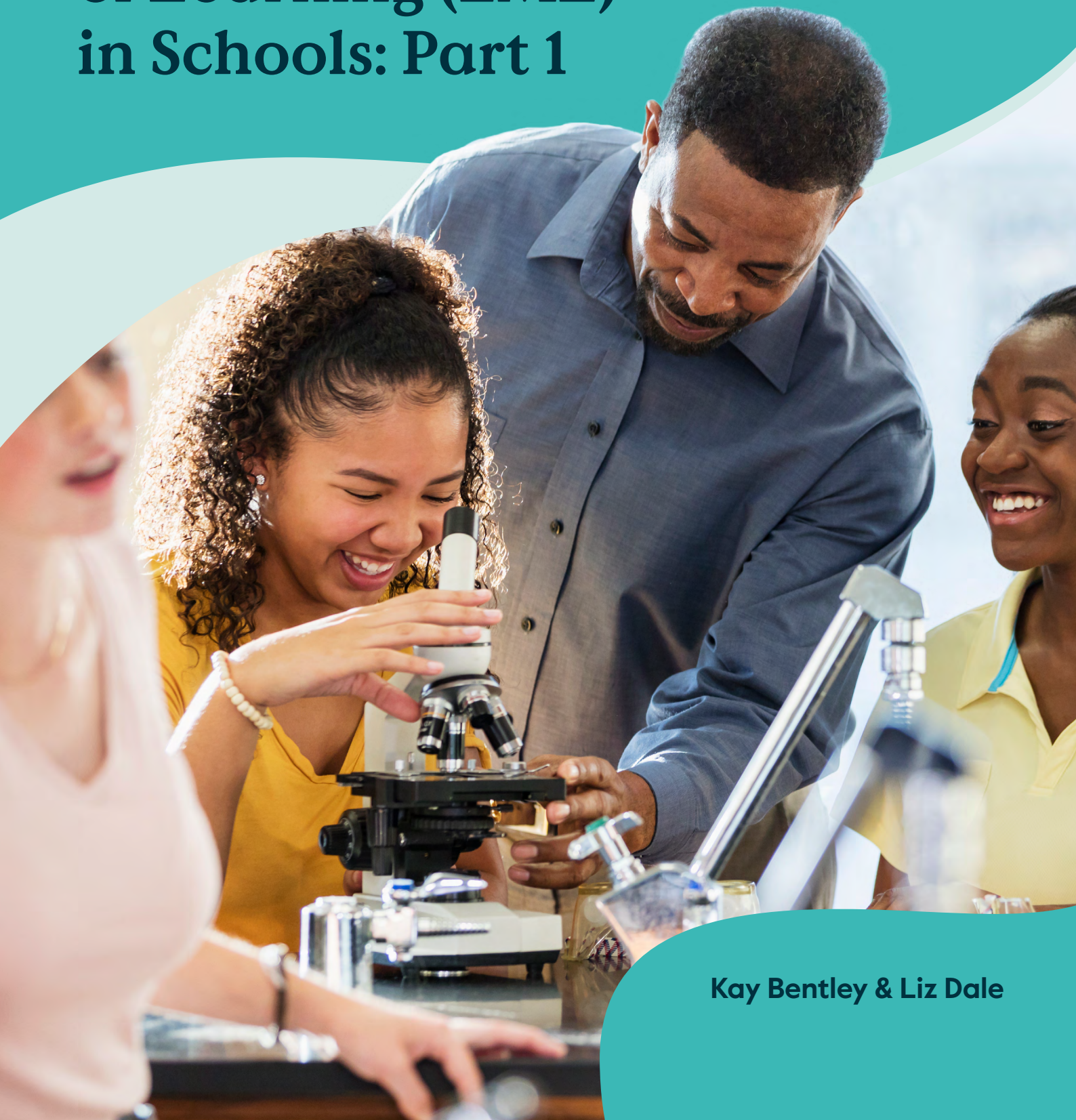
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English as a Medium of Learning (EML) in Schools: Part 1



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Introduction: What is English as a Medium of Learning (EML)?

Teaching and learning school subjects through the medium of English has accelerated as an innovation in language education for several decades. Approaches such as English as a Medium of Instruction (EMI), Content-Based Instruction (CBI), and Content and Language Integrated Learning (CLIL), have each contributed to the expansion of interest in teaching subject content in English. These approaches can collectively be described as English as a Medium of Learning or English-Medium Learning (EML). They have been implemented in schools around the world, whether in bilingual schools or schools with English Language Teaching (ELT) programmes which include some subject-specific learning.

Drivers of these initiatives include governments, both national and regional; school leaders; teachers and parents. Although any school subject can be chosen for subject teaching, curricular subjects commonly taught and learned range from science and geography, maths and computer science, to art and physical education.

In schools offering bilingual education, there is considerable variation in the amount of time devoted to subject teaching in English. For example, one lesson of maths and science each week in bilingual schools in Brazil and Jordan, three or four lessons in national bilingual schools in Indonesia and Turkey, 40% in Egyptian national bilingual schools, and up to 50% in Spain and Mexico. The amount of time for subject teaching may also start as a lower percentage of teaching hours in pre-school contexts and build up to higher amounts by the end of primary. Bilingual secondary schools show similar variation, both in the amount of time and in the choice of subjects taught in English.

The rise in the number of bilingual schools that are teaching whole subjects through EML is therefore noticeable. Despite bilingual education having been established in countries such as Argentina more than a century ago, the emergence of primary bilingual schools with classroom teachers – as well as primary language specialists delivering subjects in English – is relatively new. This means more secondary schools are receiving learners who already have experience learning in English.

Accelerating the pace of all programmes adopting EML has been the incorporation of CLIL approaches in ELT course books for primary schools, and on CLIL and dual language teaching handbooks for both primary and secondary subject teachers.

CLIL came to the attention of teachers after the publication of course books, such as Cambridge's:

- *More!* (2008) with 'CLIL (cross-curricular learning) in subjects such as Maths, Geography, Music, Science ...'.
- *Eyes Open* (2015) with 'extra' CLIL pages on e.g. Biology, Art, Technology and Chemistry.
- *The English Ladder* (2012) with 'a CLIL feature in every unit, focusing on core subjects such as science and maths'.
- *Super Minds Second edition* (2022) with 'authentic CLIL content'.
- *Kid's Box New Generation* (2023) with 'CLIL sections in every unit [to] introduce pupils to learning other subjects in English'.

Although this was termed 'soft CLIL', with perhaps only one 45- or 60-minute subject lesson each week, the sections or pages within units in a language course enabled teachers to gain confidence in teaching and developing learners' knowledge of subject concepts in English.

In ELT contexts, teachers began to explore subject concepts with learners more deeply, often using multimedia.

CLIL and dual language teaching handbooks for subject and language teachers, which were published during this period include:

- *Uncovering CLIL* (2008) examining CLIL at primary, secondary and vocational levels.
- *CLIL: Content and Language Integrated Learners* (2010): an overview of CLIL from three leading practitioner-theorists.
- *CLIL Activities* (2012) aimed at subject and language teachers in secondary schools.
- *Putting CLIL into Practice* (2015) giving guidelines for guiding input and supporting output.

Today teachers can read Cambridge's CLIL Essentials for Secondary Teachers, and Beyond CLIL Pluriliteracies Teaching for Deeper learning (2021). There are also many digital articles about CLIL. For example:

https://www.cambridge.org/elt/blog/2023/03/16/the-benefits-of-clil-for-young-learners-and-teachers/ (for younger learners)

https://www.cambridge.org/core/books/abs/curriculum-integrated-language-teaching/clil-in-multilingual-and-englishbackground-contexts/E2CD7A43F0848AE26283FCDC590C3D0C (for older learners)



These provided methodological support for in-service and pre-service teacher development, a key issue identified by researchers as essential for successful EML.

