CLIL Supporting Academic Education in Business Engineering Management

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Abstract: Nowadays in faculties worldwide CLIL – Content and Language Integrated Learning – is a developing, flexible concept, where content (non-language subjects, cross-curricular themes, and global issues) as well as foreign languages are integrated in a mutually beneficial way of teaching, able to provide motivating and value-added experience to educational results for numerous students. Computers play the key role, as basic means in effective CLIL implementation. Business management and engineering at academic levels are the best suited CLIL subjects, with high competition in admission exams and noticeable popularity among Romanian learners. This study discusses the necessity, the evolution and the typical selection of English language required for such lectures and seminars. Above all, it advocates for cultivating study skills at academic level, in order to prepare competent workforce, able to perform with distinction on global labour markets in areas such as management and sustainable development policies.

Key-Words: computers and CLIL, business engineering, management, academic education

1 Rationale

The implementation of CLIL programs has grown rapidly as a result of proactive and reactive reasons including the language policies meant to harmonize teaching and learning across Europe. CLIL in academic business engineering & management education has proved its benefits encouraging both students and faculties to approach active learning in global contexts and to venture beyond cultural and linguistic barriers in order to gain additional perspectives and knowledge. CLIL bridges existing curricular limits providing integrated study environments and new dynamics to subjects. It urges stakeholders & administrators to value idiom proficiency in bilingual students and faculties. CLIL expands the number of graduates able to carry out tasks in more languages, thus stimulating bilingual & multilingual professionals. ESP professors can be CLIL collaborators, supporting certain content subjects.

Fig. 1. CLIL benefits

CLIL stemmed from communicative approaches influenced by autonomous learning, student mobility programs, and new technologies. Hence language policies see CLIL as a means for internationalizing and modernizing institutional profiles. Content in tertiary education is an opportunity for CLIL learn-
ers to master specific lexis competences indispensable in furthering their studies and gaining an edge. Networks and resources have become available via the TIE-CLIL Project (Trans-Language in Europe) funded by the Socrates framework in its subsequent form for promoting pluri-lingualism by introducing Content and Language Integrated Learning in five different EU languages (English, French, German, Italian, Spanish). It aims to provide pre-& in-service development programs in CLIL for language and subject teachers by refining existing knowledge in the field and by providing state-of-the-art understanding of theory and practice. Consistent research in the area, implemented in 2010 by the University of Nottingham, has highlighted the themes that work well via CLIL. They are as follows:

- Enterprise, business and management
- Global dimensions & sustainability
- Technology & engineering
- Environment protection & alternative scenarios
- Interconnectedness & media
- Identity & cultural diversity
- Cultural understanding & tolerance
- Explore own values and beliefs
- Community participation
- Healthy lifestyles
- Creativity & critical thinking
- Making sense of the world
- Communicate clearly and effectively worldwide

Historically speaking, ESP (English for Specific Purposes) emerged in the 1960s, 30 years prior to CLIL, and both stem from the common demands of world economy, from the emergence of English as international language of communication in science and business, and from the new focus on responding to learners’ needs of dialogue in specific contexts. ESP was successful in academic language teaching as a result of using the communicative approach. It shares with CLIL the following characteristics:

- mainly intended for intermediate→advanced adult students who have basic English knowledge.
- methods & activities pertinent to the subject served;
- language practice (in grammar, lexis, and register) fit for the discipline in different contexts.
- focus on occupational purposes & academic study skills, mainly learning to learn (Machado, 2001).
- authentic learning materials, suitable for students’ actual proficiency levels.

In parallel, in 1965, Content-Based Teaching (CBT) and the Canadian Immersion Model laid the bases for learning content in a second language (Coyle, Marsh, 2010). ESP and CBT dealt with occupational needs which required both content & language with the same priority. In 1994, similar demands led to the emergence of CLIL in Europe. It is a stand-alone approach melting socio-culturalism, constructivism, multiple intelligences & language learning theories, but CLIL & CBI share common traits (Coyle 2010) both fusing content and idiom. In addition to this, CLIL has incorporated ideas from EFL, ESP, TBI (Task-Based Instruction) and related disciplines. In all the above, content & language merge consistently so we wonder where ESP ends and CLIL begins.

