outcomes in their future career.

Fulfilment and gratification can boost motivation, and the challenge is undoubtedly to be exceeded (Lasagabaster, 2009). On the contrary, if students cannot see the whole experience has a plus opportunity and frustration achieves a certain level, the impact of CLIL is negative, and the rejection and denial can be real (Lightbown and Spada, 2006). As a new challenging experience, it might produce different effects on students, and it is essential for the teacher to monitor the process, to guide the growth and to make sure to provide understandable tasks and coherent with their language level. Moreover, the teacher must clarify how the opportunity is unique and how language proficiency might represent a treasured skill for their life. The problem becomes more significant when joined with inadequate and poor teacher proficiency or insufficient teaching strategies for promoting linguistic enhancement.

2.8.4 *Receptive vocabulary knowledge*

Researches in foreign language vocabulary assume that there is a connection between the number of words known by learners and proficiency in the language: when a learner knows many words, he can perform better in a foreign language. Moreover, there is confirmation of its authentic connection to text comprehension: students with considerable vocabulary knowledge have fewer obstacles in reading academic texts in the foreign language. Furthermore, receptive vocabulary knowledge is related to incidental word learning: learners with a more extensive vocabulary tend to acquire more words by incidental exposure (Horst, 1998).

2.9 CHALLENGES

At this point, it is clear that foreign language development happens through subject-matter learning and vice-versa, but the challenge remains in need to accept the impediments to this evolution and in the capacity to take proper approaches.

Despite all the positive outcomes and advantages that derive from this particular learning environment, some challenges and aspects need to be taken care of. The most significant studies on CLIL focus on the basic difficulties encompassing its application. Lack of teachers, insufficient training, poor teaching material, parental hesitation: building a CLIL program is not unchallenging, even for the most prepared (Mehisto, 2008).

The first significant challenge of CLIL concerns the teaching style, responsible for covering information. Teachers do not have time to scaffold learners and help them understand what they are talking about. Interaction between students plays a vital role because it is how students learn the language, through practising with their peers.

A second difficulty can arise and is the potential lack of confidence in the subject matter or the language subject from the teacher. Even if CLIL teachers are not foreign language teachers, they need to provide students with a relevant and opportune language model, which might be not such a straightforward and easy task. Phonology, pronunciation, orthography, grammar and syntax need to be accurate if presented to students. For subject teachers teaching, CLIL programs can be difficult due to their uneasiness towards techniques that language teachers use daily and that are incredibly vital such as eliciting, pair group, scaffolding, filling the gaps and listening. If they are not trained for that specific subject, they might feel insecure.

A different example is when the foreign language is demanding for subject teachers: is some cases students can have a higher level of proficiency in the foreign language. In this case, it will be hard for the teacher, but students are to be seen as a precious resource for the sake of the whole class and can even help teacher enhancing the program's success. The information-gathering instruments of a research conducted in Trentino Alto Adige in 2014 (Serragiotto, 2015), indicated the complex dynamics that create collaborative management of CLIL among teachers that is very challenging and not shared due to hierarchical and functional relationships between old and new generation colleagues, with resulting unclear roles and methodologies to be fulfilled. In the same research conducted in 2014 in Trentino Alto Adige, it emerged that another problem in CLIL programmes derives from the career system. During the interview, it appeared that some teachers complained of a weak awareness of their career possibilities in their school that would end in poor expectations for the future.

Finding materials is one of the most challenging section, as using an English textbook can result not beneficial by cause of different cultural models. Moreover, academic topics can be dealt with in different years, and the national curriculum might be different.

In a research carried out by Veronika Ziková in the Czech Republic, examining 95 questionnaires on advantages and disadvantages of CLIL it emerged that the most common disadvantage was "the anxiety for studying other subjects in English as students fear to misunderstand the content of the lesson"(2008:72). The technological support can be a proper solution for rendering the input more comprehensible: the motivation and performance of the students could be increased using new technologies, now made accessible to promote synchronous learning of language and content. The quality and quantity with which the contents are presented in such a way, could make the educational environment and the study of language and content more engaging and more accessible.

2.9.1 Assessment

Evaluation is, in general one of the crucial moments of didactic action (Serragiotto, 2014:71). Considering that CLIL is a dual-focus program, the problem of assessment arises and requires a reconsideration for allowing the language section being part of it. There is quite a controversy about assessment because of the learning of the subject matter and language advance together. What are we going to assess? The language or the subject? It is controversial because it can be done in different ways. The format assessment has to suit linguistic and content requirements and, moreover, it must be compatible with the characteristics of the subject involved (Serragiotto, 2014). When there is cooperation between two or more teachers, they have to work synergistically sharing objectives and assessment criteria.

The objectives of CLIL have a dual focus: to reach competence in the non-language subject by being able to make appropriate use of the lexis having acquired CALP competences. As a consequence, both objectives have to be assessed. Thus, the assessment has to focus on:
   a. The content in the foreign language in terms of knowledge, skills and competence allowing answers in the school language;

b. CALP competences separated from the explicit content.

For what concerns point A the teacher needs to have the competencies for assessing language which might be tricky. A suggestion (Coonan, 2010) is to employ two different marking sheets, one adjusting on content and the other on language. During assessment is suggested to map conceptual development and language development. For assessing CALP competences, the teacher has to be professionally prepared and expert on assessing language enhancement.

It is helpful to consider new types of formats, to have alternative comparisons available that are more appropriate to CLIL. Models of alternative checks include the portfolio, the teacher's observations and the self-assessment. Short (1993) elaborates some crucial abilities that are to be evaluated, and that help splitting language knowledge from the content:

- *Problem solving*: students prove they are in charge of solving problems.
- *Domain of contents:* students prove they have gained knowledge on the topic.
- *Elaboration of new concepts:* not only students domain the topic but also can use this new knowledge in other situations elaborating it.
- *Use of language:* students domain the foreign language in a BICS and CALP level.
- *Communicative competence:* students will have to prove they can share information in the target language.
- *Individual behaviour:* students are motivated and show interest.
- *Group behaviour:* students can work in teams cooperatively.
- *Attitude:* their attitude towards the subject and CLIL approach has to be evaluated.

Teachers can integrate their assessment using interview and reports at the end of the module for evaluating their motivation and engagement.

2.10   KEY FACTORS FOR THE SUCCESS

The first particularity this program requires is to be long term for being successful (Navéz & Muñoz, 1999) because it takes minimum seven years for developing a high cognitive level of proficiency in a second language and foreign-language programmes need to be

consistent and stable. Furthermore, teachers must be consistent and long-term committed in order to provide the right fundaments along with all the parties that have to join their effort. Setting high expectations for all students, no matter their cultural background or language level has been proved beneficial (Collier, 1992).

Competent and collaborative teachers, along with participative parents, are the bases for building reliable CLIL programs that can determine an advance and better performances in future careers. Organization and the choice of subjects are nevertheless crucial (Coonan, 2010). Teachers not only have to be competent in their study field, but also have to study CLIL strategies, such as scaffolding and must be aware of their crucial outcomes. Creating a strong network of competent teachers, sharing suggestions and materials can evolve into a successful step for maintaining the positive aspects of this project. Any reform, apparently well-grounded as it may be, might fail for loss of that energy and commitment, which is a needed requirement.

2.11   CLIL IN ITALIAN PRIMARY SCHOOLS

CLIL programs are not so prevalent in primary schools yet, due to the extraordinary and special efforts that are necessary for constituting a working system for younger pupils and primary school teachers for the whole five years duration.

2.11.1 IBI/EBI project

Among the most significant experiences in primary schools, the IBI/ EBI project is worth mentioning, organized by the General Direction for the Scholastic systems and the British Council Italia along with the Regional School Office for Lombardy which involved six schools of Lombardy region. The project develops from researches about positive benefits in linguistic, intercultural, social, cognitive and personal development in bilingual learning. For organizational matters, there are several factors to take into consideration when planning a CLIL program in primary schools such as the guaranteed long-term commitment for the five years of primary school, the involvement of at least 50% of the classes, and the minimal 25% of the weekly hours (Serragiotto: 2015). This project started in 2010 and involved 111 classes, 2479 pupils and 60 teachers and has been researched and monitored by the University of Modena and Reggio Emilia. The

objective of the monitoring was to provide a framework that reflected on the project and, more broadly, on bilingual education as a curricular element and teaching method. The monitoring activity investigated on motivation and attitude of pupils, staff and parents, and skills acquired by the students.

At first, the project had a positive impact on students' language skills and a direct influence on the way teachers worked, changing their attitude for the best. The monitored IBI/ EBI experiences have highlighted pleasant outcomes in terms of language skills acquired by children, who are regularly at a higher level than those generally offered for primary school without penalizing disciplinary skills. The opinions shared by administrators and professors also highlighted some innovative aspects of the process, including teamwork, new teaching methods and techniques, improving school offers and stimulating developed preparation. To conclude, we can say that the project, therefore, is not only modifying the design, the teaching practices and the materials used in the interested classes but also favouring a rethinking of the entire offer of the interested schools. Some critical points also emerged: the difficulty of finding materials for the implementation of the design according to the real training needs; the constant need to develop the linguistic-communicative skills of teachers; the need not to slow down the acquisition journey started by children in the transition to middle school. Moreover, it emerged that families were strongly motivated, as most parents chose to enrol their children for providing an excellent opportunity for greater openness of mind and early contact with a foreign language.

2.11.2 *Piano Trentino Trilingue*

A second notable example worth mentioning is the Piano Trentino Trilingue approved in 2014 in the autonomous province of Trento in which English and German were promoted and implemented. The suggestions expressed by the European Council for innovation of the processes of education in the field of foreign languages gained favourable conditions in the autonomous province of Trento that has initiated in recent years numerous initiatives of formation and development. The critical points were once again the research of human, economic and material resources; the lack of a consolidated and shared reference model; heterogeneity of approaches for the evaluation. Based on these

assumptions, the determination of a didactic model was required and developed after the case study. The research questions of the study were the following: is it possible to define a CLIL reference model in primary schools? What are the characterizing aspects of the profile of the CLIL teacher? How can teacher training be taught? In line with the selected aims and tools, the impressions of three different categories of participants (teachers, students and parents) were examined through questionnaires, interviews and focus groups as research tools.

The evaluation made by teachers showed that the predominant characteristics were: academic, professional, linguistic and technological skills necessary for adaptation to new school contexts. Furthermore, an interactive work approach is considered essential. Parents' questionnaires were filled in mainly by the mothers, and they showed that teachers' role is parents' priority. Therefore, it is fundamental a continuous update for the improvement of CLIL competencies. Children noticed a more significant commitment in concentrating on the explanations and an intense work of introspection and reflection. They were deeply involved in the development of skills necessary to follow the teacher and understanding disciplinary concepts conveyed in the foreign language. Work in pairs and cooperative activities were preferred, which strengthened the chances for the activity's success, which are valid actions that increase the quality of the student's learning.

The overall picture highlights a range of variables linked to the national context and the proficiency of the CLIL teacher. Emphasis is placed on a complex strategy that responds to the national level, institutional factors and organizational structure of the school. In fact, there is little shared collaboration between colleagues because of hierarchical and functional relationships and incomprehensibility of the roles and methodologies to be adopted. We can conclude that CLIL programmes can be activated in primary schools and present the same challenges and obstacles than secondary and high school CLIL programs. A strategy is needed, and moreover, an archive where teachers can select their didactic material is strategic, helpful and needed.

2.12   CLIL IN ITALIAN SECONDARY SCHOOLS

The outline, presented by the ex-Minister for Education, Gelmini, and established by the former Government, grants for (Ministero dell'Istruzione, dell'Università e della Ricerca, 2010):

> L'insegnamento in lingua straniera di una disciplina non linguistica compresa nell'area delle attività e degli insegnamenti obbligatori per tutti gli studenti o nell'area degli insegnamenti attivabili dalle istituzioni scolastiche nei limiti del contingente di organico ad esse annualmente assegnato.

In 2014/15 CLIL was implemented in Italian high schools (*Licei* and *Istituti Tecnici*) with the introduction of a non-linguistic discipline (DNL) in a foreign language during the last year for all schools (being the subject a *materia d'indirizzo* for Istituti Tecnici) with the exception of *Licei Linguistici* in which two non-linguistic subjects are taught in two different foreign languages.

2.13   CLIL AT UNIVERSITY

Same motives and objectives, social drive and globalization in the study field have led to developing CLIL programmes at university level, as reported by professor David Marsh. Indeed, it is one of the best ways for supporting multilingualism and intercultural mindset while fostering the use of a foreign language as it has become a prerogative not only in high schools but also at University. Moreover, studying abroad or in a foreign language encourages citizenship and the universal values of tolerance, freedom, and non-discrimination employing education. A myriad of studies has demonstrated that University students are prepared for degrees carried out in a foreign language and furthermore, the benefits that derive are undeniably relevant (Ruiz de Zarobe, Jiménez Catalán, 2009). It is evident as the number of Erasmus students in Europe is expanding along with students carrying out degrees (especially Master's Degrees) abroad (European Commission, Annual Report 2017- Statistical Annex). As this phenomenon has spread, another one has followed: the increase of University courses held in English.

Positive results have also been published in studies carried at university levels. Results from Burger and Chrétien's studies (2001) indicated that listening and reading skills improved students' oral productive skills as confronted with students attending simple English lectures. Conclusions showed that profits were meaningful when looking at skills

and syntax completion, which encourages the idea that continuous exposure of content through reading and listening activities leads to a strong enhancement of productive skills.

University students that decide to enroll in courses delivered in a foreign language have certainly some peculiar characteristics which are: shaped learning styles, implicit linguistic knowledge of their mother language and explicit linguistic knowledge of the target language, self-confidence, precise and accurate academic goals, professional goals and willingness to operate in globalized scenarios and foreign contexts.

CHAPTER 3

III.   EDUCATION IN THE 21ST CENTURY

In 2019, professors are the same as 20 years ago, using similar books, sitting on the same chairs and desks, and employing the same teaching methods. Subjects are sharply divided, and the topics are presented in watertight compartments, creating poor connections between the different disciplines. Themes are presented separately, and as a consequence, knowledge is not a complete unit but is made of unrelated fragments. This problem is present even in some universities, because it is problematic to design and propose a curriculum in which every part fits within.

This third chapter concentrates on scientific divulgation in terms of a needed organ for the education system of modern societies, and Pleiadi in particular, as a company devoted to this conception. Furthermore, the eight *Citizenship Competencies* are presented in the chapter*,* emanated in 2018 for promoting education in a context of democracy and freedom.

3.1 LANGUAGE EDUCATION IN THE 21ST CENTURY

Foreign languages are often presented in the absence of a context, and problematic outcomes such as poor English competencies from Italian students are a confirmation that something needs to be done. In the past, several English curricula concentrated on equipping learners with BICS (Cummins, 1981, 1984) that would enable them to communicate in informal settings. Students learning English abroad, have the chances to exchange BICS competencies, while students, generally with low socio-economic backgrounds or no opportunity for travelling, encounter problems. They have little opportunities for practising informal language and often fail to do so. However, at modern times, with the increasing globalization of education, academics and course designers have concentrated on directing learners' needs and objectives to real-world language-learning. Even students not directly connected to the language world, have to face the reality that the prevalence of academic material and technical information is published in English (Hyland, 2006, 2009; Snow and Uccelli, 2009; Tardy 2004). As a result, EFL teachers began to notice that students are interested in learning English mostly for

accessing academic information, which is written in English. For this reason, CALP competencies have now gained great importance for what concerns language learning.

In 1992, the *Maastricht Treaty,* (officially the Treaty on European Union) eliminated the restrictions that limited the mobility of European residents among countries of the EU. In 1995, the European Commission communicated the white paper, appending additional necessity to the matter by its claim that European citizens be proficient in at least three languages (mother tongue plus two). In the same period, a substantial introduction (Recommendation R/98/6 of the Committee of Ministers) advocated by the European Commission and the Council of Europe evaluated the opportunity of including FLMI[7] into their education systems. Modern models, considerably modified from the traditional bilingual education models, have developed as a consequence. Observations on FLMI have advanced since the 1990s pointing to CLIL project, a proposition that has been notified by different educational branches.

In our globalized, connected and rapidly evolving world, an always rising number of people want or need to learn languages. The education authorities are facing the challenge of transforming schools in environments open to languages, in which all children can learn at least two foreign languages and strengthen the ability to learn others in the future. Welcoming and democratic societies cannot develop without encouraging admiration for diversity and inclusiveness in education. In this regard, the possibility of teaching and learning several languages can be a powerful instrument for helping integration and free circulation, which could be beneficial for all European citizens. CLIL is one of the answers to the pressing challenges of a changing and dynamic society.

3.2 PLEIADI AND SCIENTIFIC DIVULGATION

Pleiadi- Science Farmer- is an Italian society devoted to scientific dissemination with a practical and experimental approach. It was born in 2009 in Padua from the collaboration of Alessio Scaboro and Lucio Biondaro, newly graduated in physics and astrophysics they shared the dream of disseminating science to the youngest generations with a practical approach. They started from scratch, and they have now built a society which is

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[7] FLMI refers to Foreign Language Medium Instruction.

responsible for organizing events all around Italy, collaborating with schools, universities, museums, private and public entities. Pleiadi operates in the fields of education and communication offering educational activities, interactive and experimental laboratories, events, travelling planetarium, fairs, interactive exhibitions, publishing and educational projects for knowledge dissemination.

Pleiadi activities are mainly addressed to children and schools as their primary concern is to put experience at the centre of the learning moment. The idea of this project develops from the need for building new dialogues and confrontations between science, society and his citizens. The pedagogy promoted is student-centred, in line with the guidelines of MIUR (Ministry of Education) which implies the overcoming of mostly theoretical and abstract teaching, starting from equipping students with independence in learning and the ability to descend knowledge from real problems. Even more important if children are the public, it has become a prerogative to create a bond between future generations and scientific knowledge. Moreover, it was essential to address the projects to children and their parents, in order to educate the society most effectively.

Pleiadi projects are thoughtfully designed for creating an unforgettable experience, paying particular attention to the smallest detail, from the explainer's clothes to the stand set up which has to catch the attention and result elegantly prepared.

3.3 PLEIADI'S PHILOSOPHY

Pleiadi works with an approach that focuses on the experimental component, establishing practical experience at the centre of the exposure. Studies confirm that thanks to the practical component, imagination enhances the capacity of elaborating knowledge. We took into consideration the study yield by UChicago in April 2015, upholding that brain scans show a significant activity when students experience new concepts with a hands-on approach. There is a connection between having a natural approach to learning with depth and better understanding. Sensory and motor-related brain sectors are activated and lead to considerably deeper learning and comprehension.

