Universidad Internacional de La Rioja
Facultad de Educación

Master's Degree in Bilingual Education

The design of an E-portfolio as an interdisciplinary tool to promote autonomy in a CLIL context

Trabajo fin de estudio presentado por: Estíbaliz Jurado Arroyo
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Director/a: Ariane Sande Piñeiro
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Abstract

Learners of the 21st century are living in a globalized world where the command of ICT and personal initiative are demanded competencies. In that sense, students need an adapted learning environment that enhances these competencies. The learning process along primary school should cover these needs, prepare students to be an active part of the society and succeed in it.

This Master's Dissertation aims to design an E-portfolio as an interdisciplinary tool to promote autonomy in a CLIL context. To reach this objective, this intervention proposal outlines a project to enhance student's autonomy using an E-portfolio as a digital support. This project has been planned within an interdisciplinary project that combines science and arts in a CLIL context. Students will travel around different continents rescuing lost animals from the local zoo. Along the trip, learners will take the responsibility to create their diaries (E-portfolios), where they will collect all the information needed to become experts on the animals they rescue and take good care of them.

To succeed in the creation of this project, we have explored the literature and search for the concept of E-portfolio, CLIL fundamentals, the links between CLIL and E-portfolios, the importance of autonomy in a CLIL context and the benefits of E-portfolios regarding autonomy.

Once the project has been created applying the theoretical concepts explored in the literature review, this Master's Dissertation will provide a tool to value the effectiveness of the project in case it is carried out. The project will conclude exposing the lack of practical studies in the Spanish nation regarding the combination of E-portfolios, autonomy and the feasibility to combine these two aspects in a CLIL environment. It will also suggest improvements for further applications and future lines of work in the educational field.

Keywords: E-portfolio, CLIL, autonomy, interdisciplinary project, digital competence.

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1. Introduction

It is widely accepted that the use of ICT within an educational context has created a new learning environment for students, parents and teachers. The educational community has to face the new demands of the society and therefore, the needs of students that in the future will be an active part of this society.

This challenging situation has led us to an increased searchlight of tools and materials to fulfil students' needs. The research has brought innovative material to use in different contexts and for different students' profiles.

An example of this innovative material that reaches the requirements of this new learning environment, and the focus of this master dissertation, is the E-portfolio. This tool is the 2.0 version of portfolio which was defined by the author Barrett (1999, p.2) as a purposeful collection of student's work that demonstrates effort, progress and achievement; a portfolio provides a richer picture of student performance than can be gained from more traditional, objective forms of assessment.

As the author highlights, this tool has been destined for assessment due to the fact that it can give more information of student's progress, therefore, the teacher will be able to help them more accurately. Over the years, and keeping the idea of adapting the learning experience to students' needs, E-portfolios have emerged as a response of the current society demands, adding some more benefits aside from the portfolio itself. Some of the benefits that Barrett (1999, p2.) stated are:

1. Makes student work in many media accessible, portable, examinable, and widely distributable.
2. Makes performances replayable and reviewable; it is important to see more than once.
3. Hypertext links allow clear connections between standards and portfolio artifacts.
4. Creating an Electronic Portfolio can develop skills in using multimedia technologies.

E-portfolios are giving the opportunity to students to perform with their entire repertoire and on their own path. This opportunity is leading us to the idea of autonomy, strongly linked with these four benefits. By this, we mean that it is interesting to create situations where students can self-regulate their learning needs and have the sources to access the content as many times as they consider needed, rebuild it or review it.

The proposal aims to create an E-portfolio that provides all these benefits mentioned and use it to work on the promotion of students' autonomy. This E-portfolio will be present in an interdisciplinary project that links science and arts subjects in a CLIL context. We will travel with our students around the different continents, learning about some groups of animals, their diets and their physical characteristics getting as a result their personal diary (E-portfolio) of the adventure.

To do it so, firstly we will have a deep look at the scientific literature, giving a special attention to the elaboration of E-portfolios in an efficient way based on current evidence, secondly, we will establish the CLIL fundamentals that will be present when planning, we will explore the use of an E-portfolio in a CLIL context and the successful ways to promote autonomy on our students according to the scientific literature.

After exploring the current evidence in this matter, and taking into account all the ideas obtained in the literature review, we will elaborate an intervention proposal that will connect: E-portfolios, CLIL and autonomy.

Finally, we will evaluate the process and the results obtained in this proposal to see, from a general perspective, what the results are and which aspects can be improved in future applications of the proposal.

1.1. Justification

Taking into account this link between ICT and 21st century students' need, teachers should promote new ways of teaching and scaffold their teaching in an interdisciplinary way, as it is in real life, the learning process should not be compartmentalised. To do it so, this project aims to delve into the study and design of an E-portfolio as a tool to bring closer the current times of the 21st century students and curriculum content.

The European Parliament and Council (2006) have pointed out the importance of the command in the fundamental basic skills which includes ICT as an essential foundation for learning. Concurrently, the CLIL approach not only has to follow this lead because of the European regulation, but also because CLIL fundamentals aim to foster this new 21st century learning environment which is strongly linked with technology. In this sense, Marsh, Mehisto, Wolff, Frigols (2011, p.18) stated that the CLIL approach works toward a learning environment where students can develop cognitive, social and affectively.

The area of research of this project is focused on the design of an E-portfolio as a tool due to the fact that, as we just have described, we need to connect ICT and curriculum to provide a quality education for our students and prepare them for the needs of the society. Following this lead of students' needs in the 21st century, another important aspect to succeed as an adult in this globalized world is the command of the L2. This aspect also concerns the CLIL approach which is not focused on teaching a foreign language, but on the acquisition of it through curricular content.

Once we have highlighted these three concepts: ICT, CLIL and E-portfolio the connection among them it is clear. The use of an E-portfolio on a CLIL context through ICT, as it is described by Stefani, Mason, Pegler (2007, p.10) on their work, E-portfolio has extended the ways in which information can be accessed, used, updated and integrated, broadening the range of reflective activities that can be supported.

The authors Machado and Urbanetz (2020, p.287) in their mentioned the author Villas Boas (2010) who stated that portfolio is much more than a collection or physical grouping of the activities carried out by the students during the pedagogical process, and more than a folder where their works are archived, since the construction of a portfolio requires the selection of the work performed through critical and careful self-evaluation, which involves judging the production quality and the learning strategies used.

To conclude this part, I would say that this project has been motivated by the need to create new materials adapted to the new needs. The educational field needs to be updated and change along the changing society. This Master's Dissertation is an opportunity to design a project that includes the use of ICT, combines different disciplines and follows a CLIL approach. In that way, we will provide an example of material to cover the students' needs nowadays.

1.2. Brief analysis of the state of art

Nowadays, the use of E-portfolios has increased rapidly. The reason of it is the current teaching perspective where students should be the centre of the learning process and where formative assessment is seen as a key element of success. As the authors Majid Farahian and Farnaz Avarzamani (2018, p.3) stated portfolios can encourage students to monitor and think about their learning process and evaluate their skills' development.

Example of these new lines of investigations is the published study carried out by Majid Farahian and Farnaz Avarzamani (2018). The study named *The impact of portfolio on EFL learners' metacognition and writing performance* had a group control and an experimental group and the authors proved that portfolios significantly contribute to empowering both the metacognition and writing proficiency of EFL learners as it was affirmed by the authors (p2.).

This study also highlights some other lines of inquiry by authors such as Chen (2006) or Struyven and Devesa (2016) in Majid Farahian and Farnaz Avarzamani (2018). In them, portfolios are described as a demanding, time-consuming and kind of confusing tool for students. Although, there still being many other studies mentioned by Professors Majid Farahian and Farnaz Avarzamani (2018) in their research that are giving proof of the benefits that portfolios can provide in the learning process, example of them are: Prasad (2003) and Yilmaz & Akcan (2012) in Majid Farahian and Farnaz Avarzamani (2018).

The positive results many studies are obtaining are usually linked with formative assessment, where students are the protagonists of their learning. E-portfolios are giving them the opportunity to lead their learning and self-regulate their learning needs. An example of this, it is the study carried out by Rao (2006, p.119) in which affirms that using portfolios, students can take an active control of their learning process by using metacognitive strategies (e.g., planning and organizing learning, monitoring and observing ones' learning, reflecting on one's learning). Following this same lead of autonomy and self-regulation, other authors such as Mak and Wong (2018, p.59) found out that students believed they had developed into independent learners and enjoyed taking more responsibility in handling feedback.

In the field of CLIL, the use of portfolios to promote autonomy has also become promising for some authors such as Adamson (2014, p.34), who investigated about the purpose of portfolios as a tool to promote autonomy and concluded that findings indicate that it is mostly recognized as a beneficial and transferable skill among students.

From a general perspective, there is a lack of practical studies investigating portfolios and CLIL as it is pointed out by Adamson (2014, p.21). But it is clear, exploring superficially the literature, that this tool is getting a bigger acceptance within the educational community.

1.3. Objectives of the study

During the elaboration of this Master's Dissertation, we aim to achieve the following objectives:

1.3.1. General objective

- Design an E-portfolio as an interdisciplinary tool to promote autonomy in 4th grade within a CLIL context in the area of natural science and arts.

1.3.2. Specific objectives

- Research on the current use, elaboration and benefits of E-portfolios.
- Explore the feasibility of E-portfolios in a CLIL context.
- Compare different strategies to promote autonomy on learners.
- Design an interdisciplinary project through an E-portfolio in a CLIL context.
- Promote autonomy, creating a project based on the scientific evidence.

2. Literature review

This review will acknowledge the main features of:

- E-portfolios: we will focus on the specific theoretical foundations to create it.
- CLIL: we will establish the CLIL fundamentals that will be the when planning the project.
- E-portfolios in CLIL: we will describe the requirements of CLIL material and compare them with the characteristics' of E-portfolios to shed light on their compatibility.
- Autonomy: also from a CLIL perspective, we will acknowledge the importance given to autonomy in this approach.
- Promotion of autonomy using E-portfolios: we will acknowledge some strategies to promote autonomy.

Exploring these features that connect E-portfolios, CLIL and Autonomy we pursue to gather the information needed that has proven positive results and apply it when designing the proposal. The main aspects of this literature review will guide the creation of the E-portfolio, which will be used as an interdisciplinary tool to promote autonomy in learners combining natural science and arts in a CLIL environment.

2.1. E-portfolios

The term E-portfolio has been described previously as a 2.0 version of portfolios. In that sense, E-portfolio maintains the main characteristics of portfolio but evolving to serve a purpose in the current society where the domain of ICT is needed. Taking this into account, we will have a look into the benefits exposed by the scientific literature in portfolios and therefore, transferable to E-portfolios.

As the author Belgrad (2013, p.331) explained, portfolios were first implemented during the 1970s in progressive schools. They appeared in the National Writing Project as a substitute for a written exit exam in 1983. She also explained two main reasons why portfolios have been included progressively in education and why they are getting more importance, especially in the assessment:

1. Knowledge is complex and can be demonstrated from different perspectives that traditional assessment cannot recognize.

2. Portfolios allow an active learning, whereas the traditional system conceives learning as a passive process.

This active learning, as the author stated, occurs through stages of artifacts […] and place students at the centre of the learning process through reflective processes that offer them opportunities to become active and creative. (p. 332.)

Some other authors that support the use of this tool are Jones and Shelton (2011, p,5), they affirmed that portfolios represent a window on authentic learning, a tool that reflects the learning process. Portfolios provide a tangible way of making sense of past and present experiences, putting learning in context, and capturing and displaying the learning that has taken place. Portfolios can facilitate authentic learning. They offer a point-in-time portrait of one's development as a learner. Their research states a clear connexion between constructivism and the use of portfolios.

Machado and Urbanetz (2020, p.287) also highlight different benefits of the use of portfolios reflecting that there are many benefits in using the portfolio, especially in regard to the critical reflection processes and of the educational context. In their research they also include the five pedagogical actions stated by Filho (2011) that the use of portfolio provides:

1. To organize the pedagogical work in a non-fragmented way.
2. To think about the pedagogical work, that is, reflect collectively on the action.
3. To plan and propose interventions based on what is visualized in the portfolio, of what was selected and catalogued.
4. To reflect on the proposed interventions, from: reflection on action, on action and reflection on reflection in action.
5. To reorient the pedagogical work based on the education theory, change what has been observed or to continue a process of change through observation and reflection.

Once we have a solid background of the origins of E-portfolios and the benefits that it maintains from their previous versions, the portfolios, we will focus on some other specific aspects of E-portfolios.

The well-known and expert in the field of E-portfolios, Barrett (2000, pp.1-5) published her own definition affirming that electronic portfolio includes the use of electronic technologies that allow the portfolio developer to collect and organize artifacts in many formats (audio, video, graphics, and text). A standards-based electronic portfolio uses hypertext links to organize the material to connect artifacts to appropriate goals or standards.

The same author alleged that many educators who want to develop electronic portfolios tend to design their own, using off-the-shelf software or generic strategies (Barrett, 2000). In that sense, she stated the importance of planning when elaborating an E-portfolio. She exposed that electronic portfolio's development brings together two different processes: multimedia project development and portfolio development. When developing an electronic portfolio, equal attention should be paid to these complimentary processes, as both are essential for effective electronic portfolio development (Barrett, 2000).

In her research, the expert used the four stages proposed by Danielson and Abrutyn (1997) in Barrett (2000):

1. **Collection:** The portfolio's purpose, audience, and future use of the artifacts will determine what artifacts to collect.

2. **Selection:** Selection criteria for materials to include should reflect the learning objectives established for the portfolio. These should follow from national, state, or local standards and their associated evaluation rubrics or performance indicators.
3. **Reflection:** Include reflections on every piece in your portfolio and an overall reflection.
4. **Projection:** […] Review your reflections on learning, look ahead, and set goals for the future.

