

Integrating content and language learning

A school in Portugal developed a project combining flipped classroom and Content and Language Integrated Learning (CLIL) practices to develop the language and self-assessment skills of students,

Summary

Let's CLIL In Idães! is a school project integrated in a national programme English Bilingual Schools Program (PEBI). The project supports the use of flipped classroom and Content and Language Integrated Learning (CLIL) methods to promote autonomous learning for students and formative assessment practices for teachers. The project has been successful in improving the English language skills of students and has received national attention in Portugal.

The policy context

Portugal has been undergoing a process of curriculum redesign as well as a shift towards formative assessment. This is reflected in recent legislation and in new curriculum reference documents. Despite an increase in innovations in assessment practices in a few schools, including the use of digital technologies, it is a challenge to diagnose, improve, evaluate, and scale up these practices. In 2019-2020, Portugal implemented the [MAIA Project](#) to support formative assessment. MAIA is a research project at the national level which aims to improve the assessment of students' learning in the classroom to help them to better succeed in their learning.

In Portugal, teachers must participate in continuous professional development (CPD) events and/or activities to progress in their career. They are expected to take part in at least 50 hours of training, half of which focus on the scientific and pedagogical dimension (for example, a teacher of English as a Foreign Language would want to choose English Language Teaching CPD events and/or activities). Training in formative assessment within the MAIA Project is in line with what is advocated by the current education policy in terms of responding to the need for training teachers in formative assessment methods, techniques, and tools.

The school context



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The [Escola Básica e Secundária de Idães](#) is a kindergarten to secondary school with a high proportion of socio-economically disadvantaged students. The school has been developing projects that promote interdisciplinary collaboration and autonomy.

The school developed a KA1 ERASMUS+ Project called “Let’s CLIL in Idães”. This became part of the English Bilingual Schools Program (PEBI) which is coordinated by the Ministry of Education, through the Directorate-General for Education (DGE) and the British Council Portugal.

The school’s CLIL project

Using the Content and Language Integrated Learning (CLIL) method, the project aims to motivate students for more effective English language learning, by teaching content from different subjects in English.

CLIL is the umbrella term describing both learning another (content) subject such as physics or geography (or in this case study, sport) through the medium of a foreign language and learning a foreign language by studying a content-based subject. It is particularly useful in schools developing cross-curricular activities.

The project also supports the implementation of the flipped classroom practice in which learning activities take place at home followed by in-school lessons and making use of digital resources for digital formative assessment (DFA). The project also encourages using digital tools because they are effective and enable assessment to take place quickly, as teachers spend less time on direct observation and recording by hand on rubrics. This is especially helpful when the teacher needs to directly observe the performance of students in a physical education class, as in the example activity further below.

Some of the core objectives of the Erasmus+ project “Let’s CLIL in Idães” :

- Improve the level of key competences of teachers to cope with the social, cultural, and linguistic diversity
- Make the school linguistically and methodologically able to implement activities of job shadowing
- Improve students’ language skills



- Increase the students' success in content subjects

To disseminate teachers' experiences and material and online events, the project created a group at the [eTwinning](#) platform. eTwinning is a community of schools for Europe that offers a platform for teachers and school staff working in a school in one of the European countries involved, to communicate, collaborate, develop projects, share with schools in other eTwinning countries.

The project started during the academic year 2016/2017 and teachers participating in the project received training on CLIL. For instance, twenty teachers attended five training courses in the period of January 2019 to February 2020. These events were hosted by Peeter Mahisto and Tuula Asikainen, teacher trainers who are experts in CLIL. T

The objectives of the trainings were to gain insights into CLIL and formative assessment, learn new scaffolding strategies and develop and share materials. For instance, for content scaffolding, teachers can reduce the number of facts/tasks presented at a time, use analogies, and make connections to students' lives. For language scaffolding, teachers can shorten sentences, make students write their own definitions and use nouns instead of pronouns. The teachers attending the courses also learned for instance, about negotiating decisions on the learning process with students and giving them the chance to make choices.

After attending these courses, the teachers developed dissemination activities, mainly web conferences to share their knowledge about CLIL. Teacher Joana Faria was one of these teachers who shared her example activity below.



Research - Flipped classroom

The flipped classroom design is a student-centred instructional method, in which students learn material outside of classroom hours and engage in group activities, discussions, practical work and projects in the classroom ([video](#) in English by Schell & Julie). This student-centered approach can increase student engagement and empower them in their learning. It is called “flipped” because what is normally done as homework swaps places with teacher instruction done in the classroom ([Bergman & Sams, 2012](#)). There is a shift in learning culture, from a teacher-centred to a student-centred classroom, where in-class time is meant for exploring topics in greater depth and creating richer learning opportunities ([Hamdan et al., 2013](#)).