Fig. 2. Proficient CLIL themes, 2010, the University of Nottingham, cf. http://www.educationuk.org

The topics show interconnections and require interdisciplinary approaches by creativity stimulation in active study, with gradual language acquisition, able to produce successful learners who will become confident individuals and responsible citizens.

2 From ESP to CLIL

Both CLIL and ESP are constructed on principles of effective learning, not on specific methodologies; all decisions aim at learners’ needs. The most important goal is the ability to transfer knowledge and idiom from one area to another.

3 Merging dimensions

CLIL promotes class-based inquiry and the Critical Incident Technique to highlight these interconnected dimensions: content (progress in knowledge & skills within defined curricula), communication (using language to learn while learning to use language), cognition (train thinking skills in concept formation, understanding and language) and culture (alternative perspectives & shared understandings).
1. The Culture Dimension
- Build intercultural knowledge in wider contexts
- Develop cross-cultural communication skills
- Study neighbour countries, regions, minorities

2. The Environment Dimension
- Prepare internationalisation and EU integration
- Access International Certifications
- Enhance school profile and visibility

3. The Language Dimension
- Improve overall target language competence
- Build oral & interactional communication skills
- Deep awareness of mother tongue & target idiom
- Develop pluri-lingual interests and attitudes

4. The Content Dimension
- Opportunities to study content by perspectives
- Access subject-specific target terminology
- Prepare for future studies and/or working life

5. The Learning Dimension
- Complement individual learning strategies
- Diversify methods & forms of seminar practice
- Increase learner motivation

![Fig. 4. The 21st century learning, cf. www.infed.org](image)

For content-based instruction delivered in a second language, Brinton and Snow (2004) refer to theme-based instruction, where EFL (English as Foreign Language) teachers base materials development on content-related issues and push higher-order idiom processing acts (comparing, separating facts from opinions). Adjunct instruction may enrol students in a language course to introduce or recycle the content knowledge previously received in parallel lectures; content professors assist with students’ idiom limits by simplifying or adjusting the materials.

4 Language acquisition in CLIL lectures and seminars

It is difficult to learn a language out of context, as it is a tool for communicating in the framework of the content. Traditional ways use old topic-based textbooks sadly irrelevant to the learner’s life. In CLIL, language develops organically because the students simultaneously use the idiom and gain knowledge, in motivating activities, with clear outcomes. It is a holistic modality of teaching, incorporating thinking skills and competences relevant to the community as well as skills for the future jobs, not mere content. CLIL opens perspectives for work mobility because employers will hire people skilled in additional languages, with intercultural communication assets and multilingual abilities that facilitate international performance in a global community.

Students become increasingly confident and express themselves with greater ease despite mistakes. It is not a complete language course, just the language relevant to the lesson, and there is no syllabus to get through. Language is thus short and strictly to the point, allowing focus on the content syllabus. Clear visuals and graphic organizers for information processing & recording facilitate students’ learning. We hereby dissect typical CLIL seminars in our academic education with the aim to identify, locate and describe language functions in a range of segments, from the traditional didactic approach to the modern one, as synthesised in the next table:

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturing on factual information</td>
<td>Guiding, motivating, and facilitating</td>
</tr>
<tr>
<td>Working as an individual</td>
<td>Valuing working together</td>
</tr>
<tr>
<td>Teacher was the primary source of knowledge</td>
<td>Many rich sources of immediate knowledge</td>
</tr>
<tr>
<td>Teacher and print media served as the primary means of communication</td>
<td>Learning using a vast variety of media including the Internet</td>
</tr>
<tr>
<td>Learning was separated from the rest of the community</td>
<td>Learning now occurs globally</td>
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</tbody>
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![Fig. 5 From didactic tradition to CLIL modernity, cf. Learning Ecology Communities and Networks. Extending the Classroom, (Siemens, 2003)](image)