Then, the author connects them with the *Multimedia project development*, which are the steps proposed by Ivers and Barron (1998) in Barrett (2000) when developing a multimedia project. The steps proposed are:

1. **Assess/Decide**. The focus is on needs assessment of the audience, the presentation goals, and the appropriate tools for the final portfolio presentation.
2. **Design/Plan.** In the second stage, focus on organizing or designing the presentation. Determine audience-appropriate content, software, storage medium, and presentation sequence. Construct flow charts and write storyboards.
3. **Develop.** Gather materials to include in the presentation and organize them into a sequence (or use hyperlinks) for the best presentation of the material, using an appropriate multimedia authoring program.
4. **Implement.** The developer presents the portfolio to the intended audience.
5. **Evaluate.** In this final stage of multimedia development, the focus is on evaluating the presentation is effectiveness in light of its purpose and the assessment context.

Connecting these two proposals, Barrett (2000) obtained the five stages of electronic portfolios. In appendix 1, there is a figure to show in a visual way this idea. In the following lines, we have selected some of the questions that Barrett (2000) laid out in each stage. Giving answer to these questions we would set up a solid proposal of E-portfolio:

1. Defining the portfolio Context and Goals.

- What is the assessment context, including the purpose of the portfolio?

- What resources are available for electronic portfolio development?

- What hardware and software do you have and how often do students have access to it?

- What are the technology skills of the students and teachers?

2. The working portfolio.

- What is the content of portfolio items (determined by the assessment context) and the type of evidence to be collected?

- Which software tools are most appropriate for the portfolio context and the resources available?

- Which storage and presentation medium is most appropriate for the situation (computer hard disk, videotape, LAN, the Web, CD-ROM)?

3. The reflective portfolio.

- How will you select the specific artifacts from the abundance of the working portfolio to demonstrate achieving the portfolios' goals?

- What are your criteria for selecting artifacts and for judging merit?

- How will you record self-reflection on work and achievement of goals?

- How will you record teacher feedback on student work and achievement of goals, when appropriate?

- How will you record goals for future learning based on the personal reflections and feedback?

4. The connected portfolio.

- How will you organize the digital artifacts?

- How will you evaluate the portfolios' effectiveness in light of its purpose and the assessment context?

- Depending on portfolio context, how will you use portfolio evidence to make instruction/learning decisions?

- Will you develop a collection of exemplary portfolio artifacts for comparison purposes?

5. The presentation portfolio.

- How will you record the portfolio to an appropriate presentation and storage medium?

- How will you or your students present the finished portfolio to an appropriate audience?

To sum up, E-portfolios have been linked with interesting ideas far from a traditional perspective. As we have seen, there are many authors investigating and proving the benefits and uses of E-portfolios.

There are a variety of authors exploring and proving the advantages that E-portfolios can bring to an educational context where the learner is the centre. Solid bases and steps for implementation have been proposed by the scientific community.

2.2. CLIL fundamentals

To design the proposal, we will take into account the CLIL fundamentals, concretely the 4 C's (content, communication, cognition and culture) and the 3 A's tool (analyse, add and apply). We will start with the four C's presented by Coyle (2005) as guiding principles to build a CLIL programme. Then, we will focus on planning the language using the 3 A's also presented by Coyle (2005). These characteristic aspects of CLIL will lead the planning of the different dynamics and activities that will form our E-portfolio.

Following the four C's planning guide (appendix 2) suggested by Coyle (2005, p.5), we should start planning the content, because it is the content which determines the learning route. If it were language, imagine how limiting this would be (p5.). As the author defined, the C for content refers to the heart of the learning process […], successful content or thematic learning and the acquisition of knowledge, skills and understanding..

Furthermore, Coyle, Hood, Philip and Marsh (2010, p.5) also agreed with this definition and added the idea that content in CLIL is more flexible than selecting a discipline from a traditional school curriculum such as geography, music, biology or physics […] contextual variables such as teacher availability, language support, age of learners and the social demands of learning environment may mean that a different choice of content is more appropriated. […] What exactly is meant by "content" in CLIL will depend on the context.

Secondly, we need to connect the Content with C for communication which, according to Coyle (2005, p.5), communication involves learners in language using in a way which is different from language learning lessons. Language is acquired by the content, students are not in a language class. Therefore, the priority is the content, and language is the channel.

After linking the content with communication, we need to establish the thinking skills (C for cognition) that students will develop according the previous steps done. As Coyle (2005)

stated, to succeed in the learning process, CLIL must challenge learners to think and review and engage in higher order thinking skills. […] A useful taxonomy to use as a guide for thinking skills is that of Bloom. He has created two categories of thinking skills: lower order and higher order. Take Bloom's taxonomy for a well-defined range of thinking skills. It serves as an excellent checklist (Coyle, 2005, p.5). In appendix 2, the figure shows a clear chart of Bloom's revised Taxonomy where remember understand and apply refer to lower order thinking skills (LOTS), and analyse, evaluate and create allude to high order thinking skills (HOTS).

Finally, Coyle (2005, p.5) suggested planning the C for Culture as the last step. The author affirmed that for our pluricultural and plurilungual world to be celebrated and its potential realised, this demands tolerance and understanding. Studying through a foreign language is fundamental to fostering international understanding. 'Otherness' is a vital concept and holds the key for discovering self. Culture can have wide interpretation – e.g. through pluricultural citizenship (.). In this guiding planning, the author proposed some questions that teachers should answer when planning (Coyle, 2005, p.6):

- What are the cultural implications of the topic?
- How does the CLIL context allow for 'value added'?
- What about otherness and self?
- How does this connect with the all C's?

Regarding the 3 A's tool suggested by Coyle (2005 p. 7) are also an essential part when planning. The A's stand for Analyse, Add and Apply. In the following lines we can see how the author defines each of them:

- **A**nalyse content for the language **OF** learning. Content can be analysed for the language needed in order for conceptual learning to take place. This is a systematic content analysis to identify key words (including specialised contextualised vocabulary) phrases, grammatical functions for concept formation and comprehension.
- **A**dd to content language **FOR** learning. Enabling the learner to operate effectively in a CLIL setting (e.g. strategies for reading and understanding a difficult text). This

includes meta-cognitive or learner strategies, classroom talk, discussion, task demands.

- **A**pply: to content language **THROUGH** learning. Where the language which emerges through the learning context is built in to assure that there is cognitive and cultural capital […]. It uses emergent knowledge and skills to apply thinking skills and high level questioning.

To sum up, based on the previous research, we can say that planning in CLIL should be a flexible model where we adapt to students' needs and contexts. Therefore, each planning will be unique and adaptable but all of them will follow these principles to succeed. There is no single model for CLIL. Although, different models all share the common founding principle that in some way the content and the language learning are integrated (Coyle 2005, p2.).

2.3. Connecting E-portfolios and CLIL

E-portfolios are a multipurpose and flexible tool that can be adapted to different approaches, in this case CLIL. The author Mehisto (2012, p.15.) established a criteria for producing CLIL material. In the research, it is distinguished non-specific criteria to use in any kind of material, and also specific criteria for CLIL material with some examples. Along this section, we will describe the important aspects that, in general, any learning material (E-portfolio included) should have. Then, we will also connect the author's criteria of quality CLIL material with the characteristics of E-portfolios to analyse if the two concepts can work synchronously.

Mehisto (2012, p.16) stated that, all learning materials (CLIL or not) should:

- Create situations where students' context is linked with different school subjects and how the learning can be used outside the class.
- Promote students' intrinsic motivation to problem-solve.
- Stimuli students' skills to be able to: comprehend, conceptualise, systematise, appreciate and contemplate facts and experiences and because of this command communicate their opinions orally or written.
- Make visible learning goals/ expected outcomes.
- Promote creative and critical opinions, discussions and **learners' autonomy.**
- Help students to self-regulate their learning needs, when they need additional support.

- Build intercultural awareness and see the difference as enrichment.
- Develop media literacy.

Regarding the specific CLIL material, Mehisto (2012, p.17) stated ten criteria that quality CLIL material should have:

- Make the learning intentions (language, content, learning skills) and process visible to students. (**Visible intentions)**
- Systematically foster academic language proficiency.
- Foster learning skills development and learners' autonomy. (**Learners' autonomy)**
- Include self, peer and other types of formative assessment. **(Formative assessment)**
- Help create a safe learning environment. **(Learning environment)**
- Foster cooperative learning. **(Cooperative learning)**
- Seek ways of incorporating authentic language and authentic language use.
- Foster critical thinking. **(Critical thinking)**
- Foster cognitive fluency through scaffolding of a) content, b) language, c) learning skills development helping students to reach well beyond what they could do on their own.
- Help to make learning meaningful.

Many of these actions can be carried out in a portfolio or E-portfolio; this affirmation can be corroborated by different authors in the following statements:

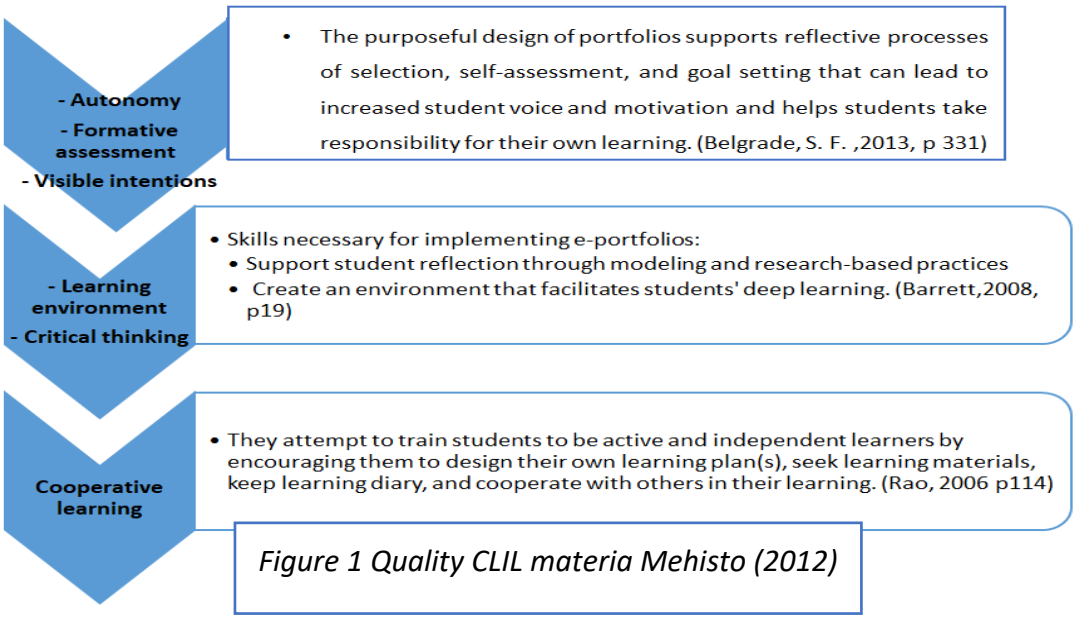

Figure 1 Quality CLIL materia Mehisto (2012)

Furthermore the author has also stated the importance of scaffolding as essential criteria in CLIL material. In that sense, a revealing study of portfolios and self-regulation, carried out in different phases by Mak and Wong (2018, p.56) shows some ideas that are completely aligned with the CLIL approach:

- Explicit instruction in Phase 1 serves as a means of scaffolding the learning process, enabling students to have a clear vision of what they should progress towards and to set individualized goals.
- The findings point to the critical role of the teacher in supporting student responsibility and ownership of learning, as the ability to self-regulate requires scaffolding.

As we have seen, there are multiple common aspects regarding CLIL and E-Portfolios. Quality materials in CLIL and E-Portfolios can merge together to provide an enriching learning environment where the learner is the centre of the process.

2.4. Autonomy in CLIL

Digging into the CLIL approach, there are many authors exploring the role of autonomy in a CLIL context and the benefits that learners can generate from its promotion. Studies as the one carried out by Halbach & Iwaniec (2020, p.10) where they aimed to establish the impact of socio-economic status (SES) in bilingual schools, has proven that following a CLIL approach the added difficulty of studying via the medium of English requires students to invest extra effort in learning right from the beginning. The limited support that they can receive at home stimulates the development of learning autonomy. Additionally, for children from less privileged families, CLIL programmes offer them the possibility to enter education at the same footing as their peers from more fortunate backgrounds, as all learners struggle with English. As the authors stated in their study, CLIL programmes enable a context where students have the need to build their knowledge and lead their learning because parents will have some limitations independently of their SES.

This study also concluded that students that have been involved in a CLIL context, once they start secondary school; they have developed a higher sense of responsibility for their learning due to the fact that parents' support is limited by their lack of foreign language skills. On the other hand, students perceive […] as being willing to put extra effort into their learning (Halbach & Iwaniec, 2020, p.13).

Another perspective to take into account, it is the one exposed by Wolff (2011) who argues some general and specific features of autonomy in CLIL and the importance in the CLIL classroom. In his research, the author as an expert on the field and with numerous studies published, affirmed that CLIL shares this principle with learner autonomy (LA), which is also built on the idea of change and based on the conviction that it is possible to change the current educational system in order to make students independent and responsible learners who are able to organise their own learning (Wolff, 2011, p73).

Following this idea of change, the author created a theoretical link between CLIL and learners' autonomy affirming that CLIL is presented as something new, as a fusion (of content subjects and language), this newness causes the need on the students to order, structure and organise the results of their thinking (Wolff, 2011, p73). This idea of self-organization in learners' thinking is again clarified by the author stating that CLIL fosters self-organisation and thus contributes to discover and develop an important capacity in learner autonomy. One may conclude, therefore, that CLIL as a fused subject provides a learning environment which promotes the capacity for self-organisation (Wolff, 2011, p73).

After this general link between CLIL and autonomy, the author gets into a deep look of the relationship between content in CLIL and learners' autonomy affirming that subject content is more motivating for the students than the content usually dealt with in the language classroom […].Enhanced motivation seems to come partly from the realia character of the content, but partly also from the fact that the students are working in a foreign language (Wolff, 2011, p74). The author reinforced the importance of motivation through authenticity (realia) in a bilingual context, he also divided the authenticity in two aspects: materials and interaction.