Challenges

The challenges faced by the school included raising student achievement in knowledge-based subjects, improving students’ (and teachers’) English language skills, and developing teachers’ competences and skills to cope with social, cultural, and linguistic diversity. The school seeks to introduce new pedagogies, notably supporting learning at home. Learning at home can encourage students to take more responsibility for their own learning, using mobile devices, adapted to each student’s learning preferences, and shifting teachers’ focus from summative to formative assessment.

Enabling factors

There were mainly several factors that supported the implementation of the CLIL project. First, the school leaders support projects like “*Let’s CLIL in Idães!*” because they improve the school’s performance.

The school allows student access to online content via their mobile phone and home access to learning resources. After using these apps, students realise that a mobile device can be a tool that can help them complete and stay on top of their classwork. Second, training activities/qualification courses were provided for teachers on flipped classroom, digital apps, and mobile learning thanks to having a teacher Daniela Guimarães who is an expert in this area. Third, after attending one of



these courses, one of the school teachers, Joana Alice Marques Faria, wrote her activities as a teaching scenario to share with other teachers (see example below).

The school encourages and guides the teaching staff on trying innovative methods and digital tools for implementing formative assessment. Tasks are designed to promote individual autonomy, enabling each student to manage their own learning. Teachers act as learning mediators and facilitators, giving clues, promoting reflection, assessing students' knowledge and needs. Teachers are used to sharing materials they create with colleagues inside and outside the school, so that they can be used by anyone, for instance, notably through [the eTwinning platform](#).

Furthermore, this approach met the current needs of students who are surrounded by technology. The CLIL activities are designed in a way that is meaningful, with precise instructions, allowing students to develop their digital and collaborative skills. Learning during the activity is an interactive process, which creates a safe environment where students do not experience negative feelings like failure, and if they do, this can be addressed by the teacher.

Research - Mobile learning

Mobile learning can be an effective approach to support situated learning. It can offer the flexibility to organise indoor and outdoor activities, as well as physical education classes as in the example activity by teacher Joana Faria. However, as [Santos, Cook and Hernández-Leo \(2015\)](#) emphasise, mobile learning is most effective when it incorporates real-life learning objects and activities (e.g., bird watching, activities using a GPS tracker, etc.) to enable students to have more meaningful interactions with their peers, the learning material and the environment. They also note that on top of scaffolding by the teacher or peers, digital scaffolding can support learner self-assessment. Mobile learning in this way can improve student achievement (e.g., [Hwang & Chang, 2011](#)).

Example activity

Teacher Joana Faria designed a flipped classroom and CLIL activity combining physical education and English as a foreign language. She divided the class into a pre-class, in-class, and after-class stage.



The teacher first emailed instructions and materials to 7th grade students, including QR codes and clues to discover a hidden word, a Padlet linking to instructional YouTube videos, a worksheet with the learning objectives and English-Portuguese vocabulary related to hurdling. Students worked on all tasks on their own, at their own pace during two weeks.

The class at school began with an online quiz for a formative assessment using the Plickers app for students to assess what they had studied at home. During the lesson students worked collaboratively on the different activities, competing in groups. For instance, the first student ran over the obstacles, thinking about which leg they led with. Afterwards, the next student picked the mobile phone and read the QR code (terms/pictures in Portuguese) and matched it with the corresponding English term.

Teachers and students constructed the criteria of assessment together. First, they choose the type of work (presentation, quiz) that they want to develop. Then, they set the topics and determine the duration of the activity. They also chose the specific vocabulary they must use.

The teacher organised the lesson according to the results of the first quiz. She made work groups by combining more proficient with less proficient students. She asked students what tasks they have done, made them visualise the videos calling their attention to the topics of which they show less knowledge. At the end of the lesson, the groups were given 5 to 10 minutes to present the discussed concepts.

Each group assessed each other's presentations to better understand the topic. This type of interaction created a more meaningful learning environment. After this, the teacher used a second multiple-choice quiz and students were shown the graphic representation of their results at the beginning and at the end of the lesson. Since the students are asked to co-construct the learning objectives and success criteria, they feel more responsible for their own results.

The digital tools also helped making the activities more inclusive. For instance, in this physical education class, it was not possible for two students to cross over the hurdles since one student moves in a wheelchair and the other one suffers from hemiparesis (incomplete paralysis of the nerves or muscles in one of the sides of the body). Therefore, the activities were adapted: the hurdles were set at 20 cm. The student used the wheelchair and crossed over the barrier. Afterwards, the student picked the mobile phone (which was on a chair and not on a mattress) and



read the QR codes (terms/our pictures in Portuguese) and matched them with the corresponding English term.