Difficulties of reading comprehension in the foreign language emerge from deficiencies in background knowledge or from insufficiently activating it. If students stop in the middle of an exercise when they encounter lexis beyond their level, which had not been elicited or pre-taught, inference applies, i.e. the academically acceptable strategy of guessing. Sense is derived from context as their knowledge makes the content available and they infer by using tacit schemata (Rumelhart, 1980). Without schemata or background knowledge, text cannot carry meaning; understanding becomes synergy between text and the readers’ background knowledge. Thus the text is a type of graphic design the readers learn to decode. Decoding is a process of using sections from the text to predict what follows by means of background knowledge, subsequently confirming or refuting the already formed hypotheses before further sampling or reading. Hence students need to be able to relate what they are taught to their scheme. ESP students often have content knowledge (content scheme) but need to fill language gaps (language scheme).
Scheme activation is inter-linked with top-down and bottom-up processing, i.e. Krashen’s ‘comprehensible input’ and Bruner’s ‘scaffolding’ = assisting. Scaffolding for content & language study was undertaken by schema-building via activities involving these steps: sequencing, using drills with causality language in targeted reading, outlining, commenting on videos. The typical seminar outlines reading, applies top-down information structuring, and schema building, and analyses causality. A video comment activity at the end of the unit provides a reciprocal bottom-up approach. Besides schema theories and top-down bottom-up data processing, this activity relies on social constructivism principles, language scaffolding & peer cooperation. Study theories like Connectivism (Siemens, 2005) bring study skills to the Digital Age via lifelong learning, non-situated study, formal central education decrease, and by ways in which technology transforms the brain, replacing ‘know-how’+‘know what’ by ‘know-where’ in learner-centred tasks.

CLIL lectures & seminars employ typical language to mirror thinking skills in the next tasks:
- To carry out simple investigations/experiments,
- To predict what will happen, to compare results,
- To describe and record what they observe,
- To find patterns, similarities and differences,
- To draw conclusions.

When collecting and prioritising students’ language by frequency, we obtain the following hierarchy:

**Identifying/naming**
- This is a/the … / That is a … / That’s the …
- This is called a/the … / The … … are called …
- It comes from a … / It’s from a …
- The … structure is defined (as) the …
- At the top of the … there is a (adj.) part called…
- Together, the … and the … constitute …

**Describing appearance/structure**
- It looks like … / All … have …, a …, and …
- It’s got hasn’t got … / It has/doesn’t have …
- The … are highly (adj.) parts which … verb
- They are (adj.) and are attached to the …
- The … are arranged in a ring in the centre of ...
- They consist of a … with a … shape at the end.
- … shaped rather like a … divided into 2 parts.
- The … is attached to the bottom of the … by a …
- A long tube grows out of the …, this is the …

**Describing location**
- It is found in the … (centre) of …
- They are inside …
- The … are found at the foundation of the …
- They are (adj.) and are attached to the …

**Describing function**
- The … is the part which … / The … is a …
- The … is where … is carried out
- The … is used for …-ing / It has the role of –ing
- It carries out the function of –ing / Its job is to …
- The … has a …-ing role / It does … the …-ing

Hence practice and the retrieved samples confirm the progression from lower order thinking skills to higher ones via CLIL, as stated in the next figure:

**5 Cultivating thinking skills for CLIL in universities**

Cultivating thinking skills is needed for academic discourse functions, for revealing the intersection of content, cognition and idiom, and for the ability to express complex thought processes adequately. Cognitive skills are crucial and systematic language work is important when teaching thinking. Students need to be shown how to express their ideas in an increasingly complex manner.

Teaching thinking skills uses modern re-conceptions of the traditional taxonomy published by Bloom in 1956 and revised by Anderson and Krathwohl.

![Bloom’s taxonomy revision](https://www.alte.org)
This categorization and hierarchy of cognition skills maps the way lower order thinking skills will ideally lead to training the higher order ones. Some routine content-processing tasks reinforce cognition: note-taking needs sequencing process steps; identifying cause and effect; expressing relations; outlining a topic from text/audiovisual media; commenting.

