universidad deleón

TESIS DOCTORAL

Virtual Exchange and the Integration of Global and Ecological Citizenship in Foreign Language Education

Begoña Fernández Gutiérrez

Programa de Doctorado de Estudios Contrastivos y Comparados: Inglés, Francés, Español

Tutor y Director: Robert Alexander O'Dowd

León, 2022

DECLARATION

I declare that this doctoral thesis is entirely of my own authorship, except for those parts indicated by reference or acknowledgement, and that it has not been previously submitted for any other degree or to any other institution either in whole or in part.

DEDICATION AND ACKNOWLEDGEMENTS

Early on in this journey, I knew what I wanted to write to my thesis supervisor Robert O'Dowd in these lines. During these 3 years there has been a constant feeling towards him that goes beyond the eternal gratitude I feel for his guidance and support in the elaboration of this dissertation. I was thinking of a speech that went viral a few years ago, back in 2016, when Miguel Herrán, the winner of the Goya for best newcomer actor turned to his director, who had discovered him when he was walking down the street at a time when he felt like a young man without a vocation, and said: *"You have made me discover a new world and you have made me want to study, work and cling to this new life as if there were no other. You have given me a life. Thank you"*. The words are not mine, but the feelings are. If writing a thesis teaches you a lesson, it is that often, what you feel and think, was felt and thought by others, probably much smarter, before you.

Many thanks also to all my colleagues at my home institution, the University of León, and to my colleagues at my home away from home: the University of Limerick. Particular appreciation goes to Marta Giralt, Marta Fortes and Shannon Burns, women that I admire and who made my time in Ireland a delightful period.

I feel especially honoured to have been welcomed into the EVOLVE and VALIANT research projects during my time on the PhD programme. These were enormously enriching experiences through which I was able to meet and learn from numerous international professionals whom I deeply admire.

Thanks also to all my fellow virtual exchange teachers who collaborated with me on the projects described in this study for their professionalism and friendship. It is thanks to them and all the students involved that I have joined this small but growing club of virtual exchange enthusiasts.

I would also like to thank the 'Junta de Castilla y León' and the European Social Fund for funding this research: without their support none of this would have been possible.

This work is dedicated to my family:

To my mother, because everything I am and everything I have achieved, and everything I may become or achieve in life, I owe it all to her. Without her immeasurable support I would have never become a doctor.

To Emilio, for being the way he is. The kind of person any PhD student would appreciate having around. When I let my "embedded thesis writer" problems get to me, he was always there to give me back some perspective. Then I remembered how small my problems were and how big my luck was to share my life with him.

And to my little co-author Leo, who was in my belly and then in my arms while I finished writing this thesis. Welcoming him into this world made me appreciate even more the importance of taking an active part for a better world. I hope this work is a small contribution to this quest.

In short, to all of you, as Shakespeare would say: "Thanks, and thanks, and ever thanks" (Twelfth Night, Shakespeare Act III, Scene 3).

SUMMARY

This thesis was written and is framed in a context of educational change and global challenge marked by historic events such as the Covid-19 pandemic, the conflict in Ukraine and the environmental crisis among others. As asserted in the 2022 UN's annual 'Progress towards the Sustainable Development Goals (SDGs) Report': "Today, we stand on the precipice of a critical moment. Either we fail to deliver on our commitments to support the world's most vulnerable or together we turbo-charge our efforts to rescue the SDGs and deliver meaningful progress for people and the planet by 2030" (UN, 2022, p. 4). For this reason, the pedagogical activities proposed here take on special relevance due to their suitability for the development of intercultural (Byram, 2008), global (OECD, 2018), and ecological (Dobson, 2000, 2003, 2007) citizenship competences that favour sustainable and peaceful coexistence. As stated by the OECD (2018): "Developing a global and intercultural outlook is a process -a lifelong process- that education can shape" (p.5). It is following this idea of using education as a shaping power for preparing students to seize the opportunities and face the challenges that the present context poses that this doctoral thesis is born.

The spread of access to technology and the internet has made it possible to implement innovative educational approaches such as Virtual Exchange (VE) for such an endeavour. VE is an umbrella term used to refer to the engagement of groups of learners in online language and intercultural interaction and collaboration with partners from other cultural contexts or geographical locations as an integrated part of course work, and under the guidance of educators and/or expert facilitators (O'Dowd, 2018). Given that the number of students who spend a period of their university studies abroad is very low, such educational experience is key to the democratisation of access to intercultural learning as it offers students the possibility to interact and learn in an intercultural environment through the mediation of technology, without the need to travel abroad (De Wit, 2016). Consequently, in recent decades, the implementation and recognition of VE has grown progressively and exponentially. Numerous studies and research projects have been carried out by educators that have explored and acknowledged the value of involving students in VE. These have been implemented from multiple approaches with well-documented success in developing numerous skill sets such as Foreign Language (FL) proficiency, Intercultural Competence (IC), cultural awareness or global citizenship which are key to live and thrive in the present context (Furstenberg et al., 2001; O'Dowd, 2003; Belz, 2004; Brammerts, 2006; Müller-Hartmann, 2007; Guth and Helm, 2010; Chun, 2015; Lindner, 2016; O'Dowd, 2019). However, the potential of VE for the development of ecological citizenship, has not yet been exploited as it could, despite the urgency of training students to meet the eminent challenges posed by the environmental crisis. In response to this gap, this research has explored the knowledge, skills, attitudes and values students develop as a result of being exposed to an authentic experience of intercultural interaction and collaboration that enables them to better understand the local and global dimensions of environmental challenges as well as the possibilities for sustainable development. At the same time, this study aims to introduce this theme into the debate on VE with a view to promoting a global and ecological culture in university FL education.

The aims of this research were: (1) to determine how the objectives of global and ecological citizenship can be integrated into the field of FL education through VE (proposal of a VE model), (2) to identify the observed learning outcomes, (3) to compare and contrast the possibilities of bilingual and lingua franca approaches, and (4) to explore how teachers can support students in their learning all within the framework of the VE model developed. To this end, an Action Research (AR)

methodology was adopted. This methodology consisted of the design and implementation of two iterative cycles in which the VE model was tested and refined following the phases of planning, action taking, evaluation and refinement or reconceptualisation. Each VE intervention was designed on the basis of a literature review and the systematic collection of qualitative self-reporting and interactional data. Learning was measured through triangulation of these various sources of qualitative information over a two-year period in which two iterative cycles were implemented with 3 cohorts of students.

In the first iteration, a telecollaborative bilingual-bicultural approach was adopted (see Dooly, 2017 and O'Dowd, 2016 for overviews) in which two groups of learners from Spain and Ireland studying each other's languaculture (Agar, 1994) communicated and collaborated using both languages. During the second iteration, a lingua franca approach was adopted (Kohn & Hoffstaedter, 2017) and students from Spain participated in a VE with a German partner class using English for communication and collaboration around issues of global relevance that go beyond explicit bicultural comparison (O'Dowd, 2019). The adoption of both approaches offers the opportunity to compare and contrast the possibilities of each telecollaborative learning configuration in order to reach reliable conclusions about their effectiveness for the implementation of the VE model developed. It also contributes to the need for further replication studies that aim to confirm the learning outcomes of specific VE approaches due to the heterogeneous nature of this pedagogical approach (O'Dowd, 2021b). Examples of such studies can be found in European Erasmus+ projects such as EVALUATE (EVALUATE group, 2019) or EVOLVE (EVOLVE Project Team, 2020) which examine the impact of the class-to-class VE model on large cohorts of students or the recent study by O'Dowd (2021b) in which the differences between these two approaches are analysed.

The multiple iterations combined with the systematic collection and triangulation of varied data sources, allowed for the identification of the answers to the research questions and contributed in turn to the conceptualisation and evolution of the VE model designed in this study. Key reference works such as the Common European Framework of Reference for Languages (CEFR) (Council of Europe, 2001, 2018b, 2020) for the development of language skills in English, the Global Competences Framework (OECD, 2018) and Dobson's (2000, 2003, 2007) notions of the virtues of the ecological citizen were used for the interpretation and analysis of the data collected.

The main outcome of this study is an evidence-based understanding of the possibilities of VEs to develop FL, global and ecological competences through both bilingual and lingua franca approaches. The VEs implemented and the final model developed were efforts to create opportunities to guide learners in building their intercultural, global and ecological profile to successfully cope with the present context made possible by the opportunities that technological mediation offers educators today. Furthermore, the study also identifies key aspects to be considered by teachers when designing and implementing VEs for the development of these competences. In addition, the study provides a VE model comprising specific tasks and materials ready to be used and/or adapted by other FL teachers who wish to introduce the global and ecological perspective into their classrooms.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABBREVIATIONS AND ACRONYMS

AR: Action Research.
ARC: Action Research Cycle.
ARC1: First Action Research Cycle.
ARC2: Second Action Research Cycle.
CEFR: Common European Framework of Reference for Languages.
CALL: Computer-Assisted Language Learning.
CMC: Computer-Mediated Communication.
EFL: English as a Foreign Language.
ELF: English as a Lingua Franca.
EU: European Union.
FL: Foreign Language.
GDPR: General Data Protection Regulation.
HE: Higher Education.
IC: Intercultural Competence.
ICC: Intercultural Communicative Competence.
NSs: Native Speakers.
NNSs: Non-Native Speakers.
PISA: Programme for International Student Assessment.
RFCDC: Reference Framework of Competences for Democratic Culture.
SDGs: Sustainable Development Goals.
VE: Virtual Exchange.
VLE: Virtual Learning Environment.

CHAPTER I: INTRODUCTION

1.1.Background

The context in which this study has been conducted is that of FL learning in European Higher Education (HE). This field is seen nowadays as key by national education systems to prepare students for life in a world characterised by processes such as globalisation and internationalisation. In recent decades, this has been consequently reflected in policy-making, being English as a Foreign Language (EFL), the most influential in both teaching policies and methodologies. This is due to its position as one of the most studied languages in the world, largely because of its use as a 'lingua franca'. A great example of the European effort for the integration of common plans in FL education can be found in the CEFR (Council of Europe, 2001, 2018b, 2020). It constitutes a common tool that serves as a guide for teaching, learning and assessing FL proficiency within the EU and has been used as a tool of reference for evaluating VE participants' FL skills development in the present study. The CEFR embodies the principles of the communicative and intercultural approaches to FL teaching and learning. The communicative approach (Hymes, 1972; Canale and Swain, 1980; Canale, 1983) gives importance to interaction, language in action and the actual use that people make of language and prioritises being able to use language in a culturally and socially appropriate way. The intercultural approach (Byram, 1997) has gained great importance over the last 20 years because of its relevance in preparing FL learners to cope successfully not only with communication in a FL but also with establishing and developing intercultural relations. Building on these approaches to FL education, the great potential of language learning for this study is found to be in the possibility, through a shared language, to experience another reality, to challenge the taken-for-granted and to develop links with people of other languages and cultures.

Over its history, education has proved its capacity to create social outcomes. This is something that has become increasingly relevant in today's multicultural Europe, where promoting active citizenship has turned into a primary objective (European Commission, 2008). In recent years, in contemporary democratic politics, the concept of citizenship has become fundamental at both the theoretical and practical levels due to the social changes of recent times in Western societies. This has been marked by the strong irruption of the international dimension in politics with issues of great relevance being dealt with such as globalisation, migratory phenomena, technological change and environmental problems (Sáiz, 2003). Recent globalisation-related socio-political events have contributed, as O'Dowd (2019) explains: "to bring the importance of intercultural tolerance and awareness to the forefront of educational priorities in Western countries (...) by promoting models of global citizenship which aim to develop active, informed and responsible citizens" (p.1).

Consistent with the importance given to citizenship today, FL education has in recent decades entered the so-called 'social turn'. This makes reference to the recognition of the value of learners and educational processes as agents shaping the socio-cultural reality and the consequent preparation of learners to take social action and practise active citizenship (Belz, 2002). The 46 states that make up the Council of Europe are committed to implementing education for democratic citizenship, that can be defined as "a set of practices and principles aimed at making young people and adults better equipped to participate actively in a democratic life by assuming and exercising their rights and responsibilities in society" (Council of Europe, 2004, p. 12). In order to achieve this purpose, agreements, policies, strategies, materials and works of reference have been developed which

underline the European effort in terms of promoting common policies of language and democratic citizenship education (Byram, 2008).

In fact, there has already been a shift in FL education towards active participation in society out of the need to prepare youth to face the challenges of their time regarding ecological and social matters (UNESCO, 2014). In recent years, models of citizenship education have proliferated and supplemented those of intercultural and global competences. The essential difference is the importance that the citizenship models give to active participation in society (O'Dowd, 2019). Examples of this are Byram's Framework for Intercultural Citizenship (2008), the Framework of Competences for Democratic Culture (Council of Europe, 2016, 2018a) and models of Global Citizenship such as the UNESCO (2014) or the OECD (2018) frameworks, all of which will be discussed in depth later on in this study. However, the term that seems to be prevailing over the rest is 'global citizenship' (De Wit, 2016; O'Dowd, 2019), which can be defined as the knowledge, skills, attitudes and values that students need to live and work in the global place and which they acquire as the result of pursuing an international education.

But one can not talk about the present context without acknowledging the most global of all challenges: the environmental crisis. As Sáiz (2003) rightly points out, environmental problems are a threat that knows no boundaries and cannot be faced by the states individually, but that requires international cooperation and the creation of 'new theoretical spaces' to face environmental problems together. In the Delors Report written for UNESCO (1996), the pillars of contemporary education were classified into 4: 'learning to know', 'learning to do', 'learning to be' and 'learning to live together'. This last pillar 'learning to live together' is seen by UNESCO as the most important to respond to the challenges of the contemporary context (Byram, 2008). It was in the year 2015 that the UN General Assembly, with 193 committed countries, established the 2030 agenda of Sustainable Development Goals (SDGs) in which 17 different goals are specified to be reached by that date. The extent to which these goals become a reality will depend in large part on the role of education and what educators do in their classes. That is why Goal 4, 'Quality Education for All', stresses the importance of developing the skills needed for students to learn to live together sustainably (OECD, 2018). Against this background, national governments are in charge of leading their own policies and strategies of the implementation of the 2030 Agenda and the goals achievement.

The approach of education for sustainable development aims to "empower learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society for present and future generations" (UNESCO, 2017, p.7). Of special relevance for this study is the fact that education for sustainable development constitutes a complementary educational approach to global citizenship education since both constitute action-oriented transformational pedagogies that seek to guide learners to critically understand the complex and interconnected global present world creating "interactive, learner-centred teaching and learning settings" (p.7) and aim to enable individuals to "contribute to sustainable development by promoting societal, economic and political change as well as by transforming their own behaviour" (p.8) by collaborating, speaking up and taking action for sustainable development. Both Dobson (2007) and UNESCO (2015, 2017, 2020) coincide in suggesting that these issues (i.e. ecological citizenship and sustainable development) could be taught through the engagement of students in environment-oriented collaborative projects. The present study takes up this call and the principles outlined and engages FL learners in a project of international telecollaboration in which they work and interact together actively addressing environmental issues of local and global relevance.

In today's present context in which students live permanently interconnected through online technologies, these should be used for implementing innovative educational approaches that allow them to seize the increased "opportunities for collaboration, cooperation, shared learning and collective responses" (UNESCO, 2014, p.11). To this end, technological advances have brought the possibility of bringing together international university students geographically dispersed to collaborate in VE which appears as an innovative approach for implementing internationalisation plans and for the development of international competences (De Wit, 2016). Internationalisation can be defined as "integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education, in order to enhance the quality of education and research for all students and staff and to make a meaningful contribution to society" (De Wit et al., 2015, p.281). As De Wit (2016) indicates, over the last decades, the focus in the plans of internationalisation of universities has shifted from 'abroad' to 'at home' (p.76) since a vast number of students do not participate in any mobility during their period at the university. This kind of virtual internationalisation (O'Dowd and Lewis, 2016) offers non-mobile students the opportunity to engage in educational experiences of interaction and collaboration with members of other cultures and speakers of other languages and get access to the international experience that they would not experience otherwise. As the European Commission Report: European Higher Education in the world (2013) indicates: "internationalisation should ensure that the large majority of learners who are not mobile… are nonetheless able to acquire the international skills required in a globalised world" (p.6). Consequently, HE institutions have started to put more efforts into internationalising their curriculums in order to obtain actual learning outcomes regarding the development of the sets of intercultural competences and global citizenship of their graduates (De Wit, 2016; O'Dowd, 2019).

Over the last decades, numerous research projects (EVALUATE 2017-2019; EVOLVE 2018-2020; ERASMUS+ VIRTUAL EXCHANGE 2018-2020) and case studies have explored and identified the value of engaging international students in this kind of learning experience for the development of numerous skills and competence sets such as FL competence (Belz, 2002, 2004; Brammerts, 2006; Dooly, 2008), Intercultural Communicative Competence (ICC) (Belz, 2003; O'Dowd, 2003; Thorne, 2006; Muller-Hartmann, 2007; O'Dowd & Ritter, 2006), intercultural awareness (Fustenberg, Levet, English & Maillet, 2001; Kramsch & Thorne, 2002; Ware, 2005), global citizenship (Dooly, 2015; O'Dowd, 2016a; 2019), multiliteracies (Guth and Helm, 2010; Chun, 2015) and soft skills (Lindner, 2016). Despite its gradual and exponential growth, an event that undoubtedly marked a dramatic increase in the attention received by this pedagogical approach was the advent of the Covid-19 pandemic crisis, so much so that O'Dowd (2021a) posed the following question in reflecting on this period: "2020: the year virtual exchange finally came of age?" (p.5). As he explains, while VE had been implemented in FL education for 25 years, up to this moment, it had remained "a peripheral activity, carried out and promoted by a small but convinced group of teachers" and had now seemed to reach the attention of mainstream academia (O'Dowd, 2021a, pp.5-6). Proof of this is that it was in this year that the European Commission included blended mobility into the Erasmus programme for the first time (i.e. combination of both physical mobility and VE) (European Commission, 2020; O'Dowd, 2021).

1.2. Statement of the Research Problem

At this stage of the 21st century it seems clear that globalisation is a process that cannot be ignored and that should not be taken naively given its double-edged nature: while it can greatly contribute to economic growth, to enhancing equality, to encouraging social progress and to benefitting intercultural relationships it also presents the risk of further marginalisation of those who do not have access to the opportunities that it offers. One of the crucial factors of globalisation, online technologies and the internet have the power to communicate all kinds of messages more easily. This has helped people from all over the world to come together and organise themselves in social movements, to practise active citizenship and to strive for a more just and peaceful world such as the #metoo or #timesup movements in favour of gender equality or that of #blacklivesmatter against racial abuse. However, at the same time, racism, discrimination and intolerance also find in online technologies a way to manifest themselves. As Georgescu (2018) points out, the online world has created more opportunities for intercultural dialogue and learning but also facilitates the spread of stereotypes and prejudices. The further we move into the global context, the more reasons we will find for intercultural FL education as a tool for reducing stereotypes, changing attitudes, combating radicalism and terrorism by equipping students with the necessary sets of skills such as critical thinking: "Intercultural learning facilitates understanding of, and encourages curiosity about, what happens at local level as well as in the rest of the world. It also motivates people to stand in solidarity with those who are treated unfairly in any part of the world and to take action for social justice" (Georgescu, 2018, p.13).

Nowadays, intercultural contact is a matter of daily life and it is vital that the educational institutions of the present need to introduce intercultural education to respond accordingly to their students' needs (Byram, 2008). One of the reasons is that migration for working reasons has become increasingly common. Another reason is that recent years have seen human movements due to people fleeing war and persecution. More concretely, the UNHCR's website (the UN Refugee Agency) reports a record number of 82,4 million forcibly displaced people worldwide in April 2022. In direct connection to these events, Europe has witnessed during the last years a new rise of populism with the reappearance of extremist far-right political parties that challenge democratic values. This is obviously another of the reasons for which educating young people on intercultural values within a clear human rights-based framework is particularly relevant, so that they can live together in democracy and critically deconstruct populist discourses (Georgescu, 2018).

A major challenge of the globalised world and one which this study will address in depth, is that of the environmental crisis. In the 1970s, when the green movement was beginning, the highly successful book 'The Limits to Growth' (Meadows et al., 1974) was published, which predicted the collapse of nature within 100 years if humans did not begin to live more sustainably. The assumption at the time was that as soon as people became aware of the seriousness of the issue, they would change their attitude and behaviour. Today we know that this was not and is not the case, so it is necessary to take part in getting people to adopt an ecological life philosophy, for which education for sustainable development is a fundamental tool (Dobson, 2000). This action-oriented transformational pedagogy is complementary to global citizenship education and "aims at developing competencies that empower individuals to reflect on their own actions, taking into account their current and future social, cultural, economic and environmental impacts, from a local and a global perspective" (UNESCO, 2017, p.7). Ecological and sustainability problems have both origins and consequences

that are global and therefore ecological citizens will need to be aware of and responsible for the effect of their actions on a local and global level for which intercultural dialogue as the one international students engage in through VE enables them to share and discuss multiple perspectives. This is key in achieving sustainable development since there is no point in complying with sustainable practices at a national level if the same is not done at a transnational level (Vives Rego, 2013).