Online quizzes allow teachers to assess students' progress in real time and without pressuring students. They feel like it is a game, while they are also using their knowledge. Like teacher Joana Faria, teachers can use the results of such online quizzes for formative assessment and change their class activities. They can reflect on what is happening during a specific class activity and make sure that students understand it. This can also help teachers adapt better to students with low linguistic proficiency. After each class teachers can do their own assessment of the students' development. This way, they will plan subsequent activities considering the knowledge level of students and their real needs at that moment, so that they can enjoy meaningful learning experiences.



Figure 1 A **Plickers** answer card. The student needs to **rotate the card** in a way that her answer of choice (A-B-C-D) is on top

Outcomes

Three classes participated in the first academic year of the project and participation gradually increased each year (Figure 1). The project was a success from the beginning and received the attention of the media: "Expresso de Felgueiras", a local newspaper, Agência Lusa, a national news agency, TSF, a radio station and RTP 1 and Porto Canal, two TV channels.



There have been 21 CLIL classes (from kindergarten to 9th grade) and 25 teachers involved in the project during the school year of 2020/2021. A school survey indicated that students liked participating in the project, because it was an effective way to learn vocabulary (47%) and a different learning process (36%) and classes were more dynamic (18%). Many students wanted to have CLIL classes.

After dealing with these digital tools in physical education classes, students started to use them in other contexts. For instance, they filmed their dialogues or built their own PowerPoints or online quizzes and created their own QR codes. They learnt to be autonomous, which helped them cope with the lockdown due to COVID-19. Student grades have also improved compared to previous years.

Score in English at Escola Básica e Secundária de Idães		
Before the Implementation of the Project <i>Let's CLIL in Idães!</i>		
School Year	Curricular Year/ number of CLIL Classes	Results
2015/2016	5 th Grade	86%
	6 th Grade	89,4%
	7 th Grade	51,9%
	8 th Grade	92,47%
	9 th Grade	71%
After the Implementation of the Project <i>Let's CLIL in Idães!</i>		
2016/2017	5 th Grade (1 CLIL Class)	90,4%
	7 th Grade (2 CLIL Classes)	77,3%
2017/2018	5 th Grade (4 CLIL Classes)	91%
	6 th Grade (1 CLIL Class)	92,8%
	7 th Grade (4 CLIL Classes)	91,6%
	8 th Grade (2 CLIL Classes)	96,5
2018/2019	5 th Grade (1 CLIL Class)	90%
	6 th Grade (4 CLIL Classes)	98%
	7 th Grade (1 CLIL Class)	74%
	8 th Grade (4 CLIL Classes)	84%
	9 th Grade (2 CLIL Classes)	72%
2019/2020	5 th Grade	98,5%
	6 th Grade	97,1%
	7 th Grade	100%
	8 th Grade	100%
	9 th Grade	100%

Figure 2 Student results (presented as a percentage score) in English as a foreign language before and after the implementation of the project "Let's CLIL in Idães"

Recommendations



Although time spent is worthwhile, digital learning can take time to prepare for teachers. Teachers must take the time to master the app they are using and build the teaching materials. Teachers also have the challenge to keep up with the pace of change in the digital world. They need to make a continuous effort to adapt to changes in existing digital tools as well as new tools.

It might be challenging to maintain a stable internet connection for outdoor or physical education activities (e.g. sports hall). There can also be technical issues during the class that the teacher should be ready to solve, for example, when a file has not been saved or cannot be shared online with other students due to a technical problem or students' lack of digital knowledge. A challenge to organising a flipped classroom for teachers is the lack of resources of students from families with economic difficulties who do not have an internet connection or digital devices.

Conclusion

The project "Let's CLIL in Idães" has been successful in improving students' language skills with the support of CLIL, flipped classroom and DFA. The next step is a discussion with teachers and students on how much progress has been made in all aspects. The improvement in students' learning and their thoughts about the CLIL activities should be recorded and disseminated to colleagues and other students. This would encourage more teachers to take up CLIL, and students who are trying CLIL for the first time to participate actively. Students must become aware that this type of activity demands their involvement and their responsibility for their own learning. More activities should be created to involve more teachers in the use of digital formative assessment (DFA) and CLIL. The school board should also promote the training of the teaching staff in this area so that they can understand the importance of DFA and CLIL.

In the future, the teachers will extend CLIL activities to other subjects, to make students take responsibility for the construction of their own learning. Regardless of the subject, the success of a CLIL activity as this one depends on the teachers carefully preparing the activities, selecting the tools to use and organising students' activities. Ultimately, students should be the main builders of their knowledge.