Another key issue in all EML contexts is the language level of the teachers. What is an acceptable language level for teaching curricular subjects in one country may not be acceptable in another. Some schools accept teachers with a Common European Framework of Reference for Languages (CEFR) high B1 level, others expect at least CEFR B2 level, and in many bilingual schools a C1 level is required. It is reassuring that most teachers say their English language improves when working with subject materials no matter which CEFR level they start with. Other schools engage native speakers to teach in English and they may require a relevant teaching qualification in the subject, language proficiency in the primary language of the community and familiarity with the community's culture.

Some learners, on the other hand, may be complete beginners, with little experience of or exposure to English before starting EML. Others may have been hearing and reading English in the media or online, or have experienced EML prior to starting primary or secondary school.

Evident in all school contexts with EML is that in order to implement an effective programme, a significant amount of planning is needed to address questions such as:

- Who will teach the subject lessons?
- How many subject lessons will we teach?
- Which subjects and subject concepts will we teach?
- Where can we find ideas and materials for teaching the subjects in English?

As a result of widespread interest, and an abundance of questions about implementing subject-specific learning in English language programmes in schools, this Paper (Part 1) addresses the following issues:

- What are the key approaches to EML?
- Why implement EML programmes in schools?
- What can be achieved in doing so?
- What are the benefits and challenges that teachers face?

Part 2 explores how schools can deliver EML programmes effectively.

Points made in both papers will draw on reference to research from around the globe.

Key approaches to EML

Key approaches to EML

- Bilingual education
- Content-based instruction (CBI)
- English as a medium of instruction (EMI)
- Content and language integrated learning (CLIL)

Bilingual education

Successful bilingual education programmes lead to 'additive bilingualism'. They enable learners to acquire an additional language at no expense to their first or home language.

Bilingual education (more recently also referred to as dual language education, in the US) can take many forms depending on individual and local contexts. It has been called 'a simple label for a complex phenomenon' (Baker in García, 2009). This is because bilingual schools may have different purposes, for example:

- to educate learners in English when living in a non-English speaking country and who may already speak two languages, for example, in international schools.
- to offer more than two languages, such as in the Basque Country where English, Basque and Spanish are taught to learners with either Basque or Spanish as their first language (L1).
- to offer several curricular subjects taught in English, for example in Chile and the Netherlands.

Each of these language models encompasses the teaching of a varying number of subjects, as well as varying amounts of subject content, through English. In addition, learners in some bilingual schools study the same subject through two languages. 'Content subjects and language are inextricably linked. Learners cannot develop academic knowledge and skills without access to the language in which that knowledge is embedded, discussed, constructed or evaluated. Nor can they acquire academic language skills in a context devoid of academic content' (Cambridge Assessment International Education, 2017).

Two models of bilingual teaching, identified by García, are particularly relevant for teaching subjects in bilingual schools.

1. **Immersion teaching**: when two languages are taught separately from each other with the same curriculum, and subject teaching in the immersion language represents 50% of that curriculum. For example, French and English in Canada. In addition, 'examples of translanguaging can be found in all types of programmes that use immersion bilingual teaching' (García, 2009).

2. **Dynamic or Multiple teaching**: when language teaching develops 'bilingual competence needed for the twenty-first century' (ibid.). This involves developing learners' bilingual proficiency, biliteracy and plurilingual skills, not just in English but in subjects from across the curriculum.

In classroom contexts where teachers encourage the development of biliteracy and plurilingualism, learners develop skills of oracy; in other words, a range of listening and speaking skills for social, discursive and reflective talk. It is important to remember that learners in EML programmes must also know how to use the specific language of different curricular subjects. Learners can then develop subject oracy.

Key Terms

Translanguaging	When learners use English and their first language (L1), or for some learners their third (L3) or sometimes fourth language (L4). Translanguaging can happen spontaneously during collaborative tasks. For example, learners: • predict the result of a science experiment in English • alternate between using English and the L1 while doing the science experiment • talk about the result of the experiment in pairs, using as much English as they can (using L1 when necessary) • report results to the teacher in English. Learners 'translanguage constantly to co-construct meaning, to include others and to mediate understandings' (García, 2009). Researchers agree that translanguaging has a place in bilingual education but have expressed concerns about balancing how and when teachers and learners use the different languages (Tedick & Lyster, 2020). Translanguaging can be planned. For example, learners watch a video clip of an underwater ecosystem in English, then talk about it in English but also use some L1 to express deeper knowledge of the topic. This avoids frustration. 'The focus of translanguaging is on meaning-making and gaining a deeper understanding of subject matter content through two languages' (Mehisto & Ting, 2017). It is also important to maintain separate spaces for English and the learners' main language to make sure both are fully developed. 'Translanguaging has shown to be an effective pedagogical practice... this may be especially in the case of EMI contexts.' (Wei, in Read Talbot, Gruber, & Nishida, 2021).
Biliteracy	This is developed in bilingual classrooms when learners' knowledge of reading or writing in one language supports their emerging reading and writing skills in another language. Learners show they are 'using their various social, linguistic and multimodal abilities to engage in biliteracy activities' (Bauer, 2017).
Plurilingualism	'The ability to call flexibly upon an inter-related, uneven plurilinguistic repertoire' (CEFR, 2018). This involves developing a language programme that values all languages represented by learners in the classroom. Plurilingual education is acknowledged as important but also a challenge for schools because teachers need to develop learners' 'linguistic and intercultural competences so that they can operate effectively as citizens, acquire knowledge and develop open attitudes to otherness' (Council of Europe).

Content-based instruction (CBI)

CBI, like bilingual education, promotes subject teaching through a second or third language and also has a longer history than programmes such as EMI and CLIL, presented below. CBI as a term was first used in the 1960s when associated with French-medium immersion programmes in Canada. Today, CBI continues to be a more commonly used term in the USA and Canada than in Europe. CBI has been described as a 'bilingual model' and 'partial immersion' (Cenoz, 2015). It is considered an approach that 'combines language and content-learning aims ... with differences in the emphasis placed on language and content' (ibid.).

In research into CBI and CLIL as dual-language programmes, Cenoz examined properties such as language and educational aims, type of teacher (subject or language) and the starting age of learners (primary or secondary). Findings stated there were commonalities and no essential differences between CBI and CLIL. There were, however, differences related to 'specific educational contexts where the programmes take place'. For example, in the Netherlands there are plentiful opportunities for learners to use English outside of the classroom, and in the Basque Country three different models of CBI were identified.

In secondary schools, some differences between CBI and CLIL have also been noted in classroom practice and teaching strategies. For example, in CBI there were fewer activities to encourage interaction and collaboration between learners; there was wider use of textbooks and more emphasis on teaching grammar than in CLIL lessons. Jiménez Catalán and Ruiz de Zarobe (2009) note '.... the emphasis is on using the language rather than on speaking about the language'. In general, CLIL differs from CBI because of 'planned pedagogic integration of contextualized content, cognition and culture into teaching and learning practice' (Coyle, Hood & Marsh, 2010).

English as a medium of instruction (EMI)

EMI has been defined as 'the use of the English language to teach academic subjects in countries or jurisdictions where the first language (L1) of the majority of the population is not English' (Dearden, 2014). In contrast to CBI (an approach predominantly used in Canada and North America) and CLIL (which is widely associated with Europe), EMI is used globally. This is due to the desire for international recognition among schools and colleges in many countries, as well as the status of English as a lingua franca for business, science and technology.