Top-down processing is general and conceptually-driven. Bottom-up processing focuses on details and is known as data-driven processing. Success of both processes depends on the readers’/listeners’ scheme, as data remain incomplete and meaningless without conforming to the person’s conceptual expectations (Rumelhart, 1980). Students have schemes formed over years and influenced by factors like school and study experiences, learner types and cultures. Novel concepts diffuse in processing until meaningfully connecting to units of prior knowledge. New input is gained by bottom-up processing and the learners automatically try fitting it into their schemata. At the same time, top-down processing helps learners recover from doubts and reinterpret possible senses. Here are CLIL traits for thinking skills practice:

- Levels tailored by CEFR: Basic, Beginner (A), Intermediate (B), Advanced (C)
- Beginners basic level gives systematic language development as well as literacy instruction
- Three-stage process: Introduce, Practice, Assess
- Writing actions reinforce &recycle strategic skills

Teaching thinking and creativity is a key element in the modern education that includes learners' beliefs and feelings into seminars as cultural environment. Engaging students in controlled outline writing has the purpose to help them organize their ideas as part of top-down and bottom-up processing practice. Luo (2012) reported that after implementing a series of controlled outlines, students better organize notions. Thus text input is reconstructed & rephrased in their own words so as to freely practice the conjunctions and connectors from controlled exercises. Students were motivated to act as content experts seeking for additional/detailed data from web quests and scavenger-hunts, hence learning to learn independently and develop essential study skills for flexible use.

By selecting practice aspects to problematise and by critically examining recorded observations students take charge of their professional progress. The CLIC Matrix is an internet awareness raising tool for professors, providing a series of indicators to use in assessing their teaching in CLIL contexts together with good practice to help them improve. The matrix covers the four aspects of culture, communication, cognition& community, each from context, language, integration and learning angles. The European Framework for CLIL Teacher Education gives a set of principles & ideas for curricula design in professional teacher development. It is a macro-framework that identifies CLIL teachers’ target professional competences and proposes professional development modules to attain them.

Multilingual education is present in international business, management, entrepreneurship, services, tourism, and internships. Lasagabaster, 2008, states that CLIL programs in upper secondary education boost students’ reading skills and they will better manage English textbooks at university level. The study found that 74 % of CLIL students scored satisfactorily on the IELTS Reading for Academic Purposes Module Test compared to 33 % for non-CLIL students. The ones in the CLIL program performed better on all aspects of text reconstruction tasks, listening & reading comprehension, grammar proficiency, writing & socio-pragmatic competence (i.e. linguistic consciousness & linguistic acts). The study concludes that students in CLIL programs score significantly higher in all aspects of language learning. Mainly in listening comprehension, the yearly increase in proficiency is twice that of learners in traditional programs. CLIL groups surpassed non-CLIL counterparts in fluency, pronunciation, vocabulary, grammar, and content. Evidence shows high participation in class and intense intellectual engagement with the subject. Students demonstrated confident command of technical and business lexis, with increased skills to produce extended discourse. Learners’ lexis became widely specialised, complex dialogues alongside with more precise distinctions and definitions were implemented in conversation, and they generally spoke more coherently, with little hesitation and no notes or prompts.

CLIL seminars develop unique traits like creativity, risk-taking in problem solving & voicing opinions, and data manipulating competences (Dalton-Puffer, 2007). Learners possess larger business engineering lexis, formal terms&appropriate academic language. For CLIL success, students require core competence in the subject matter, in the foreign language, and in their interactions. In the cognitive processes of concept formation, the close link between ideas and
particular language breaks. Bonnet (2012) states the linguistic and cognitive difficulties in CLIL generate more intense reading, paraphrasing and cognitive processing, which means that assistance & multiple learning strategies may be needed.