In other words, some competencies cannot be developed with a textbook or a manual, but only through attempts, failures and achievements one can genuinely learn and create long-term knowledge. Only through a child's discovery can he child learn and remember such involvement, and only through curiosity can a child be amazed. Imagination is a muscle, and like every muscle, it can be trained and enlarged. The same principle applies to when a child is learning how to ride a bike: only through his personal experience, only by falling and getting on his bike again will he learn how to ride successfully (Lucio Biondaro, 2015). Whatever we feel, see and think is a complex outcome of what we have experienced. Pleiadi's approach encourages above all to develop a mindset that embraces creativity, innovation, and risk-taking.

3.4 THE IMPORTANCE OF SCIENTIFIC DISSEMINATION

Effective dissemination of knowledge involves the ability to convey information to the biggest audience possible, employing diverse communication strategies. The beginning of this passage can be traced back to the *Enlightenment* movement, born in Paris in the 17th century, besides the fact that at the time, new knowledge was restricted only for the privileged people. Available knowledge for everyone was the dream and goal of the enlightenment movement (Robert Darnton, 2015), which is slowly being accomplished today with digitalization. Along with Enlightenment, *Positivism* made possible that culture was available also for ordinary people with the utilitarian perspective that made clear how the development of scientific competencies could qualify the working class. A turning point for the movement was definitely at the end of the '800 when the Great Exhibitions confirmed the importance of spreading knowledge and that investments in science bore satisfactory fruit.

In the 21st century, the importance of sharing knowledge has been proved correct in every field. The dissemination of information is a dynamic process that certainly has effects on innovation. It spreads culture arising curiosity and bridging between specialists and not. It is the realization of the principle of democratization of society, involving different social classes and integrating from a particular point of view, levelling up all the societal differences and promoting egalitarianism. The essence of science is to be communicated and thus verified, discussed, validated or not. The dream of illuminists is becoming a

reality and scientists have to take responsibility for informing the big public. This is the goal of Pleiadi and other scientific communities devoted to divulgation.

3.4.1   Climate change denial

An example of knowledge that needs to be spread for a urgent intervention from society is referred to climate change. Many people ignore the evidence that we are severely damaging our planet, and data should be spread.

In the era we are living in, humankind is facing new unprecedented obstacles and complications that have been denied and kept away for long. Global warming and climate change are the most important and severe problems we are facing, and at the very same time ignoring, however it is the responsibility of us all to recognize the problem, spread the word and take action. Amitav Gosh, Indian journalist and anthropologist writes in his book *The Great Derangement Climate Change and the Unthinkable* that we have entered a new era called *Anthropocene* characterized by the unprecedented fact that we have come to play a decisive role in the planet's ecology and geology. Human actions have become so pervasive and severe that are pushing our Earth into *terra incognita*, unknown and unthinkable. Humans have become geological agents on the planet, the primary determinant agent responsible for what is happening, which is scary, and that is the reason why we tend to deny the obvious. However, denial is not the answer, and everyone is responsible for accepting that climate change is real: humanity has so far played the role of planetary killer, concerned only with its short-term survival. Once, it was a belief that individual chronologies were insignificant compared with the vastness of geological time, but this is not true anymore. Nowadays, humans have become geological agents, and we are changing the most basic physical processes of the Earth (Amitav Gosh, 2016). Ice, which covers 10 per cent of Earth's surface is disappearing rapidly, given the fact that ice shelf disintegration is a new phenomenon associated with climate change. We have altered the chemical configuration of our atmosphere, causing sea level to rise, ice to melt and climate to change. Amitav Gosh says that "climate change is uncanny: abnormal weather conditions and the high-carbon emissions are extremely familiar events and yet have now been given a new menace and uncertainty. Climate change is hard to keep in our head for very long". It is wicked because the time horizon in which effective action

can be taken is very narrow: every year that passes without a drastic reduction in global emissions makes catastrophe more certain.

Scientific divulgation and culture have the responsibility to spread this kind of awareness: we are destroying our world, and we need to take action, and action comes from information and recognition. Many climate activists are already proceeding in the right direction, which gives hope, of reducing emissions without sacrificing considerations of equity. The hope for the new generations is that they will look upon the world with brighter eyes, unlike those who preceded them, and they will find expression and spread it in any possible way. The best way to prevent the problems we are creating is by instructing future generations and raise awareness in what needs to be dealt with immediately.

Pleiadi, along with other museums and associations, is trying to put the focus of its activities on global warming so that our children can be more aware, respectful and attentive than our generation. From information comes awareness and along with that, action. We can see initiative vefrom the young girl Greta Thunberg fighting for our mother earth. Future generations need to be informed, and the hope is that they will fight harder than us.

3.4.2   Pleiadi actions for climate change

The urgency is real; thus, Pleiadi is shaping multiples interactive laboratories and exhibitions with exhibits hands-on related to the theme of climate change for approaching, educate and sensitize the audience. The first educative project that goes directly to schools is called "EOS Clima e Ambiente" and is addressed to kindergartens, primary schools, secondary schools and high schools. It is partnered with *Centro Epson Meteo* and focuses on translating a problematic subject to different audiences. The spotlight is the connection between climate and the responsible consumption of energy. Practical and actual examples are presented to students, in different ways according to their age and with different examples. The second project addressed to schools is called *Vivigas: scuola ed energia* focusing on the different renewable and sustainable energy sources that lead us to a less polluted and healthier world. Another important event held

by Pleiadi is called *Climatic game* which is a quiz in which all the questions presented are curious facts about causes and developments of climate change. Some of the inquiries are about carbon footprint, greenhouse gas, fossil fuel, and renewable energy resources. Again, the emphasis is on spreading information and raising awareness while playing. *Elemento Acqua* is an interactive exhibition dedicated entirely to use water with a sustainable approach. It is an educational journey in the world of water, from its physical characteristics to its significant current development connected with climate change and energy saving. *Il mondo che verrà* is another product of Pleaidi, shaped for children and aimed to make them play and have fun while discovering how we can save our planet. There is a box arriving from 2119 and children can perceive the future we will be dealing with if we do not take actions. The experience is compelling and shocking at times, both for them and their parents. *Lo zaino ecologico* is another crucial exhibit that Pleiadi has created for the event *Risvegli* at the Orto Botanico di Padova. It consists of a room with a wardrobe furnished with many objects and two backpacks to be filled with such objects. Every item is connected with a sack which weight is 1/10 of the carbon dioxide required for its production. The result is that children fill their backpack with everything they consume or use daily and end up not being able to lift it from its colossal heaviness. They are usually shocked and begin to ask many questions. This is undoubtedly a starting point that cannot be considered the destination but is decisive and powerful.

3.5 THE 8 KEY COMPETENCE SKILLS

The Council of the European Union approves a new Recommendation on key competencies for lifelong learning (22nd of May, 2018) which are relevant for this research and very much connected with the UpGrade project. They are called *Citizenship Competencies* and relate to the importance of freedom for all people, within the culture of democracy.

1. *Communication in the mother tongue*: employ lexical and expressive knowledge of the mother tongue according to the communication demands in the social, cultural, scientific, economic and technological contexts. It designates the capacity to interact and relate efficiently with others appropriately and creatively. Its construction forms the basis for subsequent learning and further linguistic communication.

2. *Communication in foreign languages*: Master the English language and another (having at least a B2 level according to the CEFR[8]) community language for communicative purposes to interact in different fields and contexts of study and work. It is based on the ability to comprehend, express, and explain ideas, thoughts, opinions, experiences and feelings in both oral and written form within a proper array of social and cultural contexts. A resolute approach includes the recognition of cultural diversity as well as enthusiasm and interest in other languages, leading to intercultural communication. Besides, it assumes admiration for the personal language outline, including respect for language minorities or coming from a migration context. (Council Recommendation for the key competencies, 2018).

3. *Mathematical competence and necessary skills in science and technology*: the ability to use the language and methods of mathematics to order and evaluate qualitative and quantitative information to resolve a range of obstacles in daily situations. It is the ability to use the strategies of rational principles to deal with problematical situations, producing suitable resolutions. Science competencies lead to the capacity to describe the environment around us through a set of principles and methodologies, for instance, observation and experimentation, to recognise problems and draw results, based on empirical evidence.

4. *Digital competence*: produce and have confidence in multimedia communication tools and online communication, as well for researching and implement digital competences in study activities. It is essential to recognise how digital technologies can improve communication, creativity and change in terms of opportunities, boundaries and uncertainties. General principles, mechanisms and logic that underlie digital technologies are essential with a critical approach to the legality, reliability and impact of information.

5. *Learning how to learn*: actively participate in all kind of activities with a personal contribution, using information from different sources and organise learning in order for it to be effective. Individual, social and the ability to learning how to learn refers to the capacity to consider oneself efficiently managing time and

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[8] *CEFR* (Common European Framework of Reference) is a system used to evaluate the skills achieved by students of foreign languages.

managing personal learning and professional career. It incorporates the strength to cope with uncertainty and complexity, to improve physical and emotional well-being maintaining an orientation for the future, always favouring an inclusive context. This competence is built on a positive outlook towards personal, social and physical happiness and towards permanent learning.

6. *Social and civic skills*: behave in a free and responsible way, recognising and observing precepts and regulations, with particular reference to the Constitution. Cooperate and participate by understanding people's divergent points of view. Competence in themes of citizenship commits to the strength to be responsible citizens fully participating in civic and social life, keeping in mind global evolution and sustainability. It presumes the recognition of the shared values of Europe, (expressed in the Charter of Fundamental Rights of the European Union, 2000) including the consciousness of present situations and the critical understanding of the main events in the world and encompasses these values with social and political movements, as well as sustainable systems, especially climate change and its causes. Awareness of European integration is vital, concurrently with the recognition of heterogeneity and social identities in Europe and the world. For this competence, it is required the capacity to engage entirely with others for managing a shared interest, such as sustainable development of society. This presupposes the ability to critical thinking and integrated problem-solving skills, as well as the ability to develop topics and to participate constructively in community activities.

7. *Spirit of initiative and entrepreneurship*: refers to the ability to work according to ideas and opportunities and convert them into benefits for others. It has its foundations in creativity, critical thinking and problem solving, spirit of initiative and perseverance, as well as attitude toward team-working in a context of innovation. Entrepreneurial competence assumes the recognition that there are many chances and circumstances in which it is reasonable to convert ideas into achievements. An entrepreneurial mindset is defined by spirit of initiative, self-awareness, proactivity, vision, determination and resolution in accomplishing purposes. Solving difficulties confronted in life and work suggesting resolutions; evaluating risks and possibilities; picking from various alternatives having to

make choices, acting with flexibility; designing and planning to evaluate the resources in the environment. Motivating others and enhancing their ideas is crucial for empathizing and accepting responsibilities.

8. *Cultural awareness and expression*: indicate an understanding and admiration for how ideas and applications are expressed creatively, in various cultures and within a complete set of arts and cultural forms. It assumes the duty to understand, develop and express different ideas comprehending the role they undertake in society. This competence requires awareness of local, national, regional and European cultures, including their expressive heritage and their traditions and cultural goods. It is vital to keep an open and respectful position towards the distinct displays of cultures keeping an ethical and responsible approach. A positive attitude includes demonstrating a genuine interest in what is different, embracing new possibilities and displaying enthusiasm to join cultural events. This competence entails the recognition of the potential of artistic and environmental assets, for their individual use and improvement. It aims at establishing connections between locals, national and international customs, both in an intercultural prospect and for study and job mobility. It highlights the importance of recognising the geographical, biological, territorial aspects of the natural and anthropic context, the connections with demographic, economic, social, cultural structures and the alterations that occurred over time. Understand the communicative, cultural and relational aspects of bodily expressiveness and the effect that the practice of sports activity has for individual and collective wellness.

Promoting the *Citizenship Competencies* at school suggests improving the ethics of democracy, contributing to amplifying opinions welcoming fairness and justice, making sure that all students possess the knowledge that enables the understanding of the complexity of the cultural setting in which they are immersed and that makes them capable of evaluating, judging and making choices. These competencies are not learnt directly, but they develop in a journey of significant experiences where knowledge from different fields is employed. As the EU communication (22nd of May, 2018) stated, investment in education for developing skills like the mentioned competencies, determines Europe's possibilities to increase productivity and trigger innovation.

The UpGrade project is in line with the key competences for promoting citizenship competence, as it is mainly on learning how to learn, the spirit of initiative and cultural awareness and expression. If the idea of employing the project in English comes from the acknowledgement that one competence is missing. If the project will be taught in the English language, another key competence will be fulfilled, and the project will also foster the communication in a foreign language.

3.6 WHAT IS A DIDACTIC LAB?

Generally, the idea of a didactic laboratory is connected to a place where exciting and different activities take place. However, in the last years, the idea of an educational practice based on a laboratory approach has been asserted. It takes the form of the research and learning environment whose focal point is making the most of the methodological aspects (Jonassen, 2000). This characteristic is vital for the innovation process in the training field; it completes the development of the acquisition of the competence required to teachers for the implementation of various teaching situations and it improves the motivation of the students in learning within a cooperative environment.

The term laboratory defines a situational context rather than a position and the feeling of participating to a lab rather than being in a lab. The lab has to be perceived as a context, map, behaviour of being proactive and thoughtful. The Italian pedagogist Daniele Novara asserts that "the school has to be a laboratory rather than a conference room", where the teacher has the role of the director, able to disappear from the scene while students are working, because they are the true protagonist. Students have a different role; they are actively autonomous, responsible and collaborative. The exercise they are asked to complete is not only manual but cognitive. The learning that comes from this type of activity is significant, natural; pupils are not asked to learn for the sake of learning but for the sake of doing. The fact of being outside the traditional context of the classroom leads the pupils to think outside the box and to feel allowed to commit mistakes and try different pathways for solving problems. Knowledge is contextualized; it is not coming from words but realities. It is not dull, and the novelty of this method is that it ignites the fire of curiosity. A motivational state of curiosity provokes an explorative bustle for

overcoming uncertainty and conflict through seeking new information. The input has to be of medium complexity; when it is too simple, it can be tedious and monotonous, when it is too difficult (for instance when the environment is too complicated or different) it can be scary and inhibitory.

The following elements define laboratory activities and outline a distinction from traditional teaching (Pearson Academy, 2012):

- The active role of the student;
- No strict constraint of time for the realization of a product;
- Use of tools;
- Autonomy in the performance and the assumption of responsibility for the result;
- Integrated use of operational and cognitive skills;
- Contextualized use of theoretical principles for practical activities;
- Collaboration with peers;

In conclusion, laboratory teaching is a way of teaching where pupils seize new information from the context of its use, asking questions, making assumptions, and elaborating solutions. In this particular point, laboratory teaching highlights major differences from traditional teaching, where knowledge is presented isolating it from its use. According to laboratory teaching, students work to generate a product. However, the focus does remain the product, but it is the pretext for learning, a motivation for the activities and the actual real focus in the process by which pupils seize the academic content and strengthen cognitive, social and individual skills. In the process of organization and reorganization of his knowledge, the student has to identify and select the information and has to compare them with his scientific knowledge and then look for a new arrangement in the structure.

3.6.1 Reasons why we need new forms of instruction

The academic situation from an external point of view might look proper and adequate: high school graduating students choose to study at college, and this number increases (Fink, 2003). When we change the perspective and look at the circumstances from an

internal viewpoint, the picture appears disturbing. In 2006, Derek Bok conducted a research[9], which analyzed how well American students completed education goals, the results showed they are underachieving learning. This study implies that modern practices in education are not creating long term knowledge. The underlying problem is that although teachers want their students to achieve more distinct kinds of learning, they stick to teaching habits that are not valid at supporting such learning. High-quality teaching and good learning should: maintain information after the class is completed, strengthen the capability to shift knowledge to new circumstances, develop problem-solving skills and achieve effective results, such as motivation for further learning. Underneath each of these concerns, there is a pressing deficit for students to undergo a meaningful learning experience. If this occurred more regularly and consistently, everyone would be immensely more contented with the condition of higher education.

3.6.2   Significant Learning

Significant learning experiences outcome when teaching appears in "a learning experience resulting in something truly significant in terms of the students' lives" (Dee Fink, 2003). Researches on learning, elaborated in recent decades, have progressively discarded several beliefs on which the new school is established, highlighting how information acquisition is never parted from the context of use. Significant knowledge is established while the activity takes place in the settings of its use so that it acquires meaning. Learning is driven by the need to take theory into practice, as it acquires meaning in activities, not in contents. With this approach, it is clear that people do not learn for the sake of knowing, but for the sake of doing something.

Significant learning experiences presented by Dee Fink (2003) are characterized by:

a.   Engaging;
b.   Long-lasting learning;
c.   Value in life;
d.   The high energy level in the class;

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[9] Derek Bok, the previous headmaster in Harvard, conducted a research published in the book called *Our Underachieving Colleges: A Candid Look at How Much Students Learn and Why They Should Be Learning More.*

e. Aimed at preparing the student for the marketplace;

f. Enhance tolerance for a thoughtful citizen of a multicultural society;

g. Enhance collaborative work for thoughtful social interactions;

Bloom (1956) promotes the existence of three domains of learning: cognitive, affective and psychomotor, which correspond to knowledge, attitude and skills, to be seen as objectives of the learning process. The cognitive domain has been studied further and classified in six categories ordered by the degree of difficulty. Bloom' s student Lorin Anderson, revisited the names of the categories for creating what is now called Bloom's Taxonomy of learning domains (1956). It is a hierarchical system of cognitive skills that supports teachers' instruction and students' learning. The cognitive skills in the sequence are: remembering, understanding, applying, analyzing, evaluating, creating. The system is beneficial for designing educational programs.