1.3. Purposes of the Study and Research Questions

The overall aim of this research is to explore the possibility of developing FL learners' global (UNESCO, 2014; OECD, 2018) and ecological (Dobson, 2000, 2003, 2007; UNESCO, 2015, 2017, 2020) citizenship through the implementation of VE. To this end, a VE model was developed, implemented and refined during two iterative Action Research Cycles (ARCs) (Carr and Kemmis, 1986; Kember, 2000; Norton, 2009) with 3 different cohorts of FL students in tertiary institutions in Spain, Ireland and Germany. The VE model resulting from this study has been given the name PLANET VE in reference to the well-known environmentalist motto "save the earth, there is no planet B". From now on, this name will be used to refer to it in the text.

PLANET VE

...because there is no planet B

Figure 1: Logo of the PLANET VE.

The iterative collection of qualitative data obtained in each of the interventions and their subsequent analysis aimed to develop and refine a versatile and effective VE model comprising tasks and assessment materials and mentoring guidelines for teachers. To achieve this purpose, a number of research questions were addressed.

The effectiveness of VE for the development of linguistic (Brammerts, 2006; Marull & Kumar, 2020), intercultural (Belz, 2003, 2004; Furstenberg et al., 2001; Müller-Hartmann, 2007; O'Dowd, 2003; Ware, 2005; Furstenberg & Levet, 2014; Chun, 2015) and global (Leask, 2015; O'Dowd, 2019; Goodwin-Jones, 2019) competences has been well documented in the literature. The present study also explores how best to harness the potential of VE for the development of these key competences for the current context and adds to this ongoing debate with an innovative perspective by introducing ecological citizenship into the equation. As a result of the link between language teaching and the promotion of active citizenship (Byram, 2001, 2008, 2012, 2014; Byram et al, 2017; Byram and Goluveba, 2020), and given the urgency of achieving a more sustainable society to address the environmental crisis, this study suggests that the language classroom appears to be the ideal place to train green citizens. It is contended that this could be brought to practise through the implementation of VE projects in which international FL learners address environmental issues together in tasks dedicated to becoming critically aware and engaging in civic action. With this in mind, the following general question was formulated:

How can the goals of global and ecological citizenship be integrated into the field of foreign language education through virtual exchange?

Considering that the learning outcomes developed in the PLANET VE focusing on environmental issues (i.e. sustainable development (UNESCO, 2014; 2015; 2017) and ecological citizenship (Dobson, 2000, 2003, 2007)) have not yet been explored, a key question is:

1. In what ways can VE contribute to global and ecological citizenship development?

In addition, exploring the results derived from the adoption of the two common applications of VE (bilingual and lingua franca) in the present study offers the opportunity to compare and contrast the impact of the PLANET VE in each of these. Consequently, the following question arises:

2. What are the different affordances of the bilingual and lingua franca models in virtual exchange?

Finally, the need to train VE teachers so that they are equipped and prepared with the necessary skills to lead VEs and to offer sufficient and appropriate support and guidance to their students has been acknowledged in the literature (Stevens Initiative Virtual Exchange Impact and Learning Report, 2019; Dooly & Vinagre, 2021). Similarly, the experience of VE teachers suggests that, in contrast to general assumptions, intercultural learning and understanding does not automatically occur due to contact (Kern, 2000; Kramsch & Thorne, 2002) and VE participants do not tend to be naturally prepared to cope successfully with communication and collaboration in online contexts or the use of technology (O'Dowd et al, 2020; Ware, 2013) and could benefit from their teachers' guidance. Accordingly, the following question has been explored in relation to the PLANET VE:

3. How can teachers support students in their learning during a virtual exchange?

1.4. Methodology and Research Design

This study adopted an AR approach as its underlying methodology consisting in "self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out" (Carr and Kemmis, 1986, p.162). The conceptualisation of AR builds on previous notions that give importance to the role of teachers as key in moving the research field forward. Examples of this are Lawrence Stenhouse's (1975) notion of teachers as researchers of their own practice as a key aspect of successful curriculum development and the notion of the reflective practitioner (Schön, 1983) that highlights the relevance of reflection to both understand and redesign the educational practice in order to improve the learning experience.

A number of reasons led to the adoption of AR (Carr and Kemmis, 1986) in this study. First, it recognises the role of the teacher-researcher as an active participant and responsible agent throughout the research process. This is consistent with the nature of this research, which is part of a doctoral thesis involving a single teacher-researcher. At the same time, AR projects seek to gradually

include as many of those affected by the practice as possible in the research, which resonates with the philosophy of this student-centred study where learner reflections and testimonies are key to its findings. AR also places a strong emphasis on adopting measures to introduce beneficial changes in the classroom, which aligns with the aim of the present study: to explore and identify how a VE model could be designed so as to act as an effective teaching practice for enabling students' active participation in the global society from an ecological perspective. This is done in accordance with the cyclical nature of AR following an iterative process of planning, implementing, observing and refining the designed VE model. When it comes to the research design, this study is inspired by Nicolaou (2020), who in her dissertation explored the possibilities of VE for developing global competence and active citizenship of university students by implementing three iterative cycles of a VE project that was successively implemented and improved with different cohorts of students. Here, two iterative cycles of AR were followed that took place over 2 consecutive academic years (i.e. 2020/2021 and 2021/2022) with 3 diverse student cohorts adopting a bilingual approach in the first round and a lingua franca approach in the second one. Each of the cycles followed each of the 4 phases of AR and this process facilitated the evolution, through the triangulation of different qualitative data sources, towards obtaining an effective VE model for the development of global and ecological citizenship in the FL classroom.

Various tools were used to collect interactional and self-reporting data. Interactional data included videoconference transcripts and forum discussions. Self-reporting data involved pre and post VE interviews in the first round, an initial questionnaire and a final oral presentation in the second one and student portfolios in both rounds. Analysis was carried out adopting a qualitative content analysis approach which is a common approach in the field of VE research. It appears as a suitable approach to meet the present study's needs which comprise the examination of a large number of qualitative data to identify and interpret the patterns and meanings emerging from them in order to get a better understanding of students' learning experience and competence development during the VEs so that the best possible version of the PLANET VE can be achieved.

1.5. Significance of this Research

The present study contributes to the research effort of exploring how to best exploit the potential of VE in the context of FL education for the development of intercultural adding ecological citizenship to this ongoing discussion. It aspires to explore how to do so in an effective way by designing an innovative VE model, since previous VE projects have mostly not adopted this specific approach which combines the principles and objectives of global and ecological citizenship with those of FL education. In addition, this study draws attention to key works that can be used to plan, implement and assess VEs revolving around FL skills and global and ecological citizenship such as the CEFR (Council of Europe, 2001, 2018, 2020) for the development of EFL skills, the Global Competence Framework (OECD, 2018) and notions regarding the virtues of the ecological citizen by Dobson (2000, 2003, 2007). This study is also innovative in that it introduces the principles and objectives of education for sustainable development (UNESCO, 2015, 2017, 2020) in the FL classroom and field of VE by setting tasks that revolve around the thematic of ecological citizenship and sustainable development such as the SDGs.

The research undertaken also raises the question of the relevance and urgency of equipping FL students with a global ecological mindset. The importance of introducing the issue of

sustainability and ecological citizenship in the classroom has been addressed in the United Nations' SDGs, among which, Goal 4 that commits to quality education for all, is intentionally not limited to basic knowledge and skills but emphasises learning to live together sustainably. The particularity of this study is that it focuses on students learning to live together through intercultural interaction and collaboration and in a sustainable way by raising the issue of sustainability in tasks carefully designed to foster the development of the specific set of skills, knowledge, attitudes and virtues that characterise global ecological citizens.

As will be discussed in detail in section 2.3.3.4., a key addition of this thesis is that it also provides multiple reasons for claiming the FL classroom as the appropriate place to introduce ecological citizenship. Current approaches to FL education are characterised by encouraging the development of language skills while at the same time providing opportunities to acquire the values of active citizenship education and the ability to think critically. To achieve this goal and guide learners to critically understand today's complex global world, marked in large part by the environmental crisis, educators can use telecollaborative projects and draw on a range of complementary educational approaches, such as global citizenship education or education for sustainable development. A strong argument for the introduction of ecological citizenship in the FL classroom also lies in the fact that these action-oriented transformational pedagogies are not subjects per se, but educational approaches whose philosophy can be used to facilitate international dialogue, cooperation and action for sustainable development (UNESCO, 2014; 2015; 2017). Furthermore, the knowledge domains that a curriculum for the development of global-ecological citizenship should include do coincide with those of the FL education curriculum, as they involve the treatment of topics such as intercultural relations or environmental sustainability (OECD, 2018). However, while the literature recognises the desirability of students' participation in collaborative environmentally-oriented projects (Dobson, 2007; UNESCO, 2015, 2017, 2020) in fostering ecological competence, studies exploring the effect of international telecollaborative projects for these purposes are still scarce.

A further contribution of this doctoral thesis lies in the insights provided towards an understanding of the affordances of different approaches to VE (i.e. bilingual and lingua franca) (O'Dowd, 2021b) for the proposed model and the competences aimed. At the same time, this dissertation adds to the discussion on the aspects VE teachers need to consider when designing and implementing their projects (Ware, 2013; Stevens Initiative Virtual Exchange Impact and Learning Report, 2019; O'Dowd et al, 2020; Dooly & Vinagre, 2021) and provides specific guidelines for those interested in the development of the target competences discussed in the present study.

This research also contributes to the adoption of innovative research methods in the field of VE by triangulating students' self-reported data with actual interactional data since many of the previous studies researching VE report mainly on students' self-reported data. The collection and triangulation of multiple data sources of different nature in this research bring a more complete method of examining the learning experience of VE participants, enabling the researcher to compare and contrast students' perceptions and reflections with the actual situations they refer to. This allows for an evidenced-based evaluation of the VE experience. This also enables a more critical and objective evaluation of the potential of the PLANET VE. At the same time, the adoption of AR as the underlying methodology for this study has allowed the teacher-researcher to engage in self-reflective enquiry in order to improve her own teaching practice and the understanding of it.

In short, the results of this research provide the keys for VE teachers who want to approach the development of global and ecological citizenship in the field of FL teaching. The product of the research from a practice-oriented perspective is a versatile and effective VE model comprising tasks, materials, assessment tools and mentoring guidelines. Furthermore, this study explores the specific learning outcomes that are observed as a result of the implementation of the model, the affordances that the different language approaches present and those aspects that teachers need to take into account when embarking on this type of project.

1.6. Overview of Chapters

The current thesis is structured in 7 chapters in addition to the introduction:

Chapter 2: Literature Review: This chapter provides a comprehensive literature review of the related notions and theories studied for the purposes of this research according to three main themes: FL education, citizenship education and the pedagogical approach of VEs. The chapter reviews numerous recent models in various areas and pays particular attention to those used to assess students' learning: the CEFR in the case of FL competence development, the global citizenship framework (OECD, 2018) in terms of the knowledge, skills, attitudes and values of the global citizen and, finally, the principles, objectives and virtues of ecological citizenship following the ideas of Dobson (2001, 2003, 2007) and of education for sustainable development (UNESCO, 2017). In addition, the chapter explores the concept of VE by detailing its growth, as well as clarifying what this approach is and what it is not and the terminology used to refer to it. It also reviews the different models of VE and their learning outcomes and pays particular attention to the main issues that teachers and researchers need to consider when designing and implementing successful VEs. This serves to lay the foundations for the principles and models on which the PLANET VE is based.

Chapter 3: Methodology and Research Design: This chapter reports on AR as the underlying methodology for the design and implementation of this research. It presents its characteristics and justifies its selection as the most appropriate methodology for achieving the objectives and addressing the questions of this study. The chapter also presents the organisation of the research design into two iterative ARCs as well as a review of other previous projects that served as inspiration for the design of the PLANET VE and the context of the study. A general outline of the phases of the study and their associated activities and results is also presented, providing a general timeline of this research. In addition, this chapter presents a detailed description of the methodology of this study with reference to both the types of data and the corresponding collection procedures and tools, and the approaches and tools selected for their analysis. The chapter concludes by attending to issues of validity and reliability of the study as well as ethical considerations.

Chapter 4: First Action Research Cycle (2020/2021): This chapter presents each of the phases of the first iterative AR cycle (i.e. ARC1) of this study in detail. During ARC1 a total of 120 undergraduate students from Spanish and Irish HE institutions coming from different fields of expertise participated in the VEs. In VE1 25 students of English Studies (SP) interacted and collaborated with 54 students (IE) who studied Translation. In VE2 22 students of Tourism (SP) interacted and collaborated with 19 students (IE) who studied Business. The stages described comprise: action planning, action taking and evaluation and action reconceptualization. In other

words, the chapter reports on the VE design, implementation and analysis and reflects on the findings to propose enhancements for the next iteration (i.e. ARC2).

Chapter 5: Second Action Research Cycle (2021/2022): This chapter presents the second round of implementation (i.e. ARC2) in which a total of 43 undergraduate students in Spanish and German HE institutions participated. There were 20 students of English Studies in the case of the Spanish University and 23 students of Teacher Education in the case of the German one. Each of the phases of ARC2 is detailed including: action planning, action taking and evaluation and action reconceptualization. In other words, the chapter reports on the VE design, implementation and analysis and reflects on the findings to propose enhancements for the final version of the PLANET VE.

Chapter 6: Results and discussion: This chapter provides a detailed description of the final PLANET VE based on the findings stemming from the implementation of the two iterative ARCs. It then presents and discusses the answers to each of the questions of this research: (1) How can the goals of global and ecological citizenship be integrated into the field of foreign language education through virtual exchange?; (2) In what ways can VE contribute to global and ecological citizenship development?; (3) What are the different affordances of the bilingual and lingua franca models in virtual exchange? and (4) How can teachers support students in their learning during a virtual exchange?.

Chapter 7: Conclusion: This chapter aims to provide the reader with a brief overview of the key findings identified in this study. It argues the significance of the research carried out and also acknowledges its limitations. The chapter concludes outlining some recommendations for future research.

1.7. Chapter Conclusion I

Chapter I aimed to situate the reader by providing background information about the key concepts and context within which the present study has been conducted. It explains the research problem addressed and indicates the overall and specific objectives of the study in relation to it. This first chapter also includes a brief description of the methodology and research design, followed by an argumentation on the significance of the research undertaken. The chapter concludes offering the reader an overview of the structure followed throughout the dissertation.

In the following chapter I conduct a comprehensive literature review on three main subjects: FL education, citizenship education and the pedagogical approach of VE. In my study, these different areas are brought together in a model of VE, the PLANET VE, that builds on the main ideas identified in this review.

CHAPTER II: LITERATURE REVIEW

2.1. Introduction

The literature review presented in this chapter covers 3 key areas: FL education, citizenship education and the pedagogical approach to VE. As will be argued throughout this chapter, work on the integration of global ecological citizenship in FL education is scarce, despite being well suited to this task. This is why the pedagogical approach to VE is addressed in this study as an enabler for the development of both FL competences and global and ecological citizenship. In order to identify how best to maximise the potential of VE for the development of these target competences, its principles and objectives are explored here, as well as the different models of implementation, its learning outcomes and modes of assessment, and how educators can best apply this educational practice. In turn, numerous recent approaches and models in these different areas are reviewed and special attention is given to those used to answer the research questions and assess student learning. With regard to FL education, the principles of the communicative approach which seeks the development of communicative competence (CC) (Hymes, 1972; Canale and Swain, 1980; Canale 1983), as well as those of the intercultural approach which seeks the development of ICC (Byram, 1997) are taken as a reference. The work used for the analysis of competence development in terms of FL skills is the CEFR (Council of Europe, 2001, 2018b, 2020). In turn, the principles and objectives guiding this study in terms of citizenship education take as reference various compatible and overlapping streams such as intercultural (Byram, 2008), democratic (Council of Europe, 2018a), global (UNESCO, 2014; OECD, 2018) and ecological (Dobson, 2000, 2003, 2007) citizenship education. While the analysis of students' competence development in this regard focuses on global and ecological citizenship with reference works such as the global competences framework (OECD, 2018) and Dobson's (2000, 2003, 2007) virtues of the ecological citizen.

The main ideas identified will be brought together in the following chapters for the development of a VE model (PLANET VE). In it, participants will be able to develop their skills in order to achieve open, appropriate and effective communication in a FL, as well as to acquire the set of competences that will enable them to participate in and analyse intercultural encounters and to practise active global ecological citizenship.

2.2. Foreign Language Education: From the Communicative Approach to the Intercultural turn

Prior to the social changes of the late 20th and early 21st centuries, language learning was seen as something reserved only for the privileged classes and as a potential threat to national identity, as it exposed learners to new beliefs and values (Byram, 2008). Therefore, the methodology of FL teaching and learning was initially based on translation methods, which involved: "seeing another language and the values and beliefs it embodies through the framework of one's own language, and one's own beliefs and values" (p.5). However, what was seen as a threat centuries ago is now valued as the great potential of language learning: the possibility, through a shared language, to experience another reality, to challenge the taken-for-granted and to develop links with people of other languages and cultures.

A key moment in this shift in the conception of FL education came with the advent of what is known as the communicative approach which started with the concept of communicative competence by Hymes in 1972. Communicative competence prioritises the actual use that speakers make of language, giving importance to language in action. It was Chomsky who first introduced the term competence in 1965, referring to the speaker-listener's knowledge of a language and differentiating it from performance, which implies the actual use of language in concrete situations (Chomsky, 1965). However, Hymes' proposal emerged as an alternative to Chomsky's conceptualisation of competence since this is based "on a completely homogeneous speech community" to which Hymes claims that "only under idealisation could performance directly reflect competence; in reality, it obviously could not". Instead, Hymes (1972) introduced a sociolinguistic perspective by defining the term communicative competence as an "inherent grammatical competence, but also as the ability to use it in a variety of communicative situations". For Hymes, indeed, "any stretch of discourse is an imperfect indication of the knowledge that underlies it" but what may be grammatically imperfect can nevertheless adequately fulfil a social act and meet the communicative expectations of interlocutors (Hymes, 1972, p.272). In sum, the communicative approach proposed to replace unrealistic notions such as an homogeneous speech community, perfect competence or independence of socio-cultural features by a socially oriented communicative behaviour based on psycholinguistic and sociolinguistic knowledge of language and the ability to use that knowledge.

It should be noted that when Hymes wrote about communicative competence it was from the perspective of social interaction and that it was a few years later when Canale and Swain (1980) applied this concept to the context of FL education. They divided communicative competence into specific competences: grammatical, discourse, sociolinguistic and strategic competence. Grammatical competence refers to knowledge of the language code, which implies that the discourse produced is formally possible. Sociolinguistic competence is concerned with appropriate adaptation to sociocultural rules of use. Strategic competence is based on the identification and successful repair of communication breakdowns and, finally, discursive competence, added later by Canale in 1983, involves the production and comprehension of oral and written texts. It is worth stressing here the prominence acquired by the interactional function of discourse thanks to the communicative approach. The correct development of the interactional function through FL teaching will help learners to be prepared for real communicative scenarios. Learners benefit from engaging in real interaction in order to learn aspects such as when to speak, when to listen and how to negotiate meaning (Richards and Renandya, 2002).

From the above it can be concluded that the communicative approach which gives importance to interaction, language in action and the actual use that people make of language marked the advent of communicative language teaching and raised awareness of the importance of not only knowing grammar but being able to use language in a culturally and socially appropriate way. Consequently, this approach introduced changes in the materials, methods and objectives of FL teaching (Byram, Gribkova and Starkey, 2002). A relevant example of this is the Council of Europe's CEFR (2001, 2018b, 2020) which embodies the principles of the communicative approach and is the tool used in Europe for setting the standards expected at each level of learning, teaching and assessment in a FL.

The intercultural approach to FL teaching and learning has been ongoing for two decades and its principles are also present in the CEFR. While today the development of communicative competence in the FL has become a primary objective in curricula, the development of what is known as Intercultural Communicative Competence (ICC) has also gained great importance over the last 20

years because of its relevance in preparing FL learners to cope successfully not only with communication in a FL but also with establishing and developing intercultural relations. The next important shift in FL education, the one to the intercultural approach, was marked by publications such as Kramsch's 'Context and Culture in Language Teaching' (1993) or Byram's 'Teaching and Assessing Intercultural Communicative Competence' (1997), which constituted a turning point in the importance of the intercultural dimension in FL education. While the communicative approach in FL education had focused primarily on the development of communicative competence by encouraging learners to learn to communicate effectively, efficiently and appropriately (often through the teaching of a range of polite formulas for each context in addition to the development of language skills), ICC builds on it and goes a step further by also including the establishment and development of relationships with people who have a different set of beliefs, worldviews and practices from one's own.