6 Principles for sustainable CLIL in computer-driven academic training

Sustainable successful CLIL in Romanian academic environments dealing with engineering, economics, management and agronomy focuses on attaining the following short-term and medium-term outcomes:

- Improved competences (reading, writing, listening, and speaking) – in first and second language
- Faster learning
- Reduced cost of delivering teaching (i.e. cost effectiveness)
- More young people continuing to learn languages after compulsory education (reducing attrition) through upper secondary, vocational pathways and tertiary education
- More young people learning a second foreign language in lower secondary education
- Increase in the range of first, second and third foreign languages being taught in general education and through to tertiary education
- Teachers have increased capability to teach effectively

6.1 Short-term outcomes

- More motivation and interest in foreign language learning
- More confidence to speak
- More opportunity to practise
- More vocabulary learnt
- More scope for different learning styles
- Better participation in class teaching

6.2 Medium-term outcomes

- Improved competences (reading, writing, listening, and speaking) – in first and second language
- Faster learning
- Reduced cost of delivering teaching (i.e. cost effectiveness)
- More young people continuing to learn languages after compulsory education (reducing attrition) through upper secondary, vocational pathways and tertiary education
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- Increase in the range of first, second and third foreign languages being taught in general education and through to tertiary education
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Fig. 9. CLIL short & medium-term outcomes

www.ec.europa.eu/education/policies

Our research, conducted in various areas of management, engineering &agri-business, confirms the consistent strategic contribution of Meyer’s principles, 2010, of successful & sustainable CLIL in academia:

- Relevant, challenging, authentic materials on new topics for motivation & connections to prior knowledge (video clips, pod-casts, flash-animations, webquests, interactive website sources on languages).
- Challenging tasks, creative thinking, opportunities for meaningful idiom use in differentiated and self-directed study constitute the key to progress.
- Scaffolding reduces cognitive and linguistic loads in content input, enabling students to complete tasks by adequate, supportive structuring; it also supports language production by providing phrases, subject-specific lexis, and collocations for assignments.

- Rich interaction in idiom acquisition is strongly facilitated by using the target language exclusively. Learners should also be pushed to make use of their resources. Student output is dependent upon task design in CLIL lessons. Task-Based Language Teaching (TBLT) will be integral part in CLIL. It brings authentic communication to the classroom, in tasks promoting meaning negotiations which give greater depth and bandwidth in content learning.
- Intercultural communication: students become aware of hidden cultural codes and of adequate linguistic & non-linguistic strategies to address them.

Fig. 10. Teacher approaches impacting learning processes, www.ec.europa.eu/education/policies

- To be effective, CLIL should take at least 25% of the content in an annual teaching programme;
- CLIL prioritises agreed parts of the subject matter;
- There needs to be a clear division between who teaches and assesses the target language and who uses the language in teaching other content; however team work among such teachers is essential;
- If the target language is used for assessment, tests should be kept simple;
- Assessment in the content subject should be based on students’ products & achievements rather than on their target language ability.
- CLIL students gain in cognitive development and in adjacent aptitudes, so it is an opportunity for using knowledge learned in one context as a basis for other situations where learners apply, integrate and transfer ideas while fostering critical thinking (Gravé-Rousseau 2011). Cognitional development seemed even faster for CLIL learners.

Fig. 11. The Progress of CLIL www.job.edunet.com
7 Transforming & growing CLIL for our graduates facing the job market

CLIL has slowly got accepted in EU countries and certain states even ask educational staff to use it.

With CLIL acquiring content & language is of equal importance, in consistent development and slow but steady integration. In the long term, students absorb both sides just as well, or even better than those who study content and language in separate classes.

CLIL stands for a change of focus in the classroom, with teachers showing students how to find data on their own, for their effective use, and how to work and talk together for discovering new ideas. This is how the new language becomes part of the learning process, which generates a shift in didactic methods: professors find different ways to help students learn.

By this, young adults are prepared for the modern world where people work in project teams, use other languages to talk to colleagues, and communicate with fellow team members from different cultures. They are expected to solve problems, plan their own effort and find out data on their own, using a wide range of sources, especially the Internet.

For most of the twentieth century, the set of skills needed for the workforce was much simpler than it is today. Schools used to prepare their students for employment by teaching them to read, write and do arithmetic, by giving them information on the world they lived in, and by teaching them practical skills. Students had to become used to following a regular daily routine, remembering data and carrying out instructions. By contrast, preparing for employment nowadays requires different skill sets, not only for today’s needs, but also, and mainly, for tomorrow’s.