In tertiary contexts in most countries, 'the rapid and disparate adoption of EMI has entailed a major overhaul of academic life for lecturers and students.' (Muñoz, 2021)

'Whereas CLIL has a clear objective of furthering both content and language ... EMI does not (necessarily) have that objective'

EMI is a term more frequently used in higher education and secondary school contexts, where the focus is on delivering the syllabus content, with learning English as a by-product of that focus. Most teachers in EMI programmes think of themselves as subject teachers rather than language teachers. 'Whereas CLIL has a clear objective of furthering both content and language as declared in its title, EMI does not (necessarily) have that objective' (ibid.).

However, some schools do use the term EMI to describe teaching curricular subjects in English.

While CLIL can be taught through other languages such as Spanish and German, EMI is exclusively taught through English.

Content and language integrated learning (CLIL)

CLIL emerged in Europe in the 1990s as an approach to teaching and learning subjects in English in primary and secondary schools, where the interrelationship between content and language was explicit as well as integrated. 'Content' is first in the acronym, as with CBI, but unlike most immersive teaching in bilingual contexts, CLIL's goal is not full immersion. Instead, CLIL is an approach using conceptually appropriate, subject-specific material, which can match that in the L1.

In primary contexts, for example, this might include learning about how body parts work together and how the nervous system works. These science concepts, and the language required to understand and communicate ideas about them, are built upon as learners proceed through the years of primary school. This is not the same as using stand-alone topic materials from different subjects, which are chosen to fit a language syllabus in one ELT course book and are not developed in subsequent ELT courses.

In secondary contexts, the subject curriculum for selected secondary school subjects, such as history, biology or maths is taught and assessed through English.

After CLIL's inception, Coyle developed a practical framework of principles for CLIL: the interrelationship between content, communication, cognition and culture. They 'do not exist as separate elements' (Coyle, Hood & Marsh, 2010). The purpose of the framework was to assist with planning, delivering and evaluating learning of both content and language.

Content

'It is content which initially guides all the planning along the learning route' (ibid.).

Communication

'learning to use language and using language to learn' (ibid.). It also involves using basic interpersonal communicative skills (BICS) for classroom interaction.

'Content is determined by the established curriculum... according to project-based frameworks for learning... (or) non-specified content, where the teacher, sometimes with learners, decides the nature or the theme or topic to be studied.' (Coyle & Meyer, 2021).

Cognition

focuses on development of a range of thinking processes, which need to be 'analysed for their linguistic demands' (ibid.).

They integrate both the conceptual as well as the communicative dimension of learning. (ibid.)

Culture

encourages all learners to value, respect and engage with the identities, languages, histories, geographies and ideologies in their own lives and to interact with others across linguistic and cultural borders.' Pratt and Foley (2020:146) in Coyle and Meyer.

As CLIL evolved and expanded beyond Europe, the Graz group of CLIL practitioners and researchers drew attention to the importance of developing pluriliteracy and learners' subject literacy. They explained that the approach puts subject literacy development in more than one language at the core of learning so that learners can become 'literate in several subjects and languages.' (Coyle & Meyer, 2021) CLIL teachers were encouraged to support learners to attain 'the content literacy required for democratic 21st century citizenship' (European Centre of Modern Languages, 2015). Developing subject literacy skills had become a key element in language learning, '... literacy instruction must be embedded across the curriculum ... and developed by the growing complexity of content' (Cambridge Assessment, 2013. What is literacy?).

Developing subject and English literacies i.e. pluriliteracies, is an integral part of EML. Subject literacies are integrated with English literacy to help learners understand, produce and communicate facts, concepts and procedures presented in subject topics. In addition to integrated subject and English literacies, learners develop visual and digital literacies in EML programmes.

Visual literacy involves understanding and interpreting multi-modal subject content presented in images, animations, video, diagrams, patterns etc.

Digital literacy develops knowledge of how to use online tools, search engines, and an understanding of how to create digital content. Both visual and digital literacies are 'fundamental to the acquisition of subject-specific literacies.' (Coyle & Meyer, 2021) Teachers therefore need to focus on 'subject-specific ways of constructing and communicating knowledge ... (so that)...learners can acquire subject literacies in several school subjects'. (ibid.)

'What becomes clear after looking at CLIL in different geographical contexts is that it has become a visible trend, which is spanning geographically as a truly European/International approach' (Ruiz de Zarobe, 2013). A CLIL approach can be top-down but more often it is implemented by individual initiatives from school communities, teachers and parents.



Key Terms

Basic Interpersonal Communicative Skills (BICS)	These are the face-to-face conversational skills learners need in order to interact with each other during subject-specific tasks in the classroom. Development of BICS is 'dependent on the physical and visual context, and on gesture and body language' (Gibbons, in Cummins, 2001). BICS also involves the use of high frequency words, such as *again, could, because*, colloquial language, for example, 'let's go for it' 'no way can we do that', and simple grammatical forms.
Cognitive Academic Language Proficiency (CALP)	'Colloquial language is ideal for expressing content and negotiating meaning in highly accessible and concrete ways.' (ibid.) This language is very different from BICS. Developing CALP is associated with learning subjects such as science, maths, geography and history. It involves understanding and producing subject-specific vocabulary, advanced general English vocabulary, for example *analyse, calculate, examine,* and also advanced grammar such as conditional forms and modal verbs associated with higher order thinking: hypothesising, evaluating and innovating. Academic language offers ways for learners to abstract complex subject ideas' (ibid.) and includes generic academic language such as evaluate, analyse, consider, strategies, formulae etc. Coyle and Meyer identified the language required for EML as colloquial, subject-specific and academic with all three interconnected. Cummins and other researchers found that in bilingual contexts CALP can take between five to seven years (or longer) to achieve. However, even in primary subject learning in an additional language, 'Pupils were able to cope with subject-content that became cognitively more challenging as they proceeded from one year-group to the next' (Johnstone & McKinstry, 2008).

Whether called bilingual education, EMI, CBI or CLIL, each of these approaches is acknowledged in turn as: '... a meaningful way to educate all children' (García, 2009) and which 'would benefit all learners and teachers' (Bower, 2017); 'a growing global phenomenon' (EMI: Dearden, 2014); an integration of 'not only language and content but also all the languages in multilingual repertoires' (CBI: Cenoz, 2015) and 'a key lever in realising competences which combine knowledge and skills for the 21st century ... with an emphasis in each competence on critical thinking, creativity and problem solving' (British Council, 2014).

What can be confusing about terminology used to describe the teaching of subjects through the medium of English is that some European countries describe their programmes as 'bilingual' rather than EMI. These include Spain, the Netherlands and Poland. This is because the approaches 'have similarities and may at times overlap' (Soruç & Griffiths, 2018). In addition, there are schools that use none of the four terms to describe teaching EML. For example, in some schools in India, the term 'English and subject content integration' is used.

All four approaches described above, as a means of learning curricular subjects in English, reveal evidence of diverse factors involved in implementing them in different parts of the world. Each approach is dynamic because it continues to evolve as a result of educational and social changes in general. Recently, this has meant technological changes in EML contexts, too. As a result of the pandemic, teachers have had to transfer much of their classroom teaching online and adapt subject input and tasks, as well learning which digital tools are effective for doing collaborative work and giving feedback to learners. Use of technology as a form of blended learning is likely to remain as EML teaching practice in many contexts.

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All approaches are represented in the following two statements:

'... language-teaching programmes in the twenty-first century increasingly integrate language and content through an additional language other than the children's home language' (García, 2009).

'The implications for arguing that bilingual education, even small-scale, is superior to monolingual education are strong, persuasive, and increasingly supported by science' (Marsh et al., 2020).