After his research analysing several years of data provided by the interactional classroom data (Wuppertal), the author reached the following conclusions that closely link CLIL and learners' autonomy (Wolff, 2011, p79):

- There are connecting links between CLIL and LA both in theory and practice.
- CLIL as a fused subject provides a learning environment which promotes the capacity of self-organisation.
- Both in CLIL and LA content are looked upon in a similar way: content needs to be authentic and processed in an authentic manner.

- CLIL as a learning environment lends itself to an autonomous approach in the classroom. The example makes this quite clear: the rules of teacher-controlled classroom interaction are broken fairly often.

To conclude this section, and based on the literature exposed, we can say that the CLIL approach promotes indirectly the learners' autonomy due to the fact that learners closest context (families) cannot provide extra support because of their lack of command in the L2. Autonomy it is also enhanced in CLIL by the use of authentic materials and interaction that CLIL teachers adapt in the L2 as the author Wolff (2011) stated. But even if the author has established a correlation between CLIL and learners' autonomy; he affirmed that further studies are needed to prove a direct causality between them (Wolff, 2011, p74).

2.5. The promotion of autonomy using E-portfolios

Getting a deep look on the purposes of portfolios and E-portfolios, we can acknowledge some lines of inquiry are exploring the promotion of autonomy using this tool. In that sense, in the following lines, we will see different studies that link the use of portfolios and E-portfolios with autonomy.

The first study to present is the one carried out by Rao (2006) which aimed to help students to become autonomous learners using portfolios as a tool. In this research, the author first introduced the concepts of learners' autonomy, the use of portfolios and the connexion between them. According to Rao (2006, p.114) learner autonomy is seen as a capacity for active, independent learning.[…] the basis of learner autonomy is that the learner accepts responsibility for his/her learning. This acceptance of responsibility has both socio-affective and cognitive implications. It is explained in this work that a positive attitude and a capacity to reflect on the learning process are needed, from the learner. It is also important to mention the skills that students can develop when they feel part of the learning process. Students who are encouraged to take responsibility for their own work, by being given some control over what, how and when they learn, are more likely to be able to set realistic goals, plan programs of work, develop strategies for coping with new and unforeseen situations, and evaluate and assess their own work (Rao, 2006, p.114).

Regarding the use of portfolios, the author exposed that they are a useful tool where learners can develop their autonomy due to the fact that portfolios are collections of

students' work selected by the students (with the teacher's guidance) to represent their learning experiences (Rao, 2006, p.115).

According to Rao's (2006) research there is no specific way to develop or implement a portfolio. Although, the author described three categories to enhance learners' autonomy in the learning process using portfolios (Rao, 2006, pp.116-118):

- Developing collections: create a list of tasks, activities, projects… agreeing with students' perspective, think about different ways of providing evidence (apps, photos, videos…) and formulate a set of guidelines for students be able to choose the meaningful work to include in the portfolio.
- Encouraging reflective practice: enhance students' awareness, perceptions and interpretations of their work. In this sense, when collecting the evidence they should answer the following questions: What work am I proud of? What are my goals? When do I know I've done good work?
- Assessing the portfolios: teacher should set the criteria to assess the portfolio and also include the following questions if the portfolio does not fit the criteria established: What would I need to see added to this portfolio in order to be convinced that the purposes have been met?

This author brings some light on the connection between autonomy and portfolios, after analysing this research, we can say that portfolios can promote autonomy in learners as far as we plan what we are intended to do, establish a clear set of goals and we guide and scaffold students' reflective skills.

A different study led by Mak and Wong (2018) also linked the importance of the assessment from the learners' perspective and the use of portfolio assessment (PA) to self-regulate their learning. In this study, the authors concluded stating that the findings suggested that students perceive PA as an effective platform to become self-regulated learners. Moreover, the findings pointed to the critical role of the teacher in supporting student responsibility and ownership of learning, as the ability to self-regulate requires scaffolding (Mak and Wong, 2018, p.60).

Finally, a third study to bring in this literature review, it connects E-portfolios, autonomy and self-assessment. The author Belgrad (2013) also coincides with the previous studies affirming the usefulness of E-portfolios in the assessment to promote learners' autonomy.

The author stated that research on portfolios and E-portfolios as containers of summative and formative evidence of learning is greatly needed to assist educators in assuring that 21st century knowledge, skills, and dispositions are captured in assessment practices that also enable students to become more autonomous interdependent and successful learners (Belgrad, 2013, p.340).

To sum up, in this section we can affirm, based on the previous authors, that portfolios and E-portfolios nowadays are being used to promote autonomy through self-assessment due to the fact that it stimulates students self-reflective skills and it gives them the opportunity to be part of the learning process, this opportunity of engagement enhance students' responsibility of their own learning.

3. Intervention proposal

The intervention proposal described in the following lines is inspired from a subject present in the Master's Degree in Bilingual Education provided by UNIR. The E-portfolio was presented as an innovative, flexible and multipurpose tool in which any content, context or approach can get benefit of it.

Once we have explored the characteristic aspects of portfolios and E-portfolios, and based on the literature review, we have created an intervention proposal to promote learners' autonomy using E-portfolios as a tool. This E-portfolio will be developed in an interdisciplinary project where science and art will be combined.

This E-portfolio will be presented as a diary where students will explain the different animals they will rescue along the trip around different continents. In their diaries, students will have the opportunity to show, their knowledge in different ways (text, audio or video). Concurrently, in the art's subject, students will devote a few sessions to creating a portrait of the rescued animal that they need to include in their diary. Further explanation of the theme of the proposal will be described in section 3.4. Sessions and activities.

To create this E-portfolio, it has been followed the Five Stages of E-portfolios suggested by Barrett (2000) and the ten criterions established by Mehisto (2012) to create a quality CLIL material. To assure the active and autonomous learning process in this proposal, we have applied the three categories to enhance learners' autonomy proposed by Rao (2006) where we develop the collection of artifacts, we encourage the reflection and we assess the results. Within the section 3.4, there is a specific part devoted to linking the CLIL implication in the sessions taking into account the CLIL fundamentals described in the literature review using Coyle's (2005) research.

Following these theoretical bases that have proven positive results in the field of autonomy, we aim to design an E-portfolio as an interdisciplinary tool to promote autonomy in 4th grade within a CLIL context in the area of natural science and arts.

Because of the guidelines of this Master's Dissertation, in this section we will present only the first part of the project, we will describe seven sessions to provide an idea of the process. It is important to mention that in future applications, the same material can be applied working on other continents, animals or even changing the theme completely.

3.1. Aims of the proposal

Creating this proposal, we aim to give some more visibility to E-portfolio as a tool to promote the learners' autonomy in the learning process following the CLIL approach. The proposal could inspire new ideas in other professionals to apply them in their classes, using as starting point this proposal.

This project has been planned to be carried out on a 4th grade class of primary school, in Catalonia. As we have already explained, the E-portfolio will collect the evidence of the project that connects science and arts. According to the Catalan Curriculum of Primary Education, approved by the Educational Department of the Spanish Government (Order ENS/164/2016), at this stage, and concretely in these subjects, students should learn and be evaluated following the guidelines described in appendix 3.

Many of the ideas present in the content and criterion of the Catalan Curriculum (appendix 3), marked in **bold**, can be covered using the E-portfolio as a tool, but Curriculum and E-portfolio can share another common aspect: CLIL. There is a variety of aspects that are present in these three pillars (Curriculum, CLIL and E-portfolio) and they can connect easily

as we show in appendix 4, where we have created a table that links Curriculum, CLIL and E-portfolio.

Aside from the content and criterion established by the Catalan Curriculum, it is also mandatory to specify the competences this E-portfolio will enhance. In appendix 5, we have created a table to show the competences that this project will cover.

Along the creation of their diary, learners will communicate their knowledge in a variety of channels (competence 1), the problem proposed will be related with their context (competence 3), the project combines science and arts to complete their diaries (competence 4), they will use a digital platform that will help them to develop their digital competence (competence 5), students will have opportunities to interact and discuss their knowledge and their position regarding their work and their peers' work (competence 6), each students will have the opportunity to see what works best for each of them and they will always be allowed to change part of the work or to do it at home if they need more time (competence 7), and finally, as a main focus of the project, students will develop strategies to know how to work autonomously and how they can improve their own performance, giving them guidelines and feedback from peers and the teacher (competence 8).

Taking into account the Catalan Curriculum plan (content and criterion) and the competencies linked above, this proposal has as a general objective:

- Create autonomously an E-portfolio describing different vertebrate animals using different ways of communication.

Regarding specific objectives:

- Organize in a clear way the information required for each animal.
- Appreciate her/his performance and select next steps.
- Explore her/his command in the three ways of communication.

These objectives will be developed along the sessions explained in the following sections and we will weigh the level of achievement in the assessment section.

3.2. Educational context and target group

The school Estonac where we will carry out this project is a school in a Catalan region, Mollet. The population of this town is more than 50 thousand and it is 25 kilometres far from

Barcelona. The surroundings of the town include a big area of industry (food industry mainly) and automotive sectors. The school is located in the middle of the town and it counts with football and basketball courts, a playground and an indoor swimming pool. The school offers an educational programme from preschool to secondary school. The buildings for each stage are separated, each of them with their own library, arts' room and music room. They do not have any green area within the school. Although, they have the Gallecs Park at 2 kilometres far from the centre, it is a green area where they normally carry out some projects or activities within a natural environment related to science or physical education.

The centre joined a Trilingual programme 7 years ago, being the first trilingual school in Mollet. Their PLC (School's Language Plan) has been adapted to include Catalan, Spanish and English. The immersion in this trilingual environment starts in preschool, progressively, the percentage of the L2 (English) increases reaching the highest percentage of hours taught in English in secondary school.

The group we will work with is 4th grade A which is formed by 22 students. This group has a B1 level in English, because their education has been trilingual, for most of them, since preschool. There is a big variety of nationalities within the class, mostly Spanish, but the group also counts with two Russians, an Italian, and three Venezuelan students. The Italian and Venezuelan learners came a year ago and they started in the centre in 3rd grade their level of Catalan is notoriously lower than their level of Spanish or English, because of that, they have a PI (individualized programme) for Catalan Language subject which is adapted to their level. Whereas, the Russian students have been living in Catalonia since they were born and their proficiency in Spanish and English is equal as their peers, but their command in Catalan is slightly lower, although, it has been determined by the language department that they do not need a PI, only some extra exposure through reading.

Another interesting profile in the class is a student with ADHD which it was diagnosed at the beginning of the year. The student is openly aware of it and shows a positive attitude toward his special needs. That open acceptance of his need has been a positive element to progress in the learning process and do not get frustrated.

The school is part of the programme PIPE (Plan Integral de Plurilingüismo Educativo) since 2014. This programme provides the school with two language assistants in the second trimester for primary school. One of them, from Birmingham, will be present in the project

carried out with 4th grade, which will increase the exposure to the L2, specially, in listening and pronunciation.

Regarding the classroom, they count with a variety of ICT sources. They have an interactive board which is used in their daily routine. There is also a projector used mainly for videos or movies and the classroom is provided with 22 laptops for learners. Although, they are allowed to bring their own laptops from home if they feel more comfortable to work with.

3.3. Timing

The proposal will be included within a science and arts project. This project will be carried out during the 2nd trimester. For several weeks, students will travel around the continents rescuing lost animals from the zoo they visited in the first trimester. The project will be divided in 5 parts (one for each continent). The first part, which is the one we will develop in this Master's Dissertation, will cover the unit of vertebrate animals in science subject and a type of painting technique regarding arts subject.

Due to the flexibility of this tool and the curriculum planning of the school, each part of the project will be devoted to a different content (invertebrate animals, aquatic animals…). As far as we maintain the format from the first part, students will always be able to go back and forward in their work in case they need it. There is a big variety of options, but part one, will serve as an illustrated example of how we can use the E-portfolio. In appendix 6, we have created a table to show the organization of the project and the sessions devoted to each continent in science subject.

Focusing in part 1, it is important to mention that the first two sessions will not include the E-portfolio; this tool will be presented on the 3rd session. We will describe the first two sessions where we will work mainly on LOTS to introduce the content and get familiar with specific concepts and vocabulary (teacher- centre). Starting at session 3, the objectives of the sessions will focus on HOTS where the student has the leading role (student-centre) through the E-portfolio.

In terms of timing, students have 3 sessions of science, 50 minutes each. Two out of these three sessions will be devoted to the project. Therefore, the first part of the project will be developed in 3 weeks and a half. The first part of the project is slightly longer than the following ones because we want to provide students with extra time to adapt to the learning

method. When the project progresses, students will need less time to make their creations and reconstruct them after the feedback because their command with ICT will be better.

Regarding arts subject, for each part (or continent) developed in science, arts subject will devote 3 sessions to a painting technique to complement the E-portfolio. Focusing on the first part of the project, Africa, students will rescue 3 vertebrate animals, which it means that in each art's session, students will need to do a portrait of the animal found, applying the required technique. Concretely, in part one, students will work on the *Frottage*[1] technique. On their weekly planning, students have two sessions of 45 minutes each; this project will devote a session to elaborating the portrait of each rescued animals once they have started their E-portfolio. To clarify the timing of the project, in appendix 7 there is a calendar where we can see the organization of the sessions in a visual way.

3.4. Methodology of the proposal

To carry out this project we have browsed through many different platforms that could adapt to the aims of the project. Taking into account all what we have explored in the literature review, we were looking for a platform that could adapt to the four stages proposed by Danielson and Abrutyn (1997) in Barrett (2000). Some of the options we have taken into account are:

- Blogger.
- Teams.
- Mahara.
- Book creator.

It was necessary that the tool could cover the Mehisto's (2012) ten criteria for quality CLIL material. Furthermore, to choose among these tools it was crucial that the tool provides:

- Autonomy to modify any aspect of the E-portfolio (design and structure).
- We need a platform where audio, text, image and video can be included.
- Flipped classroom: students should be able to work as well from home if they need it.
- The platform should be free.

[1] Frottage Technique: in visual arts, technique of obtaining an impression of the surface texture of a material, such as wood, by placing a piece of paper over it and rubbing it with a soft pencil or crayon, as for taking brass rubbings; the name is also applied to the impression so obtained. Source: Britannica (2021).