1. Independent & flexible in when & how to work.
2. Equipped with IT abilities, well versed in finding any data they need on the Internet/Social Media.
3. Social & communicative skills to cooperate in project teams, rather than work alone.
4. Subject competencies & motivation to get further skills & idioms as jobs change and evolve.

5. It certainly is a valuable asset to use linguistic and intercultural skills in multinational industries and multicultural communities.

Fig. 12 CLIL progress by components Mehisto 2008

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8 Is CLIL for all professors?

Pavesi, 2001, states that it is preferable that there is cooperation between the content and the language professors when establishing CLIL programs. However, it is not always possible or feasible, and CLIL teachers often have to perform both roles. This often gives rise to anxiety when teachers who are knowledgeable about their subject areas but who are not proficient in the target language are asked to do CLIL. They never use the type of communication students usually learn in language classes.

It gets even more problematic as:

• CLIL students do not follow a syllabus which is based on grammar development.
• CLIL students do not learn tourist language
• CLIL students do not learn language by topics in language handbooks, like family, travel, advertising. In other words CLIL professors do not convey Basic Interpersonal Communication Skills (BICS).

CLIL implies language taught in three categories:

• content-specific vocabulary for the topic and the grammar needed in the subject (past simple, ‘used to’– history, ‘if......, then .....’ sentences – science.
• language required to carry out activities during the lesson (sentence starters: ‘there is’/‘there are’; sequence markers for writing: ‘firstly’, ‘after that’ or ‘finally’; functional language for group work: ‘I disagree with ....’ or ‘Shall we decide on ....’.
• language to help organise personal ideas and solve problems, (‘analyse’ categorise ‘design’).

CLIL learners are more successful and motivated than those in traditional content education because they regard the content from different and broader perspectives.
perspectives when taught in another language; they develop more accurate academic concepts; in CLIL, subject-related intercultural learning takes place. Hence it all is highly demanding for professors and not all are willing to work extra, on uncharted areas. Furthermore, there is no specific methodology that relates to CLIL, and it requires active methods, cooperative classroom management, and emphasis on all types of communication. Moreover, holistic ways of learning as well as learning from practical, hands-on experience need to be used. In CLIL, it is important to use audio-visual aids and multimedia in order to overcome problems caused by the use of a new language; hence the need for well-equipped classrooms. The simultaneous teaching of a second language and certain content should include language support like reformulation, simplification and exemplification. Code switching (switching to the students’ school lingua franca instead of the target idiom) should be the last option for communication purposes, but a mixture of both languages, so as to get messages across effectively or keep the conversation going may be permitted. Therefore teamwork skills are needed by CLIL teachers in preparing curriculum as well as while teaching, which can be difficult. Students should spend 50% of all lessons using the target language focusing on the oral skills: speaking and listening. When planning the CLIL curriculum, it is important and challenging to take into account: • learners’ ages, needs, interests, motivation and general linguistic competence • teacher’s competences, training and expertise in CLIL and command of the second language • local community interest; contributing resources to achieve the outcomes and objectives they all set. Through interaction with peers and teachers, and by use of multimedia resources, each student constructs new knowledge at his own pace, going from simple awareness to real understanding and proficiency. Hence teacher training and constant development must be enforced, according to the next schemes:

Teachers require specialised training in language pedagogy, alongside with the didactics required for academic subjects. They must possess special skills and competences given in specific initial teacher training. Skills and competences ought to include:

- Knowledge on bi&pluri-lingualism psychology;
- Subject-related second language skills;
- Wide range of methodologies for the teaching of subject content and the second language;
- Ability to find teaching materials in the second language and adapt them for the CLIL classroom;

CLIL teachers are bi/pluri-lingual and know about:

- CLIL contexts around the world
- Identifying the core language of a subject
- The language of thinking
- CLIL task design
- Providing language support
- Teaching vocabulary in CLIL
- Developing listening in CLIL
- Working with texts and words
- Teaching subject-specific writing
- Speaking and CLIL
- Classroom language
- Error correction
- Peer observation – watching teachers teach CLIL
- CLIL lesson planning
- Assessment in CLIL
- ICT
- Project work
- Classroom presentations
- Learning strategies

Academic policy is important, especially for CLIL administration and management. As the integration of theory and practice is fundamental to the success of CLIL training, it should include observation in such classes, training sessions at university, didactic instruction and training placements in universities in the target-language country.