Now, before moving on to the exploration of the concepts of IC and ICC, it is important to clarify the difference between these terms: IC implies that the interlocutors are using their mother language, while ICC is the result of being able to use IC in a FL (Byram, 1997). ICC combines "the ability to use a language not only with correct application of knowledge of its grammar but also in socially appropriate ways…with…the importance of the relationship between language and culture" (Byram et al., 2017, p.xx). Although the field of FL education is not the only one in which the ICC can be taught and assessed, it is particularly suitable for this because of its concern to provide learners with the experience of otherness and the use of a FL for communication with those considered Native Speakers (NSs) and also in situations where they use the language as a lingua franca.

The outcome of teaching for IC or ICC is the intercultural speaker. This term was coined by Byram and Zarate (1997) while writing a paper on the evaluation of van Ek's (1986) socio-cultural competence. The problem was that van Ek's competence took the NS as a reference both at the linguistic and cultural level. That is why the authors felt the need to create a term to refer to those interlocutors involved in intercultural interaction: "The intercultural speaker is someone who is aware of cultural similarities and differences, and is able to act as mediator between two or more cultures, two or more sets of beliefs, values and behaviours" (Byram 2008, p. 57). It was Kramsch who in 1998 went ahead with the conceptualisation of the 'intercultural speaker' in contrast to the figure of the NS as a reference. The idea presented by both Byram and Kramsch is that the idealised and erroneous idea of imitation, aspiration and assimilation with respect to the NS must be replaced by the much more realistic and convenient idea of the intercultural speakers. Throughout their life experiences, they acquire a series of rules of interpretation through which they learn, analyse and reflect on the beliefs, worldviews and practices of others and also their own, creating a critical and proper sense of intercultural experience (Kramsch, 1998; Byram, 2008). Rejecting the concept of the NS as a referent and aspiration is also reflected in the CEFR (2001) in which learners are considered as 'complete' and autonomous individuals who in no case have to aspire to become 'almost native'.

When introducing ICC, Byram (1997) begins by laying the foundations for the subsequent presentation of his concept, explaining van Ek's model of 'communicative ability' by defining it as a 'useful starting point'. The six competencies that make up van Ek's 'communicative ability' together with autonomy and social responsibility are linguistic, sociolinguistic, discourse, strategic, socio-cultural and social competence. What Byram does is to adapt the concepts of social, strategic and socio-cultural competence to include them in his own model, in which the reference figure is no longer the 'native speaker' but the 'intercultural speaker'. However, because of his rejection of the NS

as the referent, Byram needs to redefine linguistic, sociolinguistic, and discourse competencies. Byram adopts the interactionist perspective in that he believes that FL education should focus on students acquiring the set of competences that will enable them to participate in and analyse intercultural encounters, rather than showing them the other cultures through ready-made interpretations and representations. Based on the above, he begins to explain his model and the series of attitudes, knowledge and skills that make it up. In view of this, he clarifies that he intentionally avoids using the term 'culture' as much as possible and instead proposes the phrase 'beliefs, meanings and behaviours'. In addition, Byram explains that he uses objective formulation to ensure that all aspects of the ICC are included (comprehensiveness), that the relationship between all aspects is clear (coherence), and that their exposure is accurate and transparent so that it can be applied in FL education curriculum design.

Once we have laid the foundations on which the model is built, we move on to explain what the intercultural communication factors of Byram's (1997) ICC model consist of. He introduces the term *savoir* as a 'holistic term' to refer to attitudes, knowledge and skills and adds an infinitive to differentiate each. The 5 savoirs include: savoir être (attitudes), savoir s'engager (critical cultural awareness), savoirs (knowledge), savoir comprende (skills of interpreting and relating) and savoir apprendre/faire (skills of discovering and interacting) (Byram, 1997). This set of *savoirs* adds to the common goals of the communicative curriculum, the ethnographic perspective, the critical awareness and the liberal morality giving rise to the intercultural curriculum (Corbett, 2003). Figure 2 shows the 5 *savoirs*.

	Skills interpret and relate (*savoir comprendre*)	
Knowledge of self and other; of interaction: individual and societal (*savoirs*)	**Education** political education critical cultural awareness (*savoir s'engager*)	**Attitudes** relativising self valuing other (*savoir être*)
	Skills discover and/or interact (*savoir apprendre/faire*)	

Figure 2: the 5 *savoirs* as shown in Byram, 1997, p.34.

The set of attitudes of the intercultural speaker include "curiosity and openness, readiness to suspend disbelief about other cultures and belief about one's own" as a "pre-condition for successful intercultural interaction" (Byram, 1997, p. 34). In order to achieve this goal and encourage attitudes of respect for and openness to the culture of others while decentring one's own, Corbett (2010) points to resources such as literary texts and other cultural forms of expression from the target culture as well as the technology and the internet that make possible contact between learners from different cultures as providing useful and effective tools.

At the same time, Byram (1997) divides knowledge into two categories which are as follows: "knowledge about social groups and their cultures in one's own country, and similar knowledge of the interlocutor's country" or in its shortened form "knowledge of the self and the other" and "knowledge of the processes of interaction at individual and societal level" or in its shortened form "knowledge of how interaction occurs" (p.35). Byram signals that while the first is always present in individuals up to some degree, the second needs to be developed. As Corbett (2010) indicates this knowledge can be developed in the classroom through activities implying the achievement of a certain level of

understanding of how interaction works through exploration, description and comparison of the behaviour of different social groups and it is important for teachers to lead learners in avoiding stereotyping as each individual can interact in many different ways depending on the context.

The set of skills of the intercultural speaker proposed by Byram can also be classified into two different categories: "the skills of interpreting and relating" and "the skills of discovery and interaction" (Byram, 1997, p. 37). Belz (2003) does not agree with Byram's use of the term skills, since she argues that " it carries with it the negative connotation that these components might be learnt by a simple technology and transferred unproblematically from one context to another" when in reality "intercultural interpretation, relation, discovery, and interaction are complex human activities that shape and are shaped by an intimate interface of macro- and micro-sociological factors, including both history and power" (Belz, 2003, p. 71). Corbett (2010) points to ways to develop these skills in the classroom: The skill of knowing how to interpret and relate information/meaning can be worked through exposure to real materials from the target language/culture as they show the linguistic conventions according to the different cultural purposes. By exposing learners to the different genres either written or spoken (letters, newspapers, emails, conversations, etc…) they will become familiar with the conventions governing them. Factors such as non-verbal communication or turn-taking need to be also taken into account as they also convey different meanings depending on the culture they are being used. At the same time, the skill of knowing how to discover cultural information implies the systematic observation and description of cultural practices typical from ethnography and the observation, description and analysis of sign systems (fashion, dance, non-verbal communication, language…) typical from semiotics (Corbett, 2010).

The last *savoir* conforming the concept of ICC, critical cultural awareness or political education, is central to achieve the aim of moving FL education beyond strict linguistic instruction and can be defined as "an ability to evaluate critically and on the basis of explicit criteria perspectives, practices and products in one's own and other cultures and countries" (Byram, 1997, p. 53). This *savoir* involves dealing with ideology and politics and the importance for learners to engage in learning to be critically aware of cultural behaviours (Byram, 2001; Porto, 2013) and is the closest to education for intercultural citizenship as we will see later on (Byram, 2008, 2012).

2.2.1. The Common European Framework of Reference for Languages

This research has been developed and implemented in the context of FL education in HE in the European Union (EU). Against this background, the CEFR (Council of Europe, 2001), a tool that that many of the member states use in their curriculum development and that adopts both the communicative and intercultural approaches to FL teaching and learning, has been selected as the framework for the analysis of students' development of FL skills in their VEs.

EU policy on language education aims to promote multilingualism, European identity and active democratic citizenship. When it comes to multilingualism, The White Paper (European Commission, 1995), for instance, encourages the acquisition of proficiency in "several community [i.e. EU] languages" as a "precondition if citizens of the EU are to benefit from the occupational and personal opportunities open to them in the border-free single market" while also highlighting that this FL proficiency must be accompanied by "the ability to adapt to working and living environments

characterised by different cultures" (p.67). The concept of European identity is also present in the White Paper (European Commission, 1995) where acquiring proficiency in community languages is considered to be also key in getting to know other people and in building European identity: "Proficiency in languages helps to build up the feeling of being European with all its cultural wealth and diversity and of understanding between the citizens of Europe" (p.67). The concept of European identity has been present since the founding of the Council of Europe with the intention of creating a sense of unity after the war by putting emphasis on the shared European culture and heritage (Byram, 2008). Over the years it has always been considered that FL learning has a direct impact on the development of a European identity because, as Byram (2008) indicates, language learning can help learners to reflect on their own national and international/European identity, helping them question culture-bounded questions such as values or meanings that they could have taken for granted. Among the central essential features of European identity are democracy and respect for human rights. With this in mind, the third feature of the EU policy on language education is the promotion of active democratic citizenship. The Council of Europe works also in encouraging active and democratic participation in society through the implementation of education for democratic citizenship as we will explore in detail later on. This is related to language learning because competence in FLs facilitates active participation in the European multilingual context (Byram, 2008).

The CEFR, first published in 2001 by the Council of Europe, is proof of the aforementioned engagement of the Council of Europe in the language field and has contributed to the implementation of its language education principles. Its communicative approach can be appreciated in the fact that it proposes an analysis of language development based on communication and the use people make of languages, to which is added the intercultural approach as a central objective "to promote the favourable development of the learner's whole personality and sense of identity in response to the enriching experience of otherness in language and culture" (Council of Europe, 2001, p.1). This publication constitutes a key tool that provides "a common basis for the elaboration of language syllabuses, curriculum guidelines, examinations, textbooks, etc. across Europe" (ibid). The CEFR offers a tool of reference for FL teachers in Europe setting a common framework in language learning among the European countries that makes communication, cooperation and recognition among countries in this field much easier. The CEFR levels are: Basic user (A1, A2), Independent user (B1, B2) and Proficient user (C1, C2). In it the skills are divided into: reception (listening and reading), interaction (spoken interaction and written interaction) and production (spoken production and written production).

17 years later, in 2018, the Council of Europe published the CEFR Companion Volume with new descriptors as an answer to the requests of continuing developing and updating it, particularly: "the illustrative descriptors of second/foreign language proficiency" as well as complementing "the original illustrative scales with descriptors for mediation, reactions to literature and online interaction" (p.21). A key aspect of this Companion Volume for this study together with the introduction of online interaction is the development of descriptors for mediation, a key feature of the intercultural speaker that includes two categories relevant for this research: mediating communication that can be defined as "the ability to 'act as an intermediary between interlocutors who are unable to understand each other directly-normally (but not exclusively) speakers of different languages" (Council of Europe, 2001, p. 87) and mediating concepts that can be defined as "the ability to bring the culture of origin in the foreign culture into relation with each other' and, inter alia, 'the capacity...to deal effectively with intercultural misunderstanding and conflict situations" (pp.104-105).

Therefore, this research has taken both the original CEFR (2001), its Companion Volume (2018) and the last published version of the Companion Volume (2020) as reference works to guide the analysis of students' development of FL skills paying special attention to the categories and related descriptors for receptive, productive and interactive skills as well as linguistic and conceptual mediation.

As explained in the CEFR (2020), productive skills are very relevant both in academic and professional contexts and, since these are not acquired naturally, FL education should provide FL learners with opportunities to put them into practice. Consequently, in order to engage VE participants in diverse activities that allow them to develop skills such as speaking and writing in the target language, the PLANET VE has taken as a reference the CEFR (2020) production activities as seen in figure 3 below.
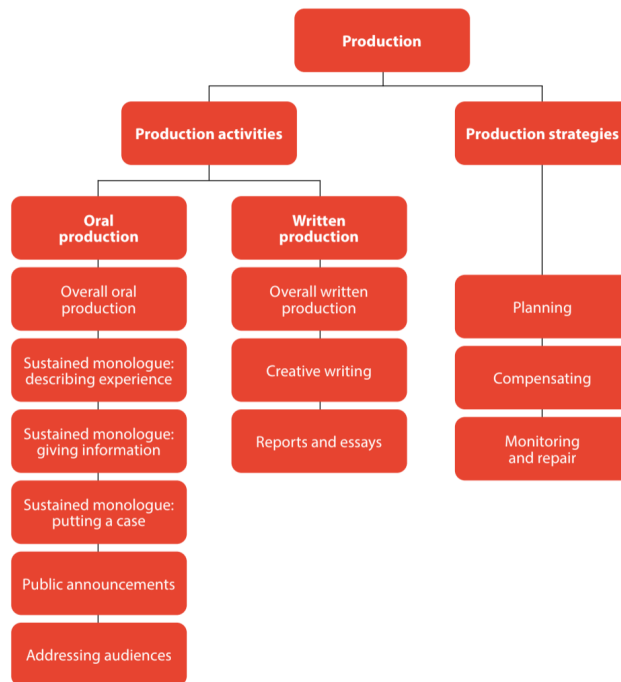
Figure 3: Production activities and strategies (Fig. 12, p. 61 in the CEFR Companion Volume, 2020).

The PLANET VE has also seeked to develop VE participants' reception skills which involve successfully "receiving and processing input" (CEFR, 2020, p.47) in the target language. To that end, diverse activities including oral, audio-visual and reading comprehension have been included in the tasks proposed. Figure 4 presents the CEFR (2020) reception activities and strategies which were taken as a reference in designing the tasks of the VE.
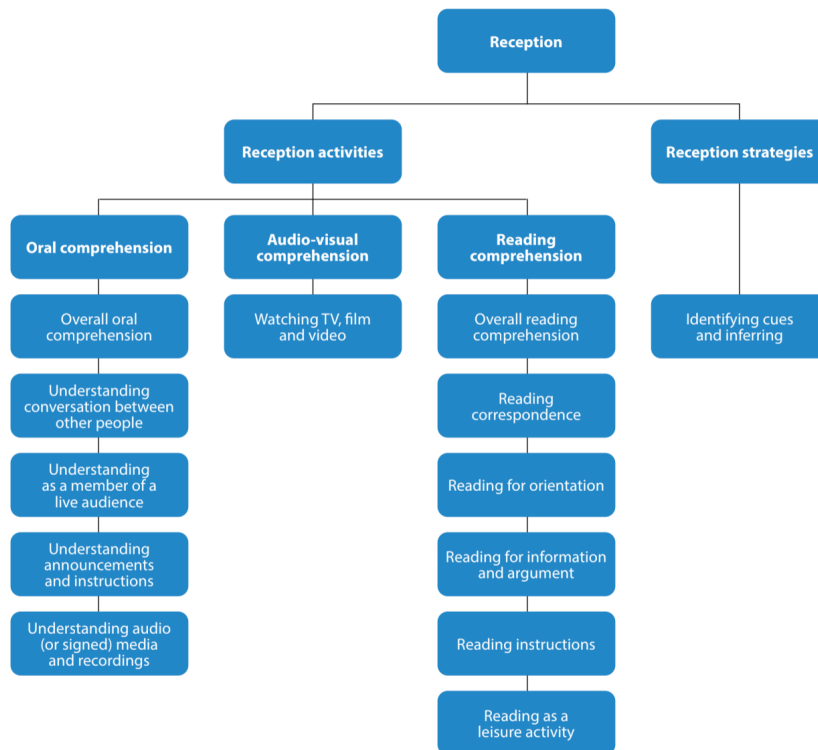
Figure 4: Reception activities and strategies (Fig. 11, p. 47 in the CEFR Companion Volume, 2020).

Finally, interactive skills including oral, written and online interaction constitute the core and essential part of VE. Interaction is defined within the CEFR (2020) as an act in which two or more interlocutors participate in the co-construction of discourse whether for collaborative, interpersonal or transactional purposes. This involves interaction strategies such as turn-taking, cooperation and asking for clarification which are key to both communication and collaborative learning processes. The CEFR (2020) stresses that the scales provided pay more attention to spoken than to written interaction since when the CEFR was created (2001) written interaction was not what it has become today (i.e. writing in much the same way as speaking, in a slowed-down dialogue). The new category of online interaction has been developed to reflect this. Figure 5 shows the interaction activities and strategies (CEFR Companion Volume, 2020) that were taken as a reference in the present study.
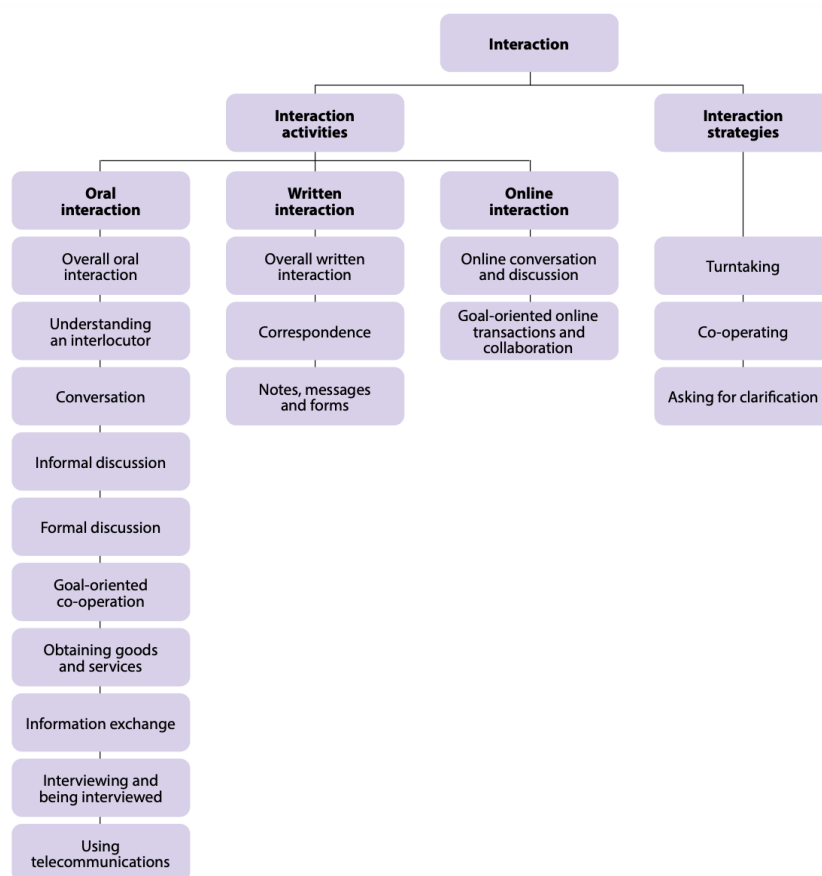
Figure 5: Interaction activities and strategies (Figure. 13, p. 7, CEFR Companion Volume, 2020).

In summary, this study has followed the activities and strategies presented in the CEFR (2020) as a reference for the design and inclusion of receptive, productive and interactive activities with the aim of developing these skills in the FL.

2.3. Citizenship Education

In recent years, in contemporary democratic politics, the concept of citizenship has become fundamental at both the theoretical and practical levels. This is due to the social changes of recent times in Western societies, marked by the change in the role and relevance of the State due to the strong irruption of the international dimension in politics with issues of great relevance being dealt with such as globalisation, migratory phenomena, technological change and environmental problems (Sáiz, 2003). Consequently, FL education has in recent decades entered the so-called 'social turn' which recognizes the value of learners and educational processes as agents shaping the socio-cultural reality and therefore promoting and preparing learners to take social action and practise active citizenship (Belz, 2002).

2.3.1. Education for Democratic Citizenship in the European Context

Democracy is "a form of governance by or on behalf of the people...responsive to the views of the majority" (Council of Europe, 2018a, p. 23). According to this definition, in order for democracy to function, it is necessary to have a citizenry formed in the democratic culture that upholds appropriate values, attitudes, and behaviours. In order to achieve this purpose, education for democratic citizenship, as will be discussed in this section, is indispensable.

The 46 states conforming the Council of Europe are committed to implementing education for democratic citizenship, that can be defined as "a set of practices and principles aimed at making young people and adults better equipped to participate actively in a democratic life by assuming and exercising their rights and responsibilities in society" (Council of Europe, 2004, p. 12). The Charter on Education for Democratic Citizenship and Human Rights education (EDC/HRE) Recommendation CM/Rec (2007) sets 4 main objectives to be pursued by each individual. These are: "preparation for the labour market; preparation for life as active citizens in democratic societies; personal development; the development and maintenance of a broad, advanced knowledge base" (Council of Europe, 2018a, p. 14). In the European context, the term 'active citizenship' was introduced in the European Commission Lisbon 2010 Strategy as "a way of empowering citizens to have their voices heard within their communities, a sense of belonging and a stake in the society in which they live, the value of democracy, equality, and understanding different cultures and different opinions" (European Commission, 2008, p. 8). In 2008, the European Commission presented 'a theoretical model of active citizenship' based on the assumption that, "through learning experiences such as formal education, civic competence (civic knowledge, skills, attitudes and values) is developed, and this enables people to become active citizens" (p. 6).