Figure 5- *Image of the hierarchical system of cognitive skills created by Bloom (1956) taken from the University library of Maryland University*
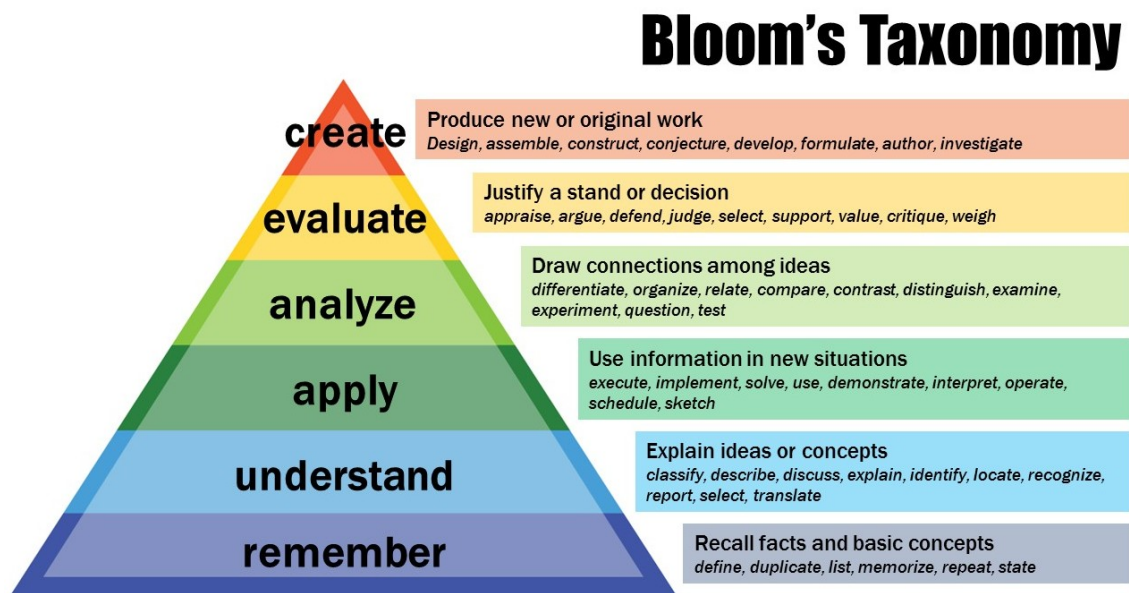
Professor Dee Fink takes inspiration from this platform and plasm it according to his principles of *significant learning* for elaborating Fink's Taxonomy, adding six levels that follow:

1. *Foundational knowledge* focuses on the capacity to understand and retain new information (principles, terminology and new concepts);
2. *The application* aims at transforming new information into practice. This level covers growing specific skills or learning how to handle complicated tasks through various kind of thinking;
3. *Integration* highlights the importance of human contact in everyday life, that has to be trained from an early age;
4. *Human dimension* entails interactions with others as new perspectives are fundamental for acceptance and for developing the personal dimension (responsibility of one's own choices) and the social dimension which together form the human dimension;
5. *Caring* about something new or in a new way is a prerequisite for an open and positive attitude towards learning. The learner develops new feelings and interests during the learning process;
6. *Learning how to learn* is the last level when learners are engaged and independent and learn to self-direct their learning.

Fink's taxonomy of significant learning aims at offering teachers a set of new terms for setting goals for their courses, implementing a learning-centred education.

Figure 6- *Fink's Taxonomy*

Students acquire best when engaging in purposeful activities which relate do adulthood activities in the real world. Compatible with what already mentioned, David Jonassen suggests:

a. To give space for constructing knowledge, not for reproducing it;
b. To avoid hyper-simplification;
c. To work with authentic material and tasks;
d. To avoid instruction sequences;
e. To activate reflection;
f. To promote the formation of contextualized knowledge;
g. To promote collaborative working.

3.6.3   *Motivation in a didactic laboratory*

"How do we know when students are motivated? They pay attention, they begin working on tasks immediately, ask questions and volunteer answers, and appear to be happy and eager" (Williams & Williams, 2011). Motivation is the most critical factor that teachers can target for promoting learning. Several approaches have been hypothesized to define motivation for answering the question: what is the best procedure to motivate students? Williams (2011), states that the five crucial factors that define motivation are: student, teacher, content, method and setting. For instance, the learner has to have access to knowledge; the teacher must be trained, inspirational and dedicated; the content has to be stimulating and relevant for students' needs; the method has to be engaging, entertaining and exciting, and the context has to be positive, safe and stimulating.

Motivation and interest shown by pupils are essential for facing the specific situation and learning itself. Affective and motivational variables are indirect abilities which become vital for every subject. The laboratory approach takes the shape of a workshop organized in tasks, from the formulation of the idea to the definition of the objects to achieve, available resources analysis and supplies to be gathered. The experimentation is mainly cognitive as students organize and reorganize their knowledge continuously. The process is supported by the emotional involvement, enjoyment and curiosity of both the individual and the group for the discovery and the achievement of a shared objective.

3.6.4 Creativity

Creativity affects cognitive processes that convert one's understanding of the world. Creativity presents itself to different degrees in different individuals, but it is the result of several factors among which stands out the social and cultural environment of the person. The richness of stimuli, collection of experiences, the capacity of elaborating data for new contexts, joined to the mastery of communication abilities can implement creativity skills (Boud, Keogh, Walker, 1985). It is incredibly vital that people can always draw from their own experiences, and this facilitates their adaptation to the surrounding world, repeating patterns in different circumstances, combining the old with the new. The brain is, in fact, an organ designed for combining, reworking, learning and readapting. This creative faculty, which is an essential condition of living, is called imagination by psychologists. It crosses whatever is narrowed by the term *routine* and creates something new. The higher the wealth of experiences, the more imagination and creativity one has. Essential to underline how much creativity gives joy to humankind. Some teachers tend to hinder creativity by concentrating on the reproduction of information and obedience in class. Is it acceptable to omit creativity from the classroom? The answer is no, especially in our high-stimulation society; the need for nurturing creativity is real. Children are continuously exposed to new stimuli, and the time for processing old ones decreases. The reaction is that there is more limited time to think and create new ideas. Educators have to nurture creativity in the classroom in an era of fast technological development where children are more inattentive and hyper-stimulated. The main goal is to make students ask questions and stay inquisitive. The experiment is always the starting point that raises questions and curiosity, and even when a child goes home without answers, but with many questions, it is a victory. For this reason, didactic laboratories have further positive impacts on a deep level of children's mind. Bruner (2009) asserts that knowledge is discovery with curiosity and sets an educational model based on the use of verification of hypothesis for going beyond the given information.

3.6.5 Teacher of a didactic lab

"We will not meet the needs for more and better higher education until professors become designers of learning experiences and not teachers" (Larry Spence, 2001). Teaching with this approach implies for teachers to restructure the professional identity and its

educational applications. Indeed, the conceptual presupposition of teaching has to be readjusted to the convictions of what learning means, and how the teaching practices are successfully applied. The role of the teacher undergoes a requalification of great importance as will be asked for a short dedication to the display of the contents, which is usually engaging for teachers. It is crucial to give students space and opportunities for eliciting an active role, and gradually predisposing responsibility of the outcomes to students, encouraging continuous reflection on activities. The teacher should embolden students to cooperate, evaluating options in groups, handling conflicts and taking responsibility for fostering teamwork.

CHAPTER 4

IV.   UPGRADE

The fourth chapter displays the project under consideration, which I delivered last year to more than 50 classes in the Italian language, and the willingness is to upgrade it in English for meeting the eight *Citizenship Competencies* and provide students with a developed, complete and democratic program.

4.1 WHAT IS UPGRADE?

UpGrade is a financial and entrepreneurial education project promoted by Cariverona Foundation[10] designed for primary, secondary and high schools by Pleiadi. It approaches children of different ages about the connection between money, work, personal accomplishment, entrepreneurship and underlying mechanisms of the world of economy and finance. UpGrade focuses on children's ambitions, the projections they have of themselves for the future, establishing a relationship with the economic and social ecosystem in which they live and will live.

The project responds to the need of introducing the "adults of tomorrow" to some fundamental notions relating to a world which is still unknown to them. Financial and economic education are essential and contemporary so that they represent one of the three key points, along with foreign languages and computer programming, of the fourth point document "Rethinking what is learned at school" by the Renzi government. The educational objective is to make students the real protagonists and promoters capable of shaping their future; for this reason, the project is also a potent tool for supporting school orientation activities.

Figure 7- *The UpGrade logo*

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[10] Cariverona Foundation of Verona Vicenza Belluno and Ancona is a private non-profit organization that pursues aims of social utility and promotion of economic development.

The project brings together diverse notions for elaborating a multidisciplinary and cooperative project. Implications of finance, economy, maths and history are delivered following the scientific method based on discovery and attempts.

UpGrade has been designed because of a need from modern society, that requires students to be the skilled citizen of the world. The main protagonists of the project are pupils of primary school (6-10), secondary school (11-13) and high school (14-19) as language and activities are suited and specifically designed for their age and the notions they have already learnt at school. It is designed for using tools and language of financial education with the attentiveness to fulfilling specific educational needs: education to citizenship in primary school and orientation in secondary school. Right language and practical approaches are vital for creating the fundaments of tomorrow's adults.

In this panorama, the project expects to establish and intensify interaction activities with the reference territories and to design networking and involvement activities for a community of its own. The project must arrive in the streets and to families, to carry out operations to reinforce financial and family budgeting skills, as well as to increase the social pact between the various actors involved in the social and educational integration of individuals. The project targets even include teachers and families because the goal is that the communication flow reaches even the extra-scholastic environment: here the messages arrive either by rebound, through the story of children and directly, through a series of interactive and in-depth tools, and materials that students bring home. The implementation of this policy implicates a stronger relationship between schools and families that accompany the process of design development of their children. Building the target audience implies more possibilities to measure the consequences and dynamics in the years to come.

For improving the proposal in terms of quality, the working group has conceived a scientific committee that is contributing to bring inputs and engaging stimuli as well as to favour measurement and evaluation processes *in itinere*. The scientific committee is composed of:
-   Alberto Lanzavecchia, researcher of economics of financial intermediaries

and corporate finance at Padua University;

- Giovanni Pontara, member of the General Council of the Cariverona Foundation, administrator of the studies in Verona province;
- Emanuela Rinaldi, University researcher in sociology of culture and communication processes at Udine University;
- Giulio Tagliavini, professor of economics of financial intermediaries in Parma University.

The outline embraces the encouragement for students to be creative, innovative, plan and manage projects for achieving goals. Those skills are essential for a citizen who lives in a globalized market, both for self-employed and employees.

The self-entrepreneurship pedagogy that inspired UpGrade, is in continuity with the EU guidelines (Communication from the commission to the European Parliament of 2012, *Rethinking Education: Investing in skills for better socio-economic outcomes*) implies the overcoming of the traditionally theoretical teacher, as well as the assumption of a different style that helps young people to acquire autonomy in learning, and the opportunity to develop fundamental skills from a young age.

The school should invest in educational strategies aimed at this purpose. For this reason, the UpGrade project supports schools in the belief that it is increasingly necessary to promote and train the spirit of initiative and entrepreneurship, one of the eight key skills for promoting European citizenship.

4.2 WHY UPGRADE?

By 2020, according to the Council Recommendations of 2018, a rising number of jobs will request higher-level skills. Consequently, education will need to reevaluate the level of success to meet this challenging requirement and supports transversal skills for providing young people with adaptive capacities for being entrepreneurial in this continually evolving world. Moreover, modern economy necessitates providing solutions for fostering youth employment while emphasizing the fulfilment of the right skills for enhancing communication between training institutions and stakeholders in the market. The relative importance that must be placed on entrepreneurial skills is stressed in the

recommendation. This is because they contribute to the fostering of business creation and employing young people. It is mentioned explicitly that entrepreneurial skills should be fostered from primary schools in order to develop in secondary and high school the awareness of a possible business career. Problem-solving and real-world tasks should be inserted in all education levels.

Annamaria Lusardi, professor of economy at the George Washington University, when interviewed in august 2019 about the importance of economy in the curriculum from a young age, states that parents of today's students, did not have to learn financial education concepts in their time, and it is, therefore, difficult to transfer financial concepts to their children. On the one hand, many parents have a great deal of hesitation in talking about money, partly because they do not feel sufficiently prepared on the subject and they do not want to take the responsibility to explain these concepts to others. On the other hand, money has often been a taboo, as people preferred to avoid the topic. Nowadays, the situation is different, and children must understand the value of money because we are having to deal with it more and more. Besides, nowadays paying with credit cards is more common than using cash, and it makes everyone lose their perception of paying, and this is one reason why financial education is gaining importance. As money is becoming more and more virtual, you cannot touch it, you cannot see it, people can pay using their watch or their phone, and ultimately people lose contact of the transitions they have made in the past. For this reason, we must make the effort in helping future generations understand the importance of financial education in the digital world. Moreover, as online transactions are faster than they used to be in the past, errors are easier to make, and children need to be prepared.

4.3 OBJECTIVES TO ACHIEVE

UpGrade denotes attention particularly to legality, to a correct perception of the value of money and social responsibility. This set of knowledge, skills and competencies establishes the spirit of adaptation and innovation, which allows persons to become aware agents throughout their financial and social life. The teaching objectives of the project are:

1. promote students' economic citizenship skills;

2. provide concrete skills through the "learn with your hands" method, promoting creativity and fantasy;

3. allow teachers to create original and effective teaching environments;

4. stimulate young people to carry out outlines that cultivate leadership, innovation and courage skills.

4.3.1 Expected results

The expected results with the fulfilment of the project, from Pleiadi's point of view, are:

- 140 laboratories programmed in primary schools, 80 labs in secondary schools and involvement of 20 high school classes in the provinces of Vicenza, Verona, Belluno and Ancona;

- realization of a final event called "the Olympic Games of the Economy" to be presented as conclusive experience;

- realization of a scholastic contest that stimulates healthy competition among students both for secondary school classes and for primary school ones;

- realization of a theatrical representation for primary school pupils and their families as a tool for interaction and dialogue with extra-scholastic agencies.

The leading indicator of effectiveness comes from the evidence of a latent entrepreneurial rate that students showed in the performance of the laboratory activities. Membership level in subsequent optional activities is manifested in the creation of a class project that is stimulated by the participation in the final competition. It is expected an extraordinary adhesion also from teachers, which manifests itself in active involvement for the additional didactic activities.

4.4 PRIMARY SCHOOL

In primary school, the child tremendously needs to improve his ability to familiarise with himself and to make free and independent choices in different contexts, in order to reach an awareness of the possibilities ahead, be self-determined, and comprehend proper knowledge on a personal and social level. It is very useful to teach financial concepts starting from everyday life, explaining why we make certain choices at the supermarket for instance, evaluating various products and different prices. The ability to have a vision

of one's quality and preferences is the effect of an exercise that education must guide, to grasp the stimuli coming from the environment and adapt them into students' life project. UpGrade in primary schools is focused on making children feel the protagonists and promoters of new ideas, providing them with some key concepts that have heard of from discussions between adults or media for understanding the meaning of basic notions like money, saving, value, bank, loan and mortgage. As these concepts are spreading in everyday life and reach their curious ears, it is useful to introduce children to this world and involve them in a micro-entrepreneurship training program which can boost their self-confidence, creativity, enthusiasm for teamwork and responsibility. The laboratory consists of two meeting of 90 minutes each, conducted by a qualified explainer expert in the fields of both economy and pedagogy. The degree of difficulty is proportionate to the age of the students, as well as the mode of communication and the vocabulary chosen. Children will be the protagonist through an educational journey that combines play and life experiences. The contents of the laboratories are developed based on the ministerial program with an interdisciplinary approach touching different subjects like mathematics, history, economy, Italian and English.

The needed material is a box in containing a tablecloth with the UpGrade logo, tools for measurements, pencils, sheets of paper, Upgrade business plan model, cash desk, envelopes, and fake printed money.

4.4.1   First meeting
The laboratory is designed in two meetings of 90 minutes each, in which in the first one, students will discover the subject by investigating on their previous knowledge about it, and then new concepts will be presented along with dynamic activities.

4.4.1.1 Focus group activity
The explainer organizes the lesson starting with the *focus group* technique, which becomes a primary tool for collecting information on students' perceptions. This technique is a gathering conversation in which the interviewer, also called moderator, interviews a collection of people composed of a restricted number of subjects. It is an especially beneficial way to examine in-depth beliefs, emotions or behaviours of a

particular community and to expand the notions underlying social thinking and behaviour (Trinchero, 2009- 101). Questions focus on what it is the subject that they will talk about during the laboratory, and the discussion begins. The inquiries which the lesson will focus on during the first half hour are:

1. *What is the economy? Have you ever heard of it?* Children typically respond yes, but they need guidance for understanding when and where. For instance, it is one of those terms they have heard of, but it is rather difficult to explain its meaning. With these constraints, the explainer guides the pupils drawing a definition of economy, expressing in words that it is a subject that generally people do not study in primary school, but in high school or at university. It is the product of diverse subjects combined. Afterwards, it is the time for developing a basic definition of economy, which is the science in charge for the behaviour of families, businesses and the state in the market (Treccani Encyclopedia) and focuses on the human behaviour in the use of resources, as they exchange, grow, distribute, and tries to define the laws that govern the best use of these resources.

2. If mathematics studies numbers, and Italian studies words, *what does economy focus on?* The answer is money, and henceforth the focus continues on the history of money that they have already studied during history classes, from barter to gold coins. Children explain what barter is, and from its explanation, they derive what the difficulties and deficiencies were and why it upgraded to coins and money.

3. The next useful question for the focus group is *what the definition of money is? How is money different from a piece of green paper*? Children assume it is because money holds the value that has been decided and agreed upon by human society, and for this reason, it is a universal medium of exchange. Value is the keyword in this case.

4.4.1.2 Measurements

The next activity requires measurements and tools. The economic world is connected to the world of maths, and it assumes the importance placed on counting and to be comfortable with numbers and measurements. Students are challenged with measurements of the classroom, from the length and width of the blackboard to the

classroom closet, windows, doors and desks. Furthermore, students measure the weight of their pencil cases and their school bags. They are provided with different tools such as a ruler, meter stick, calliper, analogic weight scale and electronic weight scale and in groups, they have to complete the task and write down their results. This activity results very optimally for children diagnosed with ADHD[11], as they actively do something in groups, moving in the class space, talking and making connections to real-life experiences.

4.4.1.3 The value and the right price

After this warm-up activity, where they move in the classroom space, touch different tools and combine their knowledge in different subjects, the *focus group* is required again for understanding their results, presenting and explaining them. Moreover, pupils are asked a new question: *is it possible to measure the value of things?* For instance, how can I measure the value of the t-shirt I am wearing? With a ruler? With a weight scale? Children realize that it is impossible to measure value in this sense, but people can estimate it, according to individual characteristics and parameters to take into account. Students start to state the fundamental characteristics that determine the price and value of things, starting from quality, material and arrive at the concept of *fashion.* When a product is fashionable, its value raises, and as a result, its price grows too. When it goes out of fashion, and the demand decreases, the value of the product drops. It is very telling and crucial to bring an example in class, which is the fidget-spinner: the toy you can spin with your fingers, nose or chin, which was the trend two years ago. The three paddle-shaped blades that spin in a central hub was designed to calm children with attention deficit hyperactivity disorder.