- It should also keep the artifacts collected for a long period of time. In that way, it can be consulted for students and assessed by teachers.
- Intuitive enough for students of 4th grade.

Blogger is a known platform widely used to build personal and professional blogs. Although, we consider it is not intuitive enough for children in 4th grade, this drawback could slow down the project. As a result, we would spend the sessions learning about the platform and not about science content.

Teams is a platform that teachers and students in this school are very comfortable to work with. Some other subjects as languages are including this tool in their session from 3rd grade, also teachers and families keep in contact through this platform. The downside of it is that students could not really keep all the work as a diary format. Also, we aim to widen students' competence with ICT and they are already familiar with this tool.

Regarding Mahara, it offers a variety of options, services, functions, connections with other platforms, etc. But because of this variety of options can be a little bit difficult to manage it and not intuitive enough for 4th grade students.

Finally Book Creator is a platform to create stories made out by children. This platform could be ideal to develop a diary of their trip. The platform is very intuitive and clear, it allows a total personalization of their creations, and students can share their knowledge through recording their voices, videos or writing. They can access from anywhere due to the fact that it is an online platform, it is free and because of the book format, students can keep the work done in each session together as a diary. Its flexibility and simplicity allow students to carry the full responsibility to create their own E-portfolio, this sense of responsibility as the author Rao (2006) stated is the essential element to enhance the learners' autonomy. Therefore, this is the platform chosen to carry out the project.

As we have mentioned, students already are using Teams, therefore, they have a Google account created and updated by the ICT department at the beginning of the course. To access Book Creator, students can sign in using their Google account. Each student has a sticker on the agenda where they can find their email address and the password.

To get familiarised with Book Creator, during the first trimester, before to start this project, in Catalan subject, we will include an activity where students will use this tool to do a recipe

when working on the instructional text. Doing this, students will have some command of the tool before starting the project.

3.5. Sessions and activities

The E-portfolio is presented as a trip around the world to bring back some animals that have been lost from the zoo. This proposal will be strongly engaging and close to their context because days before the target group had visited the local zoo and they had got in contact with the animals and with the principal of the zoo. Following this idea, the teacher will receive an email from the zoo where the principal will ask for the students' help due to the fact that they were the last people to see the animals. Therefore, students will start a trip around continents to find the lost animals and bring them back. To make sure that the animals are coming back in safe conditions, students will need to know everything about the animals they will rescue: What they eat? Where are they coming from? How they reproduce? ...

Furthermore, students will need to send reports to the zoo giving them an update of their mission to bring back all the animals. In their reports, students will include aspects like where have they found them, a description of the animals, what they need to eat…. Students will have the autonomy to choose the way they want to send the report: video, written or audio plus a template fulfilled explaining the main characteristics of the animal.

In the following pages, the seven sessions will be described and we will detail objectives, competencies, activities, the connection between the session and CLIL fundamentals and the material required to carry out the class. Regarding scaffolding, a specific section will be destined after explaining each activity. Before explaining the activities, every session will have an introduction to bring some context to the reader, and then the table of activities will be provided.

Session 1

We will ask students about the trip: Which animals they like the most? Were animals how they expected?

Activate previous knowledge: we will show a selection of pictures taken on the trip. We will comment all together the name of the animals and highlight the main characteristics (paws,

wings, fur…). Finally the teacher will introduce the concept of "vertebrate" animals and all together will come up with a basic definition of vertebrate animals.

Concurrently, on the interactive board, the teacher will open a Word document to create a mind map. So far, we will only write "vertebrate animals". After this little introduction, the teacher will explain and write on the board the objectives of the session in a way students will know what we aim to learn in this session. The practice to share with students the objectives is common in all subjects from the beginning of the course. It is also important to highlight that teachers also ask if all the objectives are clear before starting.

SCAFFOLDING:

- The word vertebrate will be written on the board when we ask about it. If it is needed, the teacher will translate the word (code-switching).

-All pictures will be seen from the interactive board and the teacher will write down the name of the animals.

<table>
<tr><td>Science</td><td>SESSION: 1</td><td>TIME: 50 min</td></tr>
<tr><td rowspan="2">OBJECTIVES</td><td>Content objectives</td><td>Language objectives</td></tr>
<tr><td>- Classify animals in different groups based on their physical characteristics.
- Compare physic characteristics of different animals.
- Recall the five groups of vertebrate animals.
- Organize in a visual way the different groups.</td><td>- Express their knowledge about vertebrate animals.
- Use correctly specific vocabulary: mammal, fish, birds, reptiles and amphibious.
- Write down correctly the new words presented.
- Argue their opinions in groups.</td></tr>
<tr><td>Competencies</td><td colspan="2">- Communicative, linguistic and audiovisual competence.
- Knowledge and interaction with the real world competence.
- Digital competence.
- Learn to learn competence.</td></tr>
</table>

	- Autonomy, personal initiative and undertaking competence.
Activity 1	Once we have commented all the animals, their characteristics and established that all of them are vertebrate, we will ask to students if they could classify them in 5 groups taking into account their physical characteristics. To carry out this part, students will form groups of 5. Concurrently, the teacher will create the sections (without the names) in the mind map to complete it together once students have created their own classifications. We put in common their conclusions and arguments about their classifications. With the teacher's guidelines we create the mind map. Finally, the teacher will provide the specific names of the different groups: mammals, fish, amphibious, reptiles and birds. We will end this activity recalling the main characteristics of each group with the language assistant who will repeat the new words presented along the session (exposure of the language with a native speaker). **SCAFFOLDING:** - The name of each animal will be written beside the picture. - Students have a list of starting sentences to express opinion. This list is always at the end of their notebook. In that way, students can always check these sentences to participate in any discussion. The teacher will mention the list before to start the discussion and she will suggest keeping it at the table where students can consult it if it is needed.
Activity 2	Keeping the mind map built together in activity 1 as an example; students will create their own mind maps using a Word document, a simple tool that they already control because it has been used in other activities and subjects. Students can choose to work individually or in pairs. The document will be shared in Teams, in the science group. In that way, the teacher can provide a written feedback that students can always check to make any change in their mind maps if it is needed. **SCAFFOLDING:**

	- The mind map done together will be on the interactive board. - Students will see the progression to create the mind map while the teacher is doing it on the interactive board (activity 1).

4 C's of CLIL:

- **Content:** content subject has been related to their context, in that way, students have seen in real life these animals just a few days ago which has increased their curiosity.
- **Cognition**: as an introductory session, the objectives are based on LOTS to get familiarised with the content and progressively move toward HOTS.
- **Communication:** students will have the opportunity to argue and dialogue with peers to share their opinions and reach an agreement to group the animals.
- **Culture:** we are encouraging our students to serve and help their community.

3 As to plan language:

- **OF:** contact with specific nouns and adjectives related to the animal field.
- **FOR:** students will create strategies to define the different groups of animals.
- **THROUGH:** use peer's explanations to complete a definition, getting and sharing ideas to come up with the best idea together.

Material:

- Pictures from the trip to the zoo, white interactive board and laptops.

Session 2

We will start the session showing some of the mind maps done in session 1. Through their creations, students will recall what is a vertebrate animal, how can we group them and the main physic characteristics of each group. After this little introduction, the teacher will explain and write on the board the objectives of the session in a way students will know what we aim to learn in this session.

SCAFFOLDING:

-Students will have a personalised visual support, their own mind maps.

-The teacher and the language assistant can provide some clues and recast students' pronunciation.

<table>
<tr><td>Science</td><td>SESSION: 2</td><td>TIME: 50 min</td></tr>
<tr><td rowspan="2">OBJECTIVES</td><td>Content objectives</td><td>Language objectives</td></tr>
<tr><td>- Classify animals in different groups based on their reproduction.
- Compare different ways of reproduction.
- Exemplify different reproductions.
- Recognize different animals’ process of reproduction.</td><td>- Express their knowledge about vertebrate animals.
- Use correctly specific vocabulary: viviparous and oviparous.
- Write down correctly the new words presented.
- Argue their opinions with the whole class.</td></tr>
<tr><td>COMPETENCIES</td><td colspan="2">- Communicative, linguistic and audiovisual competence.
- Knowledge and interaction with the real world competence.
- Digital competence.
- Social and civic competence.
- Learn to learn competence.
- Autonomy, personal initiative and undertaking competence.</td></tr>
<tr><td>Activity 1</td><td colspan="2">After showing a few of their maps, the teacher will open the mind map they did together and highlight with two different colours two words that do not appear in students’ mind maps: viviparous (under mammals group) and oviparous (under birds, amphibious, fish and reptiles).

We will provide some time to think, and see their previous knowledge about these two concepts. In case nobody knows about it, the teacher will show a drawing of “egg” as a clue. Once students link the idea of egg and the way the animals are born, we will ask about the reproduction of mammal animals. We will show some of the pictures of the trip to group some of the animals with their reproduction.

SCAFFOLDING:

- Students will have a visual support of their own mind maps.
- Teacher and the language assistant can provide some clues (as the eggs) and</td></tr>
</table>

	recast students' pronunciation.
Activity 2	The teacher will ask students to prepare a RED and a BLUE pen/pencil. The colour red represents viviparous animals and the colour blue represents oviparous animals. The assistant will show a flashcard with a picture of a vertebrate animal and he will say the name of the animal. Students need to raise a colour depending on if the animal is viviparous or oviparous. The assistant will say the correct answer and the teacher will ask for an argument of their answers. **SCAFFOLDING:** - Students will have the mind maps on the white board to organize all the content.
4 C's of CLIL: - **Content:** students have seen in real life these animals just a few days ago which has increased their curiosity. - **Cognition**: the objectives are based on LOTS to get familiarised with the content and progressively move toward HOTS in the following session. - **Communication:** student will have the opportunity to argue and dialogue with the teacher and the whole group her/his thoughts and arguments about her/his statements. - **Culture:** students can link the content of the class (reproduction) with their reality to understand better how their world works.	
3 As to plan language: - **OF:** specific nouns and adjectives related to the animal field. - **FOR:** create strategies to link specific characteristics with a group of animals. - **THROUGH:** strategies to represent different ideas in a simple way (activity 2).	
Material: - Pictures from the trip, white interactive board, flashcards, blue and red pen/pencil.	

Session 3

The teacher has received an email from the zoo asking for help. The language assistant will read it first, and then we will show it on the interactive board to read it. In the email, the principal of the zoo, Mrs Pratta, explains that some animals of the zoo are missing. They suspect that the animals went back to their original country to find the rest of their families. The principal is a very busy woman and she cannot go to find them and see if they are in good conditions, neither the carers at the zoo, they need to take care of the other animals. She was wondering if we could help them and find them. They are very worried about the animals and they would like to know about the rescuing process every week. Once we have read it and understood the message, the teacher will ask the group if they would like to start a little trip around different continents to find the animals. Then, we will present the objectives of the sessions.

Together, we create an email to answer the principal of the zoo, Mrs Pratta. To do it, the teacher highlights how the principal has started her email (greet, the heart of the matter, and regards). Students will share their ideas to answer Mrs Pratta with the teacher's help. In the content of this email we will appreciate that Mrs Pratta offers us this adventure, we will accept the trip and we will explain that to keep in contact and rescue as many animals as possible each of them will have a personal diary that the principal could check online. In there, students will explain the animals they have found (in a video, text or recorded voice), and they also will include a file where learners will show all what they know about the rescued animals, in that way, the principal will know that they are in good hands.

SCAFFOLDING:

- The email will be showed on the interactive board.
- The teacher will underline the main ideas using different colours.

Science	**SESSION: 3**	**TIME: 50 min.**
OBJECTIVES	**Content objectives**	**Language objectives**
	- Organize the information to answer the zoo's email.	- Understand the basic ideas in the email.

	- Plan the structure of their diary. - Design their diary. - Describe all the information required in the table in a coherent text, audio or video.	- Make use of the email information to create their email. - Express in a formal way their answer to the principal of the zoo. - Identify the way they feel more comfortable to transmit a message on their diaries.
Competencies	- Communicative, linguistic and audiovisual competence. - Knowledge and interaction with the real world competence. - Digital competence. - Social and civic competence. - Learn to learn competence. - Autonomy, personal initiative and undertaking competence.	
ACTIVITIES		
Activity 1	Our first trip will be in Africa, the zoo has provided 5 lists of the missing animals from Africa to make sure we rescue all of them. The first list we will see about today are the mammals. Each student will take care of one animal on the list and they will need to find it on the map displayed on the working wall hanged in class. This working wall contains a map of all continents, and small flashcards that are upside-down. Students need to find and rescue, on the map, the animal they choose from the list (each student has a different animal). **SCAFFOLDING:** - With the map students will contextualise easily where we are going and why. - Giving a flashcard to each student will enhance their sense of responsibility. - Each flashcard will have a picture of the animal and the name written down.	
Activity	Once students have rescued the animal in the map, they can take it with them	

2	and prepare their laptops. The teacher will show from the interactive board how to start their diary (E-portfolio) from Book Creator web site. As we have mentioned, students already have had a short contact with this tool, they already have an account and they have explored some of the services of this tool. The teacher will show how to: 1. Login: students can use their Google account. 2. Create a new book. 3. Design a cover. 4. Add a file (from Teams) to complete a table where the animal's information is required to know better about them. 5. Send a short message (audio/video/text) for Mrs Pratta explaining the animals we have found. These steps mention above will be also written on the regular board, in that way, students will know what to do in case they get stuck in any step, autonomously they will know what to do next. In step 4, the teacher will show how to add a file with this tool. This file is a table that students will need to complete with some basic aspects of the animal (Appendix 8). Also, on the regular board, together, we will write a list of items that our diary must have: - Nice cover design. - Name and surname. - Short introduction: who have asked for their help (Mrs Pratta) where are we? Which are our intentions? - The file with the table to describe our animal. - A short text/video/audio explaining that they have found the animal and their main characteristics (from the table) to show how much we know about these animals. After showing the example done by the teacher at the interactive board, and writing down together all the items their diary must have, students can start their diary. At the end of the session, we will explain that in arts subject, they will devote the class to creating a portrait of the animal, which must also be included

	in their diary, this part will be explained in detail in the art's session. In case the activity is not completed, students will have the rest of the week to finish it at home. **SCAFFOLDING:** - We start this activity together building a diary from zero with the teacher's guidelines (closed ZPD), after providing this example and with a list of steps to follow and a list of items to complete, students are ready to start. - During students' autonomous work, the teacher and the language assistant will provide some feedback to students and will expose common doubts with the whole class if it is needed. - In case the doubts are about the steps to follow or items to include, the teacher will lead the students to the regular board where all the steps and items are written. In that way, next time student has a similar doubt, she/he will know how to solve it by her/himself. - In Teams, we will also include a tutorial (with subtitles) for parents and students about the book Creator functioning: Source: https://www.youtube.com/watch?v=ULJaIF_f7ok

CLIL FUNDAMENTALS

- **Content:** providing the map we contextualize the content and it gives a purpose**.**
- **Communication:** communicate with a meaningful purpose, in a way they feel comfortable. Students will recognize which way their communication is more effective and their weaknesses.
- **Cognition** devoted to creating and planning. Freedom to organize and design their diaries, but including the items required. Students have the autonomy to decide how they want to share their knowledge.
- **Culture:** students will have a global perspective of the rich variety of animals coming from other parts of the world.