However, despite the great potential of education for promoting active participation in society be it formal or informal, identifying the real impact that it has on active citizenship is indeed really complex due to the several surrounding factors that affect it. The environment in which each learner lives (family, friends and community) positively or negatively influences him or her in respect to taking action. Even if a student is willing to take action in society, he or she may encounter financial, time, location and information barriers that prevent him or her from doing so (European Commission, 2008). Against this background, in the context of formal education, engaging students in projects of active citizenship appears to be a suitable tool for the development of the attitudes, knowledge and skills necessary for students to be prepared for successful action taking.

Different models of citizenship have emerged in recent decades that are relevant to this study and whose features overlap with each other such as Byram's Intercultural Citizenship Framework (2008), the Council of Europe's Democratic Citizenship: CDC Framework (2016; 2018a) or the different models of global citizenship such as those published by UNESCO (2014) or the OECD (2018). While the OECD framework has been adopted for the analysis of students' global citizenship development in this study, the principles and ideas put forward in the other models also align with and inform the present research.

As we saw in the section devoted to FL education, Byram's proposal of the concept of ICC in 1997 greatly contributed to a shift towards the intercultural approach in FL teaching and learning. Some years later, in 2008, Byram presented his Framework for Intercultural Citizenship adding "a

new dimension by combining language education with political education as a response to internationalisation" (p. 157). As he argues, the relationship and compatibility between political and ICC education are made visible through their common sets of attitudes, knowledge and behaviours providing a suitable framework for designing a joint curriculum. As discussed in the presentation of the different *savoirs* that make up the concept of ICC, critical cultural awareness or *savoir s'engager* that can be defined as "an ability to evaluate, critically and on the basis of explicit criteria, perspectives, practices and products in one's own and other cultures and countries" (Byram, 1997, p.53) is closely related to the concept of intercultural citizenship that poses FL teachers with the responsibility of helping learners to develop their language skills while providing them with opportunities to acquire the values of education for democratic citizenship and the ability to think critically (Byram, 2008). But, what are the aims of this kind of political education? Gagel (2000) identifies three: first "learning to consider personal involvement in political action as desirable", second "learning to recognise democratic forms of action (and only democratic forms) as values; these can be called democratic 'virtues'" and finally "acquiring interest in public affairs, being prepared to be interested in political resolutions of social problems" (p.24). Building on these aims, Byram divides his framework for intercultural citizenship into three levels: first, 5 over-arching orientations that include the cognitive, evaluative and action orientations from the tradition of political education and the comparative and linguistic orientations from language education, second, the specific competences related to each of those orientations and third, the specific objectives that interrelate political and language education for a feasible joint curriculum design (see Byram, 2008 for an specification of the orientations, competences and objectives of intercultural citizenship).

The PLANET VE is particularly aligned with a number of key ideas raised by Byram (2008) in his Framework for Intercultural Citizenship. As he argues, FL education can "complement and enrich" education for democratic citizenship by providing students with "the linguistic competence necessary to engage with people of other countries and languages…but also, in the capacity for critical cultural awareness, by introducing a perspective of mediation and negotiation" (pp. 164-165). A second idea raised by Byram (2008) of particular relevance to this study is the planning of a curriculum involving tasks devoted to engaging students in taking action: "such a task…takes learners beyond the assumptions of their own cultures and involves them in an activity that is…undertaken in a transnational community…[and] urges them to critical reflection on their own society and what it expects of its citizens" (p. 206).

Another publication particularly relevant to the ideas presented in this study and that builds on the European tradition of political education is 'The Reference Framework of Competences for Democratic Culture' (RFCDC) published by the Council of Europe in 2018. Its aim, as its foreword states is "to support member states in developing open, tolerant and diverse societies through their education" (Council of Europe, 2018a, p. 5). This publication presents a model of 20 competences (divided into values, attitudes, skills and critical knowledge and understanding) as well as descriptors for each of them, which are written in the form of learning outcomes based on observable behaviours so that both educators and students can plan and assess learning. The framework refers to the term 'competence' as: "the ability to mobilise and deploy relevant values, attitudes, skills, knowledge and understanding in order to respond appropriately and effectively to the demands, challenges and opportunities that are presented by a given type of context" (Council of Europe, 2018a, p. 32). Therefore, if we speak of democratic competence the context of which the definition speaks will be the democratic one and if we speak of IC the definition will be the same but the context will be the intercultural one. In the context of this study (i.e. the EU), whose society is multicultural, IC is

considered to be an integral part of democratic competence (Council of Europe, 2018a). In order to be considered competent, individuals need to 'mobilise and deploy' all the competences needed for each specific context (intercultural, democratic) at the same time. The model is formed up by 20 competences subdivided into values, attitudes, skills, and knowledge and critical understanding as figure 6 illustrates:
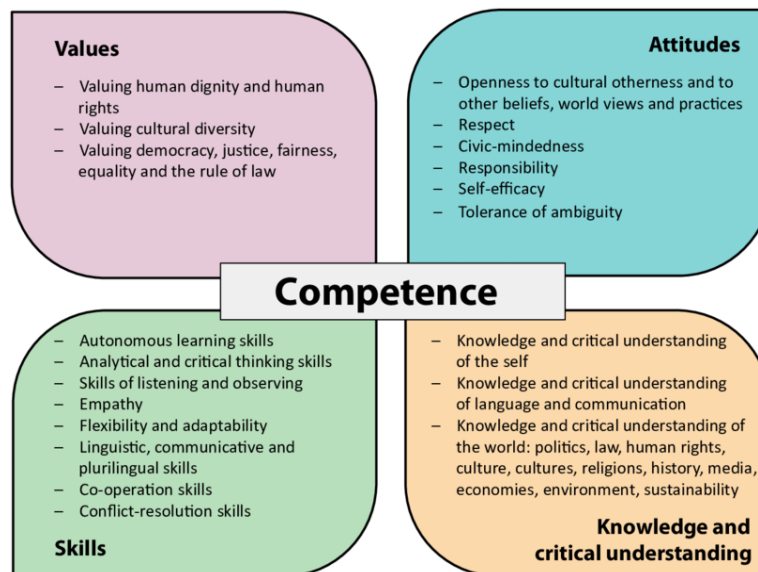
Figure 6: The 20 competences in the model of the CDC (Council of Europe , 2018a, p. 38).

While the RFCDC (Council of Europe, 2018a) offers a document of reference for the planning and implementation of the teaching, learning and assessing of the democratic competences and intercultural dialogue in a joint and complementary manner, educators using it should bear in mind that no level of competence is considered inadequate and all levels are nevertheless amenable to improvement. This tool seeks to develop democratic citizenship by forming learners in democratic culture and intercultural dialogue. Finally, it is also worth mentioning that, as Barrett (2016) indicates, this model also inherently entails a perspective of global citizenship, the type of citizenship that we will discuss next and on which this study is particularly focused.

2.3.2. Global Citizenship

As we have seen so far, recent years have been particularly prolific in terms of models of education for citizenship. In addition to the models already explained such as intercultural (Byram, 2008) or democratic citizenship (Council of Europe, 2016; 2018a), models of global citizenship have been developed (UNESCO, 2014; OECD, 2018), as a response to the present global context. Global citizenship can be defined as "the main outcome of international education to educate graduates who will be able to live and work in the globalised world" (Deardorff & Jones, 2012, p. 295) and in the context of VE this type of citizenship is the one that seems to be gaining more prominence (O'Dowd, 2019). With this in mind, the discussion regarding the knowledge, attitudes, skills and values acquired by students draws upon the conceptualisation of these components provided by the Organisation for Economic Co-operation and Development (OECD) in its model published in 2018 as will be discussed in section 2.3.2.2. But before it is important to detail the principles and objectives of global citizenship education.

2.3.2.1. Principles and Objectives of Global Citizenship

Definitions of global citizenship abound and there is no single definition. However, all definitions agree in considering it as the appropriate response to the interdependent and changing global context through the implementation of a set of attitudes, values, skills and knowledge to address the opportunities and challenges of the present. The following definition of global citizenship in particular, offered by the OECD (2018) has been the one leading this study's analysis: "Global competent individuals can (1) examine local, global and intercultural issues, (2) understand and appreciate different perspectives and worldviews, (3) interact successfully and respectfully with others, and (4) take responsible action toward sustainability and collective well-being" (OECD, 2018, p. 4) (Numbers have been added to indicate the 4 overlapping dimensions conforming global citizenship).

In this study two publications on global citizenship education are used as reference works. First, 'Global Citizenship Education' published by UNESCO in 2014 has informed this study in its conception of the principles and objectives of global citizenship education. This publication was issued in response to the growing need of member states to educate their citizens to become responsible global citizens and as a sign of their commitment to this type of education since UNESCO has established global citizenship education as one of its main educational objectives for the period 2014-2021 (UNESCO, 2014). The main reference work and the one that has been used for the analysis of students' attitudes, knowledge and skills development is the OECD PISA Global Competence Framework (OECD, 2018). The acronym PISA stands for 'Programme for International Student Assessment' and what this programme has been doing since 2000 is measuring the performance of 15-year-old students worldwide in key knowledge areas (mathematics, science and reading) with the aim of obtaining comparable data from different education systems in order to work towards improving education worldwide. That said, the fact that PISA has developed this framework for measuring global competence makes it clear to what extent the development of global competence and citizenship is relevant to education systems worldwide. Although the participants in this study are university students, this framework and its materials for measuring the development of global competence are suitable enough for our purposes and have therefore been adapted to suit the specific context of the study. Despite the fact that the framework (OECD, 2018) uses the term 'competence' and not 'citizenship', the difference between these two concepts is found in the active taking of social action in citizenship and therefore it is equally valid for us since the idea remains the same.

Global citizenship refers to a sense of belonging that goes beyond identification with the nation state and appeals to a sense of common humanity. It attaches importance not only to peaceful and respectful relations between humans around the world but also to their respectful and sustainable relationship to the environment. Education for this type of citizenship focuses on students becoming people who relate to and act in the local and global context in a conscious and critical manner according to values of respect for diversity (UNESCO, 2014). Global citizenship education seeks to train responsible and conscious citizens who will take an active part in both their national and global spheres so that they can face the challenges and opportunities that this interconnected and interdependent world presents (Abdullahi, 2010). It is important to clarify and emphasise that global citizenship is not a separate subject in itself, but that this philosophy can be used in the teaching of any subject. What global citizenship education does in both formal and non-formal settings is to use methodologies based on action, dialogue and international cooperation, often through international

partnerships. We will see how to bring this to educational practice when exploring the pedagogical approach of virtual exchanges.

This kind of education that makes students more conscious and promotes taking action for real life issues is known as transformative pedagogy and allows students to learn and apply the 'think global, act local' motto (UNESCO, 2014). This effort of global citizenship education for linking the global and the local 'as a continuum' put into practice is known as the skill of 'de-centring', meaning being able to "identify commonalities across space, time and cultures, and to develop skills, knowledge and understanding to play an active role in the global community" (UNESCO, 2014, p. 20). However, it should be noted that the concept of global citizenship is not without controversy, and a particularly important point is that ways must be found to encourage universality while respecting uniqueness (UNESCO, 2014). The domains of knowledge that a curriculum for the development of global citizenship should include are (OECD, 2018): "culture and intercultural relations, socio-economic development and interdependence; environmental sustainability; and global institutions, conflicts and human rights" (pp. 12-13). While dealing with these topics, students need a context that constitutes a safe space for expressing views freely and without being judged while being encouraged to hold a critical attitude towards concepts such as "truth" or "information" (OECD, 2018).

Just as we saw that the outcome of education for intercultural citizenship was the 'intercultural speaker' (Byram, 1997, 2008), the outcome of global citizenship education is the 'global graduate' who could be defined as one who is able to: "engage and assume active roles, both locally and globally, to face and resolve global challenges and ultimately to become proactive contributor to a more just, peaceful, tolerant, inclusive, secure and sustainable world" (Orsini-Jones and Lee, 2018, p. 8). In the following section the specific knowledge, skills, attitudes and values of the global citizen will be discussed.

2.3.2.2. Knowledge, Skills, Attitudes and Values of the Global Citizen

The model of global competence presented by the OECD (2018) builds on the models of citizenship previously presented in this study: From Foreign Language Education to Education for Intercultural Citizenship (Byram, 2008), the Reference Framework of Competences for Democratic Culture (Council of Europe, 2018) and Global Citizenship Education (UNESCO, 2014). This is because despite the fact that each of the models is more focused on a specific theme (interculturality; democratic culture; human rights and sustainability) all these models are complementary, interrelated and share common objectives. The definition of global citizenship provided in this model outlines 4 interdependent and overlapping target dimensions that global citizens need to apply successfully in their everyday lives:

Global competence is
    (1) the capacity to examine local, global and intercultural issues,
    (2) to understand and appreciate the perspectives and worldviews of others,
    (3) to engage in open, appropriate and effective interactions with people from different cultures,
    (4)   and to act for collective well-being and sustainable development (OECD, 2018, p.7) (numbers added)

along with another 4 inseparable factors which are knowledge, skills, attitudes and values. These 8 interrelated elements necessary for becoming a 'global competent citizen' composing the model are represented in figure 7 below:
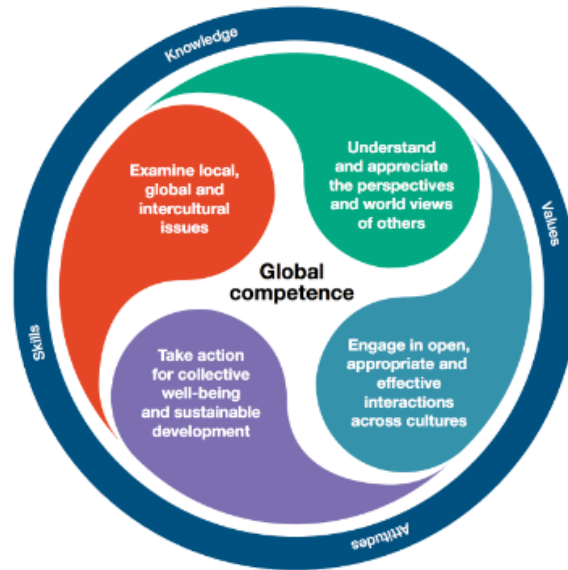
Figure 7: PISA's definition of global competence (OECD, 2018, p. 11).

For global citizenship education to be effective, opportunities must be provided to students to put into practice these 4 dimensions as well as the attitudes, values, skills and knowledge related. An example of this can be found in the PLANET VE where students engage in intercultural dialogue for examining local and global environmental issues and exchange views on sustainable practices to then take action to contribute to solving or improving those issues.

The first dimension of global citizenship (OECD, 2018) is concerned with examining local, global and intercultural issues. To this end, learners need to develop their ability to select and weigh appropriate and reliable information to then critically evaluate it in order to be able to form their own opinions about local, global and intercultural issues (Boix Mansilla and Jackson, 2011). This dimension also includes media literacy conceived as "the ability to access, analyse and critically evaluate media messages, as well as to create new media content (Buckingham, 2007; Kellner and Share, 2005)" since "globally competent people are effective users and creators of both traditional and digital media" (OECD, 2018, p. 9).

The second dimension of global citizenship (OECD, 2018) deals with understanding and appreciating the perspectives and world views of others. Globally competent individuals will show openness towards and interest in multiple beliefs, worldviews and practices and will be able to understand these and their influencing factors even when these prove to be far removed from their own (which does not necessarily implies acceptance) (Hanvey, 1975). This will in turn foster global competent individuals' reflection about and reconsideration or questioning of their own beliefs, worldviews and practices and their influencing factors (Fennes and Hapgood, 1997). This dimension also includes citizens' ability to "account for and appreciate the connections (e.g. basic human rights and needs, common experiences) that enable them to bridge differences and create common ground" (OECD, 2018, p. 9).

The third dimension of global citizenship (OECD, 2018) in turn focuses on engaging in open, appropriate and effective interactions across cultures. Open refers to interactions where "all participants demonstrate sensitivity towards, curiosity about and willingness to engage with others and their perspectives", appropriate conveys the respect for "the expected cultural norms of both parties" in interaction and effective points to the interlocutors' capacity to "make themselves understood and understand the other" (Barrett et al., 2014) (OECD, 2018, p. 10).

Finally, the fourth dimension of global citizenship (OECD,2018) is concerned with taking action for collective well-being and sustainable development. Young people can play an important part as "active and responsible members of society" since they "have multiple realms of influence ranging from personal and local to digital and global". This dimension includes individuals' readiness to take action as well as the creation of opportunities to take "informed, reflective action and have their voices heard" (OECD, 2018, p.11).

These 4 dimensions are interrelated with another 4 inseparable factors: knowledge, skills, attitudes and values:

The knowledge global competent individuals need to acquire covers different domains such as knowledge about the world and other cultures, socioeconomic development and interdependence, environmental issues and formal and informal institutions that support peaceful relationships between people and the respect of fundamental human rights (OECD, 2018). Specially relevant for this study are the domains of knowledge about the world and other cultures that relates to intercultural relations, as those happening in the VEs implemented and helps learners become aware of cultural identities, and knowledge about environmental issues that refers to students acquisition of "a solid foundation in environmental issues in order to promote and support sustainability" (OECD, 2018,p.13).

When it comes to the skills of the global competent individual or global citizen, these are numerous and of varied nature: cognitive when they refer to "the capacity to carry out a complex and well-organised pattern of thinking" and behavioural. The skills to understand the world and to take action include "reasoning with information, communication skills in intercultural contexts, perspective taking, conflict resolution skills and adaptability" (OECD, 2018, pp.13-15). More concretely, globally competent individuals are able to "reason with information from different sources", "communicate effectively and respectfully with people who are perceived to have different cultural backgrounds", "understand how other people think and feel" (i.e. perspective taking), "approach conflicts in a constructive manner" (i.e. conflict resolution skills) and "adapt one's thinking and behaviours to the prevailing cultural environment, or to novel situations and contexts that might present new demands or challenges" (i.e. adaptability) (OECD, 2018, p.15).

Attitudes can be defined as "the mind-set that an individual adopts towards a person, a group, an institution, an issue, a behaviour, or a symbol" (OECD, 2018, p.17). Globally competent individuals will demonstrate attitudes of openness and respect for people from different cultural backgrounds and global mindedness. These involve: "sensitivity toward, curiosity about and willingness to engage with other people and other perspectives on the world" (Byram, 2008; Council of Europe, 2018a) (i.e. openness towards people from other cultural backgrounds) , "positive regard and esteem for someone or something based on the judgement that they have intrinsic worth" (i.e. respect) and "a worldview in which one sees oneself as connected to the world community and feels a sense of responsibility for its members" (i.e. global mindedness) (OECD, 2018, p.17). The latter

attitude is also closely related to ecological citizenship as will be explored in the following section since it includes individuals' concerns and moral responsibility towards the planet and future generations.

Values "go beyond attitudes" and are people's "general beliefs about the desirable goals that individuals strive for in life" that "motivate certain behaviours and attitudes" consciously and unconsciously and education has a strong influence on learners' development of these. That is why it is so important to implement educational practices that encourage the development of intercultural, democratic or global values. Values that contribute to global competence are those of valuing human dignity and cultural diversity: "Individuals who cultivate these values become more aware of themselves and their surroundings, and are strongly motivated to fight against exclusion, ignorance, violence, oppression and war" (OECD, 2018,p.18).

Since global citizenship education can be applied in many different ways and in many particular contexts, its measurement and monitoring is complex and really context-dependent. Its complexity makes the area of assessing global citizenship controversial and efforts are being made to develop different methods that address the challenges it poses as far as possible. An example of this can be found in the OECD PISA Global Competence Framework (2018).

Global citizenship education seeks to encourage intercultural dialogue and collaboration and this is something that has become easier in the last decades, thanks to the growth of online technologies. In the present, many formal and non formal educational institutions use VEs to connect geographically distant learners so that they can interact and collaborate as a way of engaging them in transformative learning experiences to enable the intercultural and global dimensions (UNESCO, 2014). This will be explored in detail in section 2.4. devoted to the pedagogical approach of VEs.