Furthermore, it has been framed as a potential remedy from smartphone among young people. From being a distraction that calms the nerves, it became a widely popular toy among teenagers, considering spinners cool and essential which brought the spinners in the classroom. In spring 2017, the fidget spinner had a spectacular rise, the demand increased tremendously, and the price did too. Sales have peaked, and sellers could afford to maintain a high price and benefit from the situation. Retail sales have slowed down,

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[11] *ADHD is the acronym for Attention Deficit Hyperactivity Disorder, a mental disorder in which the individual is typically excessively moving, with inappropriate behaviours, and difficulty in paying attention.*

and spinners are now selling at 1£ when they used to cost 20£, not because the utility of the spinner declined overnight but because fashion has changed. The example of the fidget spinner is vital because it puts on the focus how fashion changes the value of even simple things, and moreover, at times it should be wise to think about postponing the purchase.

After these considerations, pupils are divided into groups and are being given a little cash desk that they have to handle for estimating the value and price of some given objects that will be presented to them. The explainer shows them the image of the objects selected (bicycle, hoverboard and a pizza menu) and hands over an envelope in which pupils have to present the sum of money they consider proper for valuing that object. They cooperate and take into consideration different properties, make their judgement in a suspense environment. Results are shared and commented by the explainer, suggesting that different prices are possible in the modern market, as every seller has to decide the price. In this perspective, they most likely will have estimated right prices, if not, the explainer makes some consideration about the market and the *right price*. The concept of the right price is challenging to explain, as two people can look at the same thing and think of two different right prices. The right price is a shifting target to marketing if there are watching competitors interesting for our customers with a pattern of pricing options that hold the production lines running. For making students realize how it is perfectly reasonable that people value objects in different ways and have different opinions, the explainer shows a striking image to the groups. The image represents an optical illusion in which is rather complicated to count one elephant's legs. Every pupil has its own opinion, they could count 4,5,6,11 legs, and each answer is correct, because there is no right answer, just as there is no right price suitable for every situation.

Figure 8- *The optical illusion of the elephant*
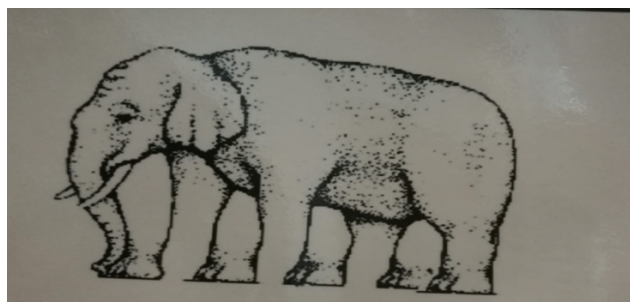
4.4.1.4 Priceless values

For introducing the last task, pupils are invited to think about a particular category of values, which are impossible to estimate and to price, because they are priceless values. *What are priceless values?* The explainer hands over a post-it for pupils to write the most precious values in their life which are later attached on a poster for them to keep as a memory. The laboratory ends with a reflection on what really has value, which is the love of our family, of our friends and pets, the luck of having a house, and be alive.

4.4.2   Second Meeting

The second meeting typically takes place a week after and starts with a recap of what has been dealt in the previous week, using the *focus group* technique, asking pupils questions and making them feel the protagonist.

4.4.2.1 The entrepreneur

After the introduction, the activity changes and students are asked to name jobs connected with the financial world for reporting the term *entrepreneur.*

1. *Who is an entrepreneur?* According to the Treccani dictionary, he is whoever professionally organizes an economic activity to produce or exchange goods or services, in a broader sense who manages a business.

2. *What are the steps that the entrepreneur has to take?* Pupils are given handouts with the five steps the entrepreneur has to do for opening his business in random order. The steps are to conceive an idea, make a business plan, search the capital, start-up the economy, and begin to do the real commercialization. Students have to arrange these concepts in chronological order and provide an explanation. The idea comes first because without it you cannot start your business: the entrepreneur has to know what to create and what to sell. The second step is the business plan because, without a schedule, everyone is lost and cannot carry out any activity, that needs to have an order and a timeline. The third task is to search the capital, so to say, search the money or investors. It is crucial to have a plan before presenting the idea to the investors or to banks, as they will decide if our project deserves to be fulfilled. Subsequently, the economy

needs to start the shop opens, the factory starts and the economy gets going. The commercialization follows, and it is the moment when the real business takes place when our product is sold, and money is gained.

4.4.2.2 The business plan

As children now know the meaning of running a business, they are challenged with thinking of what they could achieve in their future. According to their passions, they are invited to look at work not only as an opportunity for profit but a condition that allows people to express themselves and their potential. The *business plan form* is handed out to them; this time, the activity is individual and personal. They have the opportunity to write down in organized charts what their passions are, strengths and qualities for developing the idea of job they are inclined to do once they have grown up. In the project, questions are designed for thinking about one's characteristics, special believing and encouraging them, suggesting awareness for social, ecologic and economic sustainability. Children will be involved in a moment of creativity, where their dreams and professional life projects will be revealed through a role play, which will see them involved in a moment of sharing and collaboration. Through role-plays and a theatricalized approach, pupils will understand what a credit institution is and how they work. Some questions pupils are asked are:

1) What are your qualities?
2) Whom do you want to support you in the future?
3) Which project could fully develop your potential?
4) What are your dreams?
5) Are you inclined to take risks?
6) Are you inclined to teamwork?
7) Do you have planning skills?
8) Are you reliable?
9) Are you creative?
10) Is your project sustainable for a social point of view? Is it environmentally sustainable? Also, economically sustainable?
11) Whom do you want to share your project with?

Figure 9- *The Business Plan*

Children will then be guided in assessing their characteristics and dreams based on their affinities for reaching a final moment of sharing their qualities and dreams with the classmates, which is vital for creating a substantial group within the class and for promoting collaboration.

4.4.2.3 Class project

The laboratory ends with a summary of the fundamental concepts covered during the activity just concluded for answering children's questions. All classes are invited to participate in a contest in which they are asked to develop a class- group project of business. The class will be given a poster, which will be the support for the composition of the project designed by the students. On the poster, students will present their class *Business Model*, in a free and creative way but comprehending the indications specified in the support to develop their business. The poster must be completed in its entirety and can be integrated with images, photos and drawings of the prototype of the conceived company. Creativity, quality and feasibility of the ideas will be awarded, and only one class will win scholastic material for students and teachers. This activity increments their

ability to work as a team, and as it is a competition, it fosters motivation for creating the right product.

4.5 SECONDARY SCHOOL

In secondary schools, the project is all about the conquest of personal identity, the ability to make sensible decisions for the future, without discarding personal life achievements. It is in secondary schools that the orientation project reaches a maximum weight. It is designed for the first, second and third year of secondary school and concepts are presented in different manners, adapted to students' age and interests. It consists of two meetings of 120 minutes each, conducted by Pleiadi explainers, focused even more in making students protagonist and economic agents. They will be asked to design a business project in groups, in which every person plays a role which involves responsibility and specific tasks. The objective is to promote creativity and individual strengths which can drive their success in the future, making them believe in their qualities. Experiences of this kind, enhance self-esteem projecting young people in every-day situations and challenges that prepare them for their career and success.

4.5.1 First meeting

The first meeting is focused on giving students an insight into what is happening in modern society in the economic world, which will become the justification for the project. As in sports, to improve, it is not enough to listen and memorize teachers' pieces of advice, but it is essential to develop and improve transversal skills, train them and update them through a real upgrade of entrepreneurial potential.

4.5.2.1 The problem

The introduction is dealt with, in a guided discussion mode, and the explainer reads the following article where information is taken from the Istat report of 2011:

Why promoting an entrepreneurial spirit? According to a recent Istat report, entrepreneurs and self-employed workers are in Italy around 3.335.000. Their average age is 50.7 years. The ones that are over 45 are 70%, while the under 34 is 6.7%. From the survey in 2011, it emerged that the managers

are prevalent in the middle age range between 45 and 54 years old. Data on ageing management is relatively more evident for medium ranges: only 1 out of 10 is younger than 35 years. It is almost the opposite distribution if compared with the situation of workers (where 1 out of 10 is more than 55 years old, and roughly 1 out of 3 is younger than 35 years old. In this sense, the problem of the generational changes in this professional category is evident. In southern Italy, the trend is even more pronounced.

Students are asked to understand and grasp what problem is highlighted in the article, what are the suggestions and outcomes. The problem results is that Italian management is ageing with the consequent difficulty to innovate the management. Students are asked to propose possible solutions to the problem just found. After a brief debate and discussion of ideas, the explainer directs children towards a long-term solution, proposed at European level. -Generations represent groups of people born within a specific time who simultaneously experienced important historical landmark transactions and witnessed the evolution of technologies and widespread social phenomena. As generations differ because of shared social experiences, they differ in their values, ambitions and impulses, and this implicates that the way they communicate, make decisions, and use technology is varied. Generational changes have significant repercussions on economies and businesses. Pupils are questioned about finding solutions to this problem, which is affecting the Italian economy. One possible solution is that a young entrepreneurial mindset must be formed for guaranteeing more employability for young people, creating future businesses in line with the markets, training new employees with transversal skills, facing the economic market crisis and developing the key competencies required by students from the European Parliament.

4.5.2.2 The game box

As students have understood what the needs of the business world are, especially in Italy, and why it is crucial to work on them, highlighting the problem and hypothesizing possible solutions to reach a single long-term solution, they are provided with the game box designed by Pleiadi. Making them realize that they are all potential entrepreneurs is crucial for shaping the minds of future business managers. They are divided into groups

representing different companies which will focus on diverse market needs chosen by the team. Each team will be provided with:

- the *business model* in which all the official choices of the company will be noted;
- *guidelines* used by the company team to reflect upon the decisions to be taken in each section of the business model;
- *list of associates and critical partners*, from which the various professional figures of the company will be chosen, each of whom combined with a salary. Legal administration, accountant and lawyer must be chosen for constituting the company;
- *accounting sheet*, for estimating the cost structure;
- *stickers with roles* and connected responsibilities.

For keeping a company running, every person in the team has a role to be respected with precise tasks:

- *Project manager:* guides the team in the development of the game, managing tasks and deadlines, taking inspiration from the guiding questions. S/he is responsible for products' quality, managing risks, coordinating other figures, managing resources. The perfect project manager is someone who is a good decision-maker who is able to work under pressure and detains strong leadership skills and practical communication skills.
- *Notary:* records the choices made by the group and write down the decisions. S/he has to be attentive, organized, methodical.
- *Business portfolio manager* collects the costs of the company and staff in the accounting sheet. The characteristics required are analytical skills, decisiveness and a competitive spirit for new investments.
- *HR:* choose the people the company needs to perform the various functions. They have to be multitasking, caring, respectful, patient and extremely empathetic for understanding the people they are hiring, with a strong sense of ethics and excellent communication skills.

- *Head of marketing:* chooses with which channels and in what way to make the company be known in the market. They need analytical and decision-making skills, outstanding communication skills and creativity most of all.
- *Seller:* takes care of customer segments to reach and retain. They have to be enthusiastic, determined, patient, self-confident and respectful.

According to students' characteristics, they choose a role, the class is divided into groups, and the game-activity can start. Each member of the company has a role with particular tasks to fulfil: the project manager directs the team as an orchestra conductor; however, the decisions must be taken collectively. The logic of the market has demanding requirements and tight deadlines, and it is represented by the explainer who manages the times within which to make decisions. The sound of the bell will designate the beginning of the activities, and every next sound will mean that students have to pass to the next activity according to the *business model.* Students have to work independently while respecting times and their peers' point of view.

Figure 10- *Guidelines for the business model*
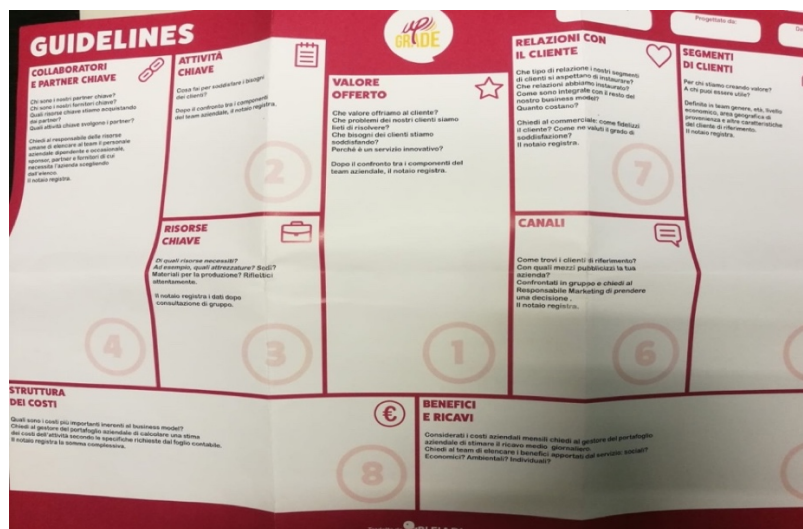
As presented in the business model guidelines, students will have to build their company from scratch, and it will be more accessible when following the numbered guidelines point by point and discuss as a team the following topics:

1) A *product or service*, a value offered to the customers that solves problems and satisfies some specific needs or even creates needs. It should be innovative and

responding to a real necessity in order to reach success, and most of all, it has to represent something achievable. A business plan is mandatory for organising the ideas and calculating the risk, as there are no new companies built without risking.

2) For developing an idea that responds to real needs, students and companies in general, have to think of the *key activities* for satisfying customers' urgencies and value their strengths and weaknesses.

3) Necessary *key resources* (office, store, warehouse, materials). Students can argue that it is obvious that for developing a company, the need for an office is crucial, for instance. However, nowadays many companies work in a way that is called *smart-working* which is a mode of satisfying the employment relationship characterized by the absence of time or space constraints, so that the employee can reconcile life and work times and, at the same time, favour the growth of his productivity (Ministry of Labor and Social Policies, 2018). This current working mode implies that those offices are not compulsory. Even stores are not essential as it is possible only to sell online, as e-commerce is expanding and detains several strengths, such as not having to pay the rent or utilities for the store. For these reasons, students are encouraged to think carefully about the necessary resources.

4) *Collaborators and key partners* are to be selected, and relationships have to be maintained over time for guaranteeing a strongly supported system. Suppliers and employees have to be interviewed and selected by the HR through detailed questions. Curriculum vitae are vital tools for making an excellent first impression, and it is essential to know how to write it and what to write. It is crucial whatever distinguishes us from other individuals; every personal experience that participated in shaping our mind and our attitude towards working is essential. It is not advised to write a boring and useless list of jobs, but our life has to result exciting and original. The presentation is vital, and we have to value our experiences to the different opportunities we have encountered so far, emphasizing coherent aspects, the acquired contents, personal flexibility and adaptability. CVs have to be concise, clear and precise, and it is advisable to use the European format called *Europass CV* when still a student because it provides proper guidelines on what to write. The importance of an excellent first

impression henceforth of a good curriculum vitae is related to the importance of a positive interview. Human Resources are in charge of interviewing persons for hiring new employees, and they will try not only to listen to previous experiences of the interviewee but most of all they will try to understand the kind of person they have in front of them, his empathy, his ability to cooperate, his communication skills, for understanding if this new personality could fit in the team already made. Nowadays, companies cooperate, and communication between members of the team is a fundamental condition.

5) *Customer segments*. It is crucial to delimitate the clients to which the company is focusing. Not all kind of people are buyers and not all of them are looking for our product. It becomes essential to analyse and define age, sex, economic level, geographical area and other influential characteristics. The Head of marketing will have to decide if it is wiser to address the product towards mass, niche or diversified market. The decision is important and implicates the positive outcome of the risk and project.

6) *Customer care and customer relationship* is the next point to think of, because after having defined which characteristics our target clients have, the management board has to develop a relationship with the clients, for valuing their satisfaction for potential improvement. Developing a relationship of trust maintains a long-lasting relationship with customers, and it reveals to be always a good marketing strategy.

7) *Advertising channels* are to be selected only after having defined the kind of clients to which the product is addressed. The Head of marketing has to individualize the right strategy and the proper channel for the specific segment of clients.

8) *Structure of costs*. The business portfolio manager has to estimate the sum of the activities' costs done so far according to the specific requests of the accounting sheet. It involves the wages of the employees, raw materials, rent, utilities.

9) *Benefits and incomes*. Considered the company's monthly costs, the business portfolio manager has to calculate the medium daily income. Considered the costs for starting the business, and considered the incomes, when will the company reach the *break-even point*? This last concept is a value that designates

the quantity, expressed in production amounts or turnover, of the product sold required to cover the costs previously contracted, in order to close the reference period without profits or losses. In other words, considering the investments, when is the company starting to own money?

The explainer helps students completing the business model, providing examples and more detailed explanations. The first meeting ends, and the explainer gives some helpful pieces of advice to provide companies with economic sustainability, such as reducing collaborators and remembering that even the management board will receive a salary.

All the material is to be kept in the boxes in class for the second meeting. In the meanwhile, pupils have to keep the trade secret from the other companies.

4.5.2   Second meeting

In the second meeting, the goal is for students to complete the *business model* and create a prototype to be presented to the market that will judge the project in all its aspects according to three parameters: data completeness, project feasibility and future business.

Each team is asked to arrange and improve every aspect of its project and to create the prototype in the dedicated sheet. A prototype is the first example of an artefact, the first implementation of the value thought and designed by the company team. On the prototype, tests, modifications and improvements will be carried out, up to the final one to be sent to production. It can be the drawing of the product schematized by underlining its peculiar characteristics, or even the logo or the packaging. Each team is called upon to prepare a presentation plan for the market.   Each role will present the particular sector of his competence so that each student will be the protagonist of the exposition. Each company team presents its idea to the market, showing the prototype, trying to be careful and attentive to the involvement of all the components of the team. Each member presents the section that was his responsibility for a more detailed and complete presentation. The market has the task of evaluating the various projects viewed, a role held by the explainer and by all the other students in the class who are not presenting their project. At the end of the presentation, other students representing the market can ask questions to highlight some points or raise questions to have clarifications on some corporate choices. After the

presentations, the projects will get an evaluation by drawing up a classification for each criterion:

- data completeness: the business model must be complete and impeccable in all its parts and as detailed as possible based on the needs of each case;
- Feasibility of the project: is the idea to be realized or is it far detached from the technology of present times? Is it creative and innovative?
- future business: will the idea generate adequate income or the costs are too high, and the company cannot face them?

Concluding the project, students will be given a final sheet that brings about the problem of old management in Italy in which they have to complete the missing parts. The solution to the problem encountered is to train young people with an entrepreneurial mindset, a set of skills that students must train and define. Concretely, it translates into:

- having an inclination to proactive managements of initiatives and ambitions;
- developing a fresh idea to design a product or a service;
- knowing how to represent and negotiate goals;
- knowing how to manage to work both individually and in a team;
- knowing how to recognize your strengths and weaknesses;
- evaluating and taking risks when necessary;
- managing resources and money responsibly;
- creating networks with other students and adults.