Some EML programmes now address a focus on STEAM subjects (science, technology, engineering, arts and maths). They are key to 21st century education as they provide age-appropriate, engaging content to deepen learners' knowledge of subject concepts, and also develop critical and creative thinking processes. STEAM tasks are often cross-curricular. For example, Technology can involve maths, science and art. STEAM projects have been published in Cambridge's Primary Path 2nd Edition (2024) and in secondary 'STEAM Investigations' (2023) for researching subject topics such as, Sports Technology, Lab grown meat and Forensic psychology.

Why implement EML in schools?

Many reasons have been explored and researched about why implementing EML is beneficial to both learners and their teachers. In addition to research findings, it is helpful to consider teachers' comments about benefits they observe. Teachers in EML may be generalists (primary classroom teachers who teach all subjects in the L1 with a few subjects in English), subject specialists (primary teachers, such as music and PE – and secondary teachers who teach their subject in English) or language specialists (English teachers in primary or secondary schools).

Initially, teachers may have concerns. They may worry about how much learners will understand when maths or science, for example, are taught in English. Subject specialists used to teaching a subject in the L1 may be anxious about their English language skills. Primary English teachers, not used to teaching another school subject, may worry about their subject knowledge. Secondary English teachers may wonder about how to support pupils and colleagues who are expected to use English throughout subject lessons.

However, with time and deeper understanding of the challenges they and their learners face, many teachers see the bigger picture and can step back and comment upon the many positive aspects of EML either in the physical classroom or online.

When examining teachers' comments about EML, the benefits tend to range over five key categories:

- Language development
- Methodology
- Thinking processes
- Motivation
- Resources

These five areas have been remarked upon both by teachers new to subject teaching in English, and those with three or more years of EML experience. The examples in Table 1 are from teachers working in different bilingual schools in Europe.

Benefits	Teachers' comments about teaching subjects in english
Language development - Teachers	My English level has improved. I have learned a lot of specific vocabulary in many different fields. Teaching subjects makes me update my language continuously. With CLIL the language is full of possibilities. It's not restricted. I have learned to slow down and use less idiomatic English with the first years. It's fascinating comparing the way language works in both languages.
Language development - Learners	They learn so quickly, and despite sometimes not having learned any English at primary school and being scared they will not understand anything – using Google translate to translate everything – by Christmas, they realise that they understand their teacher and can make sentences themselves; they can use English. They learn much more English, not only the four skills; they have to think, understand and learn subject content using English. It's a benefit for them to be aware they can use another language to learn new subject concepts. They improve their language fluency all the time.
Methodology	Children enjoy the active and hands-on experiences in their science lessons in English. Learning about CLIL methodology was more than teaching part of the curriculum in English. It was a rethinking of how I teach, how to use the resources and scaffolding that our students need. I think ... about how to present the content, about the type of activities that I present. (e.g. Do they make the learners think? Are they interesting? Do they offer them opportunities to talk more?)
Thinking processes	The pupils think about the content and want to keep learning more about it. An interesting question leads to another one and that one to another one. The subject content is more meaningful. They know about the scientific process. They have learnt to think beyond what they see in the experiments and developed high level thinking skills. They learn much more English; they have to think, understand and learn subject content using English. What the learners learn is well integrated. It lasts. The way they understand the content is useful and meaningful, so they don't forget the content immediately. They think and keep it.
Motivation - Teachers	CLIL motivates me to work harder and in a different way after 23 years teaching English. Once you try it, you feel really motivated because you see it works. My experiences of adopting CLIL are positive and soft CLIL motivates learners too.
Motivation - Learners	They are motivated by the subject content itself, and they learn more because they are interested in the content. Motivating, learners love science. They like what they are going to learn about animals, nature, history as well ... pupils like what I am explaining. They were thrilled at teaching science in English. This was new for them and because we had used other kinds of materials, more visual, and of course realia – they were pretty enthusiastic about doing it.
Resources	There are really interesting up-to-date resources available for my subject in English. Because the learners' level of English is so good, you can do more fun stuff using all the multimedia resources that are out there. I like the fact that you get a different perspective on your subject when you use materials from curricula from different countries – the geography syllabus in my country is really different from the one in the UK. In my geography lesson on transport, we looked at how pupils in UK cities get to school and how pupils in Dutch cities get to school.

Table 1: Primary teachers' comments about teaching subjects in English

These comments reflect the benefits of teaching subjects through English, noted in research published in different sectors of education.

Mehisto and Ting (2017) and Genesee (in Mehisto, 2012) report these benefits for learners in schools:

1. Learners are exposed to a rich range of language
2. Learning is meaningful
3. Learning and Teaching is motivating
4. Learner confidence in using the L2 is likely to increase
5. Learners become effective thinkers in both content and language
6. Learners and teachers appreciate and understand different cultural perspectives

1. Learners are exposed to a rich range of language

Learners are exposed to a rich range of language, including 'a variety of genres, topics, vocabulary ... and functions' (Mehisto & Ting, 2017). Motivation empowers learners 'to perform tasks involving meaningful and demanding content irrespective of their linguistic level'. (Dornyei & Ushioda, 2011). Furthermore, teaching strategies can build students' self-confidence, and provide encouragement to achieve their goals. Teachers' motivation can be the result of the feel-good factor when they see EML working. They comment that when they see students motivated to learn subjects in English, that motivates them as well. As the teacher in Table 1 stated: 'language is full of possibilities. It's not restricted'.

In schools, genres or text types from different subjects taught in English in primary and secondary schools include:

Genre and Subject	Primary ⟶ Secondary		
Instructions (Maths)	Steps to work out the perimeter of a rectangle	Steps to make a scale drawing	Steps to calculate the area of a circle
Descriptions (Social science)	Describe types of work people do	Describe a recycling centre near your school	Describe changes in population growth shown on the graph
Explanations (Natural science)	Explain how we classify food	Explain how the digestive system works	Explain why ocean currents affect climate

Table 2: Genres in school subjects across primary and secondary

The rich range of language from different genres gradually develops learners' Cognitive Academic Language Proficiency (CALP). With support, learners in upper primary and secondary EML contexts can develop a range of academic language through reading and writing different genres. Learners also develop critical and creative cognitive skills while learning about subject texts.

Language used during collaborative group work also helps to develop learners Basic Interpersonal Communication Skills (BICS). Interpersonal skills require functional language, such as giving suggestions or opinions, agreeing or disagreeing and asking for clarification. These skills are therefore something teachers also need to teach learners.

2. Learning is meaningful

In primary and secondary EML contexts, learners find that exploring subject concepts in English can complement, deepen or consolidate what they are learning about the subject in the L1. In maths, for example, they can learn different ways to solve problems. 'The knowledge learners acquire through their first language helps make the English they hear and read more comprehensible ... (and) ... the literacy developed in the primary language transfers to the second' (Navés, 2009).

Research has shown a wide range of learners can benefit from bilingual programmes, including those from disadvantaged socio-economic backgrounds, those with low levels of academic or general intellectual ability, or those with low language levels in their home language (Genesee, in Mehisto, 2012). Some gain higher language levels in English in EML contexts than similarly disadvantaged learners in traditional ELT lessons. It makes no difference what the home language is – learners with first languages from different language families (such as Japanese, Russian, Hebrew) can be equally successful in EML programmes (ibid).

The knowledge learners acquire through their first language helps make the English they hear and read more comprehensible ... (and) ... the literacy developed in the primary language transfers to the second.

3. Learning and Teaching is motivating

'High motivation, which helps to enable deeper concentration, is especially important to success in learning through an additional language' (Coyle, Hood & Marsh, 2010). Comments made by the teachers in Table 1 provide evidence of this. For example, learners are motivated to work harder and 'in a different way'; motivated because learning subjects in English 'works'. 'Despite the hard work involved in preparing CLIL lessons, the resulting increase in ... motivation and learning is inspirational' (Mehisto & Ting, 2017).