3 As to plan language:

- **OF:** understand and recognize the parts of an email.
- **FOR:** students will create strategies to answer the email following Mrs Pratta's email.
- **THROUGH:** students will explore different ways to answer formally emails.

Material: Email from Mrs Pratta, working wall with a map, list of mammals, flashcards, interactive board, table of description of the animals (appendix 8) and laptops.

Session 4

The teacher will begin the class, recalling what we did in session 1 and 2 using the mind map. After that, we will summarize the email we sent to Mrs Pratta to remember the objectives of the trip. Then, we will recall together and write again on the board the items that students' diary must have. Having these items on the board, we will share some of the designs done by students to see if they have included all the items, and provide a general feedback. After this summary of the previous sessions, we present the objectives for this session.

SCAFFOLDING:

-Teacher will provide a visual support using the mind map done together in sessions 1 and 2.

-We will keep on the board during the whole class all the items students need to include in their diaries.

-Providing real examples of peers' diaries, students can understand and feel identified with some of the positive and negative aspects highlighted in their friends' work.

-The objectives of the session will be written on the board during the whole session.

<table>
<tr><td colspan="2">SUBJECT: Science</td><td>SESSION: 4</td><td>TIME: 50 min.</td></tr>
<tr><td rowspan="2">OBJECTIVES</td><td colspan="2">Content objectives</td><td>Language objectives</td></tr>
<tr><td colspan="2">- Organize the information they want to include in their diary.
- Design their diary.
- Describe all the information required in the table in a coherent text, audio or video.</td><td>- Identify the way they feel more comfortable to transmit a message on their diaries.
- Use correctly the content vocabulary presented in session 1 and 2.
- Transmit the information on the table in a clear and organized way in text, audio or video.</td></tr>
<tr><td>Competencies</td><td colspan="3">- Communicative, linguistic and audiovisual competence.
- Knowledge and interaction with the real world competence.
- Digital competence.
- Learn to learn competence.
- Autonomy, personal initiative and undertaking competence.</td></tr>
<tr><td colspan="4">ACTIVITIES</td></tr>
<tr><td>Activity 1</td><td colspan="3">The second list we will see about today are the lost birds in Africa. Each student will take care of one animal; they will need to find it on the map displayed on the working wall. Students need to find and rescue their animal, on the map, and then they can continue building their diary with the new rescued animal.

SCAFFOLDING:

- With the map students will contextualise easily where we are going.
- Giving a flashcard to each student, we will enhance their sense of responsibility.
- Each flashcard will have a picture of the animal and the name.</td></tr>
</table>

Activity 2	Once students have rescued the animal in the map, they can take it with them, prepare their laptops and continuous with their diaries. Before starting, the teacher will remind, once again, the essential items that their diaries should include, and the teacher will suggest varying the channel of communication. Although, it is not obligatory, students will have many opportunities along the project to widen their ZPD and feel more confident with different ways of communication and interaction. **SCAFFOLDING:** - We start this activity together, recalling the content done in session 1 and 2 providing the mind map as a visual support. - Together, we remember the items to include in their diaries. We keep this list during the class in case students need to consult it. - During students' autonomous work, the teacher and the language assistant will provide some feedback. - In case the doubts are about the items to include in their explanation of the animals, the teacher will lead the students to the regular board. - In Teams, we will also include a tutorial (with subtitles) for parents and students about the book Creator functioning: Source: https://www.youtube.com/watch?v=ULJaIF_f7ok

CLIL FUNDAMENTALS

- **Content:** we contextualize the content given and it gives a purpose**.**
- **Communication:** communicate with a meaningful purpose, all their knowledge in the way they feel comfortable. Therefore, students will recognize in which way their communication is more effective and their weaknesses.
- **Cognition:** these sessions (from 3 to 5) are devoted to creating and planning. Freedom to organize and design their diaries, but including the items required in the list that we have created together. Students also have the autonomy to decide how they want to share their knowledge and transmit it to the principal.
- **Culture:** students will have a global perspective of the rich variety of animals coming

from different parts of the world.

3 As to plan language:

- **OF:** specific vocabulary to group and describe the animals correctly.
- **FOR:** students will create strategies to express their knowledge.
- **THROUGH:** students will explore different ways organize the information to send a clear message.

Material:

- Working wall, list of birds, flashcards, interactive board, table of description (Appendix 8) and laptops.

Session 5

The teacher will begin the class recalling what we did in session 1 and 2 using the mind map. Then, we will recall together and write again on the board the items that students' diaries must have. Having these items on the board, we will share some of the designs done by students to see if they have included all the items, and provide a general feedback highlighting the items included, the items missing, the positive aspects and the ones that need some work. At this point of the project, students might have completed the cover, the introduction, the tables for animals 1 and 2 and the respective message of each animal to Mrs Pratta. Therefore, we have material enough to compare them and see, in general, how we can improve. After this summary of the previous sessions, we present the objectives for this session, which are the same than session 4, but applicable to a different group of animals.

SCAFFOLDING:

-Teacher will provide a visual support using the mind map done together in sessions 1 and 2.

-Together, we remember and write down the list of items to include in their diaries.

-We will keep on the board during the whole class the list of items.

-Providing real examples of peers' diaries, students can understand and feel identified with some of the positive and negative aspects highlights in their friends' work.

-The objectives of the session will be written on the board during the whole session.

<table>
<tr><td colspan="2">Science</td><td>SESSION: 5</td><td>TIME: 50 min.</td></tr>
<tr><td rowspan="2">OBJECTIVES</td><td colspan="2">Content objectives</td><td>Language objectives</td></tr>
<tr><td colspan="2">- Organize the information included in their diary following the list of items.
- Design their diary.
- Describe all the information required in the table in a coherent text, audio or video.</td><td>- Identify the way they feel more comfortable to transmit a message on their diaries.
- Use correctly the content vocabulary presented in session 1 and 2.
- Transmit the information on the table in a clear and organized way in text, audio or video.</td></tr>
<tr><td>Competencies</td><td colspan="3">- Communicative, linguistic and audiovisual competence.
- Knowledge and interaction with the real world competence.
- Digital competence.
- Learn to learn competence.
- Autonomy, personal initiative and undertaking competence.</td></tr>
<tr><td colspan="4">ACTIVITIES</td></tr>
<tr><td>Activity 1</td><td colspan="3">In this session, we will use 3 lists corresponding to fish, amphibious, and reptiles of Africa, as a reminder, these lists are provided from the zoo.

One animal for each student and they will need to find it on the map displayed on the working wall. As in session 3 and 4, students need to find and rescue the animal, on the map. Then, they can continue building their diaries with the new rescued animal. In this case, some student will have different groups of animals, whereas in session 3 and 4 all the class was working on the same group of vertebrate animal.

SCAFFOLDING:

- Providing a visual support with the map, students will contextualise easily where we are going and why.</td></tr>
</table>

	- Giving flashcards students will enhance their sense of responsibility. - Flashcards will have a picture of the animal and the name.
Activity 2	Once students have rescued the animal in the map they can take it with them and prepare their laptops to continuous with their diaries. Before starting, the teacher will remind, once again, the essential items, and the teacher will suggest combining the channels of communication, for example, if they have transmitted the message to Mrs Pratta through a text in sessions 3 and 4, it would great to do this third entry in a different way; although, it is not obligatory. **SCAFFOLDING:** - List of items on the board in case students need to consult it. - During students' autonomous work, the teacher and the language assistant will provide some feedback. - In case the doubts are about the items to include in their explanation of the animals, the teacher will lead the students to the list. - In Teams, we will also include a tutorial (with subtitles) for parents and students about the book Creator functioning: Source: https://www.youtube.com/watch?v=ULJaIF_f7ok

CLIL FUNDAMENTALS

- **Content:** providing the map we contextualize the content given and it gives a purpose**.** Also, students will search in internet to fill up the table, in that way, students will see the real habitat of the animals that they have seen in the zoo.
- **Communication:** students will have the opportunity to communicate, with a meaningful purpose, all their knowledge in the way they feel comfortable with. Therefore, students will recognize in which way their communication is more effective and their weaknesses.
- **Cognition:** these sessions (from 3 to 5) are devoted to creating and planning. Students have the freedom to organize and design their diaries, but including the items required in the list. Students also have the autonomy to decide how they want

to share their knowledge and transmit it to the principal by text, audio or video. - **Culture: students** will have a global perspective of the rich variety of animals coming from different parts of the world, in this first part Africa. **3 As to plan language:** - **OF:** specific vocabulary to group and describe the animals correctly. - **FOR:** students will create strategies to express their knowledge. - **THROUGH:** students will explore different ways organize the information to send a clear message.
Material: - Working wall, list of amphibious, fish and reptiles to rescue in Africa, flashcards of amphibious, fish and reptiles, interactive board to show the creation of students' diaries, table of description (Appendix 8) and laptops.

Session 6

The two last sessions (6 and 7) of this first part of the project will be devoted to covering self-assessment. As we have said, the project is divided in 5 parts; in this Master's Dissertation we will describe part 1 as an example of the others. The explanation of the assessment will be detailed in the following sections.

We will start the session showing the mind map done in session 1 and 2. This time we will ask students to explain the whole mind map without teacher's guidelines. After summarising the map, we will have a look to some of students' diaries to see their progress. We will ask the group if anything is missing on it and what they like the most about it.

Science	**SESSION: 6**	**TIME: 50 min.**
OBJECTI	**Content objectives**	**Language objectives**

	- Distinguish vertebrate animals' base on their characteristics. - Appreciate their creation throughout a rubric. - Critique the weaknesses of their work. - Defend the strength of their work.	- Argue their opinions with peers in order to categorize the animals in different groups correctly. - Express agreement or disagreement with peers' opinions. - Communicate in a written way their appreciations of their designs.
Competencies	- Communicative, linguistic and audiovisual competence. - Knowledge and interaction with the real world competence. - Digital competence. - Learn to learn competence. - Autonomy, personal initiative and undertaking competence.	
ACTIVITIES		
We will split the class in two groups (A and B). Once the teacher has explained to the whole group what they will do in each group, the teacher will explain the objectives of the session, then the class will split and the two activities can start simultaneously. - Group A: will go to a new working wall with all the flashcards they have collected during session 3 to 5. Each student will have 3 flashcards. The working wall will contain a mind map, as the one we have summarized previously. Students will sit in a half circle in a way everybody can see the working wall. Each student will present the animal they have rescued and their main characteristics (group of vertebrate, reproduction, what they eat…). Once the animal is presented, the learner will need to stick it on the correct part of the mind map, according to the group where it belongs. After all students have present all the animals to their peers, the language assistant will distribute the animals again to a different student, in that way, all of them will categorize different animals		

than the ones that they have rescued. We have planned to do 2 rounds, but it will depend on how fast students can categorize them or how much learners want to talk about the animals they have rescued. Learners will carry out this activity with the language assistant.

- Group B: this group will work on self-assessment. The teacher will provide to each student a rubric (appendix 9) to value their experience in this project and the results obtained. Before doing it, the teacher will explain in detail each criterion on the rubric to make sure that the learners understand what they have to do. Once it is done, students will give the rubric to the teacher. Students will have the opportunity to fix any item in their diaries if they consider needed before to finish part 1 on the project.

It is important to mention that in group B, the teacher will provide personal feedback to each student and together they will analyse the results of their rubric. In that way, students will have some guidelines to improve their creations, but again, will be students' decision to enhance their creation before the final delivery. Therefore, we have promoted students' awareness of the results of their work, but it is on their hands to command the next steps.

SCAFFOLDING:

- Teacher will provide a visual support using the mind map from sessions 1 and 2.
- Providing real examples of peers diaries, students can understand and feel identified with some of the positive and negative aspects highlighted in their friends' work.
- The objectives of the session will be written on the board during the whole session.
- Group A: the mind map on the working wall will be the same that the one created on session 1 and 2. Using the same order and same colours, students will connect easily the same content in a different platform.
- Group B: once students have the rubric in front of them, they will read it together and explain the meaning of each criterion. Teacher will ask if everybody has understood the criteria.

4 C's of CLIL:

- **Content:** in this session, students will command the content and present it to their

peers. The content will not be given or summarised by the teacher, the learners will present what they have learnt about their rescued animals to the rest of the class. Students can share curiosities that are not included in the table, but can be interesting for other students.

- **Communication:** students will have the opportunity to communicate, with a meaningful purpose, share their knowledge with peers. In group A, students can also correct peers performance in case a student place an animal in the wrong category.
- **Cognition**: this session is devoted to assessing. With this session, students will work their skills to appreciate, critique and defend their own work. Also, with the individual feedback provided from the teacher, students will have the opportunity to value their outcomes and decide the next steps on their leaning process. Even if a student decides to keep it how it is after teacher's feedback, the process to value their work autonomously will be there and students will know strategies to judge their outcomes.
- **Culture:** students will have a global perspective of the rich variety of animals coming from different parts of the world, in this first part Africa.