2.3.3. Ecological Citizenship

Nature is a common good of humanity that must be protected, and environmental problems are a threat that knows no boundaries. This is something that cannot be faced by the states individually, but that requires international cooperation to face environmental problems together (Sáiz, 2003). As indicated by Strange (1999), ecological problems present threats without enemies and the perception of this global threat awakens a common awareness. At the same time, according to the idea of 'risk society' proposed by Beck (1998): "If dangers fund a society, global dangers fund the global society" (Beck, 1998,p.66 as cited in Sáiz, 2003, p. 273) (my translation). Indeed, there are aspects of globalisation that can be positive for the transition to a sustainable society. For example, the approximation between the global and the local that it fosters makes it possible for citizens to apply the fundamental principle of environmentalism to think globally and act locally (Sáiz, 2003).

Although ecological citizenship could be considered as part of global citizenship or a form of expression of it, the truth is that although it is compatible, ecological citizenship presents a model of citizenship by itself with certain specific features that are relevant, as we will see below.

2.3.3.1. Principles and Objectives of Ecological Citizenship

This study follows Dobson's (2000, 2003, 2007) notion of ecological citizenship and his ideas about seizing every opportunity in the formal education systems for encouraging the development of this kind of citizenship. The outcome of implementing this type of education is known as the 'ecological citizen' just as we saw before with the previous models of citizenship in which there was the figure of the 'intercultural speaker' as the outcome of teaching intercultural citizenship or the 'global graduate' from global citizenship.

According to Dobson (2000, 2003, 2007) ecological citizenship is a 'disruptive' type of citizenship because it breaks with traditional models of citizenship in several key respects. Firstly, it is a type of citizenship that is based mainly on non-reciprocal obligations and collective responsibility, something that contrasts with the traditional rights-obligations binomial. Second, the private sphere is particularly important in terms of the active practice of this type of citizenship, since, as in feminism (Hanisch, 1969), it is considered that the personal is political and actions in the private sphere are seen as having an impact on the public one. Third, it is not limited to the territory of the nation-state but is 'non-territorial' in that it knows no boundaries, but is governed by the concept of the ecological footprint. In this section, we will look at each of these factors in more detail in order to understand what ecological citizenship entails and how the ecological citizen is shaped.

In starting to define the rights and obligations relating to ecological citizenship, Dobson (2000) draws on the idea of 'a new politics of obligation' by Mark Smith (1998). The idea is that humans, as a society and as individuals, have obligations and responsibilities to fulfil in relation to nature. To this, Dobson adds the obligations and responsibilities towards other humans. The eco-citizen is aware and feels responsible for his or her actions as they affect everyone, including unknown people living elsewhere and future generations. It is important to note here that for ecological citizenship, generationism is as unacceptable as other types of discrimination such as sexism or racism. Dobson (2003) takes up Norton's (1991) idea of 'future generationism' and points out that although ecological citizenship is concerned with a sustainable relationship between human beings and nature, it is fundamentally anthropocentric, since the demands regarding the protection, conservation and recovery of nature are satisfied by meeting our obligations to future generations (Dobson, 2003).

Citizenship in the framework of the welfare state has been described mostly as a binomial in terms of citizen rights against the state and reciprocal duties. This has been so common that it is generally taken for granted when talking about citizenship. In contrast, Dobson (2000) describes ecological citizenship as a 'disruptive influence' when it comes to the rest of models of citizenship as it breaks this rights-duty binomial. The sense of duty of the ecological citizen does not reside in responding with reciprocity to his rights since "ecological citizens can expect nothing in return from future generations and other species for discharging their responsibilities towards them" (Dobson, 2000, pp. 5-6) but in a series of virtues such as concern for the common good, a sense of non-reciprocal justice, care and compassion.

Ecological citizenship ignores the concept of the territoriality of citizenship. Actions in the private, public, local and global arenas are equally valid and relevant to the development of a sustainable world. Ecological virtues are first learned and put into practice in the private sphere and then spread throughout the world (van Steenbergen, 1994). Some, as Horton (1998), would argue that

citizenship needs to be related to a political entity. Global citizenship and ecological citizenship are susceptible to the same kind of criticism. In both cases the answer can be found in the existence of international political entities such as the EU or the United Nations through which this type of transnational citizenship can be exercised (Dobson, 2000). If one wants to talk about a "space" for ecological citizenship, then this would be in the idea of the share of ecological space and the concept of the ecological footprint. Green citizens are responsible for leaving a sustainable ecological footprint, not exceeding their share of ecological space (Dobson, 2003).

In order to understand ecological citizenship, it is necessary to understand the notion of the ecological footprint. As the authors Chambers, Simmons and Wackernagel (2000) explain, every organism has an impact on the earth and this impact (the ecological footprint) is measured by the amount of nature, of natural resources, that we require to sustain our consumption patterns. Wackernagel and Rees (1996) illustrate this relationship between the consumption habits of a human society and the natural resources or the share of ecological space it needs to satisfy them using the example of imagining a modern city such as London, isolated by a glass or plastic platform that would allow light to enter but not allow material objects to enter or leave. This would be very difficult because it uses the ecological space of others to support its own consumption patterns, that is, its ecological footprint is greater than it should be to be sustainable for the planet. Theoretically, the ecological space should be divided equally among all. However, it is clear that rich countries occupy a larger share of ecological space than they are entitled to. It is common practice to exploit the raw materials and resources of less favoured countries, and to set up production factories there to meet the consumption needs of 'first world' countries (Dobson, 2003). As Wackernagel and Rees put it: pieces of a population's ecological footprint can be found anywhere in the world (1996) and the responsibility of ecological citizens is to take only their own appropriate share of ecological space (Dobson, 2007).

Another particular feature of ecological citizenship is found in the concept of membership which focuses more on the horizontal relationship between citizens than on the vertical, albeit reciprocal, citizen-state relationship. For those who conceive of membership as a fundamental part of citizenship, the free-entry character of this type of citizenship will be controversial (Dobson, 2000).

Finally, one of the most distinctive aspects of ecological citizenship is the recognition of the private sphere as an area in which to carry out active citizenship: "the private realm should not be regarded as a barrier to citizenship, but as a place where it can be carried out, where virtues can be learnt- a springboard to the international and intergenerational arenas" (Dobson, 2000, p. 26). The private sphere is understood as the relationships of individuals with their families, friends and acquaintances. Due to the emphasis on the possession of rights and the lack of obligation to participate in public life in post-war models of citizenship, the private sphere has been associated with passive citizenship and the public sphere with active citizenship. However, ecological citizenship breaks with this idea by considering that the private sphere not only allows for active citizenship but is a key context for developing it: "the household is an important site of political activity…and to restrict the idea of activism to the public realm is to create a blind spot as far as ecological political activity is concerned, and therefore to restrict unnecessarily the remit of citizenship itself" (Dobson, 2000, pp. 13-14).

2.3.3.2. Virtues of the Ecological Citizen

To achieve a new sustainable society, it is necessary to leave behind the prototypical passive citizens of the 20th century, unconcerned with environmental issues and focused on their own comfort and well-being based on the state of consumption. Instead, ecological citizens as pictured by (Vives Rego, 2013) are aware and critical of the risks and negative consequences of consumerism: degradation of biodiversity, depletion of resources and pollution of land, water and air. Unlike the modern citizens who put nature at their service, ecological citizens seek to adapt to nature and are concerned with being informed, capable of exercising critical thinking and rejecting 'disinformation'. This enables them to assess the local and global consequences of their consumption decisions and to act in the interests of sustainability. This way of thinking and acting in a responsible and sustainable way must be encouraged by public institutions, educational institutions and society in general. Despite this, ecological citizens are also aware that there are factors that condition the consumption decisions that can be individual, psycho-social, economic...Similarly, in order to be able to speak of ecological citizenship, basic needs must be covered, so it can only be consolidated on the assumption that societies have a certain level of well-being (Vives Rego, 2013).

Just as we have seen how specific values, attitudes, knowledge and skills shape the intercultural speaker or the global citizen, the ecological citizen, in addition to being governed by the above-mentioned principles, possesses certain specific virtues that Dobson (2003) illustrates as follows:

The virtue of commitment to the common good in ecological citizenship, as explained by Dobson (2003), follows the civic republican idea of "the common good" in that it proposes that its citizens act in a sustainable way thinking about the good of all. When punishments or incentives are established for citizens to behave in a sustainable manner, a change in behaviour is observed that is due to these. However, once the punishment or incentive ceases, those citizens who do not have an ecological conviction return to previous bad habits and practices. Therefore, it is necessary to train citizens not to change their behaviour due to extrinsic motivations but rather act to uphold values and attitudes of commitment to the common good (Dobson, 2003). Justice in turn, appears as the key virtue of ecological citizenship. As we have seen when exploring the concept of the ecological footprint, for justice to exist, each person must use his or her 'share of ecological space' so that the human way of life is sustainable for the Earth. The problem is that there are 'globalising' citizens and 'globalised' citizens, so that the former affect the latter by their actions (even at a distance and over time). This is because globalising citizens leave greater ecological footprints than their share of ecological space. Therefore, in order to have justice, those with too big ecological footprints must reduce them and live in a sustainable way (Dobson, 2003). The virtues of care and compassion, in the context of ecological citizenship, refer to the care and compassion of the ecological citizen towards nature and other humans (including future generations) because of their vulnerability to threats resulting from unsustainable behaviour (Sáiz, 2003).

While it is clear that the road to a sustainable society is not and will not be easy, since as Smith (1998) puts it, becoming ecological citizens involves "significant shifts in human assumptions, behaviour and institutional structures" (p.10) education offers a right tool for the development of the virtues of ecological citizenship. Particularly, in recent years education for sustainable development has appeared as a suitable approach to achieve this goal.

2.3.3.3. Education for Sustainable Development

In 2015, the UN adopted the 2030 Agenda for Sustainable Development with the aim to provide a global framework for the achievement of the 17 SDGs intended to "redirect humanity towards a sustainable path" (UNESCO, 2017, p.6). Data was collected through surveys from millions of people from around the world in order to develop this agenda that addresses the major challenges in terms of development for the whole of humanity and consequently presents the goals to cover them. The objective of the 17 SDGs is "to secure a sustainable, peaceful, prosperous and equitable life on earth for everyone now and in the future" and they specifically address "key systemic barriers to sustainable development such as inequality, unsustainable consumption patterns, weak institutional capacity and environmental degradation" (ibid). Against this background, national governments are those in charge of leading their own policies and strategies of the implementation of the 2030 Agenda and the goals achievement. With this in mind, the approach of education for sustainable development aims to "empower learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society for present and future generations" (UNESCO, 2017, p.7). Of special relevance for this study is the fact that education for sustainable development constitutes a complementary educational approach to global citizenship education since both constitute action-oriented transformational pedagogies that seek to guide learners to critically understand the complex and interconnected global present world by collaborating, speaking up and taking action for sustainable development (UNESCO, 2015; 2017).

UNESCO, which is the United Nations agency on education for sustainable development, has released several publications in the last years devoted to provide guidance to educators on how to implement this educational approach such as the above mentioned Framework for Action (UNESCO, 2015), the 'Education for Sustainable Development Goals: Learning Objectives' that offers a guide for education professionals on the use of education for sustainable development in learning for the SDGs (UNESCO, 2017) or the Education for Sustainable Development Roadmap (UNESCO, 2020) that offers advice on key features and priority action areas for the implementation of education for sustainable development.

Dobson (2007) also offers some advice on the promotion of ecological citizenship through formal education by identifying "a rough-and-ready template for a citizenship curriculum in the environmental context" (p. 283) since, as he explains, any theme in a curriculum can be taught from an ecological perspective. His considerations include a number of aspects that should be included in any curriculum with a view of ecological citizenship and are as follows: the importance of rights; the issue of justice in terms of international, intergenerational and interspecies obligations; scientific knowledge; moral development; justice and fairness; the question of what kind of world we want to hand on to future generations; taking active part in responsible action in communities; the world as a global community; and global interdependence and responsibility need to be addressed.

2.3.3.4. Ecological Citizenship in the Foreign Language Classroom

Both Dobson (2007) and UNESCO (2015, 2017, 2020) coincide in suggesting that these issues (i.e. ecological citizenship and sustainable development) could be taught through the engagement of students in environment-oriented collaborative projects. At the same time, current approaches to FL education lend themselves to collaborative projects as it is the case of VE. The present study takes up this call and the principles outlined in the previous sections and engages FL learners in a project of international telecollaboration in which they work and interact together dealing and engaging in the active addressing of environmental issues of local and global relevance. This will be explored in detail through the subsequent chapters on this study specially chapters 4, 5 and 6.

A number of questions may arise for the reader: Why do this in the FL classroom, where there are already intercultural and linguistic objectives? Is this not overloading the language learner? However, the FL classroom is an appropriate place for developing ecological citizenship for multiple reasons that will be outlined here:

As can be read in the Council of Europe's language education policy (2018c) as well as in the 'Fact sheets on the European Union: Language policy' (Franke, 2017) language learning is considered to be key to prepare students for life in the current multilingual and multicultural European context. In this regard, the EU's language teaching policy attaches special importance to the relationship between multilingualism, European identity and active citizenship (European Commission, 1995, 2008; Council of Europe, 2018c). It is considered that acquiring proficiency in a FL enables individuals to become active citizens in the multilingual European context. Consequently, promoting FL education's power to encourage active citizenship and create social outcomes has become a primary objective in the EU (European Commission, 2008) entering in recent decades the so-called 'social turn'. The social turn recognises the value of learners and educational processes as shaping agents of socio-cultural reality and promotes and prepares learners for social action and the practice of active citizenship (Belz, 2002). To achieve this purpose, agreements, policies, strategies, materials and reference works have been developed that underline the European effort in terms of promoting common policies for language and citizenship education (Council of Europe 2018a, 2018c).

This relationship between FL learning and active participation in society has been explored in the literature (Byram, 2001, 2008, 2012, 2014; Byram et al, 2017; Byram and Goluveba, 2020) arguing that political and FL education complement and enrich each other. Their compatibility lies in their common sets of attitudes, knowledge and behaviours, providing a suitable framework for designing a joint curriculum. This conception places a responsibility on FL teachers to help learners develop their language skills while providing them with opportunities to acquire the values of active citizenship education and the ability to think critically. This could be brought to practise, as Byram (2008) explains, through the implementation of tasks dedicated to engaging FL learners in becoming critically aware of cultural behaviours and to engage in civic action (Byram, 1997, 2001, 2008, 2012; Porto, 2013). The last savoir that makes up the concept of ICC (Byram, 1997), critical cultural awareness or political education, is central to achieving the goal of taking FL education beyond strict language instruction and can be defined as the ability to critically evaluate the worldviews, practices and products of one's own and other cultures.

Given this link between language teaching and the promotion of active citizenship, it is appropriate to raise the question of what the present context is and what kind of citizenship needs to be exercised in it. Answers to these questions can be found in the 2030 Agenda for Sustainable Development adopted by the United Nations General Assembly on 25 September 2015 that was born out of the need to leave behind the prototypical passive citizens of the 20th century in order to achieve a sustainable society (Vives Rego, 2013). Among the SDGS, we encounter goal number 4 that targets to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" and is considered to be "a key enabler of all the other SDGs" (UNESCO, 2020, p.3). Education constitutes then a key factor in leading society towards sustainable development and the publication of the Incheon Declaration and the SDG4-Education 2030 Framework for Action reflects the educational community's commitment to achieving this (UNESCO, 2015). Therefore, since the extent to which these goals become a reality will depend in large part on the role of education, educational institutions and educators should create opportunities to encourage: On the one hand, the development of the virtues of ecological citizenship that entail thinking and acting in a responsible and sustainable way and on the other hand, international communication and collaboration since the environmental crisis constitutes a global challenge that needs international cooperation (Sáiz, 2003).

In order to achieve this aim, educators can count on a number of complementary educational approaches such as education for sustainable development or global citizenship education which constitute action-oriented transformational pedagogies. These pedagogies seek to guide learners to critically understand the complex and interconnected global present world by collaborating, speaking up and taking action for sustainable development (UNESCO, 2014; 2015; 2017). A strong argument for the defence of the introduction of ecological citizenship in the FL classroom can also be found in the fact that these educational approaches do not constitute separate subjects by themselves. Their philosophy can be used in the teaching of any subject in both formal and non-formal settings through the implementation of methodologies based on action, dialogue and international cooperation, often through international partnerships. In addition, the domains of knowledge that a curriculum for the development of global-ecological citizenship should include do match those of the FL curriculum since these entail dealing with issues such as (OECD, 2018): "culture and intercultural relations, socio-economic development and interdependence; environmental sustainability; and global institutions, conflicts and human rights" (pp. 12-13).

All of the above mentioned makes the implementation of VE projects in which international FL learners address environmental issues together as the perfect tool for the endeavour. However, its potential for the development of ecological citizenship, has not yet been exploited as much as possible. Ecological and sustainability problems have both origins and consequences that are global and therefore citizens will need to be aware of and responsible for the effect of their actions on a local and global level for which intercultural dialogue as the one international students engage in through VE enables them to share and discuss multiple perspectives. This is key in achieving sustainable development since there is no point in complying with sustainable practices at a national level if the same is not done at a transnational level (Vives Rego, 2013). In response to this gap, this research has aimed to contribute to the body of literature that has documented the success of VE implementation from multiple approaches in developing numerous skills and competence sets such as FL competence (Belz, 2002, 2004; Brammerts, 2006; Dooly, 2008), ICC (Belz, 2003; O'Dowd, 2003; Thorne, 2006; Muller-Hartmann, 2007; O'Dowd & Ritter, 2006), intercultural awareness (Fustenberg, Levet, English & Maillet, 2001; Kramsch & Thorne, 2002; Ware, 2005), global citizenship (Dooly, 2015; O'Dowd, 2016a; 2019), multiliteracies (Guth and Helm, 2010; Chun, 2015) and soft skills (Lindner, 2016)

exploring how to best exploit the potential of this learning experience to equip learners with the knowledge, attitudes and skills of the global ecological citizen.

2.4. Virtual Exchange

The main tool employed in this thesis to develop global ecological citizenship along with FL proficiency is the implementation of VEs. VE is an umbrella term used to refer to the engagement of groups of learners in online language and intercultural interaction and collaboration with partners from other cultural contexts or geographical locations as an integrated part of course work, and under the guidance of educators and/or expert facilitators (O'Dowd, 2018). This pedagogical approach was chosen because of its potential for the development of the target competences based on the learning outcomes observed in previous studies in the literature as will be explored in this section.

2.4.1. Virtual Exchange: Growth, Terminology and Characteristics

Its beginnings date back to the 1990s and over the last three decades, both the terminology used to refer to the pedagogical approach of VE and the practice itself have transformed and evolved rapidly as will be discussed in detail in the following pages. Over the years, this practice has been referred to as telecollaboration (Belz, 2003; Warschauer, 1995), tandem learning (O'Rourke, 2007), Online Intercultural Exchange (OIE) (O'Dowd 2007; O'Dowd & Lewis, 2016), Internet-mediated intercultural foreign language education (Belz & Thorne 2005) or Collaborative Online International Learning (COIL). Currently, the term that many practitioners and researchers propose in order to advance the field is Virtual Exchange (VE) to refer to the different ways in which international students engage in structured online collaborative learning projects.

During this period, VEs have been employed in the field of FL education in many different ways with a number of different models with their distinctive characteristics that have emerged in the relatively short history of this teaching practice as will be discussed in detail in section 2.4.2. The most common models of VEs in FL education have been based on bilingual bicultural exchange between two groups of learners. However, in recent years, lingua franca VEs (Kohn & Hoffstaedter, 2017) in which classes of non-native speakers of the target language engage in online collaboration have gained popularity. It is worth mentioning that, as the literature shows, while categorising VEs according to models is useful to allow an overview of trends, these categories should not be considered monolithic with aspects of different models being possible to combine in a particular VE.

Interest in VEs in the field of FL education has increased dramatically in recent years as will be seen throughout this section with large-scale projects, organisations and bodies such as the European Commission researching and promoting the learning outcomes of VEs as well as offering training and support to teachers and institutions interested in integrating VEs into their curricula. The current COVID pandemic has also resulted in an increased interest in implementing such telecollaborative projects (O'Dowd, 2021).

In recent years, the pedagogical approach of VE has generated much interest in the educational context due to multiple reasons. One of these is the potential of VE for the implementation of internationalisation strategies in institutions of HE. According to the Higher Education Academy (Strang et al., 2016), internationalisation is a process that prepares university

members to live and work together and sustainably in the global society. More concretely, the European parliament describes internationalisation of HE as "integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education, in order to enhance the quality of education and research for all students and staff and to make a meaningful contribution to society" (De Wit et al., 2015, p. 281).