Furthermore, students are challenged with an activity of self-assessment in which they will have to analyze and assess the skills they think they have gained with the two-lesson laboratories. Individually, students are asked to examine the challenges they have faced and how they have reacted, particularly focusing on if they now know how to: solve problems, how to learn, argue their own opinion, make choices, collaborate in a team, identify links between different subjects, be creative, listen to their peers, plan a task, consider costs, handle unforeseen circumstances, change opinion and value risks. While students carry out this task, the explainer crosses the ranking to draw up the final classification and declare the project considered to be the best, specifying how they have been evaluated their strengths and weaknesses.

Consequently, the *business model final sheet* is presented to the class, that is challenged once again with designing a class project (perhaps taking inspiration from the ideas they have already developed). Every class that has attended the laboratories is invited to design a final project for participating in the contest evaluated by the Pleiadi board, and eventually, the best idea will win technological materials for the school. UpGrade continues, the constructive debate on the gained competences must continue, especially taking advantage of the final contest, as an opportunity to develop the valuable skills just developed.

4.6 HIGH SCHOOL

UpGrade reaches high schools, mainly because it provides an insight into the financial world and helps students in making the best choice for their future. The topic of educational orientation is continually gaining importance, passing from a secondary and unimportant activity to a central theme of school activity. Its effect has been recognized not only in promoting an informed choice of the enriching and professional path of each one, but also as a significant weapon to counter the phenomenon of dispersion of young people that, in Italy, still reaches higher numbers than the European averages (Dossier of General Direction for the Student, 2017). Now more than ever, because of the endless options students encounter when graduating from high school, is crucial to provide guidance and help them understand what their strengths are, their wishes, their abilities. Many students feel lost when finishing high schools, and it should be the teachers' job to attempt giving them some guidance. In a context of growing need to take actions, MIUR (Ministry of Education, University and Research) promotes with the note number 4232 of the 19th of February 2014, the new national guidelines for lifelong guidance. In this perspective, orientation is no longer limited to the transaction moment of the scholastic path but is a formative process that "invest the global process of growth of the person, extends throughout the whole life, […] and is transversal to all disciplines" (MIUR note n. 4232, 2014). UpGrade in high schools is thought and developed with this goal, and henceforth during the second meeting, an authentic experience of a real entrepreneur is guaranteed to the students.

4.6.1 First meeting

During the first meeting, students will be able, through a pragmatic and experiential activity, to try their hand at designing a real business. They will have the chance to face not only issues and concepts linked to everyday life, but to put themselves in the shoes of actual businesspeople. The activity is structured as a game and students will be able to work in teams, as in a real company, and will have to define roles, make decisions, face unexpected events and confront the implications of their choices. First, some notions of the economy world are introduced along with rules to be followed, and secondly, a product has to be designed and launched in the market, for instance, a catapult. It is all delivered as a board game, for guaranteeing students' engagement. The first steps that need to be taken are:

1. Read the rules of the board game. The goal of the game is to make higher profits than other companies, selling more catapults or building them better than others.

2. To sell, pupils must place the catapult and the target marketing board in the game table. A maximum of one catapult produced for each month of sale can be launched and those produced in the previous months cannot be used because they have already been sold. To sell, someone has to buy. The customer will monitor the progress of the game and pay if the catapult meets the requirements. Buyers will pay 500 euros if the target is hit; 300 if it exceeds the target line and 100 if it falls before the target line. Furthermore, if marketing is active, the buyers can pay an additional 50 euros. Decisions must be taken together, remembering personal roles. The market has tight deadlines, and for this reason, each step tackled will end with a whistle.

3. Decide the name of the team/company. The naming operation is as complex as delicate. In general, we can say that the right company name must meet specific requirements: uniqueness, simplicity and contextuality. Unique and creative, as it is advisable not to be confused with other companies, simple, readable and short as it will undoubtedly endure in the mind of potential customers, and finally it has to refer to the activity itself and possess a logic.

4. Define roles and salaries: in a company, roles are essential and have to be defined so that every person knows what his/her tasks are. The roles in a company and in the board games are:

- *Project manager* guides the team in the development of the game, responsible for products' quality, managing risks, coordinating the team and managing resources. For choosing the PM, students have to analyze their profile and characteristics and find a candidate who is a good decision-maker, good at communicating and with strong leadership.

- *The purchasing manager* is responsible for approving the purchase of best quality services or goods at competitive prices.

- *Research and development manager* enjoys brainstorming new concepts keeping in mind the entire organisation of the production process from planning to implementation, keeping a record of the costs.

- *Marketing and sales management manager* has the task of identifying trends by investigating data, identify consumers' needs, prepare a marketing plan for publicity and maintain the relationship with esteemed clients.

- *The administrative manager* controls administrative team organs and guarantees that daily office transactions are performed efficiently. The role implies improving procedures and policies, developing the budget and train the team with a strong aptitude for problem-solving, leadership, coaching and critical thinking.

5. Apply for funding for constituting the company: students have to present their project to the explainer who represents the bank. The idea presented has to be healthy and convincing for ensuring the funding.

6. Fill in the budget sheet or audit budget, which is one of the primary tools for planning and regulating the company's economic activity. It is a business management program interpreted into economic-financial terms, which leads and empowers managers towards short-term objectives, defined within a long-term strategic plan. In the grid, it is necessary to indicate the monthly instalment of the loan, the raw materials, the monthly salaries, hypothetical revenues and the hypothetical monthly profit. The difference between these last two concepts is that the profit is the difference between revenues and costs of production.

Figure 11- *The budget sheet*

AZIENDA:						
	COSTI IPOTETICI				RICAVI IPOTETICI	PROFITTO IPOTETICO MENSILE
PERIODO	RATA MENSILE DEL FINANZIAMENTO	MATERIE PRIME	STIPENDI MENSILI	ALTRO		
mese 1						
mese 2						
mese 3						
TOTALE FINE ESERCIZIO						

Once pupils have terminated these management operations, they have to test the products that are catapults and launch them in the market. According to the board game, there are scores and prices for the launching and buyers have to adapt to the defined prices.

4.6.2 Second meeting

During the second meeting, there will be an initial introduction that draws together the central topics discussed in the previous lesson. In order to engage students with the reality that surrounds them, there will be the intervention of a local entrepreneur who will make his expertise available to students, while they will have the opportunity to listen to real experiences, real risks, real fulfillments, the answers to what it means to run a company and what obstacles the entrepreneur faced running the company. Then there will be a moment of debate and confrontation between students and entrepreneurs in which students will be able to please their curiosity, asking questions projecting their passions in the future.

4.6.3 Third meeting

The third meeting is an event carried out at the Ristori Theatre in Verona, where all high school classes are invited to participate along with the winners of the primary and secondary school's contests. The experience is thought to be a dominant exchange and debate between university professors and researchers of economics and sociology who will discuss the topics of micro-entrepreneurship and economics realistically and interactively. They will report their life experiences, touching students directly and deepening the arguments of the modern economy. The 4 hour event, is marked by a high

level of interaction between the guests represented by students who are the possible experts of tomorrow. The first part of the morning is designated to learning from the experiences of the experts, while the second part is organized as an interactive workshop where students are involved in the first person to face challenges, confronting in teams with their peers in a contest where they can win valuable prizes for the scholastic world.

CHAPTER 5

V.   THE RESEARCH: "WOULD IT BE INTERESTING TO INTEGRATE THE UPGRADE PROJECT IN ENGLISH?"

After researching on the most crucial theoretical principles for implementing the UpGrade project in the English language, it was necessary to understand whether other academics perceived the advancement or not. Therefore, it was imperative and fundamental to research on the willingness from the part of teachers, to benefit from a more developed project. This last chapter is focused on the research and practical part of my thesis, where teachers have been questioned, and data have been analyzed for drawing conclusions effectively and eventually take the first step for starting the project definitively.

5.1 WHY IN ENGLISH?

In a world of global exchanges, the capability to dominate a foreign language increases competitiveness. Languages are gaining importance as they boost employability levels and versatility, and weak language skills are connected with impediments in a market where workers have mobility. The first European Survey on Language Competences informs that European states are far from embracing these challenges, despite the investments made.

The world of economy is connected with the Anglophone world, as the common language used for international transactions is English. Moreover, for marketplaces around the world, a premium domain of the English language attracts considerable advantages. It is not surprising a strong correlation between the level of proficiency in English and indicators registering import/export activities such as logistic efficiency and timing for import. In developing economies, the shift from manufacture to a model based on technology requires qualified sellers able to sell their products internationally. Furthermore, a rising number of societies operates now at an international level, taking part in a global supply chain. Professor Tsedal Neeley from Harvard Business School, states that 60% of multinational organizations today operate in English, and whoever does not, will be left behind. Moreover, with e-commerce expanding at an average annual rate of 20%, the future of the labour market requires skilled English speakers.

The skills required today in the marketplace have been replaced. A higher number of jobs is mechanical, and technologies have a significant role in all fields of work. Social skills display more relevance to guarantee flexibility and capacity to accommodate the change. The international study "Program for International Student Assessment" (PISA) issued by the Organization for Economic Cooperation and Development (OECD) registers that a rising number of young people and adults lack the necessary basic skills. The study records show that in 2015, one in five students lacked the adequate abilities in essential skills such as reading, math and science. Hence, it has become a prerogative for the education system to invest in promoting such skills, for instance, by supporting high-quality education, supplemented by extracurricular projects.

The current evolving society is turning into a mobile and digital one and requires fresh and innovative ways of learning. More than ever, digital technologies impact education, implying the development of a resilient learning setting, flexible for adapting to societal needs. In the field of academic economy, learning schemes by heart is essential but not sufficient for reaching growth and resolution. Transversal skills such as creativity, critical thinking, team-working, problem-solving have gained an essential role in the market, and the education system needs to adopt new methods for achieving its accomplishment.

The UpGrade project has been chosen, because of the tremendous outputs that it will guarantee if integrated with the English language. The potential it detains is enormous, and it will be even more so if students have a first approach to the economic field, in English. It is a project of economy, and the language for the financial world is English. Nowadays, most specializations at University are delivered in English, for preparing students for the real world out of the class context. Furthermore, the project is in line with the *Key Competencies of Citizenship* issued by the EU communication of 2018, defining new opportunities for building productivity in Europe, with the sole exception that the UpGrade project as it is now, is lacking the competence number two, communicating in foreign languages. The implementation in the English language would accomplish goals and provide an improvement in terms of education within a European perspective. This motive is sufficient for justifying the decision to implement the program in English,

giving the fact that the competence of mastering foreign languages is gaining more and more relevance and should be taken into consideration, in an exceptional program such as UpGrade. Moreover, the project would be complete and touching its most strong gains.

5.2 METHODOLOGY OF RESEARCH

For researching on the topic, a questionnaire was developed for collecting data about the interest for enhancing the entrepreneurship program into a more complete, modern, and European project that aims at promoting the *Competencies of Citizenship* while fostering self-promotion.

5.2.1 Research Method

When the most suitable research approach has been set, it is time for the *detective work:* "Social research involves detective work. You begin with a problem and then ask several questions about it" (Gilbert, 2001). For this reason, a questionnaire for the teachers involved in the previous UpGrade projects, was presented in detail and as an integral part of this dissertation. The question, in this case, was if teachers were interested in upgrading the UpGrade project in the English language, inquiring about their fears, tips for its success and the importance they put on the strengths it detains. After having designated my research question, the investigation began, utilizing a questionnaire as a research method. This research aimed in all its characteristics, at maintaining coherence with the present time, and consequently, the adoption of web survey was essential, where the questionnaire is managed self-filling it, without guidance, while the collection of the answers is directly through emails. The collection of the answers lasted approximately a month as in the meanwhile, data were analyzed beginning with the graphics provided by the *Google Form* itself.

5.2.2 Participants

The choice for the sample fell on the teachers because presenting a complicated matter could not have been possible when addressed to students. The questionnaire presents the *Citizenship Competencies*; for instance, these concepts might not be transparent for primary and secondary school students. As answers had to derive from a qualified sample, able to understand the potential of the improvement and the transformation that UpGrade

in English might guarantee, 26 teachers who had already experienced the project in the Italian language were chosen as the participants for the research. The importance of having experienced the project in the past, was key for foreseeing the improvements in the English language, along with an understanding of the context of delivery and effectiveness. Moreover, the questionnaire helped with verifying the level of satisfaction and possible improvements.

5.3 SURVEY PREPARATION

My primary mission, therefore, was to study and learn more about the UpGrade project and CLIL methodology. Paying attention to their strengths and weaknesses was essential in order to find the right compromise for linking them together. Starting from the question of the research thesis:

Is it possible to implement an economics project in the English language, following the principles of CLIL methodology in order to prepare students for the challenges of modern society?

The following objectives were identified, on which I then focused my attention during the preparation of the research questionnaire:

- comprehend CLIL approach, its strengths and weaknesses, and its employability in a project of economy;
- identify the eight competencies of citizenship that can determine possibilities to increase productivity and trigger innovation in Europe as the EU communication (22nd of May, 2018) stated;
- meet the institutional actors involved in the management of Pleiadi projects such as UpGrade;
- identify the gains that the project will get if translated into English;
- identify the possible difficulties that students might encounter.

According to these objectives, the questionnaire has been drafted and sent by email by Pleiadi's secretary office. Before delivering it, it has been proved essential to pre-test it and control if the survey was meeting the following criteria: comprehensibility of the

questions, language employed, adequate order of the questions, avoid redundancy, register and adequacy of the answers.

5.4 QUESTIONNAIRE FOR THE TEACHERS

A significant number of quantitative and qualitative research methods are accessible to the researcher, from interviews, questionnaires, case studies. The decision to employ a questionnaire was made, which is basically a structured method for gathering primary data. It is usually a list of addressed questions in which various interviewees are asked to provide an answer to the same set of questions (Bell, 1999). The questionnaire is the measuring instrument used for gathering data on a specific phenomenon, so that the data collected are comparable. This choice was made because questionnaires are an efficient way of obtaining large amounts of information from a large sample of people that is suitable for statistical analysis and comparisons. In order to reach a considerable sample, the questionnaire was created on *Google Drive*, in the configuration of a *Google Form* survey. Questionnaires hold whatsoever a significant number of advantages, ranging from availability, easiness for consultation and distribution and their ecologic form as there are no printing costs. Moreover, it is an active, direct and practical method for obtaining quantitative and qualitative data. The data can be easily converted into statistical analysis, beneficial and essential for drawing conclusions.

The general limitation of questionnaires is the lack of details because of the fixed responses, so the implementation of a final open question for more in-depth answers was essential. Particularly in the field of education, the social and participatory component of teachers plays a key role in the analysis of the development of academic projects. Knowing the composition techniques of the questionnaire is necessary to conduct statistical surveys and to comprehend the motives behind any research. For readers to identify the basic principles behind the construction of the research is important for critically look at the study. The questionnaire was designed in the Italian language because it was addressed to Italian teachers and it had to be comprehensible and transparent for completely avoiding any misunderstanding. Questions were addressed in the same form and detained the same meaning for all interviewees.

A short introduction was outlined in order to be informal and direct, but at the same time, its purpose was to catch the attention of the teachers, gain their trust and willingness to fill in the questionnaire. I introduced myself as a student and as a Pleiadi explainer researching on the UpGrade project. Furthermore, it has been proved essential to shortly explain CLIL methodology and the *Competencies of Citizenship* for providing background information useful for understanding the aim of the research. The introduction, presented in the first page of the *Google Form* is reported as follows:

UpGrade of UpGrade: QUESTIONNAIRE FOR TEACHERS OF THE CLASSES WHO HAVE PARTICIPATED IN THE UPGRADE PROJECT[12]

Good morning to all of you teachers who participated in the UpGrade project with Pleiadi. You might be wondering why a questionnaire? First of all, let me introduce myself, I am Alberta, a Pleiadi's operator who took part in teaching the UpGrade project last year, to your elementary, middle and high school students.

In addition, I study Languages at the Ca' Foscari University of Venice, and I decided to integrate these two passions of mine to develop a final dissertation that incorporated the project I held a lot this year as I thought about how much it could further enrich kids, as the world of economics is very attached to the English-speaking world. During the four months of the project, I found a lot of motivation, commitment and enthusiasm on the part of both students and you teachers, and I thought, why not try doing UpGrade in English?

In recent months, I have conducted a research on CLIL (Content Language Integrated Learning), an educational program in which a subject is presented to students through the vehicular use of a foreign language, in order to acquire linguistic knowledge and specific notions of non-linguistic matter, simultaneously. I have had the opportunity to confirm that the positive effects are there and are evident, including more motivation, more confidence in oneself, more willingness to ask questions, development of language skills with academic language, vision of the curriculum as a unit, and also it creates opportunities for the future working of children who will be more focused on studying in a foreign language.

I pay particular attention in my research to the key competences for lifelong learning, approved on 22 May 2018 by the Council of the European Union, particularly relevant for this research and very linked to the UpGrade

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[12] The original text is available on the appendix.

project. They are called Citizenship Skills and concern the importance of freedom for all people within the culture of democracy.

I now present to you teachers a questionnaire in Italian, which is aimed at understanding whether there might also be an interest in developing this project on your part, if you have confidence in its qualities and if you think that difficulties may arise.

I kindly ask you to answer the questions, the questionnaire is completely anonymous, and your contribution is beneficial for my research. I hope you enjoy it and can produce innovative work that can be implemented in the future.

The introduction was displayed as a presentation text in the *Google Form,* for providing a helpful insight about who was the researcher and what the questionnaire was about.

5.4.2   *Questions*

The questionnaire produced is formed of 21 questions, mostly yes/no questions and numerical rating scale questions. Some of them are about facts, formulated to learn about objective realities, and some about opinions, elaborated for obtaining subjective information about beliefs and preferences.

The first question that seemed essential for me to ask was if they knew the UpGrade program; as I did not want that wrong emails, the wrong or careless professor could undermine my statistics. Adopting this approach, I could, from the beginning of the analysis, classify those who remembered the project and those who did not.

1)   Do you know the UpGrade project?

The second question narrows down the sample from those who had experienced a positive project by doing UpGrade and those who think that the project was not effective. Teachers must understand the privilege they had and the great opportunity of experiencing such a unique and performing activity. For this reason, I decided to employ this question from the beginning and for understanding the degree of effectiveness perceived and the degree of improvement. The decision of employing a numerical rating scale is justified by its optimal use for understanding the purpose and graphic representations. A measuring instrument was needed for eventually make considerations on the results and comparisons that were possible only using quantitative options as answers.

2) How much, on a scale from 1 to 5, did the UpGrade project seem effective to you?