3 As to plan language:

- **OF:** use specific vocabulary to group and describe the animals correctly.
- **FOR:** students will create strategies to express their knowledge and use peers' explanations in their speech.
- **THROUGH:** infer sustainably, with teacher's guidelines, regarding their performance.

Material:

- Working wall, mind map, interactive board, flashcards and rubric.

Session 7

This session will be similar to session 6, this time we will swop the groups in order that all students have done the self-assessment and have an individual feedback before doing the last delivery. The detailed explanation of the activities is in session 6. Therefore, in this

session, we will only list the main activities, again for further explanation the reader can always come back to check session 6.

<table>
<tr><td colspan="2">SUBJECT: Science</td><td>SESSION: 7</td><td>TIME: 50 min.</td></tr>
<tr><td rowspan="2">OBJECTIVES</td><td colspan="2">Content objectives</td><td>Language objectives</td></tr>
<tr><td colspan="2">- Distinguish vertebrate animals’ base on their characteristics.
- Appreciate their creation throughout a rubric.
- Critique the weaknesses of their work.
- Defend the strength of their work.</td><td>- Argue their opinions with peers in order to categorize the animals in different groups correctly.
- Express agreement or disagreement with peers’ opinions.
- Communicate in a written way their appreciations of their designs.</td></tr>
<tr><td>Competencies</td><td colspan="3">- Communicative, linguistic and audiovisual competence.
- Knowledge and interaction with the real world competence.
- Digital competence.
- Learn to learn competence.
- Autonomy, personal initiative and undertaking competence.</td></tr>
<tr><td colspan="4">ACTIVITIES</td></tr>
</table>

- Comment the mind map (students-centre).
- Analyse some of the diaries.
- Teacher will explain how we will split the class and, what is going to do each group.
- Explain the objectives of the session.
- Split the class.
- Group A: working wall.
- Group B: rubric and individual feedback.

SCAFFOLDING:

- Teacher will provide a visual support using the mind map done in sessions 1 and 2.
- Providing real examples of peers diaries, students can understand and feel identified with some of the positive and negative aspects highlighted in their friends' work.
- The objectives of the session will be written on the board during the whole session.
- Group A: the mind map on the working wall will be the same that the one created on session 1 and 2. Using the same order and same colours, students will connect easily the same content in a different support.
- Group B: once students have the rubric in front of them, they will read it together and explain the meaning of each criterion.

CLIL FUNDAMENTALS

- **Content:** in this session, students will command the content and present it to their peers. The content will not be given or summarised by the teacher, the learners will present what they have learnt about their rescued animals to the rest of the class. Students can share curiosities that are not included in the table.
- **Communication:** students will have the opportunity to communicate, with a meaningful purpose and share their knowledge with peers.
- **Cognition**: this session is devoted to assessing. Students will work their skills to value, critique and defend their own work. Also, with the individual feedback provided by the teacher, students will have the opportunity to value their outcomes and decide the next steps on their leaning process. Even if a student decides to keep it how it is

after teacher's feedback, the process to value their work autonomously will be there and students will know strategies to judge their outcomes in other contexts. - **Culture:** students will have a global perspective of the rich variety of animals coming from different parts of the world, in this first part Africa. **3 As to plan language:** - **OF:** use correctly the specific vocabulary to group and describe the animals correctly. - **FOR:** students will create strategies to express their knowledge and use peers' explanations in their speech. - **THROUGH:** infer sustainably, with teacher's guidelines, regarding their performance.
Material: - Working wall, mind map, flashcards and rubric.

As it appears in the title of this Master's Dissertation, the design of an E-portfolio as an interdisciplinary tool to promote autonomy in a CLIL context, we aim to combine two subjects. We have just seen the planning for science which is the subject that leads this project; but also as we have explained in the aims of the proposal, this project includes arts subject. Due to the low impact of arts subject in the assessment of the project, we will detail in the following lines the main aspects of sessions 1 to 3 regarding arts. The sessions will be explained in detail in appendix 10.

Subject: Arts	**Time: 45 min**
Content objectives: - Execute the correct technique. - Experiment with different materials to obtain the frottagge. - Select the adequate material to use.	**Language objectives:** - Recall the correct name of the materials. - Infer sustainably to define the frottagge technique. - Describe the process of their creations.
Activities: - Introductory video. - Experimenting with different materials.	

- Combining materials.
- Creation of the portraits.
- Presentation of their creations.

CLIL Fundamentals

- **Content:** students will be engaged in this session when they realise that they can use any material in their context to carry out this technique. Therefore, students will use objects of their environment as tools to create something new.
- **Communication:** we will enhance their ability to define abstract concepts and to describe coherently a process.
- **Culture:** students will have the opportunity to appreciate art creations and to see the process from an artist's perspective.
- **Cognition:** these sessions will move from LOTS to HOTS. Students will have autonomy to try out different tools, look for new ones and dismiss the ones are not working for her/him.

3 As to plan language:

- **OF:** use correctly the specific vocabulary to describe correctly the different material used.
- **FOR:** students will create strategies to express their knowledge and use peers' explanations in their speech.
- **THROUGH:** expose their creations in a clear way.

Scaffolding:

- The videos will include subtitles.
- The teacher will stop the video and highlight the main ideas.
- We will provide first an example before practicing individually.
- Teacher will share students' discoveries with the rest of the class to enrich the experience.

3.6. Assessment

3.6.1. Leaning assessment

In this section, we will explain how we would assess the learning process in case this proposal is carried out. As it has been explained in the presentation of the proposal, this project is interdisciplinary and it combines science and arts. In appendix 11, we have created a mind map to explain in a visual way the organization of the learning assessment.

Before explaining the assessment, it is important to mention that this proposal not only aims to create a project of science and arts content, in a CLIL environment. The main aim of the project is to promote autonomy in learners. Therefore, the assessment not only will be focused on the outcomes regarding content, but also we will assess and see the progress on the autonomy of the learners and how they perceive their learning progress.

Regarding initial assessment, taking into account that we want to assess the progression of students' perception of their autonomy in the learning process, we will compare how they perceive their learning process before starting the project and once they joint the project. To do it, we will use the self-assessment rubric (appendix 9, excluding the fourth criterion) at the end of the previous unit of science, before starting the unit of vertebrate animals and the creation of their diaries (E-portfolios). In this previous unit, students have followed a teacher's centre approach.

The sessions and the time devoted to each subject (science and arts) it has been different, consequently, the impact on the assessment it will be different as well. In that sense, we have that science will have the 90% of the total result of the E-portfolio and arts will represent the 10% of the final result.

Regarding science, we will divide the 90% in 5 parts (one for each continent), in that way, each part will count 15%. When we add up the 5 parts we obtain a 75%, this result will comprise the continuous assessment. There is an extra 15% left that will be part of the final assessment which will be compounded by the result of the continuous assessment and the extra 15% to reach the 90%. This 15% left can be obtained if students have used, along the project, the 3 ways of communication (text, audio or video).

The continuous assessment will be carried out along the project. At the end of each part (continent), students will be assessed regarding content and their perception of autonomy in

their learning process. Within the continuous assessment, the 15% of each continent includes the teacher's assessment which will assess the content (10%) and the self-assessment (5%) where students will assess their progress in their learning process. Both parts will be assessed throughout rubrics, the teacher's assessment rubric is detailed in appendix 12 and the self-assessment' rubric has been already presented in appendix 9.

In terms of final assessment, as it has been mentioned, we will use the 75% of the continuous assessment and the 15% left that will be added in case students have used different channels of communication in their diaries. This 15% will motivate students to widen their ZPD regarding communication and use different ways to send a message. Normally, students are very comfortable writing, but not recording or filming.

Regarding arts' subject, it will be the 10% of the whole E-portfolio. We will follow the same structure than science. We will divide the 10% among the 5 continents. Therefore, each continent will count 2%. As it has been explained in previous sections, the unit of drawing techniques will be carried out along the whole project. In each continent, students will explore a different technique, but they are part of the same unit. The continuous assessment will be carried out by the teacher following a rubric (appendix 13). In terms of final evaluation of the unit, the teacher will use the result of each continent.

3.6.2. Assessment of the proposal

To assess the proposal, we should take into account if the objectives proposed in section 3 could succeed. Regarding the general objective, **create autonomously an E-portfolio describing different vertebrate animals using different ways of communication**; we envision a well-functioning on the creation of the E-portfolio due to the fact that the process will be repeated 5 times. Therefore, students have many opportunities to create and improve their creations. Along the trip, students will feel more confident on the dynamic of the class and progressively they will focus on their creations rather than to understand what they have to do in each class.

The same idea applies in terms of communication, once students understand the functioning of the project; they will have 3 attempts in each continent to try different ways of communication. This long process allows them to work on their own pace and move forward when they feel confident enough to do it. Regarding specific objectives:

- **Organize in a clear way the information required for each animal**: we envision that this objective can be reached once students understand the functioning of the proposal, possibly, at the beginning, students will have some difficulties or even fail. That is the reason why during the sessions we have destined an introductory part to show examples of how to do it, to repeat it several times and to list the elements needed.
- **Appreciate her/his performance and select next steps.** This is a very individual objective that it could fail if the students' reflexion is not combined with the teacher's feedback. In this case, it will depend on the amount of students and the time that the teacher can provide to each of them. In case that the number of students is elevated, the teacher could use some time from other subjects to provide an individualised feedback that can guide students to choose their next steps and recognise their strengths and weaknesses.
- **Explore her/his command in the three ways of communication.** We envision that this objective can succeed if the students are encouraged to alternate the different formats of communication. Devoting a few minutes in each session to show peers' work, will help to students to feel confident and try it too.

Furthermore, we would assess the proposal's effectiveness and feasibility taking into account two aspects:

On one hand, the learners' impressions**.** Once the project is completed, and students have travelled around the 5 continents, we will dedicate a part of a session to share opinions, to summarize the process, to highlight the parts they liked the most, the aspects that have been more difficult… This space of reflexion will help to detect aspects that the teacher cannot see from the teacher's perspective, these aspects are mandatory to engage students and to make the learning process more accessible.

On the other hand, we will use a table inspired on the literature review explored in this Master's Dissertation. We will establish some criterions based on the scientific evidence to assess the proposal and detect the weak aspects of the proposal. The table will also include a "observations" section, because a project like this cannot only be assessed with yes/no, ticks and crosses, it requires a qualitative part where the teacher can explain in detail the implementation and performance. The table to assess the proposal can be found in appendix 14.

4. Discussion

This intervention proposal has used E-portfolio as a tool to promote autonomy in learners within a CLIL environment. The literature reveals that E-portfolios are an excellent support to enhance autonomy, personal initiative and undertaking competence because the tool allows students to share their knowledge in the way they feel more comfortable, whereas, a traditional approach would only focus on final assessment, normally written. As we have seen in this proposal, the E-portfolio has given the opportunity to students to decide how they prefer to share their knowledge and take responsibility of their learning. The students can know by their self, what works better for them, their strengths and weaknesses because the learner is the center when creating their E-portfolios.

Designing the E-portfolio, we have taken into account the ideas described in the literature review, especially the stages to create an E-portfolio stated by Barrett (2000). In terms of content, it has been easy to combine the CLIL principals within an E-portfolio format, due to the fact that both concepts share important principals as we have described when connecting CLIL and E-portfolios using Mehisto's (2012) criterion for producing CLIL material.

Autonomy has played an important role along the project; we have followed Rao's (2006) work. When developing the collection, we gave the responsibility to student to communicate the knowledge acquired in the channel they prefer. We have also encouraged reflection through the self-assessment and the teachers' feedback and finally we have assessed the E-portfolio from a teachers' perspective, using the rubric showed in appendix 12.

It has also been important to follow the statements of Mak and Wong (2018) when affirming that E-portfolio should be used as assessment in order to create a responsibility on learners and enhance their autonomy to build their own leaning in the way they feel more comfortable with.

In this Master's Dissertation we have only described the first part of the project, but the real progression of the learner's autonomy, regarding their learning, would be disclosed at the end of the project. Then, we could compare the first impressions of the learner regarding their creations, and their perception of their work at the end of the project, when finishing

part 5. This comparison can be carried out using the self-assessment rubrics where we can contrast how students conceive their creations after the project.

Even if this project has some limitation that we will explain in the last section, it is important to highlight that the duration of this project, and the repetition of dynamics every time students travel to a new continent, it has permitted that students know in every session what they have to do and try out different ways to succeed on the objective proposed. From a personal perspective, it is necessary to try new activities and dynamics with students, but sometimes that can make students feel disoriented in their learning process and leave aside their autonomy, their personal initiative and undertaking competence to only complete a task without reflection. Sharing peers creations along the project, showing that other students are using different ways of communication and providing an individualized feedback, we will promote a reflective attitude in the learners towards their work. From this attitude, student can decide the next steps to enhance their learning, knowing better what it is best for her/him in terms of acquiring knowledge and apply this self-awareness in other situations.

5. Conclusions

In this section we will state the conclusions we have come as a result of the line of work developed along this Master's Dissertation. To state our conclusions we will value the level of achievement of the objectives proposed.

These objectives emerged from the needs of students of the 21st century to have access to a contextualised learning based on their new reality. Nowadays, learners' reality is surrounded by ICT, in that sense, we have worked to design a tool that covers this need, and through it enhance students' autonomy. To do it, we have chosen the tool E-portfolio because the flexibility of this tool allows the combination of ICT at the time that autonomy can be promoted in a CLIL environment. To cover the need exposed above, this Master's Dissertation established one general and five specific objectives that will be valued in the following lines.