Continuing professional development (CPD) keeps the staff updated and informed on the latest and most relevant developments in the field. For CPD, the main prerequisite is to attract committed subject teachers who feel confident of their subject matter and are experts in their subject specialist language, teaching methodologies and syllabus. They must be able to communicate in the target language but also assist students in developing language awareness. The key aspects of effective in-service CLIL teacher education are: language work, particular strategies for text comprehension and vocabulary acquisition; development of ways to fuse content and language.

In an ECML framework for professional development of CLIL teachers, Marsh, 2011 specifies the professional competences CLIL teachers possess:

Fig. 13. Mapping CLIL Types in the modules of the TKT Course, www.cambridge.org
• Commitment to cognitive and social development;
• Insight of CLIL core features, and how these link with best practices in education;
• Research-based knowledge of the interdependence of language and cognitive development;
• Ability to offer enhanced and detailed pedagogical scaffolding by a wide range of knowledge & skills relating to didactics and assessment;
• Demonstrate an active learning model by showing a personal way of enquiry, reflection & evaluation;
• Provide CLIL-specific resources & enriched study environments (highly integrative, multi-layered, cognitively demanding, but balanced by enhanced scaffolding and other support systems);
• Classroom management via relevant knowledge on classroom dynamics and motivation techniques
• Building common knowledge among stakeholders about programme management and understanding each other’s role in supporting its development.

Fig. 14. CPD and CLIL Teacher Education Stages

In EU countries prospective CLIL staff are recruited if they meet these criteria (Eurydice, 2006):
• They are native speakers of the target language;
• They received formal training in the target idiom;
• They attend regular training on CLIL teaching;
• They can successfully pass a language exam.

A proficiency level of B2/CEFR is widely reported as necessary. In countries such as Italy, with CLIL being extensively introduced, improving prospective CLIL staff language competence is a prerequisite.

9 Conclusions
The term Content and Language Integrated Learning (CLIL) was launched in 1994 in conjunction with the European Commission. It followed wide debates at EU level, led by experts in the Netherlands and Finland on ways of bringing language learning excellence from certain types of schools, into mainstream government-funded schools and colleges.

At the time, the launch of CLIL was both political and educational. ‘The political driver was based on a vision that mobility across the EU required higher levels of idiom competence in designated languages than was found to be the case at that point. The educational driver, led by major bilingual initiatives in Canada, was to design and adapt existing language teaching approaches so as to provide a wide range of students with higher levels of competence’ Marsh (2012). Now, about twenty years later, the concept of CLIL is not only a way of improving access to additional languages, but also a way of introducing innovative practices into the curriculum as a whole. CLIL settings provide more opportunities for hands-on, practical activities, which tend to produce more involved talk as students centre on the task and on shared meaning negotiations in collaborative talk.

Fig. 15. Challenges & innovative solutions in CLIL, www.etprofessional.com

CLIL is designed to prepare young people for the future careers. It outlines steps to understanding and learning independently. It has 3 main features:

a) The learning of an additional idiom is integrated in content subjects like science, history, geography. Students learn the target language through which the content is facilitated.

b) CLIL has its origin in different socio-linguistic and political contexts; it relates to any language, age and education level from primary, secondary, higher to vocational and professional learning. In this sense CLIL responds to the EU lifelong learning program; multilingualism & multiculturalism promote understanding, integration and mobility for all Europeans.

c) CLIL cultivates social, cultural, cognitive, linguistic, and academic study skills, which, in turn, facilitate achievements in both content and idiom.

The important reason for the introduction of CLIL is to help the education sector prepare students for the world of work today and tomorrow. Young people have to be ready to face different challenges than those faced by their parents and grandparents.
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