As De Wit (2016) indicates, over the last decades, the focus in the plans of internationalisation of universities has shifted from 'abroad' to 'at home' (p.76). One of the reasons for which the focus of the internationalisation strategies has shifted to internationalisation at home lies in the fact that a vast number of students do not participate in any mobility during their period at the university. The EU mobility rates of HE graduates in 2017, for instance, was 8% according to the Eurydice report 2020 (European Commission/EACEA/Eurydice, 2020). Consequently, institutions have started to put more efforts into internationalising their curriculums in order to obtain actual learning outcomes regarding the development of the sets of intercultural competences and global citizenship of their graduates (De Wit, 2016; O'Dowd, 2019). Technological advances have brought the possibility of bringing together international university students geographically dispersed to collaborate in VE which appears as an innovative approach for implementing internationalisation at home and for the development of these international competences (De Wit, 2016). Internationalisation is viewed by FL education as a chance for students to build intercultural relationships that will help them in becoming aware of others' perspectives and their own and will prepare them to live and work in the present world (Byram, 2008).

In recent years different initiatives and projects dedicated to VE implementation and research have emerged. An example of this is The Stevens Initiative (https://www.stevensinitiative.org/) born in 2015 with the aim of promoting and supporting the field of VEs, especially for young people in the United States, the Middle East and North Africa. In 2016, the transdisciplinary organisation UNICollaboration (https://www.unicollaboration.org/), was created in Europe to support research and practice of VE in HE. In the following years, the growth of the VE field at European level is reflected in the granting of funding by the European Commission to projects (i.e. Key Action 3 projects) aimed at training university educators in the implementation of this pedagogical approach as well as large-scale research on the impact of VE on both students and teachers in university education. Examples of this include the projects Evaluating and Upscaling Telecollaborative Teacher Education (EVALUATE, 2017-2019), which studied the impact of VE on over 1000 students in initial teacher education across Europe and Evidence-Validated Online Learning through Virtual Exchange (EVOLVE, 2018-2020) which examined the learning outcomes of VE in all areas of HE. It was also in the 2018-2020 period that the European Commission launched its Erasmus+ Virtual Exchange project, which engaged more that 28,0000 young people in VE learning experiences in Europe and the MENA region.

Dooly and O'Dowd (2012) explored the numerous reasons that have led VE to become an important area of FL education. First, the growth of access to online technologies has made it possible in the Western context to increase its implementation in the educational setting at primary, secondary and tertiary levels in a cheaper and faster way. At the same time, the emergence of user-friendly Web 2.0 tools has enabled FL educators to engage their students in managing these without this taking excessive time and effort for them. More reasons can be found in the adoption of approaches to FL education that adopt an interactive approach such as the communicative and the intercultural where "learning is understood as an organic process, fostered through cognitively challenging, meaningful

use of language" (p.11) that is likely to happen when learners engage in online intercultural interactions. The 'intercultural turn' (Thorne, 2006), that is, the spread in the adoption of the intercultural approach (Byram, 1997) in the field of FL education, along with the recognition of the value of online intercultural interaction and collaboration for the development of the intercultural skills has lead educators to seek to integrate it into their classrooms (O'Dowd, 2003, Belz, 2003, Ware, 2005). At the same time, the acceptance of the communicative approach (Hymes, 1972) and the communicative competence development as common objectives in FL education have contributed to the growth of importance of VE. Yet another reason can be found in the fact that FL competence and digital skills have become key assets for the job market (Dooly and O'Dowd, 2012).

Despite this gradual and exponential growth of the VE field, an event that undoubtedly marked a dramatic increase in the attention received by this pedagogical approach was the advent of the covid-19 pandemic crisis, so much so that O'Dowd (2021) posed the following question in reflecting on this period: "2020: the year virtual exchange finally came of age?" (p.5). As he explains, while VE had been implemented in FL education for 25 years, up to this moment, it had remained "a peripheral activity, carried out and promoted by a small but convinced group of practitioners" (ibid) and had now seemed to reach the attention of the mainstream public. Proof of this is that it was in this year that the European Commission included blended mobility into the Erasmus programme for the first time (i.e. combination of both physical mobility and VE) (European Commission, 2020; O'Dowd, 2021). As the Erasmus+ Virtual Exchange website states, VEs: "function in a synergistic and complementary way with physical exchange programs. They can prepare, deepen and extend physical exchanges, and, by reaching new populations and larger numbers, fuel new demand for physical exchange" (Erasmus+ Virtual Exchange, 2020) (https://europa.eu/youth/erasmusvirtual_en). At the same time, the aforementioned document (European Commission, 2020) also signals that VE will play an important role in its own right in the development of intercultural dialogue between young people: "...greater use will be made of virtual exchanges between young people and education institutions in Europe, and around the world, to further engage young people in intercultural dialogue and improve their soft skills" (p. 38) (as cited in O'Dowd, 2021, p. 7).

However, this rapid growth of VE has caused some confusion about the terminology used to refer to it as well as what this pedagogical approach does or does not consist of. Hence, it is important to clarify, first, the terminology issue and then, the characteristics of VE.

First of all, in order to situate the reader, it should be specified that VE in the specific context of this study which is FL education, constitutes a subfield of Computer-Assisted Language Learning (CALL) (Beatty, 2013) which can be defined as "any process in which a learner uses a computer and, as a result, improves his or her language" (p.7) while the interactive aspect of CALL is often referred to as Computer Mediated Communication (CMC) (p.62). O'Dowd and Beelen (2021), offer a range of examples illustrating the variety of terms used to describe the pedagogical approach of VE such as 'telecollaboration', or 'online intercultural exchange' in the field of FLE, 'global virtual teams' in the field of business or 'collaborative online international learning' in the US (https://www.eaie.org/blog/virtual-exchange-iah-terminology.html). One discussion that is particularly illustrative of the controversy and ambiguity surrounding the variety of terms used to refer to the pedagogical approach of VE is that of Colpaert (2020) and O'Dowd (2021) through their publications in the academic journal Computer Assisted Language Learning (CALL).

Colpaert (2020) questions in his publication the increasingly frequent adoption of the term VE compared to the initially more common term 'telecollaboration'[1]" and raises the following question: "why call them virtual if virtual means 'less than the real thing?" (p. 655). He argues that: "the term 'virtual exchanges' would suggest that online exchanges do have some limitations compared to real, physical exchanges" (p.654). To this, O'Dowd (2021) answers by pointing out that the term telecollaboration is not without controversy either, since "even though it was in common use in CALL circles since it was used by Warschauer (1996) and then by Belz (2002), was disliked by many colleagues because of its own connotations and its own limitation" (p.2). Some suggested, he continues, that "combining 'tele' (meaning 'at a distance') and 'collaboration' did not accurately capture the online and intercultural nature of what we do" (O'Dowd, 2021, p.2).

Both O'Dowd (2021) and O'Dowd and Beelen (2021) review the reasons why the term VE has gained popularity and agree that the origin of the term seems to lie in the 'Virtual Exchange Coalition' (http://virtualexchangecoalition.org/) formed by the organisations, Soliya, iEARN and Global Nomads Group which in 2011 defined VE as "sustained person-to-person educational programmes facilitated by technology". Over time, the term has spread so widely that numerous initiatives in the field of VE, such as the Stevens Initiative, Soliya or Sharing Perspectives Foundation, as well as funders of research and practice in this field such as the European Commission (including the Erasmus+ Virtual Exchange initiative) have adopted the term. Consequently, the use of the term VE has become a way to move towards the use of a common terminology and thereby to contribute to a common effort in mainstreaming this educational practice and bringing clarity to those approaching this field who may otherwise be confused by terminology (O'Dowd, 2021; O'Dowd and Beelen, 2021).

Therefore, although there are numerous ways of naming this type of practice, this study uses the term VE to contribute to the need for academics, practitioners and educators to make an effort towards a standardisation of terminology in the field so that the literature is clearer and more concise (Stevens Initiative Annotated Bibliography, 2020).

2.4.2. Different Approaches to Virtual Exchange and their Learning Outcomes

There exist three different ways in which VEs are being implemented into international HE institutions nowadays. These are: pre-mobility (Giralt and Jeanneau, 2016; Batardière et al., 2019), blended mobility (European Commission, 2020) and class to class VEs (EVALUATE group, 2019). First, pre-mobility VEs aim to get students ready for their period of study abroad by engaging them in interaction and collaboration with partners from the destination university before their mobility. At the same time, blended mobility combines periods of online collaboration with a short term physical mobility in which VE participants meet at one of the participating institutions. Finally, the last model, that of class-to-class VEs, is the one that this study is based on and consists of collaborative projects that form part of the participant institutions (2 or more) course work in which teachers organise collaborative tasks for their students to complete together online.

Class to class VEs, or telecollaboration as they were called at the time (Warschauer, 1996;

---

[1] Telecollaboration, defined as "online intercultural communication and collaborative learning with a view to developing linguistic, social, intercultural, and digital competences" (Colpaert, 2020, p. 653).

Belz, 2002), date back to the 1990s along with the expansion of the internet. In its relatively short history, a number of different models have emerged with their own particular characteristics for the implementation of this pedagogical approach. Nevertheless, it should be emphasised that while it is correct and useful to use a categorisation of VE according to models to allow an overview of trends within the practice over the years, these categories should not be considered as rigid. As numerous studies in the literature demonstrate (Porto, 2014; Lindner, 2016), it is possible to combine aspects of different models in a particular telecollaborative partnership. The most common models of VE in FL education have been based on bicultural exchange between two groups of learners studying each other's language and culture. For example, Spanish learners of English can collaborate online with Irish learners of Spanish and use both languages while working together as was the case in the two VEs implemented during the ARC1 of this research. Additionally, in recent years, many FL educators have also engaged their students in lingua franca VEs (Kohn & Hoffstaedter, 2017) that give students the opportunity to participate in online collaboration with partner classes who are not native speakers of the target language. This may involve, for example, students from Spain and Germany collaborating together in ELF as has been the case with the VE implemented during ARC2 of this research.

Chronologically, three phases can be distinguished in terms of different approaches adopted for the implementation of VEs:

The first VEs were implemented in the 1990s within the scope of CALL and from a communicative approach in the context of FL education. The main attraction of these VEs was that students could communicate with NSs of the target language and consisted mostly of an e-mail exchange using the tandem model (e.g. a Spanish student sends a letter written in English to his English pen-friend and the pen-friend answers back with a letter in Spanish). In these first VEs, according to the communicative approach, the educational focus was on the development of language skills and cultural learning was simply a side effect of this (Brammerts, 2006; Lindner, 2016).

The second phase is marked by the shift towards an interest in culture in the area of FL education, which was already beginning but was forged and became key with the publication of Byram's (1997) model of ICC. As we have seen previously, Byram deliberately built upon Hyme's concept (1972) of communicative competence by adding to it the intercultural dimension whereby the educational objective was to become a successful 'intercultural speaker' by developing a series of values, attitudes, knowledge and skills, and leaving aside the unrealistic idea of the native speaker as a model (Chun, 2015; Lindner, 2016). Consequently, the VEs characteristic of this phase begin to consist of partnerships between educational institutions in which international students grouped in small groups of 2 or 3 students work on tasks related to cultural issues in order to develop language skills and also IC following Byram's model. Examples of this can be found in Belz (2004), Furstenberg et al. (2001), Müller-Hartmann (2007) or O'Dowd (2003) among others (Lindner, 2016).

The third phase, marked by technological advances and the emergence of collaborative web 2.0 tools, generated a growing need for students to develop multiliteracies and was therefore named by Guth and Helm (2010) as 'Telecollaboration 2.0'. As it is logical, this phase pays special attention to the collaborative aspect of the VEs (Lamy and Goodfellow, 2010) and, consequently, to the linguistic and intercultural learning objectives of the previous phase, another series of necessary literacies are added such as media literacy or digital literacy and also a series of skills considered 'soft

skills' that have to do with the social and collaborative aspect of the exchanges (Lindner, 2016). In this phase, the VEs based on the use of web 2.0 tools such as synchronous chats, blogs, wikis and social networks and VEs using lingua francas become an increasingly common practice (Chun, 2015).

In recent years, the number of projects that have implemented virtual cross-disciplinary exchanges has increased. While continuing to develop the learning objectives of the previous phases such as linguistic and intercultural competences or multiliteracies, work is being done on the content of specific subjects (O'Dowd, 2016). Another particular vision that is gaining importance in recent years is the need to involve students in citizenship projects (O'Dowd, 2019).

Now that some background on the historical perspectives has been provided, the following sections will look at the different models of VE in detail.

2.4.2.1. Bilingual-Bicultural Approaches to Virtual Exchange

Bilingual-bicultural VEs are the most commonly reported in the literature of FL education (O'Dowd & Lewis, 2016) and involve two classes who study each other's 'languaculture' (Agar, 1994). The models of e-tandem and telecollaborative exchanges pertain to this category of VE (see Dooly, 2017 and O'Dowd, 2016 for overviews).

E-tandem, constitutes the first well-known model of VE and is characteristic of the first phase of VEs in that it aligns with the views of the communicative approach (Hymes, 1972; Canale and Swain, 1980) and the idea of engaging learners in authentic communication to promote learning. More specifically, this model engages two learners both of whom are NSs of each other's target language in interactions that involve the exchange of informal or peer linguistic feedback between them (O'Rourke, 2007). In e-tandem, participants will typically engage autonomously in a discussion on a given topic outside the classroom as an extra or independent activity rather than as an institutionalised or curricular activity (O'Dowd, 2011). While initially these interactions mainly consisted of written asynchronous discussions these can also adopt a synchronous communication mode. Nowadays, e-tandem is still a common practice in the field of VE, as evidenced by the numerous reports and the large body of research emerging from teletandem networks (Leone & Telles, 2016).

Telecollaborative VE, emerged in the second phase of VEs (late 1990s and early 2000s) as the first model of VE to consider intercultural learning (Byram, 1997) in addition to language competence development. Belz's publications in the early 2000s provide good examples of research into the interactions and learning outcomes of this model integrated into the classroom and as she indicates (Belz, 2005) the aim of this model of VE is to "to foster dialogue between members of diverse cultures (who otherwise would not have the opportunity to come into contact) in an effort to increase intercultural awareness as well as linguistic competence" (p. 23). This reflects the interest in the field of FL education in forming intercultural speakers as well as the recognition of the value of online intercultural interaction and collaboration to do so. The telecollaborative model of VE consists of international partnerships in which students interact and collaborate in tasks designed and organised by VE teachers as part of their classwork involving some kind of recognition. These tasks develop around culture related issues and are completed by international students working in pairs or small groups (Belz, 2001). A key notion introduced by this approach is the distancing from the unrealistic

idea of the native speaker as a model (Byram, 1997; O'Dowd, 2011). A particularly relevant example of this model of VE can be found in The *Cultura* project (Furstenberg et al., 2001; see Chun, 2015 for a review of VEs following the Culture model in the literature), which adopts a comparative cultural approach by asking participants to compare and analyse parallel materials from their respective cultures to enable them to notice differences and similarities and to engage in discussions and work together in the progressive co-construction of the meanings and reasons underlying different cultural aspects, thus reaching a deeper understanding of each other and each other's culture (Furstenberg et al., 2001). Today, this telecollaborative VE model that is teacher-led and involves class-to-class collaboration and in which learners communicate and collaborate (a)synchronously using a FL on tasks revolving around a cultural topic is widely implemented and researched. In particular, in recent years, multiple case studies have focused on analysing its learning outcomes such as language or IC but also digital and soft skills (Ryshina-Pankova, 2018; Mullen and Bortuluzi, 2019).

2.4.2.2. Lingua Franca Approaches to Virtual Exchange

A lingua franca can be defined as "a language used for communication between groups of people who speak different languages" (Cambridge University Press, 2022) and in today's global context, English can be considered the world's lingua franca used as a common language for communication among people from all over the world both online and offline. What is more, in the present context, more people speak English as a second or FL than as a mother tongue which leaves the NS as a model as a concept somehow outdated that is being replaced by a way of teaching and learning English that is more suitable to the current context (Liaw & English, 2014). This trend has also been reflected in the field of VEs where there is a growing interest in the implementation of lingua franca VEs (Kohn & Hoffstaedter, 2017) recognising that learners are more likely to use a language with other NNSs as themselves rather or more often than with NSs, especially within the work context (Graddol, 2006). Two different models can be identified in this category: transnational VEs and critical approaches to telecollaboration.

Transnational VEs have been increasingly implemented in HE over the last 10 years, and are those that involve the communication and collaboration of participants around issues of global relevance using a lingua franca. This model enables students to develop language and intercultural skills relevant to today's global context by engaging them in tasks that require collaboration on issues that go beyond explicit bicultural comparison, as it aims to move "towards a global notion of the intercultural" (O'Dowd, 2019, p.4). Studies of this VE model have reported positive self-reported outcomes in terms of language and intercultural competence acquisition. This can be seen, for instance, in Guth and Helm's (2012) transnational VE in which Italian and German students communicated using ELF. Transnational VEs have also been identified as helping learners overcome perceptions of linguistic and cultural difference and instead contributing to the creation of stronger intercultural and team bonds (Lindner, 2011).

O'Dowd (2021) analysed 345 learner portfolios from 13 different class-to-class VEs in HE to compare the learning outcomes of telecollaborative and transnational models and concluded that students participating in telecollaborative ones are more likely to stick to the dichotomy my/your 'languaculture' and, are therefore at greater risk of developing negative feelings towards the other's languaculture if the VE experience does not turn out as expected. In contrast, those who participate in

transnational VEs where the aim is often to "achieve successful collaborative goals in multicultural groups" tend to report "a much higher frequency of learning outcomes related to collaborative skills, digital skills and the importance of cultural differences in communication styles" (p. 10). This model of VE is currently popular partly because it facilitates access to this type of experience for learners in countries where teachers may have difficulty finding partner classes to study their language and also because it enables more classes from different countries to collaborate together, creating a more diverse context for intercultural learning.

Finally, another recent popular model of VE within the lingua franca approach is that of critical telecollaboration (Helm, 2017) which seeks to foster communicative and sociocultural competences while challenging traditional assumptions of telecollaboration, such as that the NS is ideal interlocutor, technology as a neutral medium, or online intercultural interaction naturally leading to deeper understanding and fostering equality. What Helm (2017) proposes instead, as a response to the current global context, are interactions aimed at fostering open dialogue in which to address social and political issues with learners so as to foster understanding of diverse worldviews and thereby promote a more tolerant, just and peaceful world. These interactions are often facilitated by a facilitator and an example of this are the Soliya VEs (https://www.soliya.net/programs/about-programs) that bring together students from the Middle East, North Africa, South Asia, Europe, and North America to discuss cultural and political issues together since 2003.

2.4.3. Primary Themes for Virtual Exchange Teachers and Researchers

Now that the foundations of what VEs are and the different approaches available for their implementation have been laid, it is useful to detail the key issues to be considered by VE teachers when designing and implementing their own projects in the specific context of class-to-class VEs, which are the focus of this study.

2.4.3.1. Design: Tasks, Tools, Integration and Assessment

This section will explore the considerations to be taken into account in terms of task design, tools selection, and project integration and assessment.

In the context of FL education, a task can be defined as a **"**meaning-centred activity that is based on the communicative needs of learners and related to the real world" (Levy & Stockwell, 2006, p.249). In the context of VE in turn, the type of tasks we find are telecollaborative ones involving the interaction of different linguistic and cultural communities and entailing a high degree of negotiation of meaning and cultural exploration. The specific tasks that VE teachers select or design for their projects are key in determining the outcomes of these. Already in 1958 the psychologist Gordon Allport through his studies about the value of intercultural contact to reduce prejudices found that simple intercultural contact or exchange of information is not enough to give a real change of attitudes. In order for the intercultural experience to be effective and for genuine changes in attitude to be observed, contact must go beyond the surface and involve individuals in collaboration towards common goals: "Only the type of contact that leads people to do things together is likely to result in changed attitudes" (Allport, 1958, p. 276 cited in O'Dowd, 2016b, p. 279). Therefore, one key aspect

for VE to succeed is to engage international students in good telecollaborative tasks to work on together.

However, designing a VE project may prove challenging for those educators who are nearing this approach for the first time since the design process as well as the motivations for the selection of one type of task or another has rarely been explicitly explained in the literature. With this in mind, in 2009, O'Dowd and Ware did a literature review through which they were able to identify 12 types of telecollaborative tasks, which they grouped into 3 main categories: information exchange, comparison, and collaboration. Today, this categorization is widely accepted by experts and used as a reference by researchers and teachers to carry out their project design tasks. Complete VEs can be designed following these 3 categories that, as Guth and Helm (2012) have illustrated, allow for the development of skills and competences in the operational, cultural and critical dimensions.

First, information exchange tasks would be the 'ice-breakers' serving as an introduction to the VE project for the participants. These should aim to motivate students in regards to the project as well as to initiate the online socialisation process among the international students. The degree of interaction and negotiation of meaning at this early stage tends to be the lowest of the project since the focus is on students' getting to know each other by exchanging information related to their personal lives and their contexts.