Regarding the general objective, **design an E-portfolio as an interdisciplinary tool to promote autonomy in 4th grade within a CLIL context in the area of natural science and arts**, we can say that the objective has been accomplished. As we have highlighted in the

discussion section, this proposal has obtained, as a result, a project where students of 4th grade can develop their autonomy, personal initiative and undertaking competence through the autonomous creation of their E-portfolios. This tool offers a flexible and personalized creation for each student. Therefore, students will lead and take responsibility of their diaries (E-portfolios) at the time that they are learning through ICT. It is important to mention that the level of achievement in this case cannot be measured precisely, due to the fact that the proposal has not been carried out yet and we cannot value the learners' perspective, if the proposal is carried out, then we could value with greater precision the level of accomplishment of the tool.

Referring to the specific objectives, we can affirm this Master's Dissertation has achieved the five specific objectives established at the beginning of the proposal. In the following lines, we will argue the reasons for this statement:

- **Research on the current use, elaboration and benefits of E-portfolios.** This objective has been successfully acquired as the literature in this field is extensive. We can conclude that, in terms of scientific research:
    - There are a variety of studies that have used E-portfolios, especially for formative assessment.
    - There is not a specific way to elaborate an E-portfolio because it will depend on the context where it will be applied. Although, some authors as Barrett (2000) or Rao (2006) proposed some general guidelines.
    - There are several researches have proven the benefits of E-portfolios within a learning context, especially benefits regarding autonomy.

  It is important to mention that many of the studies and research analysed were using portfolios. This fact does not affect directly the benefits of E-portfolio because as we have explained, these benefits are transferable on its majority to E-portfolios.
- **Explore the feasibility of E-portfolios in a CLIL context.** Based on the literature explored, we can conclude that E-portfolio is a flexible tool that can be adapted and enhance the development of CLIL principals. Both concepts share common aspects as we have seen when describing Mehisto's (2012) work: formative assessment, visible intentions, critical thinking or meaningful learning.

- **Compare different strategies to promote autonomy on learners.** After a thorough research we can conclude that the promotion of autonomy is achieved from a learner-centre approach. Taking into account the literature review, student needs to feel that is the owner of the learning process, it is her/his responsibility. Furthermore, another strategy to consider when promoting autonomy is the strong connection between autonomy and self-assessment.
- **Design an interdisciplinary project through an E-portfolio in a CLIL context.** After evaluating the outcomes of the final proposal, we can conclude that we have designed a project that combines two disciplines (science and arts), the main support of the project is the E-portfolio, and this tool has proven to be perfectly compatible to develop the CLIL principals.
- **Promote autonomy, creating a project based on the scientific evidence.** In terms of planning, we can say that this objective has been achieved because the project follows the guidelines proposed by the authors distinguished in the literature review: the stages of Barrett (2000), the criteria for quality material in CLIL by Mehisto (2012), the strategies to promote autonomy by Wolff (2011) and Rao (2006) or the importance of self-assessment to promote autonomy by Mak and Wong (2018). Although the real level of achievement, it only can be measured once the proposal is carried out.

Although we have reached these conclusions, more practical studies are needed in the Spanish context (or similar) to promote the use of these tools in the classroom. In that sense, with close examples of implementation, educators could feel encouraged to implement these strategies in class.

The conclusions we have reached taking into account the objectives established are pleasingly promising regarding the education field. This proposal could be seen as a real example of implementation in a CLIL context and encourage other professionals to include the E-portfolio in their repertoire of tools to enhance students' learning process. Nevertheless, E-portfolios or any other ICT support are in expansion, therefore, their applications can change, improve and adapt to students' needs rapidly, as a professionals of this field, we should keep updated about this progress to provide a better learning experience to our students.

6. Limitations and prospective

In this section, we will present the limitations we have faced along this journey. After that, we will suggest future lines of research. On one hand, regarding limitations, we have had the following ones:

1. In terms of theoretical orientations, it has been difficult to find practical studies in the Spanish national context that could back up and guide the creation of this project. The current outlook of E-portfolios is growing, although, the national scene is a bit behind compared to other nations in Europe, America and Asia.

2. Design: the design of this project was ambitious and it wanted to cover several units within science and arts following the E-portfolio dynamic. But this idea has turned out to be excessively time consuming. For further implementations, we would reduce the number of continents to visit, or dedicate only 1 to 3 sessions to each continent instead of 5. Although, it is important to say that with the plan proposed, students will know in every part what to do because it is repetitive, this planning will allow learners to concentrate on other matters of their learning process instead to spend time realizing what the teacher proposes in each activity.

3. Information and parts of the design: as we have said, this project contains 5 parts and several weeks of planning. With regard to students, it can be a bit hard at the beginning to see the whole picture of the project. Although, they will have several weeks and opportunities to enrol the dynamic of the project every time they land on a new continent and start over.

4. E-portfolios in primary school. When exploring the different supports we could use to create the E-portfolio, we tried out many different options, but most of them were addressed to adults, and professional profiles.

5. ICT's department in the school. This project has established that the school includes a solid ICT department: creating all the accounts for students, helping the teacher when creating the "teacher's account" or solving technical issues that can arise during the project. The lack of an ICT's department, could limit the implementation of the project.

6. Teacher's command of ICT. Even if the ICT's department can support the correct execution of the project, the teacher should also have a good command of the specific tool used to create the E-portfolio, not only to help and guide students but also to make the most profit of the options provided by the tool. If the teacher does not command the tool, the design of the project can be limited.

7. Self-assessment. As it was explained in the intervention proposal, the self-assessment was explained and developed in session 6 and 7. The fact that the rubric was not explained before starting the project, can limit students' performance in part 1. Although, we decided that the beginning of the project was not the best moment to explain in detail the assessment. We believe it was too much information to process at the time, we considered that it was a priority to understand the organization of the project (the continents we would visit, what to do in each continent, what we need to know of each animal) than to know at the first session how would be assessed without understand what we were doing. To mitigate this issue, we dedicate a section in each session to explain the objectives they meant to achieve. These objectives are directly connected with the assessment.

8. Feedback from the zoo. It is not been contemplated in the design to keep the two directions of communication once the project has started. The lack of interaction with the zoo could limit the motivation of learners. For future applications, we suggest to include emails, audios or videos from the principal of the zoo appreciating the useful task done by the students.

On the other hand, looking upon the prospective aspects of this proposal, it is necessary to invest on practical studies in the Spanish national context to promote the use of these tools in class. Furthermore, it would also be interesting to implement similar designs in other grades to compare the level of achievement, taking into account their maturity. It could be interesting to see if students in 1st grade or in 6th grade can also enhance their autonomy and then, detect when it is the appropriated moment to implement this tool in the learning process of the student.

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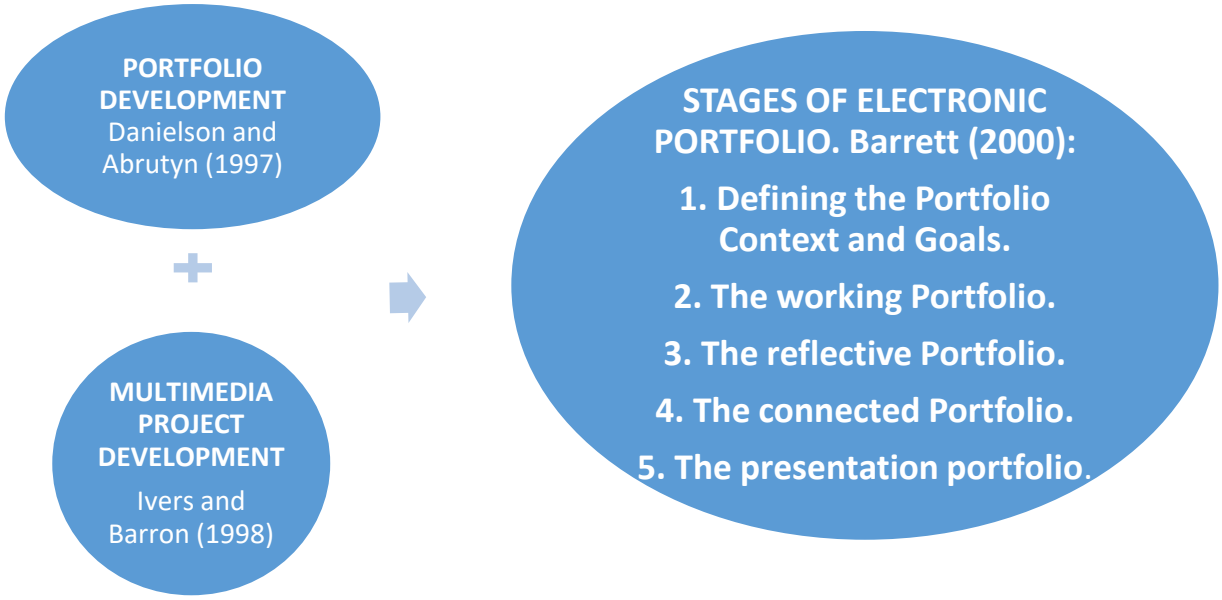
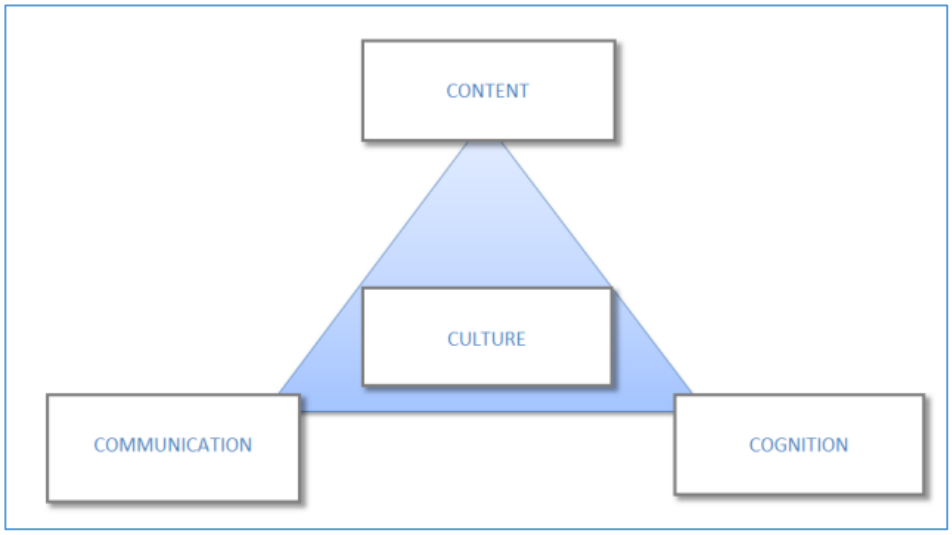
8. Appendices

8.1. APPENDIX 1: FIVE STAGES OF ELECTRONIC PORTFOLIO

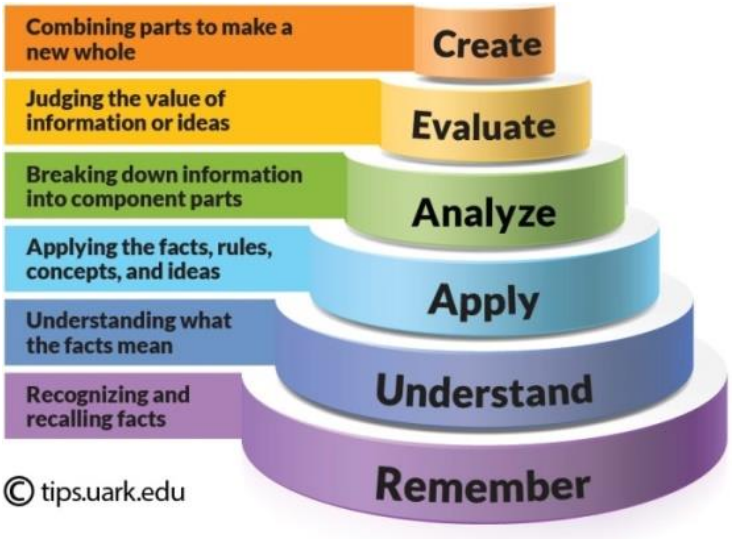


8.2. APPENDIX 2: CLIL fundamentals

The four C's:



Bloom's revised taxonomy:



Source: https://tips.uark.edu/using-blooms-taxonomy/

8.3. APPENDIX 3: CONTENT AND CRITERION IN THE CATALAN CURRICULUM

- Regarding Science:

Content

- Realization of a research investigation on the basis of questions or relevant **problems of their context**, by cooperative work, experimentation and the use of different sources of information and **technologies** (specific programmes, simulations….).
- Oral and written argumentation of resolution in their research.
- Seek and contrast of information in different supports (scientific texts, pictures, graphs...)
- Use of the mechanisms of active participation, cooperation and dialogue on the construction of common tasks and the resolution of problems.
- Transmission of the information obtained using different ways of communication.

Criterion

- Value the group work showing a cooperative attitude and a responsible **participation**, accepting and respecting the differences and tolerating others' ideas in debates.
- Showing initiative and creativity in the realization of research about a relevant theme of their context.
- Setting questions about concrete features, obtaining relevant information through systematic observation and the collection of data using the proper sources, communicating the results orally, graphically and by written.

- Regarding Arts:

Content

- Characteristics of materials, colours and shapes on pictures, objects and pieces of art.
- Formal sources of the language (planification and point of view).
- Connection between perceptive qualities of the objects and the feelings that they arise.
- **Positioning, judging and arguing** about objects and pictures.
- Functions of audio-visual productions and objects as a description of the world.
- Materials and technologies used in the present and in the past.

Criterion

- Identify and verbalise with the correct terminology the possibilities that are used by artists and media.
- Describe and share with peers how a piece of art makes them feel.
- Seek information to answer their questions and doubts about pieces of art.
- **Create** visual compositions that represent ideas, emotions and experiences using different materials, including digital resources.
- Show respect and responsibility on cooperative work.

8.4. APPENDIX 4: CONNECTING CURRICULIM, CLIL AND E-PORFOLIO

Curriculum	CLIL approach regarding the 4C's	Working through E-portfolio
Problems of their context	Culture	The project will be presented as a problem, where their context needs their help.
Technologies	Cognition and Content	Students will use a variety of technological sources to work on and express their selves.
Participation	Communication	The E-portfolio allows practicing three ways of communication (audio, video or text).
Positioning, judging and arguing	Communication	The project includes self-assessment.
Create	Cognition and Content	Objectives of High Order Thinking Skills are present in the sessions and the platform used to create the diary will enhance the development of these objectives.