4. Learner confidence in using the L2 is likely to increase

The subject content 'gives greater purpose to language learning' (ibid.). The teachers' comments in Table 1 imply that learners' improvement in language fluency – and their awareness that they can use another language to learn new subject concepts – are likely to increase their confidence in using English. When learners manage to communicate new subject knowledge in English they experience success, even though they may make some mistakes with grammar or pronunciation.

Further research in contexts with EML programmes has shown that development in learners' L1 has also benefitted from exposure to school subjects learned through English. This 'linguistic interdependence' means that knowledge of one language (or more than one) strengthens knowledge of another. Research on programmes in Canada and the US, promoting additive bilingualism, showed learners can achieve the same language levels in their L1 and L2 (e.g. English). They can also show the same levels of academic achievement as pupils taught only in one language (Genesee, in Mehisto, 2012).

When learners manage to communicate new subject knowledge in English they experience success, even though they may make some mistakes with grammar or pronunciation.

5. Learners become effective thinkers in both content and language

There is also evidence of effective thinking in the teachers' comments in Table 1. Pupils want to 'think about the content'; to 'think beyond what they see in experiments'; to 'think' about what they learned and 'keep' that knowledge. In each of these examples, learners are developing critical and creative thinking processes. Learners have 'cognitive functioning that appears to impact not only their language knowledge, but also their critical thinking' (García, 2009) and because they have 'two ways to describe the world, have the ability to be divergent or creative thinkers'.

6. Learners and teachers appreciate and understand different cultural perspectives

As the comments in Table 1 show, teachers appreciate access to recent developments in their subject. These are often published first in English, e.g. in secondary subjects, analyses of the language of history or science, or use of RNA in vaccines – and in primary, e.g. the latest methods used in maths, and value multimedia materials available online in English.

Research in bilingual programmes also shows that through exposure to English language resources, learners can develop appreciation and understanding of English language cultures. English language materials may reveal different cultural habits with regard to recycling, or different attitudes to historical events. At the same time, learners maintain the same level of appreciation and understanding of their own culture and community as learners taught only in the first language (Genesee, in Mehisto, 2012).



What challenges do primary teachers face in EML programmes?

Research findings reveal that EML programmes have benefits (see Table 1) but also challenges for both teachers and learners. Successful subject teaching EML. However, successful subject teaching in EML settings 'is not always straightforward or immediate' (Coyle, Holmes & King, 2009), and the way that EML programmes are developed, implemented and evaluated matters.

How teachers approach teaching EML also influences how far different types of learners can progress in learning subjects in English. The challenge is to include all learners with a range of different needs, from those who are proficient in English to those who have specific learning needs. Depending on how an EML programme is implemented, the approach can lead to an increase in learners' appreciation and understanding of their community's main language and culture.

Teachers at the start of both primary and secondary programmes therefore 'need to invest time in rethinking how they will teach through an additional language' (ibid.). This is partly because teachers have to consider their own language and that of their learners, their subject knowledge, and effective methodology for EML. This is in addition to planning, selecting materials and tasks, considering how to support learners and how to carry out ongoing evaluation. Each of these presents a challenge.

Teachers have to consider their own language and that of their learners, their subject knowledge, and effective methodology for EML. This is in addition to planning, selecting materials and tasks, considering how to support learners and how to carry out ongoing evaluation.

As with the benefits of teaching EML, it is important to give teachers a voice when articulating their challenges and beliefs about teaching one or more subjects in English. Primary school generalists, primary and secondary school subject specialists, and language specialist English teachers, mention different kinds of challenges.

Table 3 shows challenges stated by primary teachers new to subject teaching in English.

Challenges	Primary teachers new to subject teaching in english
Teacher language	To feel comfortable with my language. Speaking in English for all the lesson. Improving my English for PE lessons.
Methodology	It obliges me to prepare the lessons using new strategies. The first sessions are difficult for most of the students and also for the teacher (you've studied a lot about CLIL, searched for resources ... and now it's time to do it).

Table 3: Challenges faced by primary teachers new to subject teaching in English

From Table 3 it is clear that the primary teachers' language level for subject teaching, and their ability to use English throughout a subject lesson, were main concerns. Those teaching sciences were aware of the challenge of including new strategies for teaching subject topics, particularly for practical science lessons. Many teachers express how challenging or 'difficult' it is to start teaching subjects in English despite training, studying, planning and locating appropriate resources.

More experienced primary teachers, with three or more years of teaching subjects in English, tend to state different challenges. See examples in Table 4:

Challenges	Primary teachers with three or more years' experience of subject teaching in english
Teacher and learner language	Some ideas are difficult to explain in English.
Knowledge of subject content	We have to know a lot about our subject, have good knowledge of the content. Teaching terms in a different language for learners expressing themselves in school subjects is difficult. Teaching science in upper primary levels because the content is more difficult and intense.
Methodology	We have to know how to teach science. CLIL pushes me hard to find varied ways of teaching the same science concepts ... then, evaluating science concepts.

Table 4: Challenges faced by primary teachers with three or more years' experience of teaching subjects in English

These statements reveal the contrast between teachers' challenges during initial stages in the classroom, and the challenges teachers face after longer experience of EML. Teachers new to subject teaching in English focus on language the teachers themselves need for subject teaching. More experienced teachers highlight challenges related to specific content and language that both teachers and learners need, their knowledge of subject content, and the importance of effective methodology and evaluation of learning.

Challenges	Secondary school subject teachers
Teacher language	I don't always see or hear language mistakes the learners make, or I can't explain why it's a mistake. The learners sometimes don't understand what I am saying.
Methodology	I don't just have to be a history teacher, especially in the first year, in the first months, I have to be a language teacher. But I'm not a language teacher and I don't have the skills to do that. I have to work really hard to make sure they understand the subject concepts properly. I evaluate the learners' understanding of subject concepts, grammar doesn't really matter.

Table 5: Challenges faced by secondary school subject teachers in EML settings

From Table 5 it is clear that subject teachers' language level for subject teaching, and their ability to put across subject-specific knowledge and skills in English were their main concerns.

Findings in secondary CLIL described some teachers as 'subject didactic professionals but language didactic amateurs.' (Gierlinger, 2021). It was a challenge for them to become confident when teaching subject-specific language in an EML classroom. In some Higher Education contexts, 'EMI implementation produces more challenges than opportunities for HE teachers and students.' (Macaro et al., 2017).

Secondary school English teachers tend to state different challenges. See examples in Table 6:

Challenges	Secondary school subject teachers
Teacher language	Subject teachers really need us to help them so there are no English mistakes in their lesson materials and tests and to make sure everything sounds English. The learners need different sorts of language in different subjects all at the same time. In history they need the past tense in the first week and in science they use the passive early on, but the English language syllabus doesn't deal with either of those until halfway through the academic year.
Knowledge of subject content	English lessons don't have to just be about language, they're about culture and literature, too. We have our own subject content. I would love to use texts and ideas from subject lessons – the subject teacher could really help provide depth to the learners' ideas and push them to express more complex ideas. I'm not an expert in the subject, if I do an art project on Rembrandt, I don't necessarily know enough to teach it in more depth.
Methodology	We need to use much more interesting materials because the learners' language level develops so quickly. With team teaching, the learners get the benefit of the language teacher's and the subject teacher's expertise, but the timetable can get in the way. In English lessons, we can help learners prepare for writing and speaking tasks in the other subjects, but we need input from the subject teachers.

Table 6: Challenges faced by secondary school English teachers in EML settings

The examples in Table 6 show English teachers rethinking their role when they work in EML. They have concerns about the language level of subject teachers' English and how to order their English curriculum to suit the language needs of the learners in other subjects. They appreciate the opportunity to use more challenging content or incorporate other subjects in their English lessons but can feel uncomfortable about their own understanding of other subjects. Organising collaboration with subject teachers is a concern.