It has been proved essential to understand the strengths of the program perceived by the teachers and question number 3 was outlined. The first four questions are the ones referring to the past editions of UpGrade, great for capturing information about its perception, and the room for improvement for future realizations. The options presented are the most important strengths that were detected. The first one is connected to the idea that students do not have an insight of what economics is, and they need it from an early age, as the way money is perceived is changing but at the same time, money plays a massive role in modern families and children need to be instructed. The second option presents the idea of developing the so-called *soft skills,* crucial for modern jobs and highly requested by the HR[13]managers. *Soft skills* are individual characteristics that affect the way people act or cooperate with others in the workplace and in life in general. These skills facilitate forming relationships with people, build trust and manage teams. They are necessary for growth in the workplace, for leading the company to success and for personal life. They translate into problem-solving, critical thinking, creativity, cooperativity and good interpersonal communication skills. The third option represents the idea that when students experience real-life events at school and try at hands new activities that can relate to useful episodes even outside the school context, they learn more effectively because they are incredibly engaged. Furthermore, schools should prepare students for the real world with practical knowledge and not solely with theoretical principles.

3) Why do you think it is useful?
- *It offers students a first approach to the world of economics*
- *It offers the possibility of developing soft skills*
- *Prepare students for the world outside the school context*
- *I don't think it's useful*

The fourth question opens up the topic of the possible improvements of the UpGrade project. It is indeed, the so-called *control question*, formulated in a slightly different manner and with the purpose of confirming validity, reliability and consistency.

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[13] HR stands for Human Resources, entitled to recruit and select new employees to join the staff.

4) In your opinion, could the UpGrade project be improved?

It is followed by question number 5 and 6 that go deeper into the matter. The possibility of a translation and implementation into the English language is presented as a proposal for future improvements.

5) Which one, of the following proposal would you implement?
- *Add more meetings*
- *Integrate the program in English*
- *Implement the use of technology (Power point presentations, video,..)*
- *Other*

6) In your opinion, UpGrade would be a more valid program if in English?

Questions number 7, 8, 9, 10, 11, 12, 13, 14 are the authentic core of the questionnaire. They present the actual enhancements that have been studied for the research, in a way to understand if teachers perceive these betterments and have a democratic view over education. Particular emphasis has been put on the *Competencies of Citizenship,* of primary importance for the research. The improvements presented are within the following questions:

7) What importance do you give to the increased motivation, found to be beneficial in CLIL (Content Language Integrated Learning) programs?

8) On a scale from 1 to 5, to what extent can this project strengthen the soft skills of your pupils?

9) From 1 to 5, how much can UpGrade in English strengthen students' skills in a foreign language?

10) In your opinion, can the English version of UpGrade, contribute to "team building" (ie. helps creating a team)?

11) In your opinion, from 1 to 5, how much can UpGrade in English help children to promote initiative?

12) What importance do you put on the development of language academic skills in English?

13) In your opinion, does UpGrade in English lead students to be more prepared for the world outside the school context?

14) In your opinion, studying a subject in a foreign language, leads students to be more open minded and more tolerant?

Questions number 15, 16, 17 have the goal of capturing the potential weaknesses of the program if in English. Because of its extreme challenge, students might feel insecure, stressed and undermotivated as a negative collateral consequence.

15) From 1 to 5, how much do you think the risk of misunderstanding on the part of students and consequent risk of failure, is high?

16) From 1 to 5, do you think students will feel demoralized and not up to par?

17) In your opinion, will there be less student participation?

Question number 18 is a space for further observation, in case teachers have suggestions, more questions or have additional information to add. It is a precious resource for unforeseen circumstances that might have been skipped.

18) Do you think there are other issues to consider?

Question number 19 is the summary question and one of the most significant. The decision of placing it as one of the last questions is because it was vital to present the pros and eventual cons of the project. Teachers have been introduced to the strengths and motives of the project, and they have to evaluate their importance for students according to their needs. On the other hand, weaknesses have been introduced, because every challenge drags some risks with it. There are no achievements without difficulties, and as teachers know their students, they can evaluate how those risks have a significant impact or can be confronted.

19) In front of a choice, do you think schools would prefer UpGrade in English?

Finally, it was necessary to investigate about personal information such as age and level of instruction, in order to have a more extensive background of the participants, even if their qualities are implied to be similar. These last two questions were important for understanding if there were differences between old-fashioned teachers and new generation teachers in terms of open vision and attitude towards change.

20) Age

21) Level of instruction

5.5 PREDICTIONS

While designing the questionnaire, particularly favourable results were certainly expected, such as the total willingness to upgrade the project in English and the recognition of the primary benefits of CLIL. Besides, as the positive qualities that CLIL programmes hold were demonstrated to the teachers in the introduction, I assumed they were aware of the positive outcomes and consequently, that teachers trusted the whole project. As citizens of the world themselves, positive expectations were presupposed, in which they trusted the UpGrade's betterment from which their students could benefit if in English. Yet, I expected some uncertainty and doubts, as my assumptions took into consideration that not all of the interviewees were proficient in the foreign language themselves, and for this reason, I feared they could perceive the project too demanding. As a matter of fact, the preoccupation of involving the class in challenging new paths is a common fear that is perceived and explicitly emerged in several pieces of research from teachers' part. Worries about levels of success in the foreign language by learners, are a habitual issue (Lazaruk, 2007, Rifkin, 2005) and my prediction was that teachers could perceive the fear themselves and that it could undermine their confidence in such activity. Part of my prediction was that the most fearful teachers were the old-fashioned ones, having dealt with a different kind of education and stuck in a rigid and outdated mindset.

As I am the only person that had experienced the numerous laboratories with different classes, their motivation, their dreams and their determination, and I am well informed about CLIL methodology, I certainly trust the positive development of the project, and I expect teachers to trust me and the literature behind it. This picture is undoubtedly my positive prediction.

5.6 DATA COLLECTION AND METHODOLOGY OF DATA ANALYSIS

The inquiry was developed throughout the summer of 2019 and was sent by email in the middle of August, in order for teachers to be back to school but not excessively busy with their classes for enough time. Pleiadi's secretary delivered the questionnaire by emails,

and answers were accepted until the 30th of September 2019. Outcomes were collected for 45 days through the *Google Form Sheet.* The inquiry was shared with 40 teachers, and 26 of them have filled in the form and represent the actual sample for the conclusions.

For analyzing the data, I started from the charts provided by the *Google Form,* one of the reasons why this approach has been selected. In actuality, graphics were presented automatically in the form of bar charts and pie charts. The four essential passages were: to look at the main research questions, examine the data, to apply cross-tabulation and draw conclusions (Research Monkeys, 2019). For the cross-tabulation, numeral rating scale questions were analyzed using the following criteria: 4 and 5 points answers were considered positive and 1,2,3 points answers were considered negative and were crossed with yes/no questions using the Excel function "if"[14].

5.7 RESULTS

When it comes to drawing conclusions about the answers of the research, it is crucial to remember the meaning of the data. Results will be discussed considering each question and providing the most meaningful graphics.

1) Do you know the UpGrade project?

The totality of the sample answered positively to the first question, confirming that they have experienced the project in the past in the first person and they remember it. In the eventuality of negative answers, it would have been meaningless to consider those questionnaires.

2) How much, from 1 to 5, did the UpGrade project seem effective to you?

The second question was the true starting point, and results were reasonably positive, since 50% of the sample stated that the experience seemed totally beneficial and gave 5 points on a scale from 1 to 5, 38% gave 4 points out of 5 and 11.5% 3 points out of 5, highlighting extremely positive feedbacks from the previous year. It was essential to

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[14] *Example of the Excel function used in the research*

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=SE(M4=$M$29;SE(O4="NO";("VERO");"FALSO"))
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analyze the following data, starting from the perception of the teachers from the former project.

Table 1- *Bar chart relative to question number 2*
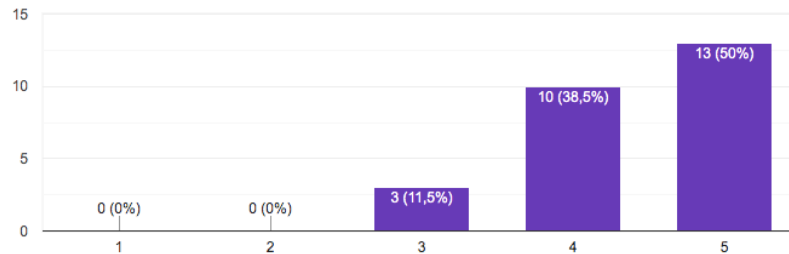
At this point, I investigated on why the experience felt particularly positive, providing the options that, in my opinion, represented its strengths.

3) *Why do you think it is useful?*
   - *It offers students a first approach to the world of economics*
   - *It offers the possibility of developing soft skills*
   - *Prepare students for the world outside the school context*
   - *I don't think it's useful*

The majority of the sample (61.5%) stated that the UpGrade project's first strength is that it offers the possibility of developing soft skills, 26.9% believe that it is particularly beneficial because it offers a first approach to the world of economics and 11.5% think that it prepares the students for the world outside the school context.

Soft skills' importance is growing in the modern workplace because they boost the potential of the person and are very much demanded by clients of all sorts. A study conducted by Deloitte Access Economics foresees that "Soft skills- intensive occupations will account for two-thirds of all jobs by 2030"[15]. Teachers are aware of the enormous importance *soft skills* have and that schools need to invest in providing them. Since UpGrade broadens students' horizon, force them to collaborate if they want to effectively

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[15] Taken from "The importance of Soft Skills "at https://virtualspeech.com/blog/importance-soft-skills

build an efficient business and face them with problems they have to solve, teachers appreciate this quality of the project.

Table 2- *Graphic relative to question number 3 where the options in the Italian language correspond to the order of the question*
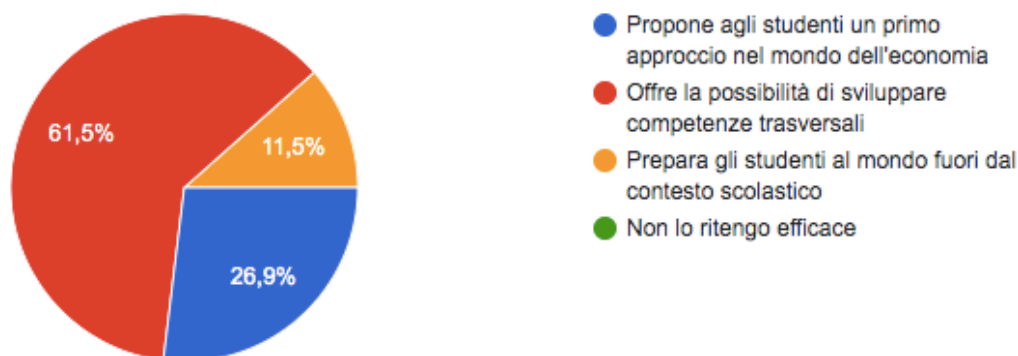
4) *In your opinion, could the UpGrade project be improved?*

The whole sample provided an affirmative answer to this question, confirming that every project can be enhanced and that it is hypocritical to think that something is perfect and cannot be changed. Especially in our society, changes happen exceptionally quickly, and everything needs prompt adaptation. In the next question, some implementation and betterments are presented, giving some space for new ideas that might not have been foreseen.

5) *Which one, of the following proposal would you implement?*
   - *Add more meetings*
   - *Integrate the program in English*
   - *Implement the use of technology (Power point presentations, video,..)*
   - *Other*

As every project can be improved, also UpGrade detains a margin of improvement, and 61.5% of the interviewed sample stated that the best direction to take is to integrate the program in the English language, 30.8% suggested to add more meetings, 3.8% (1 interviewee) suggested to implement the use of technology and 3.8% (1 interviewee) recommended to provide business people interventions. It is extremely telling that the majority of the candidates advocated for teaching the entrepreneurship project in the

English language. It confirms that the idea behind this thesis is valuable and shared by numerous teachers. The proposal to add more meetings is predictable and represents a valuable additional hint for the future. The further proposal of providing interventions from business people is already accepted and implemented in high schools so that students are old enough to understand the business and to be able to ask questions and provide individual doubts.

Table 3- *The pie diagram refers to question number 5, where options in the Italian language follow the order in the English language presented in the question*
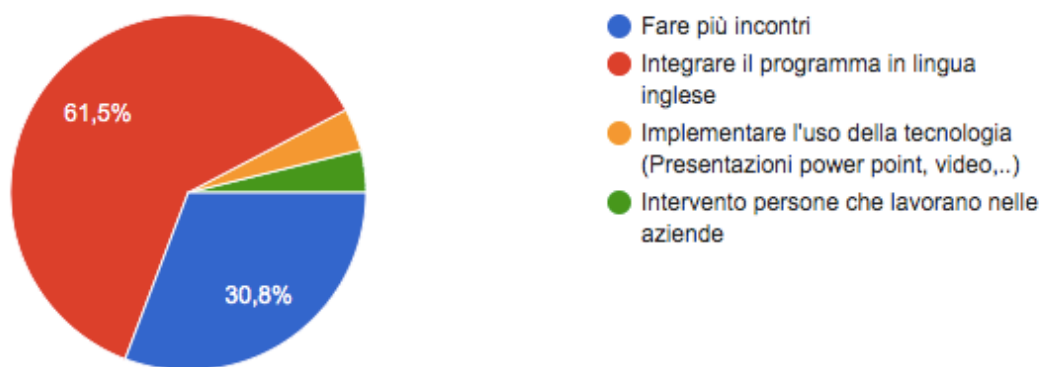
6) *In your opinion, UpGrade would be a more valid program if in English?*

The answer to question 6 is quite controversial as 88.5% of the sample answered affirmatively and 11.5% negatively, and the expectation was that the entire sample confirmed affirmatively. As a matter of fact, it is a good starting point, even if not the whole sample accepts the challenge. The motivation of the negative answers can be explained by the fear teachers perceive from not being proficient in the foreign language which is transferred to their students: if they cannot follow a lesson in English how can their students? Indeed, this reason is not well-founded, as children have been bombarded with inputs in English and certainly hold a certain knowledge in the language whatsoever. In order to understand how teachers ponder their judgements, the next questions have been drafted.

Table 4- *The pie chart refers to the answers of question number 6*
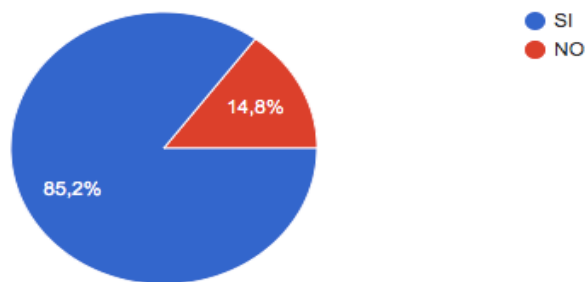
7) *What importance do you give to the increased motivation, found to be beneficial in CLIL (Content Language Integrated Learning) programs?*

The content of this question has been presented in the introduction of the questionnaire so that teachers were provided with the positive outcomes of CLIL methodology in case they were unaware of them. Many studies on CLIL methodology support the fact that it increases students' motivation as confidence in language grows, and students' skills progress more quickly, encouraging them and eventually leading to better performances and self-appreciation. The idea behind, is that teachers accept the challenge when they recognize the importance of a certain development, in this case, the increase of motivation. Data show that the importance of a considerable increase in motivation is quite high but probably it is not the only important element. In fact, as we can see in the chart below, 38.5% of the candidates stated that the importance of the increased motivation on learners has medium importance, while 34.6% gave 4 points and 26.9% the maximum importance. Overall, results show a positive attitude.

Table 5- *Bar chart representing the answers of question number 7*
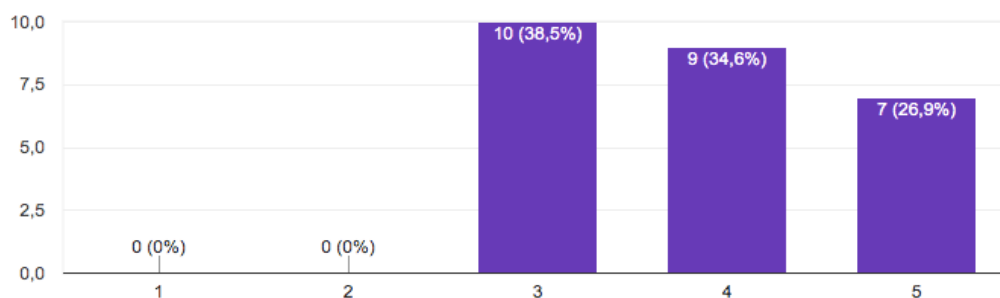
8) On a scale from 1 to 5, to what extent can this project strengthen the soft skills of your pupils?

Question number 8 is very much related to question number 3, in which a great deal of importance was put on the possibility of developing soft skills. Results are positive since all answers show that teachers have individuated a potential improvement in their students' soft skills and thus, trust the program. Soft skills' development represents a vital educational goal, challenging, and to be enhanced in class through frontal lessons and a natural consequence of practical activities where, besides, students are forced to collaborate.

Table 6- *Bar chart representing the answers of question number 8*
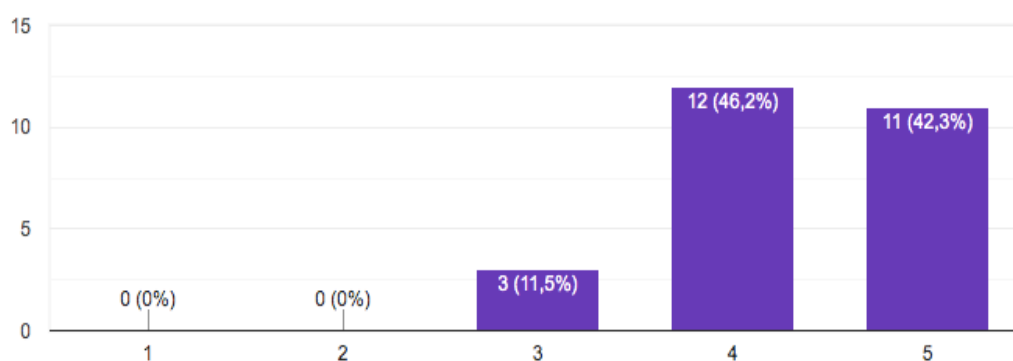
9) From 1 to 5, how much can UpGrade in English strengthen students' skills in a foreign language?

Question number 9 is a prediction based on what teachers have observed in the previous years of UpGrade in Italian. Their answers are positive as only 3.8% provided 3 points out of 5 while 53.8% gave 4 points and 42.3% 5 the maximum. It is a positive result because based on the history that foreign language education detains, from the *grammar-translation approach,* to the *audio-lingual approach*, we have entered a time in which it is crucial to provide experiences and real-life communication as communicative competence is the goal of language instruction. Talking about money, loans, bank accounts in the foreign language helps students to create a context and to connect their

knowledge to real facts. Providing inputs and giving them the opportunity to employ their new knowledge in a relaxed environment, not with the standard teacher but with an expert that is a closer figure to students' age and does not assess their performance, is extremely good for their self-esteem and it strengthens students' skills in the foreign language, as teachers confirm.