Second, comparison and analysis tasks constitute a gradual step in terms of task complexity and degree of student interaction and involve information exchange and knowledge co-construction through critical cultural comparison and analysis. These can focus on a cultural or linguistic analysis and can take as reference different cultural sources such as books, films, series, social media, advertisements, news, articles, surveys, etc. At this stage, students engage in dialogue to share and co-construct together knowledge in terms of cultural similarities and differences between their contexts.

Third, collaborative tasks involve students' collaboration on the co-creation of a joint product and constitute the most important part of the project in terms of competence development. This final task type is the one that involves the greatest degree of interaction, interdependence and negotiation of meaning since students need to work as a team to develop their work together. At this stage students can be asked to create together a wide range of different products from essays or presentations, to multimedia contents and even active citizenship reports as in the case of VEs focused on citizenship as will be seen in the VEs implemented as part of this research.

As identified in numerous studies looking at the effectiveness of VE for communicative, collaborative and intercultural skills development, the inclusion of appropriate collaborative tasks that present students with the need to collaborate and negotiate to accomplish the task together is key in enabling this type of learning (Helm & Van der Velden, 2019; The EVALUATE Group, 2019). These also suggest that facing challenges in accomplishing these tasks together as a group also greatly contributes to enhancing students' learning outcomes. In contrast, collaborative tasks are the least frequent which may be due to the complexity presented by group work, division of labour, balancing of schedules, reciprocity in involvement and work sharing as Guth and Helm (2010) have identified.

At the same time, in the process of task design teachers need to take into account the context in which these will take place. Online multimodal means of synchronous, asynchronous, oral and

written communication have their own conventions, opportunities and limitations, which are different from those of face-to-face communication, and this is something that has to be considered when designing the tasks that FL students will carry out in their international collaborative projects (Guth and Helm, 2012). This leads us to the matter of tool selection.

When deciding what tools to use in a VE, an initial concern should be choosing a Virtual Learning Environment (VLE) to host the project. In this platform teachers can post all the announcements, task instructions and necessary information such as timetables and project background information (for example about the participating institutions and about the theme of the VE) while students can post the contents and results or reports of their weekly tasks. VLEs can also provide international working groups with space for interaction in discussion forums, for instance. Examples of VLEs that can be used to host VE projects can be found in sites such as Moodle (https://moodle.org/?lang=es), Schoology (https://www.schoology.com/) or Mahara (https://mahara.org/) just to name a few. This choice will depend on the collaborating teachers' preferences as well as their institutions requirements. However, it is convenient to choose a VLE that is not excessively complex to manage for students since this can hinder the development of the project.

Another question that teachers will face when choosing the tools for the VE project will be whether to engage students in asynchronous communication, synchronous or both. CMC over the internet can take place synchronously "where interaction takes place in real time" such as in "various types of text-based online chat, computer, audio, and video conferencing or asynchronously "where participants are not necessarily online simultaneously" such as in "email, discussion forums, and mailing lists" (Simpson, 2002, p. 414). In a recent review of the literature, Avgousti (2018) identified that in VE asynchronous CMC was more commonly used than synchronous CMC, being the most common tools for communication between 2004-2010 email and forums. However, Avgousti's research also showed a shift towards multimodal mediums in the last years including audio and video and the use of videoconferencing tools such as Skype. Similarly, reviewing trends in VEs in recent years, O'Dowd (2016) also identified synchronous interaction through videoconferencing tools as an upward trend. The reason why synchronous communication tools may have been less used so far is the added difficulty of making learners available to work together at the same time and the time shifts in different countries. However, researchers report higher levels of motivation and interaction when students communicate synchronously (Kramsch, 2009). Combining both communication modes is also a possibility and constitutes indeed the most desirable option for students to benefit from the positive aspects in terms of competency development that both of them offer. Avgousti (2018) also reported that in more than a third of the studies in the review, the combination of both asynchronous and synchronous CMC were used. Regardless of the tools chosen for both communication and task development (e.g. tools for creating multimedia presentations) it is desirable both to choose tools that are not overly complicated at a technical level and to provide sufficient and appropriate training for students to ensure that they have the necessary knowledge to handle them successfully.

In addition to their communication as part of their tasks, students can benefit from establishing a channel of personal correspondence for their international working groups. This can provide them with a non-monitored space to organise their work together as well as to engage in more personal and informal conversations where to develop their interpersonal relationships. For this purpose, learners can discuss together and agree on the tool they like best. It is common for students

nowadays to resort to instant messaging applications such as Whatsapp or Telegram (Gutiérrez et al, 2021, 2022).

Another key factor when planning a VE is integration intended as the inclusion of the project into the classes. The tasks proposed as well as the theme(s) around which these develop need to be related to the students' course syllabus and to be relevant to their learning needs. In order to integrate the VE into the course, it should appear in the course syllabus explicitly mentioning how it relates to the course objectives. In addition, enough and regular class time should be devoted to work and discussion on aspects related to the VE. In this process, the teachers' guidance plays an important role as we will explore in detail the section devoted to the role of the teacher in the implementation of VE.

At the same time, and closely related to the issue of integration, is that of assessment, as students need to receive credit or recognition for their participation in VE (Lamy & Hampel, 2007; Helm, 2015). Teachers need to select the appropriate tools to assess the learning outcomes of students through their participation in the project, which in turn have to be in line with the objectives of the course in which it is being implemented (Helm, 2015; Godwin-Jones,2019). While the range of knowledge and skills that students may develop thanks to their participation in a VE is wide (i.e. global, intercultural, digital, soft skills, etc) and may prove to be challenging to assess (O'Dowd, 2010), teachers may focus, for assessment purposes, on specific areas such as linguistic competence in the case of the FL classroom.

Recent publications (O'Dowd and Lewis, 2016; Lee and Sauro, 2021) have looked at common assessment practices used in the context of VE to evaluate language learning. The three main approaches to assessing language learning identified by Lee and Sauro (2021) are the ones that follow: (1) approaches that evaluate changes in language use over time during the VE such as corpus-based analysis of learners' target language (pp.35-36) and multiple measures combining learner self-reports and subsequent use during the VE (pp.36-37); (2) approaches that employ pre- and post-tests to evaluate learning outcomes (pp.37-38) and (3) approaches that rely upon student self-assessment or self-documentation (pp. 38.39). They also present these approaches in relation to the VE curriculum (Figure 8): "Curriculum-based assessment includes formative and summative assessment, and curriculum-free assessment includes proficiency, diagnostic, and placement assessment" (Lee & Sauro, 2021, p.41).

Figure 1.   Examples of language assessment
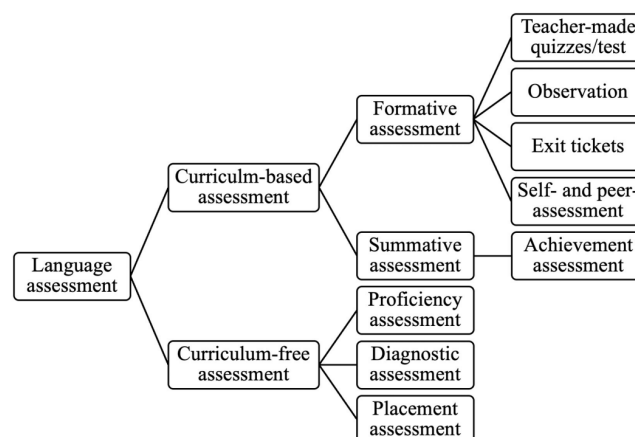
Figure 8: Examples of language assessment in VE (Lee & Sauro, 2021, p.41).

While assessment in terms of other sets of skills developed through VE such as ICC, intercultural, global citizenship or digital skills development has tended to be overlooked (Byram, 2014; Porto, 2019), in recent years an increasing number of studies have tried to tackle the challenge of assessment in these complex areas. Examples of this are European projects researching VE at large scale such as EVALUATE (the EVALUATE group, 2019), Erasmus+ VE (Helm & van der Velden, 2019) or EVOLVE (EVOLVE Project Team, 2020). All these sets of competences tend to be measured using qualitative tools such as "student essays, journals and blog entries, transcripts, or portfolios [that] provide content that can be examined and assessed according to the model and rubrics used" (Helm, 2015; Godwin-Jones,2019,p.12). When it comes to the assessment of ICC, there are a number of resources that offer criteria such as the Intercultural Sensitivity Scale (Chen & Starosta, 2000), the Process Model of Intercultural Competence (Deardorff, 2006) or Byram's model of ICC (1997) which many educators adapt to their own contexts and needs (Lewis & O'Dowd, 2016). In terms of citizenship assessment also various models have been developed such as the RFCDC (Council of Europe, 2018a) or the OECD PISA Global Competence Framework (OECD, 2018). The latter has served as a source of inspiration in terms of assessment for pedagogical purposes in the iterative ARCs of this study (i.e. assessment that is intended to plan further educational practice) as will be explored later on.

However, trying to assess this kind of intercultural competences poses some ethical issues such as lack of a reference model, difficulties in assessing 'internal outcomes' (e.g. personal growth and maturity) and the contextual nature of these internal competences; the affective dimension; and inevitably the methods used for evaluating intercultural competences (O'Dowd and Lewis, 2016; Borghetti, 2017). What is certain is that students should be: "clear about expectations regarding assignments, including length, language,and content" and the feedback provided "frequent, consistent, and substantive" (Godwin-Jones, 2019, p.12). To this end, students should be exposed to examples of what they are expected to do (e.g. from previous years) and should also be provided with the rubrics (or any tools) that educators are going to use to grade their work.

2.4.3.2. Implementation: the Role of the Teacher

As seen in the preceding section, previous to the implementation stage, VE teachers play a key role in the design and planning of the project in terms of task design, tool selection and integration of the project in the course. In turn, teachers are also responsible for establishing an appropriate partnership for the project and to maintain close contact with the partner teacher(s) throughout the process to contribute to the smooth running of the project. In addition, teachers need to offer enough and appropriate guidance and support to students throughout the process of implementation of the VE. Ensuring that it is firmly integrated into the classroom by devoting time to both preparing students for their online interactions and reflecting on their experiences and learning outcomes. All these aspects shaping the role of the teacher in the implementation of VE will be explored in more detail here.

Finding a suitable partner(s) is a determining factor in the development and success of VEs. A number of different aspects need to be discussed with potential partners such as the approximate number of students participating in the VE from each institution, the semester dates and any holidays

interfering with the project dates, the technical sources students can count on during the project (e.g. computers, internet connection, allowed tools/sites), frequency and timetable of the sessions in each institution, course objectives and content areas, languages used in the course, profile of the participants (i.e. age, level of proficiency in the FL, previous intercultural/VE experience, digital literacy) and institutional needs and requirements. After discussing all these aspects VE teachers can consider whether or not a partnership should be established, since if they identify too many institutional asymmetries it may be convenient to continue looking for a more suitable partner.

Institutional asymmetries (Lindner, 2016) can be defined as "differences between the participating institutions and cohorts" (p.145) and can manifest as "differing age, cohort size, language proficiency and prior experience of other cultures" as well as "media literacy- including different practices in using communication tools- as well as mismatched semester dates and grading requirements"(p.16). These asymmetries can have both a negative and positive effect on learners' online intercultural interaction and collaboration. For example, they can lead to different degrees of commitment in terms of motivation or participation in the project, which can lead to misunderstandings or even conflicts in the working groups. An example of this can be found in Belz (2002) who reflected on how the opportunities and constraints of institutions affect the social action of VEs. In her study, Belz (2002) observed how her American students were more concerned with completing their homework assignments for their grades than with actually taking advantage of the opportunity to interact and collaborate with their peers from another culture (p.73). In formal educational contexts, students are often concerned about their grades, and when there are significant differences in the importance of the exchange to students' grades at each institution, this can lead to large differences in participation, effort, and concern about assignments that can generate tension and even conflict. However, in contrast to this, the diversity generated by institutional asymmetries can also happen to be a positive challenge fostering intercultural learning and negotiation (Lindner, 2016).

After having established a partnership, teachers need to articulate what O'Dowd and Ware (2009) termed as 'online collaborative competence' which can be defined as the ability to find common ground and establish compromises in terms of project design while showing openness and willingness to adapt to differing views and approaches with the aim to agree on tasks whose learning objectives and pedagogical understandings are clear and satisfying to all partners. In addition to project planning and design, VE teachers need to stay in close contact with each other during the project, preferably on a weekly basis to discuss aspects of the project such as the current task, any potential problems or identified by the teachers or mentioned by the students (e.g. in terms of online interactions or work completion), any upcoming holidays or events interfering with the project, any necessary modifications, etc.

Another key aspect in the role of the teacher is that of pedagogical mentoring and support involving how teachers help students to reflect on and learn from their interactions throughout the project (O'Dowd et al., 2020). The context of VE is specially demanding for teachers since they need to be ready to tackle a complex context in which learning scenarios involve intercultural communication in a FL happening in an online context (Ware & Kramsch, 2005) giving rise to a number of challenges to the implementation of telecollaboration projects (see O'Dowd and Ritter, 2006 for an overview). O'Dowd (2013) identified the following challenges to implementation of VE encountered by VE teachers: "time necessary to set up and run exchanges", "difficulties in integration and assessment due to institutional requirements", "lack of pedagogical knowledge about how to run and integrate exchanges", "teachers lack of e-literacies and required technological knowledge" and

"difficulty in finding appropriate partners". For these reasons, authors have called in the literature (Stevens Initiative Virtual Exchange Impact and Learning Report, 2019; Dooly & Vinagre, 2021) for the need to train VE teachers to be equipped with the necessary skills to run VEs and to be ready to offer enough and appropriate support and guidance to their students. An example of this concern in the field is the Mentoring Handbook for VE teachers (Gutiérrez et al., 2021) that offers practical guidance and advice for teachers on how to implement their mentoring to raise their learners' awareness of how to interact online in (a)synchronous communicative contexts.

VE teachers' experience suggests that, in contrast with the general assumptions, intercultural learning and understanding do not happen automatically because of contact (Kern, 2000; Kramsch & Thorne, 2002) and young learners do not tend to be naturally prepared to cope successfully with communication and collaboration in online contexts or the use of technology (O'Dowd et al, 2020; Ware,2013) and could benefit from explicit guidance on becoming aware of effective and appropriate communication strategies in online intercultural contexts. To do so, teachers need to pay attention to their specific contexts for VE implementation in which many factors are at work at the same time shaping their own opportunities and constraints. Teachers need to pay attention to aspects such as the cultures of use (Thorne, 2003) with respect to technology, negotiation of meanings between participants or the type of relationships they establish (superficial, hyper-personal, conflicting...), as this will shape their communication and affect learning outcomes. From their own observation, teachers can design and implement their own mentoring accordingly. To do so, they can employ a number of strategies identified as beneficial in the literature.

Authors have noted as effective (Ware, 2013; Muller-Hartmann and O'Dowd, 2017) to closely observe online interactions (e.g. online discussion forums or videoconferences) in international working groups and present students with real anonymised examples of both interesting conversations or rich points (Agar, 1994) and delicate or failed conversations (i.e. communicative breakdowns) (O'Dowd and Eberbach, 2004) to enable class discussion of these with the whole group and encourage active participation in knowledge construction as well as critical reflection. In teacher-led group discussions in class, the integration of these real-life situations drawn from learners' own interactions and/or reflections proves fruitful in terms of linguistic and intercultural learning (Belz and Muller-Hartmann, 2003; Ware and Kramsch, 2005) and it also helps to prevent learners from forming stereotypes or misconceptions about their international partners, which may occur if they do not receive support or training in this regard (Belz, 2003; Guth, Helm & O'Dowd, 2012).

2.5. Chapter Conclusion II

In Chapter II, I set out to provide a comprehensive literature review of three main topics: FL education, citizenship education and the pedagogical approach to VE. To do so, I reviewed numerous recent approaches and models in the different areas and paid particular attention to those used to assess student learning: the communicative and intercultural approaches and the CEFR in the case of FL competence development; the global citizenship framework (OECD, 2018) in terms of the knowledge, skills, attitudes and values of the global citizen; and, finally, the principles, objectives and virtues of ecological citizenship following the ideas of Dobson (2001, 2003, 2007) and of education for sustainable development (UNESCO, 2017). In addition, the chapter explored the concept of VE by detailing its development, as well as clarifying what this approach is and what it is not and the terminology used to refer to it. I also reviewed the different models of VE and their learning outcomes

and paid special attention to the main issues that teachers and researchers need to consider when designing and implementing successful VEs.

As a result of this review, it was seen that little work has been done on integrating ecological citizenship into FL education, although it is well suited for this task. In my study, I will bring these different areas together in a VE model that takes the main ideas identified in this review as its basis. To summarise, it is about: helping students learn to communicate effectively, efficiently and appropriately in an FL, to acquire the set of competences that will enable them to participate in and analyse intercultural encounters, and to promote and prepare students to take social action and practice active global ecological citizenship, all through the implementation of VE projects.

In the next chapter I go on to describe Action Research (AR) as the underlying methodology for the design and implementation of this research. Reference is made to the types of data and the corresponding data collection procedures and instruments, as well as the approaches and instruments selected for analysis. The two iterative Action Research Cycles (ARCs) are described to introduce a general chronological outline of the phases of the study and its associated activities and outcomes. A review of previous projects that informed the pedagogical design of the study is also provided and issues of validity, reliability and ethical considerations are addressed.

CHAPTER III: METHODOLOGY AND RESEARCH DESIGN

3.1. Introduction

This chapter presents Action Research (AR) as the methodology adopted for the design and implementation of this study. It outlines the characteristics of the AR inquiry cycles along with the relevance and suitability of these for attaining the objectives of this research. The chapter also provides an overview of the inquiry cycles' timeline, schedule and contexts as well as of the projects that served as background for the design of the model PLANET VE. It concludes by reviewing the procedures of data collection and analysis.

3.2. Research Questions

Recent years have been particularly prolific in terms of models of education for citizenship such as intercultural (Byram, 2008), democratic (Council of Europe, 2016; 2018a) or global citizenship (UNESCO, 2014; OECD, 2018), as a response to the present global context. Global citizenship can be defined as "the main outcome of international education to educate graduates who will be able to live and work in the globalised world" (Deardorff & Jones, 2012, p. 295) and in the context of VE this type of citizenship is the one that seems to be gaining more prominence (O'Dowd, 2019). The effectiveness of the pedagogical approach of VEs for the development of linguistic (Brammerts, 2006; Marull & Kumar, 2020), intercultural (Belz, 2003, 2004; Furstenberg et al., 2001; Müller-Hartmann, 2007; O'Dowd, 2003; Ware, 2005; Furstenberg & Levet, 2014; Chun, 2015) and global competences (Leask, 2015; O'Dowd, 2019; Goodwin-Jones, 2019) has indeed been well-documented in the literature during the last two decades. The present study contributes to the research effort of exploring how to best exploit the potential of VE for the development of key competences for the present context such as ICC (see Avgousti, 2018 for a review) and global citizenship (O'Dowd, 2019) and adds to this ongoing discussion an innovative perspective by introducing ecological citizenship into the equation. This is done by putting emphasis on students learning to live together and sustainably through the introduction of a global (OECD, 2018) and ecological (Dobson, 2000, 2003, 2007) approach for the tasks proposed. With this in mind, the following general question was formulated:

> How can the goals of global and ecological citizenship be integrated into the field of foreign language education through virtual exchange?

As an answer to this question, the development of an effective VE model for the development of global and ecological citizenship suitable for implementation in the field of FL education has been sought. This is based on the empirical experience of the two Action Research Cycles (ARCs) implemented in the present study and includes detailed task instructions, materials, assessment tools and mentoring guidelines for teachers. This will enable any FL teacher interested in implementing or adapting such a model to do so.

In VEs revolving around global critical themes FL learners are given the opportunity to develop relevant competences that go beyond the 4Fs: Food, Festival, Folklore and Fashion (Meyer and Rhoades, 2006) and to engage in meaningful interactions with international partners. However,

considering that the learning outcomes developed in the PLANET VE focused on environmental issues, sustainable development and ecological citizenship have not been explored yet another question worth exploring arises:

1. In what ways can VE contribute to global and ecological citizenship development?

At the same time, while there is a large body of research that has examined student learning outcomes in the context of class-to-class VEs, the diverse nature of these (e.g. classes, learners, tasks, technologies, assessment...) can make it difficult to draw reliable conclusions about the effectiveness of particular models of VE (O'Dowd, 2021b). Therefore, exploring the results stemming from the adoption of both a bilingual and a lingua franca approach in the present study is relevant as it offers the opportunity to compare and contrast the possibilities of each telecollaborative learning configuration in order to draw reliable conclusions about their effectiveness for the implementation of the PLANET VE model. So the following question is posed in relation to it:

2. What are the different affordances of the bilingual and lingua franca models in virtual exchange?

This question also contributes to the need for further replication studies that aim to confirm the learning outcomes of specific VE approaches due to the heterogeneous nature of this pedagogical approach (O'Dowd, 2021b). Examples of previous replication studies can be found in European Erasmus+ projects such as EVALUATE (EVALUATE group, 2019) or EVOLVE (EVOLVE project team, 2020) which examine the impact of the class-to-class VE model on large cohorts of students or the recent study by O'Dowd (2021b) in which he analysed 345 portfolios of 5 bilingual-bicultural VE and 8 ELF VE to examine the differences between these two approaches.