These statements reveal the contrast between primary generalists', subject teachers' and language teachers' challenges in EML. Many generalist primary teachers and secondary subject specialists know the subject content well in their L1, but need to improve their language level to teach it in English. Both need to focus on making sure learners understand subject concepts. Language specialists, who may teach in primary or secondary schools, focus more on the language that learners need. Secondary school language specialists focus on redefining the focus of content in their lessons, e.g. by teaching subject literature rather than grammar rules. They see potential to use more meaningful subject content in language lessons but voice a concern that they may lack enough content knowledge to do so effectively. Collaboration between subject and language teachers can be difficult to organise.



CHALLENGES	
1	Teacher language
2	Learner language
3	Knowledge of subject content
4	Methodology
5	Teachers and other stakeholders

Challenge 1: Teacher language

First and foremost, all teachers working in EML schools – whether language, subject or primary specialists – need to feel confident in their English language abilities so that learners can acquire, use and develop subject-specific language.

Some teachers in EML programmes have a B1 English level. It is advisable for them to work towards gaining a B2 level to teach subjects in the upper years of primary and lower years of secondary. In the higher years of secondary, C1 is recommended. In 2013, the European Commission stated that teachers in CLIL contexts should be fluent speakers of the target language, in this case English.

Teachers working in EML schools – whether language, subject or primary specialists – need to feel confident in their English language abilities so that learners can acquire, use and develop subject-specific language.

According to the Common European Framework of Reference for Languages (CEFR, 2018), it is at C1 level that a speaker 'can express him/herself fluently and spontaneously without much obvious searching for expressions' ... (and) ... 'can use language flexibly and effectively for social, academic and professional purposes'. Ultimately, teachers in most EML contexts should aim at achieving both of these descriptors.

Another argument for working towards a C1 level is the range of academic vocabulary that learners need to use in secondary subjects. Vocabulary such as sphere and sequence in maths, and sustainable and erosion in science, are described as C1 level in the English Vocabulary Profile.
See: https://englishprofile.org/?menu=english-vocabulary-profile

Native speaker teachers who may be teaching in EML schools can find it difficult to adjust the speed and range of language they use for learners unfamiliar with different types of English accents and idioms. They may also lack knowledge of the learners' first language and culture for comparison or clarification of differing ways of using language. Familiarity with both the learners' primary language and English is recommended.

It may help teachers who are less confident in their use of English to remember that ultimately, the focus in EML is on developing the learners' language and cognitive processes to enable them to learn about subject-specific concepts.

Challenge 2: Learner language

Teachers are highly aware of the challenges their learners face. It is important to acknowledge and then address them. Learner challenges expressed by teachers include:

- Learning subject concepts is difficult in another language.
- Learners have to make an extra effort to understand subject material.
- Learners don't know some subject-specific vocabulary in their own language.
- It's difficult for learners to speak in English for a whole lesson.
- Learners need plenty of examples and opportunities to make reasoning very explicit.
- Expressing ideas clearly in English can create frustration.
- Learners have to think more about what they want to say and how to say it.

In EML contexts, teachers should therefore examine subject-specific vocabulary, language structures and language chunks that learners need to understand and produce. Subject specialists may find it easy to identify subject-specific terminology (content obligatory language), but have more difficulty noticing the words and structures learners will need in order to use the subject-specific terminology correctly (content compatible language).

Content obligatory language	Content compatible language
Science	**Science**
Classifying Animals	Classifying Animals
Fish are animals that live in water. They are covered in scales and they have fins and tails.	Fish are animals that live in water. They are covered in scales and they have fins and tails.
States of Matter	States of Matter
The particles in a liquid are not so tightly packed. They can move past each other.	The particles in a liquid are not so tightly packed. They can move past each other.
Maths	**Maths**
3D Shapes	3D Shapes
This shape has 4 faces. I thought this net would make a square, but I was wrong.	This shape has 4 faces. I thought this net would make a square, but I was wrong.
Odd and Even Numbers	Odd and Even Numbers
I am a two-digit number. I am an even number. I am greater than 3 x 7. I am less than 4 x 6. Which number am I?	I am a two-digit number. I am an even number. I am greater than 3 x 7. I am less than 4 x 6. Which number am I?

Table 7: Different types of language that learners need[1]

One option is to have subject teachers and language teachers plan and develop materials together. Some language may need to be paraphrased, simplified or broken into several shorter sentences for comprehensible input. Teachers can prepare this language and present/display it on posters on the wall, or digitally with images. It is also useful to have key vocabulary on handouts for learners to illustrate in class or at home. Teachers should be ready to repeat new vocabulary several times during a lesson and to get learners to repeat it while doing different tasks.

1 Adapted from Alison Talbot. (29 October 2020.). Cambridge Mathematics and Science CLIL Pack. (Bahcesehir edition.). Alan Cross, Cherri Moseley, Emma Low, Fiona Baxter, Janet Rees, Jon Board, Liz Dilley.

Allowing additional wait time for learners to respond to questions about subject concepts is also important, particularly with why and how questions, when learners need time to process and think about new subject content in another language.

Challenge 3: Knowledge of subject content

Subject teachers and English teachers have different areas of expertise. They are both familiar with which concepts are difficult for learners to grasp in their subject area. Language teachers in primary and secondary schools know, for example, that beginners often forget the 's' ending required for the third person singular form of verbs, that learners can find present continuous forms difficult to use and that some spelling patterns are hard to remember. Science teachers know that many learners believe, for example, that dissolving is a one-way process, that burning a candle is a reversible change and that a TV screen is a natural source of light.

Teaching both subject-specific concepts and the language used to explain them effectively, is therefore quite a challenge. Also, knowing how to use a wide range of strategies to support learning can add to the hurdles that teachers have to overcome.

This is when collaboration with colleagues is invaluable. Both subject teachers and language teachers are experts in their own subject and can support each other. It is important that schools facilitate teachers in EML settings with time and opportunities to make use of subject and language teachers' areas of expertise. EML schools can encourage teachers to work together for planning, developing resources and lesson materials, and evaluating learning and teaching. Some schools plan regular cross-curricular project weeks, which allow subject teachers and language teachers to carry out joint projects.

Challenge 4: Methodology

Teachers need to consider both language methodology and methodology used in the subject they are going to teach. See examples in Table 8.

Methodology	Teachers need to know how to ...	Examples
Personalised learning	... activate learners' prior knowledge of subject content.	*Name some land animals and some ocean animals.*
Communicative learning	... support learning of subject concepts and vary support strategies so learners can understand, explore and communicate new subject knowledge in English.	*Look at the pictures of animals on the board.* *Think! With your partner, choose one animal and write three things about its habitat.*
Task-based, collaborative learning	... set up and monitor subject-specific group tasks and consolidate learning.	*Your group is working well.* *What is everyone's role in this task?* *How can you put the information about animal habitats into the diagram?*
Reflective learning	... evaluate the integration of subject content and language learning, give feedback, and encourage learners to comment upon their subject and language learning.	*This is a good description of the characteristics of reptiles.* *Can you think of another adjective for their skin?* *What do you like about your description?*

Table 8: Examples of methodologies and what teachers need to do when teaching subjects in English

Challenge 5: Teachers and other stakeholders in schools

In addition to teachers' challenges, other stakeholders are faced with issues surrounding the implementation of EML. All stakeholders need to understand the EML programme in their school and be able to give a rationale for implementing it. Stakeholders also want to know what most learners will achieve by the end of the programme: What English level can be achieved? How will learners' academic achievement be measured and compared with what they would learn delivered in the L1? The benefit of this scrutiny when EML 'programmes make public their intended learning outcomes on an ongoing basis...(is that)... they are more likely to achieve their targets.' (Mehisto & Ting, 2017).