8.5. APPENDIX 5: COMPETENCIES

Competences in the Catalan Curriculum	E-portfolio
1. Communicative, linguistic and audiovisual competence.	X
2. Mathematic competence.	
3. Knowledge and interaction with the real world competence.	X
4. Cultural and artistic competence.	X
5. Digital competence.	X
6. Social and civic competence.	X
7. Learn to learn competence.	X
8. Autonomy, personal initiative and undertaking competence.	X

8.6. APPENDIX 6: PARTS OF THE PROJECT

Parts of the project

Parts	Content	Sessions
Part 1	**Africa** - Introductory session and previous knowledge (session 1). - Content learning through LOTS (sessions 1 and 2). - Introduction and development of the E-portfolio (session 3, 4 and 5). - Self-assessment of their production, remake their creations and share their knowledge with peers (session 6-7).	**7**
Part 2	**Asia** - Introduction and development of the E-portfolio (session 8, 9 and 10). - Self-assessment of their production and remake their creations (session 11). - Sharing with the class some productions and teacher's assessment (session 12).	**5**
Part 3	**America** - Introduction and development of the E-portfolio (session 13 and 14). - Self-assessment of their production and remake their creations (session 15). - Sharing with the class some productions and teacher's assessment (session 16).	**4**
Part 4	**Europe** - Introduction and development of the E-portfolio (session 17 and 18).	**4**

	- Self-assessment of their production and remake their creations (session 19). - Sharing with the class some productions and teacher's assessment (session 20).	
Part 5	**Oceania** - Introduction and development of the E-portfolio (session 21 and 21). - Self-assessment of their production and remake their creations (session 23). - Sharing with the class some productions and teacher's assessment (session 24).	**4**

8.7. APPENDIX 7: CALENDAR PART 1

January

					1	2
3	4	5	6	7	8	9
10	11 Session1	12	13 Session2	14	15	16
17	18 Session 3	19 Session 1	20 Session 4	21 Session 2	22	23
24	25 Session 5	26 Session 3	27 Session 6	28	29	30
31						

February

	1 Session 7	2	3	4	5	6
7	8	9	10	11	12	13

Science's sessions.

Art's sessions.

8.8. APPENDIX 8: TABLE OF CHARACTERISTICS OF THE RESCUED ANIMAL.

Rescued Animal	
Name :	Continent:
Group of vertebrate:	
Reproduction:	
What they eat: - - -	
Physical characteristics: - - -	
Curiosities: -	

8.9. APPENDIX 9: RUBRIC SELF-ASSESSMENT

Self-assessment (0.5p) **Mark with a cross (X)**	**1** **Never** **(0.0)**	**2** **Rarely** **(0.025)**	**3** **Sometimes** **(0.05)**	**4** **Mostly** **(0.075)**	**5** **Always** **(0.1)**
I feel comfortable expressing my opinion in class					
I have revised my work					
I feel comfortable using these three ways of communication: video/text/audio.					
I have included all the artifacts in the project: - Cover. - Introduction. - Three rescued animals. - Message to Mrs Pratta.					
I have applied the corrections provided from the teacher.					

8.10.APPENDIX 10: ARTS' SESSIONS

Session 1

<table>
<tr><td>Subject: Arts</td><td>Time: 45 min</td></tr>
<tr><td>Content objectives:
- Experiment with different materials to obtain the frottage.
- Create a portrait combining materials.</td><td>Language objectives:
- Recall the correct name of the materials.
- Infer sustainably to define the frottagge technique.</td></tr>
<tr><td colspan="2">Activities:
- Introductory video. Students will watch a video to introduce the technique of frottagge. We will comment the materials they are using in the video and what are they doing with the material. After the video, together we will make our own definition of the technique: https://www.youtube.com/watch?v=gXLs76x50ic
- Explain the objectives of the session.
- Experimenting with different materials provided by the teacher: coins, leafs, wood, fabric, plastics…
- Creation of the portrait (animal 1)</td></tr>
<tr><td colspan="2">CLIL Fundamentals
- Content: students will be engaged on this session when they realise that they can use any material of their context to carry out this technique. Therefore, students will use objects of their environment as tools to create something new.
- Communication: we will enhance their ability to define abstract concepts and to describe coherently a process.
- Culture: students will have the opportunity to appreciate artistic creations and to see the process from an artist's perspective.
- Cognition: these sessions will move from LOTS to HOTS. Students will have autonomy to try out different tools, look for new ones and dismiss the ones are not working for her/him.</td></tr>
<tr><td colspan="2">Scaffolding:
- The videos will include subtitles.</td></tr>
</table>

- The teacher will stop the video and highlight the main ideas.
- We will provide first an example before practicing individually.
- Teacher will share students' discoveries with the rest of the class to enrich the experience.

Session 2

Subject: Arts	**Time: 45 min**
Content objectives: - Execute the correct technique. - Experiment with different materials to obtain the frottage. - Select the appropriate material to use. - Create a portrait combining materials.	**Language objectives:** - Recall the correct name of the materials. - Describe the materials brought from home. - Describe the process of their creations.
Activities: - Explain the objectives of the session. - Experiment with different materials that students have brought from home. - Create the portraits combining materials (animal 2). - Present their creations. Students will show their creations to the group and they will explain the materials they have used to create the portrait of the rescued animal 1.	
CLIL Fundamentals - **Content:** students will be engaged on this session when they realise that they can use any material of their context to carry out this technique. Therefore, students will use objects of their environment as tools to create something new. - **Communication:** we will enhance their ability to define abstract concepts and to describe coherently a process. - **Culture:** students will have the opportunity to appreciate artistic creations and to see the process from an artist's perspective. - **Cognition:** these sessions will move from LOTS to HOTS. Students will have autonomy to try out different tools, look for new ones and dismiss the ones are not working for	

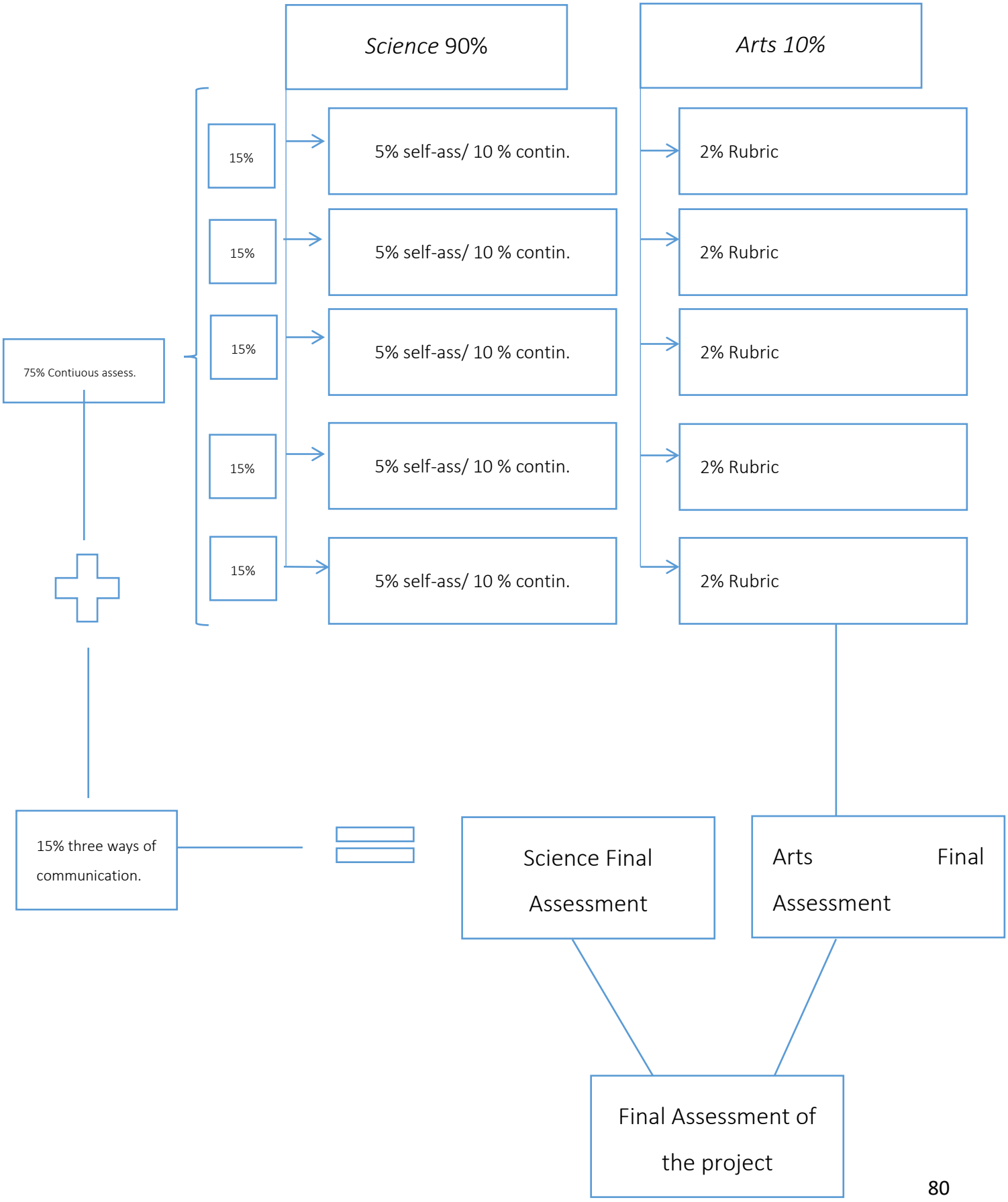
her/him.
Scaffolding: - Teacher will share students' discoveries with the rest of the class to enrich the experience. - Before presenting their creations: the teacher will establish some guidelines to follow and they will be written down on the board.

Session 3

Subject: Arts	**Time: 45 min**
Content objectives: - Execute the correct technique. - Experiment with different materials to obtain the frottage. - Select the appropriate material to use. - Create a portrait combining materials	**Language objectives:** - Recall the correct name of the materials. - Describe the process of their creations.
Activities: - Explain the objectives of the session. - Creation of the portraits combining materials (animals 3). - Presentation of their creations. Students will show their creations to the group and they will explain the materials they have used to create the portrait of the rescued animal 2 and 3 if they have finished it.	
CLIL Fundamentals - **Content:** students will be engaged on this session when they realise that they can use any material of their context to carry out this technique. Therefore, students will use objects of their environment as tools to create something new. - **Communication:** we will enhance their ability to define abstract concepts and to describe coherently a process. - **Culture:** students will have the opportunity to appreciate artistic creations and to see the process from an artist's perspective. - **Cognition:** these sessions will move from LOTS to HOTS. Students will have autonomy	

to try out different tools, look for new ones and dismiss the ones are not working for her/him.
Scaffolding: - Teacher will share students' discoveries with the rest of the class to enrich the experience. - Before presenting their creations: the teacher will establish some guidelines to follow and they will be written down on the board.

8.11.APPENDIX 11: LEARNING ASSESSMENT ORGANIZATION



8.12.APPENDIX 12: TEACHER'S ASSESSMENT RUBRIC (NATURAL SCIENCE)

Continuous assessment	**Stage 1 (0.02)**	**Stage 2 (0.05)**	**Stage 3 (0.1)**
Student has classified correctly the rescued animal according vertebrate animals.	0-1 animal classified correctly	2 animals classified correctly	3 animals classified correctly
Student has classified correctly the rescued animal according reproduction.	0-1 animal classified correctly	2 animals classified correctly	3 animals classified correctly
Student has mentioned correctly different foodstuff.	0-5 correct foodstuff	5-10 correct foodstuff	More than 10 correct foodstuff
Student has mentioned correctly different physical characteristics.	0-5 physical characteristics	5-10 physical characteristics	More than 10 physical characteristics
The organization of the information…	…is not clear	…is moderately clear	…is clear
Cover contains the following items: name/title/decoration	1 item included	2 items included	3 items included
Introduction….	… is not clear	… is moderately clear	… is clear
Rescued animal table	0 to 1 rescued animals	2 rescued animals	3 rescued animals
Communication to Mrs Pratta: student has explained all the items of the table about the rescued animals	On 0 - 1 animal	on 2 animals	On 3 animals
Different ways of communication in the same continent	Only 1 way of communication	2 ways of communication	3 ways of communication

8.13.APPENDIX 13: TEACHER'S ASSESSMENT RUBRIC (ARTS)

Assessment during student's presentation (2p)	**Stage 1 (0.1p)**	**Stage 2 (0.25p)**	**Stage 3 (0.5p)**
Student has combined different materials.	1 material used	2 to 5 materials used	More than 5 materials used
Student has named correctly the different materials.	1 material named correctly	2 to 5 materials named correctly	More than 5 materials named correctly
Description of creation.	Student has not explained the process and she/he has mentioned 0 or 1 material on the description	Student has explained the process and she/he has mentioned 2 to 5 materials on the description	Student has explained the process and she/he has mentioned more than 5 material on the description
Student has chosen correctly the materials to represent the skin/fur/shape of the animal.	It represents the skin/fur/shape of the animal	It represents some parts: skin/fur/shape of the animal	It fully represents the animal

8.14.APPENDIX 14: CRITERION TO ASSESS THE PROPOSAL.

Criterions	**Yes**	**No**	**Observations**
The proposal counts with realistic objectives			
The project provides enough opportunities to practice and explore the content			
Students have time to revise and fix their creations after feedback			
The tool permits comparing the progress of students' sense of autonomy regarding the learning process			
Students' level of exposure to the L2 is appropriate			
The ICT support provides the freedom to create students' designs autonomously			
Students are aware of how they are going to be assessed			
The activities are engaging for students			
The artifacts allow the teacher to assess the level of achievement of the objectives proposed.			
The amount of feedback and the time to provide it is appropriated.			