Table 7- *Bar chart representing the answers of question number 9*
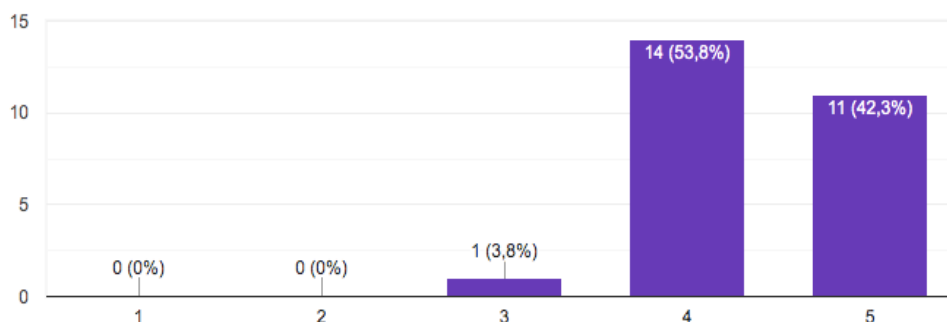
10) *In your opinion, can the English version of UpGrade, contribute to "team building" (ie. helps creating a team)?*

The answers to question number 10 are extraordinarily positive since 96.2% of the sample answered positively, and only one candidate, who represents 3.8% of the sample provided a negative answer. Team building activities are essential from a young age because students try at hand to listen to others' ideas, understand other points of view and make compromises without rushing their decision. This skill is particularly required in the workplace because even persons with strong leadership have to listen to others for reaching success. As long as schools present individual activities to students, where their skills are assessed through personal tests, this skill is neglected. The UpGrade project invites children to understand their strengths, work in a team, combining their strengths in one whole project in which everyone excels, and that is successful.

Table 8- *Pie chart representing the answers of question number 10*
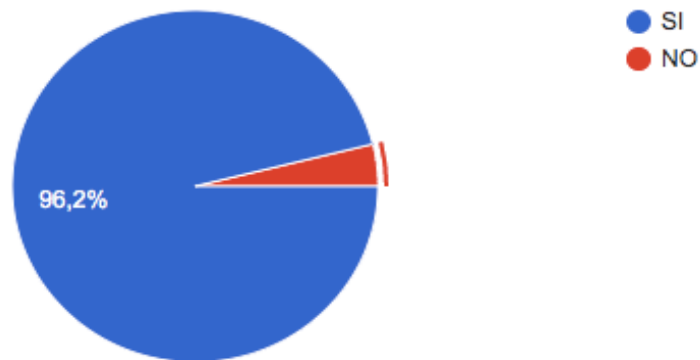
11) *In your opinion, from 1 to 5, how much can UpGrade in English help children to promote initiative?*

The UpGrade project aims at promoting students' spirit of initiative by providing some notions about the world of economics and entrepreneurship. It definitely boosts students' willingness to shape their own future by investing in what they love and what they are good at. However, 4.2% of the sample do not believe so, 20.8% gave 3 points and in this way placed themselves in the middle, the majority (54.2%) gave for 4 points and 20.8% the maximum. These results are not extremely positive but yet, are very telling; not all teachers trust their students to take actions when in front of a challenge, some teachers are probably fearful that students might feel insecure.

Table 9- *Bar chart representing the answers of question number 11*
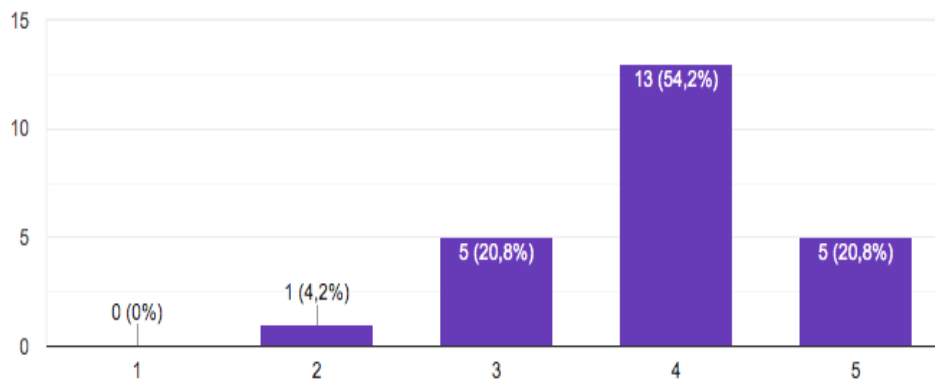
12) What importance do you put on the development of language academic skills in English?

Question number 12 is crucial because not all teachers know the difference between BICS and CALP (Cummins, 1986): students might get in touch with Basic Interpersonal Communicative Skills during regular lessons because these skills are employed in everyday life and interpersonal connections. On the other hand, Cognitive Academic Language Proficiency applies to the explicit disciplinary language for coping with academic demands. CLIL lessons are designed to provide academic content, and the project of implementing UpGrade in English acquires meaning when teachers consider the enormous value of the use of academic language a*d-hoc* during the tasks of the project. 28% of the sample provided 3 points, the majority 44% provided 4 points, and 28% provided 5 points. In essence, all answers are positive and provide a further reason for the actualization of such idea.

Table 10- *Bar chart representing the answers of question number 12*
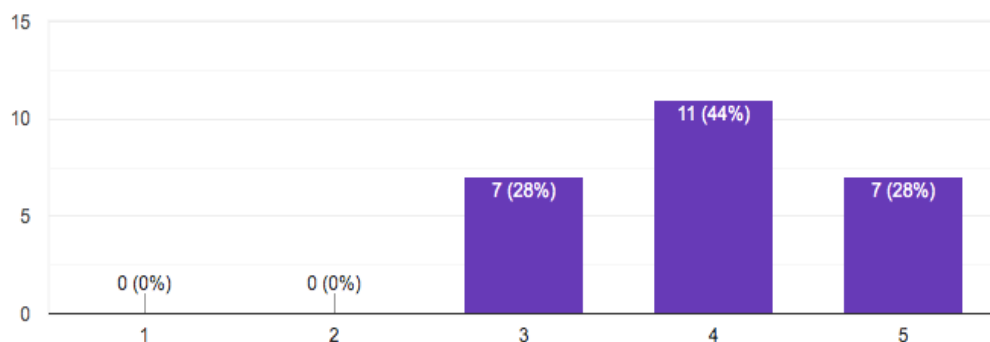
13) In your opinion, does UpGrade in English lead students to be more prepared for the world outside the school context?

The totality of affirmative answers to question number 13 is extremely positive. In fact, UpGrade concentrates on children's ambitions, the projections they have of themselves for the future, building a relationship with the economic and social ecosystem in which they live and will live, underlying mechanisms of the world of economy and finance, which is undoubtedly a context not familiar in schools. Providing students with the tools

for understanding economy, finance, banks and entrepreneurship helps them in the orientation process of deciding what to do after school.

14) *In your opinion, studying a subject in a foreign language, leads students to be more open minded and more tolerant?*

In a society where racism, xenophobia and intolerance are prevalent and represent the outcome of retrograde and close-minded education, children need to be instructed to be tolerant, positive, curious about the different and not suspicious. In the current world, our *form mentis* must adapt to the quick changes in society, and it is essential to be able to deal with differences in every occasion. Education represents a solid basis that can lead to improvement. Culture is at the foundation of progress, and it is the task of parents but also of teachers to succeed in transmitting the love for different cultures. Learning languages represents the first step, the tool that enables people to get in touch with the differences, to travel, and to communicate with people from different cultures. Learning foreign languages provides the key for opening many doors in which acceptance is the rule. Teachers are aware of this issue, and the majority of the candidates (60%) provided the full rate, while 32% gave 4 points and only 8% 3 points, confirming a positive result.

Table 11- *Bar chart representing the answers of question number 14*
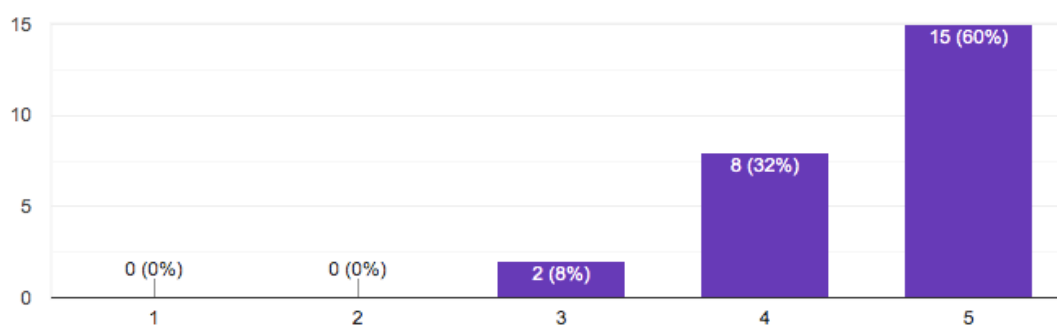
15) *From 1 to 5, how much do you think the risk of misunderstanding on the part of students and consequent risk of failure, is high?*

Question number 15 opens up the window in which teachers can express their fears towards this challenging idea, and one of them is definitely the fear of misunderstanding from the part of the students. In fact, 44% of the sample stated that the risk is low,

explicitly 2 out of 5, another 44% state the risk is medium (3 points out of 5) and in a way implies that it depends on the students, and finally 12% stated that the risk is slightly high and represents 4 points out of 5. Probably their fear grows from their personal difficulty to understand the foreign language. However, CLIL programs aim at employing the use of the foreign language most of the time, but it is clear, that whenever students do not have the tools for understanding from the beginning, some concepts will be explained in both languages.

Table 12- *Bar chart representing the answers of question number 15*
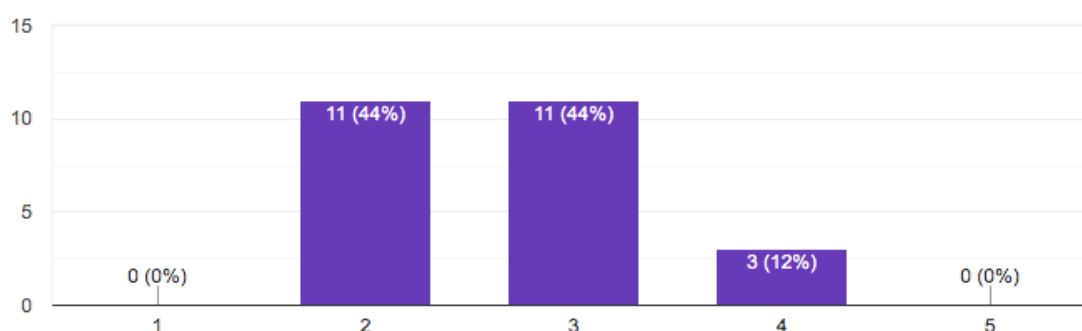
16) From 1 to 5, do you think students will feel demoralized and not up to par?
This question completes question number 15, and results show a more positive thought through the issue of demoralization, even if the majority of the sample put their choice in the middle. 12% of the sample do not think students will feel demoralized, 24% show little concerns, 60% stay in the middle selecting 3 points out of 5, and only 4% have some serious concerns and selected 4 points out of 5. These numbers show that students will actually gain motivation through the project and will feel empowered, and their self-esteem will rise. Teachers have to help them in the process and provide the right terms, repeat them continuously and verify that students are following.

Table 13- *Bar chart representing the answers of question number 16*
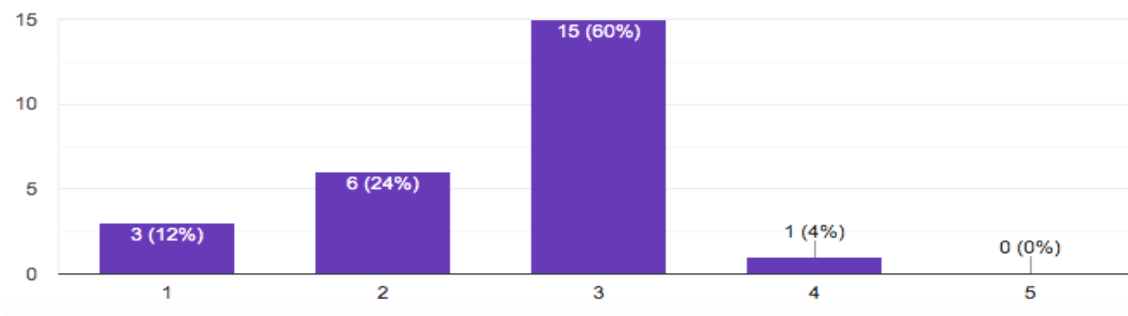
17) In your opinion, will there be less student participation?

The answers to this question show great concern in students' participation as 34.6% of the teachers think that there will be less participation. This data is worrying, and it might represent the obstacle that needs to be overtaken for the success of the program. In order to understand these obstacles, the next question was drafted.

Table 14- *Pie chart representing the answers of question number 17*
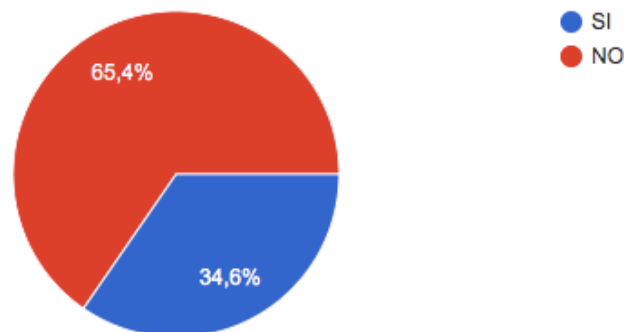
18) Do you think there are other issues to consider?

Question number 18 is a space where teachers can express their concern or observation using their own words, and it emerged that they have numerous preoccupations, presented as follows:

- *Presence of pupils with disabilities.* Two candidates expressed the same fear and is well-grounded. I had thought about this issue while designing the project, and I remembered that during the lessons in Italian, pupils with

disabilities were helped by support teachers during all activities. If during standard frontal classes, pupils with disabilities were not able to follow the lesson, during UpGrade pupils with disabilites were handed the same material as the other students (unlike during standard lessons) and were actively participating in the activities in the way they could. Even if the lesson in English might represent a further barrier for them, with the help of a support teacher, they could overtake this issue and participate in all the practical activities.

- *Clarity and simplicity of the presentation.* It represents a suggestion more than a concern, and it will definitely be taken into consideration. Simple and clear language will be used at first and then gradually vocabulary difficulty will increase.

- *Poorly prepared students in English will not be able to follow.* Two candidates expressed this concern and it connects with the previous one, and the solution remains the same. The presentation will be given using simple and clear language at the beginning, and it will adjust to students' preparation.

- *In my opinion it would be useful to prepare the students to use words or expressions that would then be easily recognized during the open lesson of the project.* This suggestion is extremely useful and might translate in a sheet to be given to students one week before the project, for instance, in order for them to be prepared and to have acquainted some useful language.

19) *In front of a choice, do you think schools would prefer UpGrade in English?*
This question represents a summary of the whole questionnaire because it has to constitute an upgraded version of the program in Italian, and if teachers prefer the old version, it loses its meaning. 73.1% of the sample answered affirmatively and 26.9% negatively. The results are positive but not wholly satisfactory, giving the fact that I expected a higher percentage to acknowledge the potential of the project. Fears and concerns have already been presented and I assume they represent the barrier for 26.9% of the sample.

Table 15- *Pie chart representing the answers of question number 19*
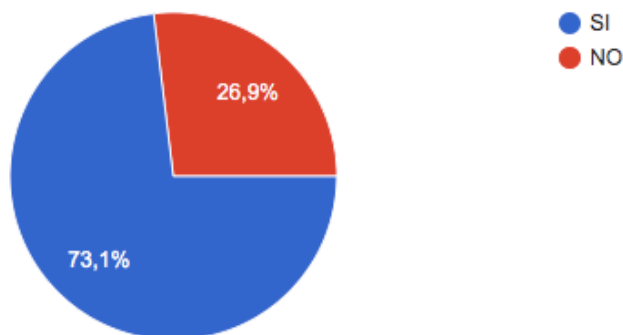
20) *Age*

The sample is rather heterogeneous, as shown in the graphic, starting from 27 years to 66 years old. The medium is 40 years old, calculated on the sample of 26 persons. In order to give meaning to the question I made a cross-analysis for understanding if young teachers had a different attitude towards the program with respect to old-fashioned teachers. As a confirmation, most of the teachers over 40, which represents the medium, answered negatively to question number 19, except for 5 candidates. All the candidates that answered positively were under 40. A second reveling detail, is that candidates who stated not to choose the program in English, also said that in their opinion there would have been less participation from students' part. These answers are definitely linked, and we can assume that those teachers fear that their students will not be able to follow the lesson, and as a consequence, there will be fewer students' participation. Most of those teachers are over 40.

Table 16- *Bar chart representing candidates' age expressed in question number 20*
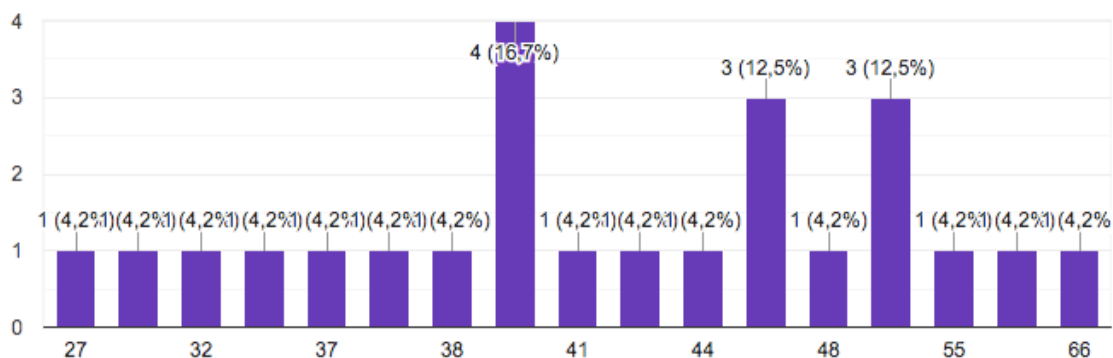
21) *Level of instruction*

The majority of the interviewees confirms that they have graduated from University, only a candidate states to have graduated from an "Istituto Magistrale" which refers to a specific high school for working as teachers, that was possible only in the past without the restriction of a graduation at University. Other than this specific case, all teachers have a "Laurea" or a "Laurea Magistrale" and represent a homogeneous sample.