Parents are also stakeholders so it is beneficial to offer subject workshops, such as Art in English; Doing a sport in English; Computer skills in English. If parents attend, they experience EML in action and can then understand some of their children's challenges.

Head teachers in a European case study reported that 'having competent, motivated and convinced teachers was the main factor' in implementing programmes well, while teachers 'focused on the importance of training' so they could acquire 'strategies for the classroom' (Soler, González-Davies & Iñesta, 2017).



Summary and conclusion

1. Teaching English-Medium Learning (EML) in a range of primary and secondary contexts is expanding globally.
2. There are different English-Medium Learning programmes: Bilingual Education; Content-Based Instruction; English as a Medium of Instruction (EMI) and Content and Language Integrated Learning (CLIL).
3. Teachers should be able to describe the type of EML programme in their school and know if it promotes translanguaging, pluriliteracies and plurilingualism.
4. EML teachers need to understand the difference between developing learners' BICS and CALP and also the difference between content obligatory and content compatible language.
5. Teachers should be aware of the many benefits of implementing EML programmes and also be aware of challenges that teachers and learners can face.
6. It is important that teachers aim to improve and adapt their English language level in order to educate learners effectively, especially at higher levels of primary and secondary school.

Part 1 of English as a Medium of Learning in Schools addresses key approaches and terminology related to teaching and learning subjects through English in primary and secondary schools. In addition, it presents a range of benefits and some challenges that teachers and learners face in EML contexts. Benefits include the development of teacher and learner language; active and interactive subject teaching and learning; effective thinking in both content and language, and subject resources that widen cultural perspectives. Challenges focus on the language demands of subject content, knowledge of subject content and rethinking how to teach subjects in EML.

Part 2 of English as a Medium of Learning in Schools examines effective ways of delivering EML in primary and secondary schools. It explores specific language that teachers need in order to explain subject concepts, to ask questions, and to respond, manage and model language for EML lessons. Planning for EML, providing support strategies for learners and evaluating subject and language learning, are discussed with a range of examples for teachers to use or adapt. Further reading material is also recommended.

Further reading

Books

These books are recommended because they focus specifically on either primary contexts or secondary rather than higher sectors of education or all three.

Primary

- Bower, V. (2017). *Supporting pupils with EAL in the primary classroom*. London: Open University Press.
- Cremin, T. (2015). *Teaching English Creatively*. (2nd Edition.) Oxford: Routledge.
- Egger, G. and Lechner, C. (2022) *Primary CLIL around Europe*: Delta
- Gibbons, P. (2021) *Scaffolding Language, Scaffolding Learning. Teaching Second Language Learners in the Mainstream Classroom* (2nd Edition) Portsmouth NH: Heinemann.

Secondary

- Coyle, D. and Meyer O. (2021) *Beyond CLIL* Cambridge: Cambridge University Press
- Dale, L. & Tanner R. (2012) *CLIL Activities* Cambridge: Cambridge University Press
- Mehisto, P., & Ting, T. L. (2017). *CLIL Essentials for Secondary School Teachers*. Cambridge: Cambridge University Press.
- Nikula, T., Dafouz, E., Moore, P. & Smit, U. (Eds.). (2016) *Conceptualising Integration in CLIL and Multilingual Education*. Bristol: Multilingual Matters.
- Read Talbot, K., Gruber, M-T., & Nishida, R. (Eds.) (2021) *The Psychological Experience of Integrating Content and Language*. Bristol: Multilingual Matters.

HE

- Cambridge University Press. *A Systematic Review of English Medium Instruction in Higher Education*. Available at: https://www.cambridge.org/core/journals/language-teaching/article/systematic-review-of-english-medium-instruction-in-higher-education/E802DA0854E0726F3DE213548B7B7EC7

EAL (English as an Additional Language) in Britain is equivalent to ELL (English Language Learning) in North America. Both EAL and ELL address the needs of learners who have a range of different home languages and who may be new to the country where they live.

School leaders may be interested in the following books that provide information on designing and implementing successful bilingual programmes.

- Genesee, F., & Hamayan, E. (2016). *CLIL in Context: Practical Guidance for Educators*. Cambridge: Cambridge University Press.
- Mehisto, P., & Genesee, F. (Eds.). (2015). *Building Bilingual Education Systems: Forces, Mechanisms and Counterweights*. Cambridge: Cambridge University Press.

English as a Medium of Learning (EML) in Schools: Part 2 provides additional information on planning, delivering, supporting and evaluating effective EML in schools.

Articles

The articles below examine EML approaches and key terms presented in this Paper in more depth. Some include other sectors of education in addition to secondary.

- Cambridge Assessment International Education. (2017). *Bilingual Learners and Bilingual Education*. Available at: https://www.cambridgeinternational.org/Images/271190-bilingual-learners-and-bilingual-education.pdf
- British Council. Content Based Instruction. Available at: https://www.teachingenglish.org.uk/article/content-based-instruction
- Dobson, A., Pérez Murillo, M.D., & Johnstone, R. (2011). Bilingual Education Project (Spain). Evaluation Report Online Supplement. Available at: https://www.britishcouncil.es/sites/default/files/bilingual-education-project-spain-evaluation-report-suplement-en.pdf
- Durán, L. (2018). Understanding young children's everyday biliteracy: "Spontaneous" and "Scientific" influences on learning. Journal of Early Childhood Literacy, 18(1): 71–96. Available at: https://journals.sagepub.com/doi/10.1177/1468798417740617
- Eurydice Brief: Key Data on Teaching Languages at School in Europe. (2017). European Commission. See pages 17–19 for 'Language support measures for migrant students'. Available at: https://eacea.ec.europa.eu/national-policies/eurydice/content/eurydice-briefkey-data-teaching-languages-school-europe_en
- Pluriliteracy: Glossary of terms. Complied by Council of Europe. Available at: https://www.ecml.at/F7/Glossary/tabid/1496/language/en-GB/Default.aspx

Articles and resources

The articles below examine EML approaches and key terms presented in this Paper in more depth. Some include other sectors of education in addition to secondary.

- https://www.teachers-zone.com/clil-lesson-plans.html#google_vignette
- https://www.onestopenglish.com/children/clil/lessons
- https://www.onestopenglish.com/clil/clil-in-austria-an-interview-with-andreas-baernthaler/550180.article
- https://academic.oup.com/applij/article/45/2/364/7197286

Subject-specific websites for secondary

These websites provide classroom ideas for teaching subjects commonly taught in secondary EML contexts. They can be used in physical or online classrooms. Teachers can use, adapt or supplement the ideas presented in them.

In addition to subject-specific websites, the new general word list, academic word list and a glossary of terms are listed for reference.

Maths

- Teaching Maths through English – a CLIL approach
- https://www.cambridgeenglish.org/Images/168751-teaching-maths-through-english-a-clil-approach.pdf
- https://nrich.maths.org/curriculum-secondary mathematical topics for 11-16 year olds
- https://nrich.maths.org/9088 rich mathematical tasks for post-16 year olds

Science

- Teaching Science through English – a CLIL approach
- https://www.cambridgeenglish.org/Images/179514-teaching-science-through-english-a-clil-approach.pdf
- http://www.schoolscience.co.uk/home resources for enriching teaching and learning in science from the Association for Science Education
- Cambridge Education Resources for Schools – a series of workbooks offering integrated content and language support for specific subjects. Available at: https://www.cambridge.org/us/education/subject/science/breakthrough-clil
- Breakthrough to CLIL for Biology Age 14+ workbook
- Breakthrough to CLIL for Physics Age 14+ workbook
- Breakthrough to CLIL for Chemistry Age 14+ workbook

History

- Teaching History through English – a CLIL approach
- https://www.cambridgeenglish.org/images/168750-teaching-history-through-english-a-clil-approach.pdf
- https://schoolhistory.co.uk/ materials for history teaching for 11-18 year olds

Geography

- Teaching Geography through English – a CLIL approach
- https://www.cambridgeenglish.org/Images/179514-teaching-science-through-english-a-clil-approach.pdf
- https://www.nationalgeographic.org/education/ learning and teaching resources for primary to post-secondary

Word lists

- https://www.newgeneralservicelist.com/ high frequency words for students of English as a second language
- https://www.eapfoundation.com/vocab/academic/awllists/ word families that frequently appear in academic texts with tools for understanding and using academic vocabulary

All secondary subjects

- https://www.bbc.co.uk/teach/secondary/zkqp47h
- Common European Framework of Reference for Languages provides descriptors for six levels of foreign language proficiency standards, which can be useful for formulating language teaching aims. Available at: https://rm.coe.int/cefr-companion-volume-with-new-descriptors-2018/1680787989

Primary and secondary

- Glossary of terms TKT: CLIL Glossary of terms. (including visual organisers and their purposes)
- https://www.cambridgeenglish.org/Images/22194-tkt-clil-glossary-document.pdf

Bibliography

Bauer, E.B. (2017). *Biliteracy* ResearchGate. Available at: https://www.researchgate.net/publication/321709458_Biliteracy

Bower, V. (2017). *Supporting pupils with EAL in the primary classroom*. London: Open University Press.

British Council. (2014). CLIL Policy and Practice: Competence-based education for employability, mobility and growth. Available at: https://www.britishcouncil.org/sites/default/ files/clil_recommendations_august_14_pdf.pdf

Cambridge Assessment. (2013). What is literacy? An investigation into definitions of English as a subject and the relationship between English, literacy and 'being literate'. Available at: https:// www.cambridgeassessment.org.uk/Images/130433-what-is-literacy-an-investigation-into-definitions-of-english-as-a-subject-and-the-relationship-between-english-literacy-and-being-literate-.pdf

Cambridge Assessment International Education. (2017). Bilingual learners and bilingual education. Available at: https://www.cambridgeinternational.org/Images/271190-bilingual-learners-and-bilingual-education.pdf

Cenoz, J. (2015). Content-Based Instruction and CLIL: Moving Forward in the 21st Century. Language, *Content and Curriculum*, 28(1): 8–24. Available at: https://www. tandfonline.com/doi/full/10.1080/07908318.2014.1000922

Council of Europe. (Plurilingualism.) Platform of resources and references for plurilingual and intercultural education. Available at: https://www.coe.int/en/web/language-policy/platform

Council of Europe. (2018). Common European Framework of Reference for Languages (CEFR). Available at: https://www.coe. int/en/web/common-european-framework-reference-languages/ table-1-cefr-3.3-common-reference-levels-global-scale

Coyle, D., Holmes, B., & King, L. (2009). Towards an integrated curriculum – CLIL National Statement and Guidelines. The Languages Company. Available at: http://www.rachelhawkes. com/PandT/CLIL/CLILnationalstatementandguidelines.pdf

Coyle, D., Hood, P., & Marsh, D. (2010). |*CLIL Content and Language Integrated Learning*. Cambridge: Cambridge University Press.

Coyle, D., & Meyer, O. (2021) *Beyond CLIL*. Cambridge: Cambridge University Press.

Cremin, T. (2015). *Teaching English Creatively*. (2nd Edition.) Oxon: Routledge.

Cummins, J. (2001). *Negotiating Identities: Education for Empowerment in a Diverse Society*. Los Angeles: California Association for Bilingual Education.

Dearden, J. (2014). *English as a medium of instruction - a growing global phenomenon*. Oxford: British Council. Available at: https://www.britishcouncil.org/sites/default/ files/e484_emi_-_cover_option_3_final_web.pdf

García, O. (2009). *Bilingual Education in the 21st Century: A Global Perspective*. Chichester UK: Wiley-Blackwell.

Gibbons, P. (2021). *Scaffolding Language Scaffolding Learning 2nd edition*. Teaching Second Language Learners in the Mainstream Classroom. Portsmouth NH: Heinemann.

Gierlinger, E. (2021) *L2 Confidence in CLIL Teaching: A Tale of Two Teachers*. In Read Talbot, K., Gruber, M-T., & Nishida, R. (eds.) The Psychological Experience of Integrating Content and Language. (pp. 195 – 212).

Jiménez Catalán, R.M., & Ruiz de Zarobe, Y. (2009). The Receptive Vocabulary of EFL Learners in Two Instructional Contexts: CLIL versus non-CLIL Instruction. In ed., Y. Ruiz de Zarobe & R.M. Jiménez Catalán *Content and Language Integrated Learning: Evidence from Research in Europe*. Bristol: Multi-lingual Matters, 81–111.

Johnstone, R., & McKinstry, R. (2008). Evaluation of EPPI: Final Report. Early Primary Partial Immersion. Available at: https://www.scilt.org.uk/Portals/24/Library/research/eppi_book.pdf

Macaro, E., Curle, S. Pun, J. Jiangshan, A. & Dearden, J. (2017) *A systematic review of English medium instruction* Cambridge: Cambridge University Press. https://www.cambridge.org/core/journals/language-teaching/article/systematic-review-of-english-medium-instruction-in-higher-education/E802DA0854E0726F3DE213548B7B7EC7

Marsh, D., Díaz-Pérez, W., Frigols Martín, M.J., Langé, G., Pavón Vázquez, V., Trinidade, C. (2020). *The Bilingual Advantage: The Impact of Language Learning on Mind & Brain*. Jyväskylä: EduCluster Finland, University of Jyväskylä Group.

Mehisto, P. (2012). *Excellence in Bilingual Education: A Guide for School Principals*. Peterborough: Cambridge University Press.

Mehisto P. with Ting, Y.L.T. (2017). *CLIL Essentials for Secondary School Teachers*. Cambridge: Cambridge University Press.

Muñoz, A.J. (2021) *It wasn't my fault: Lecturers Notes to Former Selves after Five Years of EMI Service*. In Read Talbot, K., Gruber, M-T., & Nishida, R. (eds.) The Psychological Experience of Integrating Content and Language. (pp.174 – 194) Bristol: Multilingual Matters.

Navés, T. (2009). Effective Content and Language Integrated Learning (CLIL) Programmes. In ed., Y. Ruiz de Zarobe & R.M. Jiménez Catalán. *Content and Language Integrated Learning: Evidence from Research in Europe*. Bristol: Multi-lingual Matters, 22–40.

Pratt and Foley (2021) *Beyond CLIL Pluriliteracies Teaching for Deeper Learning*. In Coyle, D. & Meyer, O. Cambridge: Cambridge University Press.

Ruiz de Zarobe, Y. (2013). CLIL implementation: from policy-makers to individual initiatives. *International Journal of Bilingual Education and Bilingualism*, 16(3): 231–243. Available at: https://www.tandfonline.com/doi/full/10.1080/13670050.2013.777383?scroll=top&needAccess=true

Soler, D., González-Davies, M., & Iñesta, A. (2017). What makes CLIL leadership effective? A case study. *ELT Journal*, 71(4): 478–490.

Soruç, A. & Griffiths, C. (2018). English as a medium of instruction: students' strategies. *ELT Journal*, 72(1): 38–48.

Tedick, D.J., & Lyster, R. (2020). *Scaffolding Language development in Immersion and Dual Language Classrooms*. Oxon: Routledge.

Wei, L. (2018) Translanguaging as a practical theory of language. *Applied Linguistics* 39 (1), pp. 9 – 30.

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