5.8 DISCUSSION

After the analysis of every separate question, it was necessary to intersect distinct answers, for a better perception of the results' meaning. For the analysis, in the numeral rating scale questions, 4 and 5 points answers were rated positive, and 1,2,3 points answers were supposed negative. The first critical hallmarks to analyze were the set of questions from question number 7 to question number 14 focused on CLIL's strengths. They were crossed with question number 6 relative about the added validity of the program if in English, for observing a potential connection between them.

Beginning with motivation, the relation between the importance of increased motivation found to be beneficial in CLIL and the idea of a more valid program if delivered in English is clear: 18 candidates, which represent 70% of the total sample answered according to this correlation. Motivation increases in CLIL contexts (Lasagabaster, 2009), and with this purpose in mind, teachers account the project to be an excellent chance for promoting their students' self-confidence.

84% of the sample shows the reciprocity between the fact that UpGrade might strengthen students' soft skills and the tangible betterment if in English. Teachers that conveyed 4 or 5 points, also showed positivity concerning the improvement of the program if in English. This relationship is very telling and shows that the enhancement of soft skills represents a concrete gain and for teachers is a reason to show interest in the program.

Even higher is the relationship between the concept that UpGrade in English provides more value and question number 9, which entails the strengthening of the skills in the foreign language since 88.5% of the sample confirm this correspondence. The high

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percentage highlights the prominent concern that the augmentation of the skills in the foreign language plays when teachers think about their interest in the English version of UpGrade. It is a fundamental report, considering that the main intention behind, is to add the instruction in the foreign language for fostering foreign language education.

92% of the unit display consistency in the association among team-building skills and the improvement that UpGrade would ensure if in English. Probably, students during regular classes do not have the prospects to operate in groups and to nurture this highly demanded skill which is teambuilding. Professors discern how new, creative ventures can boost the bonding between pupils and even more, help them in building trust. Working in groups is no easy task, especially when the school system is entirely individualistic. Pupils should be encouraged to interact, for improving their ability to listen, to communicate and for understanding their role in a group.

70% of the responses reveal integration within the development of initiative from students' part and the theory that the English redaction of UpGrade depicts growth in the program. The promotion of initiative is often neglected at school, as during standard classes, the time-space for action is quite limited. We can assume that professors acknowledge that during UpGrade, the likelihood of giving students the drive to taking decisions, is beneficial. When in English, it portrays a further challenge that can boost students' willingness to take actions.

84% of the results reveal a similarity among the upgrading to the English program and the growth of language academic skills. Teachers who state that UpGrade in English is a better program also believe in the value that language skills detain, especially concerning academic language. Students have limited opportunity to get in touch with academic vocabulary in the foreign language, and its learning is converting towards CALP competencies. CLIL lessons are intended to implement the academic language, and as a consequence, teachers appreciate the program also for this precise reason.

88.5% of the answers explicate a correspondence between the fact that UpGrade in English leads students to be more prepared for the world outside the school context and

the idea that the English version of UpGrade embodies its enhancement. UpGrade is a laboratory activity, and instead of theoretical principles, real-life happenings represent the moment of learning. The topic of economy and finance is crucial for the workplace and certainly helps pupils for the world outside the school context. If in English, even more, it provides the tools for communication abroad, with international partners, and it unquestionably broadens the horizon.

77% of the solutions show a similarity between the theory that UpGrade in English depicts a step further and the fact that studying a subject in a foreign language leads students to be more open-minded and tolerant. Language represents the grounds of cultural identification and community. Foreign language learning drives to a more open-minded look on people and society because it provides the instruments for getting to know and appreciate other systems, judging less and observing more. Looking at events from a different perspective leads to acceptance of the differences and tolerance.

Moreover, it is very revealing to witness how the inquiry regarding less student participation is linked to the last question about the preference of UpGrade in English. There is a marked correspondence, and these particular data might suggest that those teachers who do not favour the project in the English language cringe that their students might be less motivated because of the language barrier, and as a consequence, that their participation might suffer. Only 4 candidates represent an exception in this correlation.

These correlations highlighted by the cross-tabulation, are evidence that the strengths of UpGrade that I disclosed at the commencement of the research, are considered so by teachers as well and are part of the grounds why they trust the project. It is rather revealing that the most appreciated quality of CLIL approach is the possibility of fostering foreign language skills, followed by the enhancement of soft-skills. It highlights the strong bond that this program can create, enhancing language skills in a stress-free context, where students are asked to cooperate, create and solve problems. These practical activities realized at school, provide students with the soft skills that employers, teachers and parents consider essential for the new labour market and for life in general.

5.9   IMPLEMENTATION

The questionnaire confirmed that all the strengths depicted at the beginning, play an essential role for teachers when thinking of the implementation of UpGrade in the English language. Yet, it proves as well that teachers' most significant fear is that their students do not meet the specific language requirements in order for the occurrence to be positive. Teachers' opinions are extremely cherished; however, their fear is plausible but at the same time does not represent a real impediment. The idea is, in fact, that the explainer uses both English and Italian, especially with younger students and especially at the beginning. Explainers will, at every time, scaffold language, for making new language, available to learners. Moreover, it is very likely, that students will be equipped with useful vocabulary even before the meetings so that input will be more comprehensible for promoting language learning (Krashen, 1981). In addition, in order for learning to take place, the teacher has to begin from low cognitive demand assignments followed by low linguistic demands and only then the teacher will display tasks that are cognitively demanding but not linguistically demanding. At last, it will be the time for assigning cognitively demanding tasks using demanding language (Cummins, 1991), which is CLIL highest goal (Coonan, 2014). Students will be provided with more teaching material that will help them in the process, according to CLIL methodology.

The questionnaire has been essential for the detection of potential issues to consider, that emerged. Teachers' prominent fear is that students will not feel up to par, because of possible misunderstanding throughout the lesson. This fear is well accepted and represents a challenge for the explainer, that will have to present the language in a way for students to understand. Scaffolding language, beginning with low linguistic demands, using the mother tongue at times and suitable teaching material can help students. When students feel undermotivated the teacher must help them. However, practical activities represent the most engaging possibility in which students can boost their motivation level. Less student participation might represent a risk, but with the right tools and proper strategies the risk can be deceived.

For the actual implementation it is advisable to use the checklist provided by professor Graziano Serragiotto, especially for preparing and adapting the material. In particular, it is desirable to arrange in advance the new vocabulary that the explainer wants to deliver, the grammatical structures and the modality of delivery. Indeed, the suggestion provided by one of the interviewed teachers of adding more meetings is particularly constructive. Indeed, language needs some time for developing, and motivation and self-esteem as well.

Another suggestion for teachers is to use Bloom's taxonomy for significant learning (1956). Learning is driven by the necessity to convey theory into practice, as it holds meaning in activities, not in contents and Bloom suggests a hierarchical orderliness of cognitive skills that helps teachers' education and students' learning. The cognitive skills in the progression are: remembering, understanding, applying, analyzing, evaluating and creating. The system is beneficial for designing educational programs and it can easily be applied in the UpGrade project.

CONCLUSION

Five months of teaching a laboratory of economy and entrepreneurship while studying to become a teacher of English leads to a dissertation like this, in which practice and theory are blended together, real life experience and academic training, become an actual research.

Globalization is dramatically transforming every rule and every formula that has been set up in the past. It translates into the need of rethinking what it means to learn, what it means to teach, what and how we have to teach. The internationalisation of the earth implies that the academic context needs to be more flexible. In our era, profoundly marked by sudden changes, we need our students to be equipped with new skills that, we teachers, have to provide. It is our responsibility, which gets more complicated when students are bombarded every single day with information, inputs and distractions. They are the *Generation Z* which places their energy and attention in interesting new devices and finds whatever is conventional and outdated boring. Books are crucial for children's education but lack factuality and materiality.

Multilingualism is not an anomaly, instead it epitomises the very essence of European identity. Foreign language education demands to be fostered in new ways, for providing students with the tools required today in modern society. CLIL represents a suitable method and practical option for a significant integration of the foreign language in the curricula. Moreover, it is European oriented and aimed at promoting the four skills relevant in modern societies: critical thinking, collaboration, creativity and communication while overcoming judgements such as racism, xenophobia and intolerance. Indeed, it is what our society necessitates because successful people are creative, and creativity needs to be nurtured from a young age, starting from a welcoming and tolerant education system. Standardised curriculum and mechanical learning, following the philosophy that one-size-fits-all does not represent the ideal teaching method.

As well, didactic laboratories embody the best situation at school for fostering significant learning experiences which are engaging, have value in life, encourage high energy level

in the class, prepare students for the marketplace, enhance tolerance, enhance collaborative work and represent long-lasting learning. In the UpGrade project, not only are financial and entrepreneurial tools granted, but also students get the chance to familiarise with themselves and to make free and independent choices in different contexts. This is in order to reach an awareness of the circumstances ahead, be self-determined, and comprehend proper knowledge on a personal and social level. UpGrade focuses on children's ambitions, the projections they have of themselves for the future, building a connection with the economic and social ecosystem in which they live and will live, boosting their self-appreciation.

CLIL and the UpGrade project have been mixed in this dissertation, for providing a new challenging pathway in which students' relevant skills can grow as well with language competencies. The behavioural engagement is guaranteed, involving students' effort, concentration, and willingness to asking questions. It is in line with the *Citizenship Competencies* for life-long learning related to the value of freedom in education for all people, within the context of democracy.

From this exploratory study, we can deduce that CLIL represents a valid method for nourishing language education and blending it with curricular subjects within a European context. CLIL experiences help students expand their prospects on culture, life, and real-world knowledge. It boosts academic achievement as the mastery of academic vocabulary and critical thinking skills render curriculum more exciting and successful. Undoubtedly, it is a challenge, and for this reason, CLIL provides students with a sense of fulfilment for being able to discuss a specific topic in a foreign language.

The research highlights that the strengths of the program are several, the most appreciated ones are the occasion for fostering foreign language skills and the enhancement of soft-skills that facilitate building relationships, develop trust and manage team in the workplace and life in general. Teachers recognize how this set of skills is valuable and rather difficult to cultivate during standard frontal lessons. Yet, the research showed that fears and holdbacks still portray the reasons why these kinds of activity are not so widespread. Teachers' biggest concern is that pupils will not feel up to par because of

potential misinterpretation during the lesson. This fear denotes a challenge for the explainer, that will have to present the language in a way for students to understand using suitable techniques such as scaffolding, beginning the lesson with low linguistic demands tasks, using the mother tongue at times and suitable teaching material. However, practical activities such as the UpGrade project mirror the most engaging possibility in which students can boost their motivation level. Less student participation might imply a risk, but with the right devices and proper approaches, the risk can be deceived.

Providing a context for our students where they can identify themselves in the future, is an important experience that they will never forget. It acquires more meaning because while they are occupied with doing a specific activity, they learn how to do something, forgetting that they are at school and that they are learning for real (*Rule of forgetting*, Krashen, 1983), and they most certainly will never forget it. "When I hear, I forget. When I see, I remember. When I do, I understand". Confucius wisely reported more than 2000 years ago, and today more than ever this saying remains a motto for many teachers, educators and myself included.

ACKOWLEDGMENTS

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APPENDIXES

A) Guidelines for planning a CLIL module

SUBJECT: _____

TITLE: module/ unite/lesson___

ADDRESSEE: ____

- Age: ____
- Mother tongue: ____
- Level in the foreign language: ____

YEAR OF PUBLICATION: ____

OBJECTIVES/ CONTENT: (on line with the ministerial programs) ____

ORGANIZATION OF THE TEXT/CONTENT:

- Module distribution/ units/ chapters: _____
- Index: ____
- Instructions: ____
- Prerequisites: (explicit/ implicit; concepts that have to be introduced before the module) ____
- Objectives: (explicit/ implicit) ____
- Input: (sufficient; clear) ____
- Graphic project/ layout: (engaging/ not engaging; helping memorization) ____
- Symbols: ____

VOCABULARY

- New vocabulary: (neat and concordant) ____
- Graphic techniques employed: (bold, highlighted) _____
- Repeat of vocabulary from previous units: (for reiterating and memorization) ___

GRAMMATICAL STRUCTURES

- Formation of new words and tenses: ____
- Structure of complex sentences: _____
- Other grammatical complications: ___

ORGANIZATION OF THE SPEECH

- Organization of paragraphs: ___
- Organization of sections: ____

-   Organization of chapters/ units: ____

LEARNING STRATEGIES

-   Reading strategies: (summaries, questions, filling the gaps) ___

-   Taking notes: ____

-   Skills: (listening, reading, writing, speaking) _____

-   Self- evaluation /feedback: _____

-   Graphics, diagrams, charts: _____

-   Others: ____

SUPPLEMENTARY MATERIAL

-   Comprehension activities/ production/ development of lexicon: ____

-   Amount of exercise: _____

-   Strengthening activities: ____

-   Optional distinct path: ___

-   Assessment/ test grids: ____

-   Correction handouts: ____

-   Guideline for the teacher: (suggestions, integrations, modality for assessment) ___

-   Links with other subjects: ___

-   Further information: ____

MODALITY

-   Team work/ pair work /individual: ____

-   Material: (engaging, authentic, flexible, adaptable, pedagogic) ____

-   Strategies: (diverse, meeting different learning styles) ___

LINK

-   Technological material: (video, audio, internet) ____

B) UpGrade di UpGrade: QUESTIONARIO PER GLI INSEGNANTI DELLE CLASSI CHE HANNO PARTECIPATO AD UPGRADE

Buongiorno a tutti voi insegnanti che avete partecipato al progetto UpGrade con Pleiadi. Vi starete chiedendo, come mai un questionario? Prima di tutto mi presento, sono Alberta, un'operatrice di Pleiadi che ha partecipato al progetto insegnando lo scorso anno, ai vostri alunni delle delle scuole elementari, medie e superiori.

Inoltre, studio Lingue all'Università Ca' Foscari di Venezia, e ho deciso di integrare queste mie due passioni per elaborare una tesi di laurea che

inglobasse il progetto a cui ho tenuto molto quest'anno poichè ho pensato a quanto potrebbe arricchire ulteriormente i ragazzi, essendo il mondo dell'economia molto legato al mondo anglofono. Durante i quattro mesi di progetto, ho infatti riscontrato molta motivazione, impegno ed entusiasmo sia da parte dei ragazzi che da parte di voi insegnanti, ed ho pensato, perché non provare a fare UpGrade in inglese?

Nei mesi scorsi, ho svolto un lavoro di ricerca sul CLIL (Content Language Integrated Learning), che consiste in un programma educativo in cui una materia viene presentata agli studenti tramite l'uso veicolare di una lingua straniera, in modo da poter acquisire nozioni linguistiche e nozioni specifiche della materia non linguistica, contemporaneamente. Ho avuto modo di avere conferma che gli effetti positivi, ci sono e sono evidenti, tra cui più motivazione, più confidenza in sé stessi, più volontà a porsi domande, sviluppo di abilità linguistiche con linguaggio accademico, visione del curriculum come unità, e inoltre crea opportunità per il futuro lavorativo dei ragazzi che saranno più improntati a studiare in lingua straniera.

Pongo particolare attenzione nella mia ricerca, alle competenze chiave per l'apprendimento permanente, approvate il 22 maggio 2018 dal Consiglio dell'Unione Europea, particolarmente rilevanti per questa ricerca e molto legate al progetto UpGrade. Si chiamano Competenze di cittadinanza e riguardano l'importanza della libertà per tutte le persone, all'interno della cultura della democrazia.

Presento ora a voi insegnanti un questionario in italiano, che è mirato a capire se anche da parte vostra potrebbe esserci un interesse a sviluppare questo progetto, se avete fiducia nelle sue qualità e se pensate che possano presentarsi delle difficoltà.

Vi chiedo gentilmente di rispondere alle domande, il questionario è del tutto anonimo e il vostro contributo è davvero utile per la mia ricerca. Spero vi faccia piacere e che possa produrre un lavoro innovativo che potrà essere implementato nel futuro.

1) Conosci il progetto UpGrade? SI NO
2) Quanto ti è sembrato efficace da 1 a 5? 1 PER NIENTE, 5 MOLTISSIMO
3) Perché lo ritieni efficace?
   ▪ Propone agli studenti un primo approccio nel mondo dell'economia
   ▪ Offre la possibilità di sviluppare competenze trasversali
   ▪ Prepara gli studenti al mondo fuori dal contesto scolastico
   ▪ Non lo ritengo efficace

- Altro

4) Secondo te, si potrebbe migliorare il progetto UpGrade? SI NO

5) Quale tra le seguenti proposte implementeresti?
  - Fare più incontri
  - Integrare il programma in lingua inglese
  - Implementare l'uso della tecnologia
  - Altro

6) Secondo te, UpGrade sarebbe un programma più valido se in inglese? SI NO

7) Che importanza dai, all'aumento di motivazione, ricontrato come beneficio nei programmi CLIL (Content Language Integrated Learning)? 1 NESSUNA 5 MOLTISSIMA

8) In una scala da 1 a 5, in quale misura questo programma può rafforzare le competenze trasversali dei tuoi alunni? 1 PER NIENTE, 5 MOLTISSIMO

9) Da 1 a 5, UpGrade in inglese quanto può rafforzare le competenze degli studenti in lingua straniera? 1 PER NIENTE 5 MOLTISSIMO

10) A tuo parere, UpGrade in inglese, contribuirebbe al "team building?" (aiuta cioè a creare una squadra)? SI NO

11) Secondo te, da 1 a 5, quando UpGrade in inglese può aiutare i ragazzi a promuovere spirito di iniziativa? 1 PER NIENTE 5 MOLTISSIMO

12) Che importanza dai, allo sviluppo di abilità linguistiche con linguaggio accademico in inglese? 1 NESSUNA 5 MOLTISSIMA

13) Secondo te, UpGrade in inglese porterebbe gli studenti ad essere più preparati al mondo fuori dal contesto scolastico? SI NO

14) Secondo te, studiare una materia in lingua straniera porta ad essere più aperti mentalmente e più tolleranti? 1 PER NIENTE 5 MOLTISSIMO

15) Da 1 a 5, quanto pensi il rischio di incomprensione da parte degli studenti, e conseguente fallimento del progetto sia alto? 1 NON RISCHIOSO 5 MOLTO RISCHIOSO

16) Da 1 a 5, pensi che gli studenti si sentiranno demoralizzati e non all'altezza? 1 ASSOLUTAMENTE NO 5 ASSOLUTAMENTE SI

17) Secondo te, ci sarà minor partecipazione da parte degli studenti? SI NO

18) Secondo te, ci sono altre problematiche da considerare?

19) Davanti a una scelta, secondo te, le scuole preferirebbero UpGrade in inglese? SI NO

20) Età

21) Livello d'istruzione

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