Finally, authors have called in the literature (Stevens Initiative Virtual Exchange Impact and Learning Report, 2019; Dooly & Vinagre, 2021) for the need to train VE teachers to be equipped with the necessary skills to run VEs and to be ready to offer enough and appropriate support and guidance to their students. Similarly, VE teachers' experience suggests that, in contrast with the general assumptions, intercultural learning and understanding do not happen automatically because of contact (Kern, 2000; Kramsch & Thorne, 2002) and young learners do not tend to be naturally prepared to cope successfully with communication and collaboration in online contexts or the use of technology (O'Dowd et al, 2020; Ware, 2013) and could benefit from explicit guidance on becoming aware of effective and appropriate communication strategies in online intercultural contexts. Consequently, the following question has been explored in relation to the model of VE developed in the present study:

3. How can teachers support students in their learning during a virtual exchange?

In the next section the research approach adopted to answer these questions will be outlined.

3.3. Action Research

This study adopted AR as its underlying methodology. The social psychologist Kurt Lewin is considered to be the father of AR who coined the term in the early 1940s. He is attributed with the celebrated phrase: "No action without research; no research without action". Although numerous definitions of the concept of AR exist, the one proposed by Carr and Kemmis' (1986) tends to be widely accepted in the literature and describes it as "self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out" (p.162). This definition aligns with education as a social practice and Kemmis & McTaggart (1988) outline a sequential programme for educators willing to engage in AR. The conceptualisation of AR builds on previous notions that give importance to the role of teachers as key in moving the research field forward. Examples of this are Lawrence Stenhouse's (1975) notion of teachers as researchers of their own practice as a key aspect of successful curriculum development and the notion of the reflective practitioner (Schön, 1983) that highlights the relevance of reflection to both understand and redesign the educational practice in order to improve the learning experience.

3.3.1. Characteristics of Action Research and the Action Research Cycle

Departing from Carr and Kemmis' (1986) proposal of the key components of AR, Kember (2000) identifies and discusses the 7 characteristics that can be outlined as the major ones for illustrating the nature of AR: (1) a social practice (2) aimed towards improvement, that is (3) cyclical, (4) systematic, (5) reflective, (6) participative and (7) determined by the practitioners. These elements will now be examined in more detail:

(1) Education is a complex social practice in which teachers and students interact (be it face to face or online). Therefore, researching issues related to teaching and learning involves grappling with a wide array of human questions. With this in mind, the methodology of AR, concerned with social practice, appears to be a suitable one for research that aims to explore the complex picture presented by educational contexts as is the case of the present study.

(2) The orientation of AR towards improvement is a key distinctive feature of this methodology that can be framed within the type of research that focuses on achieving social change (Lewin, 1951; Rapoport,1970). Those researchers who undertake AR embrace change and embark on it with the deliberate intention of enhancing their practice. They identify a problem in their practice, collect evidence, interpret it and take action to apply the results derived from their research with the aim to solve the problem or improve the practice. As Norton (2009) points out, in the specific context of HE, AR orientation towards improvement can focus on "the individual students, the curriculum, the department, the institution, changing or informing policy making and strategy across the sector" (p.55).

(3) In order to do so, AR researchers engage in 2 or more iterations of a cycle or spiral that involves a process of action planning, action taking, observation and reflection including the refinements identified in each of them in the following one. However, as Kember clarifies, while AR cycles will always include these 4 steps, overlaps between steps will be common, as well as the need to move back and forth in the AR cycle or spiral. This is most often the case in more complex projects, where

several spirals may emerge to explore the various themes and sub-themes. Authors such as Cook (1998) or Norton (2009) observe that while these steps may provide a useful guideline for researchers, these should not be taken as a rigid template since AR is primarily a process of interpretive work and progressive refinement. As Kember (2000) concludes in this regard, the intention should be to follow the process and its steps in an orderly manner whilst acknowledging that variations may be necessary to achieve the research objectives.

(4) One of the main strengths of AR is that it attracts many educators, among which the teacher-researcher of the present study can be situated, who see it as a logical and appropriate method for exploring and improving their teaching. However, this does not mean that AR is a less precise methodology than other paradigms, as it implies rigorous enquiry including systematic observation and evaluation. Norton (2009) notes that because of the perception of AR as a different research approach to conventional research, practitioners undertaking AR need to pay particular attention to both the design and analysis of their research.

(5) As can be inferred from the characteristics outlined above, AR is a reflexive process that inherently involves interpretative work on the part of the teacher-researcher. However, as Norton (2009) warns, this interpretative nature makes it necessary for researchers to be transparent about the whole process and its implications.

(6) AR is also participative which involves a number of ideas. First, that it involves those involved in the subject matter under investigation. Also that AR can be conducted by a group of researchers or by individual reflective practitioners (Schön, 1983) who aim to understand and redesign their educational practice in order to improve it. Finally, the term participative when referring to the characteristics of AR also includes the key role of practitioners in the process as key agents of change.

(7) AR is determined by the practitioners since it is educators that decide the subject of the research based on their own interests and motivations in regards to their own practice. The topic can be "some innovation they feel is worth introducing into their teaching", "a problem they want to solve or an issue they want to tackle" or "a concern that they have been aware of for some time" (Kember, 2000, pp.24-25). In the present study, for instance, the teacher-researcher felt the need to introduce an innovation through the inclusion of global and ecological citizenship to enhance skills development of FL students by engaging in VE projects as part of the course instructed by her.

When it comes to the characteristics of the AR cycle, the main 4 steps (i.e. planning, acting, observing and reflecting) originally proposed by Lewin (Lewin and Lewin, 1948) are widely accepted in the literature (Kember, 2000; Norton, 2009) while it is also acknowledged that these steps may need to be taken back and forward and new categories and subcategories can emerge in the research process adapting this schema (Smith, 1996; 2001; 2007; Cook, 1998; Norton, 2009). Rossouw (2009) proposes an adapted version of the AR cycle for both pre- and in-service teachers to be taken as a suggestion on how an investigator can proceed. Figure 9 illustrates Rossouw's proposal of the AR cycle:
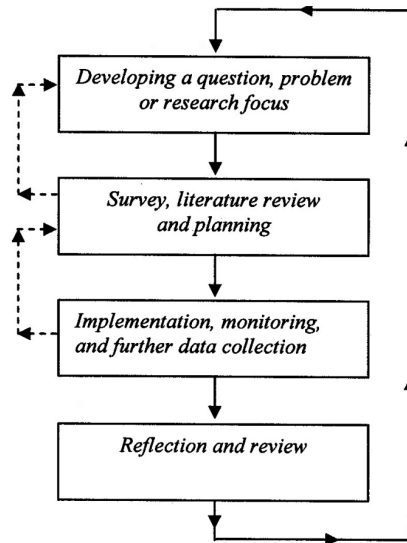
Figure 9: Action research cycle (Rossouw, 2009, p.10).

These steps (see Rossouw, 2009, pp. 9-12 for a detailed description of each step) can be summarised as follows: The action researcher starts the cycle by delimiting the problem to be addressed, the innovation to be introduced or the question to be answered as a first step. Next, the researcher proceeds to retrieve sufficient information available in the literature and/or the context and networks to be able to situate the issue in order to design a concrete and adequate plan for the informed pedagogical action. This plan should include how the issue will be addressed in terms of the information obtained, the specific outcomes to be achieved, the resources needed, the methods and tools for data collection and analysis, the research participants and ethical considerations. Once a specific plan has been established to address the issue, the action researcher moves to the implementation phase of the action plan, taking responsibility for observing and monitoring the process and collecting the necessary data. The final step involves reflection based on the analysis of the data and subsequent reconceptualisation if deemed appropriate. The nature of the AR cycle is iterative and progressive and involves using the findings from the analysis of the data obtained in each cycle to make appropriate modifications or improvements in the next cycle until the desired outcome is achieved. Each subsequent cycle then follows the same planning, action, observation, reflection and refining structure. Norton (2001; 2009), in turn, proposes the use of the acronym 'ITDEM' to help practitioners picture and remember the structure of the AR cyclical process: "Step 1 Identifying a problem/paradox/ issue/difficulty; Step 2 Thinking of ways to tackle the problem; Step 3 Doing it; Step 4 Evaluating it (actual research findings); Step 5 Modifying future practice" (Norton, 2009, p. 70).

3.3.2. Strengths and Weaknesses of Action Research

As with any other type of research methodology, AR presents both strengths and weaknesses. From its characteristics, a number of strengths that AR presents can be identified. The most important of these can be summarised in the following way. First, the fact that AR focuses on improving practice through the study of its own context to then apply its findings (i.e. changes, improvements, etc) to it can be considered as one of its strengths as it contributes not only to improving the issue being assessed but also to the professional growth of the practitioners. As Gunbayi (2020) points out, AR rejects the division between knowledge generation and knowledge implementation and instead

integrates research, practice and action as interconnected aspects, leading to reflective professional practice on the part of practitioners Therefore, AR enables reflective practice (Schön, 1983) and contributes to practitioners' gain of a better understanding of their work. In the specific context of HE, as Norton (2009) notes, AR gives academics the opportunity to take ownership of their own professional development by becoming active learners.

Another positive feature of AR can be found in its capacity to link research to actual practice and active intervention simultaneously, thereby contributing to problem solving and knowledge construction (Hult and Lennung, 1980; Gunbayi, 2020). The changes that AR promotes are one of its core assets, as these are based on participatory research and enable bottom-up democratic changes when it comes to policy and practice development in educational contexts (Efron and Ravid, 2019; Gunbayi, 2020). AR is also a versatile and rich method in which triangulation of tools and methods is usually included. While it tends to be approached from a qualitative stance, a mixed approach can also be applied allowing for the inclusion of both quantitative and qualitative approaches in the research process (Gunbayi, 2020).

However, a number of challenges inherent to the implementation of the AR methodology can also be identified. Both Kember (2000) and Norton (2009) warn that the methodology has its limitations. These include the issue of objectivity due to the lack of multiple perspectives in the research process and also the presence of assumptions that may depend on the researcher's individual considerations, skills or even interests. However, Norton (2009) clarifies that AR takes this limitation into account as well as its dependence on the context in which it is carried out and does purposefully not intend to be prescriptive. AR practitioners can use the dissemination of their research projects via publications and conferences to share and discuss their findings with other colleagues in the field. Bearing this in mind, a second coder has been involved in data analysis in this study and the results stemming from the first AR cycle implemented have been shared and discussed with expert colleagues in various international conferences on the thematic of VE.

Another limiting factor in AR can be found in the generalizability of its findings due to the usually smaller size of the samples researched (Wiśniewska, 2011). In the case of qualitative data, smaller samples can lead to less richness and in the case of quantitative data to low statistical power (Gunbayi, 2020). This can be addressed by introducing techniques such as the triangulation of multiple data sources and the cyclical iterative nature of AR that allows to refine the action with as many cohorts of students (i.e as many times/cycles) as necessary until the findings are deemed reliable. Other disadvantages of AR identified in the literature can be the amount of work that it entails for the practitioner as well as funding challenges (Gubnayi, 2020).

3.3.3. Rationale for Adoption

The main aim of this study is to explore and identify how the pedagogical approach of VE could be formulated (i.e. design of the PLANET VE model) so as to act as an effective teaching practice in the context of FL education for enabling and encouraging students' active participation in the global society from an ecological perspective. Going back to Carr and Kemmis' (1986) description of AR, the first characteristic of a project that adopts this methodology is that it takes as its subject of study a social practice with the aim of improving it through action. It can be concluded that AR's philosophy which puts a strong emphasis on taking action to bring beneficial changes to the

classroom perfectly aligns with the aim of the present study as well as with its philosophy of encouraging action taking.

In order to achieve the aim of this study, it was necessary to engage in an iterative process that would enable to plan, implement, observe and refine the PLANET VE until achieving an effective proposal. This leads us to the second characteristic of an AR project (Carr and Kemmis, 1986), which matches this need with its cyclical nature implying the steps of planning, acting, observing and reflecting applied in a systematic and interrelated way.

The fact that this research forms part of a doctoral dissertation involving a single teacher-researcher has also been a determining factor while designing the study and selecting its underlying methodology. The third and final characteristic offered by Carr and Kemmis (1986) when delimiting the notion of an AR project acknowledges the role of the teacher-researcher as an active participant and responsible agent throughout the whole research process. At the same time, this study is learner centred and students' reflections and testimonies are key to its findings. AR projects proceed gradually including as many of those affected by the practice as possible in the research. Therefore, AR was also deemed as a suitable methodology because it involved the teacher-researcher in charge of the running of both the research and the educational practice studied in it (i.e. the VEs) as well as other participants of the educational practice by including students' reflections and testimonies.

3.4. Research Design

The design of this study, informed by AR methodology, was structured according to two iterative Action Research Cycles (ARCs) that took place over 2 consecutive academic years (i.e. 2020/2021 and 2021/2022) with 3 diverse student cohorts. Each of the ARCs consisted of 4 phases: action planning, action taking, analysis of results, and reflection/reformulation. This process facilitated the evolution, through triangulation of different qualitative data sources, towards obtaining an effective VE model for the development of global and ecological citizenship in the FL classroom.

The action planning phase comprised of an extensive review of other VE projects which had proved to be effective for the development of the target skills. A number of findings from these previous studies, their recommendations and successful practices served as a guide for the design of the PLANET VE. This phase helped to determine the best VE model design for the achievement of the research objectives which included selecting the sequences, types, and content of tasks, the types of tools for interaction, the VLE and the assessment tools. A key moment in this phase, once the PLANET VE was planned, was to find suitable partners interested in taking part in it. When the end of this phase was reached in each ARC, the VE model was designed and the partnerships for its implementation were in place.

The action taking phase involved the implementation of two consecutive ARCs involving 3 different cohorts of students, two cohorts during ARC1 and one during ARC2. The reason why only one VE was implemented during ARC2 can be explained through the concept of saturation. This phenomenon is defined in qualitative research as "the point when additional data fails to generate new information (Morse, 1995; Sandelowski, 1995)" (Braun and Clarke, 2013, p. 55) and was observed in the data analysis stage during ARC1. Consequently, it was considered that one VE would provide sufficient manageable information for a single teacher-researcher without reaching saturation. This

procedure made it possible to successively collect self-reporting and interactive qualitative data which facilitated the understanding of the effectiveness of the PLANET VE for the development of the target competencies and of the rest of the research questions. Each of the iterations contributed to the refinement and enhancement of the PLANET VE leading to the final version of it which proved to be the most effective in terms of competence development. Therefore, the iterative structure of the AR cycle made it possible to test and refine the model and allowed the achievement of the present study objectives.

Next, each action evaluation phase implied a qualitative content analysis of the qualitative data collected in order to get a better understanding of the actual competence gains of students through their participation in the VEs as well as of the rest of the research questions. In the light of the findings obtained during this research phase the pertinent adjustments and reconceptualizations were made in the following one.

Finally, each reflection/reformulation phase consisted of critical reflection on the findings obtained at the analysis stage to identify what worked well and what could be improved in order to maintain the former and modify the latter so as to move towards the best possible PLANET VE model. Figure 10 shows the structure of the present study:
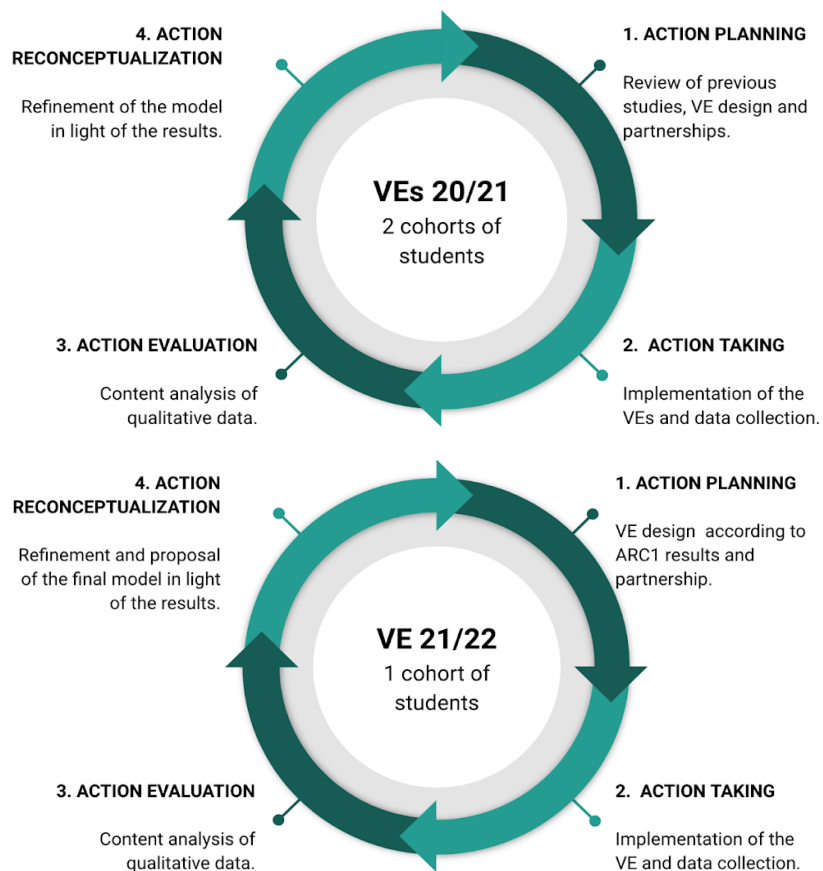
Figure 10: Research design of the present study.

3.4.1. Implementations of the Virtual Exchange Model and Participants

The two iterative ARCs took place in consecutive academic years (2020/2021 and 2021/2022) in which the PLANET VE was implemented 3 times (i.e. two VEs during ARC1 and one VE during ARC2) with a total of 163 students taking part in the study.

During the first round of implementation of the PLANET VE (ARC1) a total of 120 undergraduate students from Spanish and Irish HE institutions coming from different fields of expertise participated in the VEs. On the one hand, 25 students of Filología Inglesa (i.e. English Studies) from a Spanish university interacted and collaborated with 54 students from an Irish university (i.e. Irish University 1[2]) who studied Translation. On the other hand, 22 students of Tourism from the same Spanish university interacted and collaborated with 19 students from Irish University 2 who studied Business. When it came to the second round of implementation (ARC2) a total of 43 undergraduate students pursuing the third year of their university degrees in Spanish and German HE institutions participated in the PLANET VE. There were 20 students of Filología in the case of the Spanish University and 23 students of Teacher Education in the case of the German one.

In the 2 VEs implemented during ARC1, a bilingual-bicultural approach was adopted involving students of English and Spanish as FLs who interacted and collaborated using both languages. The Filología and Translation students dealt with the topic of environmental problems in their communities and sustainable practices they would propose to face them. At the same time, in parallel, the same VE model was adapted and applied with the students of Tourism who interacted and collaborated with Business students using English and Spanish for communication too but dealing this time with the topic of sustainable tourism and sustainable businesses they would propose. During the second implementation of the PLANET VE during ARC2, an ELF approach was adopted and students interacted and collaborated on tasks related to sustainability and the SDGs.

The evaluation of these three interventions through qualitative content analysis led to the identification of the affordances of the PLANET VE which served to facilitate its adjustment and reconceptualization for the second implementation and final model in turn.

As previously explained, each of the VEs followed a three-task sequence following O'Dowd and Ware's (2009) categorization which consisted of (1) Getting to know each other: Information Exchange; (2) Comparison and Analysis; and (3) Creation of a joint Telecollaborative Product. For each of the tasks the FL students followed the "language rules" agreed by the VE teachers which consisted of producing the pieces of text in their FL and answering their international partners' written contributions in their L1 in the case of the bilingual-bicultural approach. When it comes to videoconferences, students had to manage time so that half of the call would take place in one language and half in the other. In the lingua franca VE, all interactions took place in English. All the implementations of the PLANET VE comprised both synchronous and asynchronous CMC for which students used Web 2.0 tools of communication such as Zoom for videoconferencing, the discussion forum of the VLEs (i.e. Schoology in ARC1 and Mahara in ARC2) for the written asynchronous correspondence, Whatsapp for instant messaging or Google Drive to collaborate on tasks. Teachers introduced each of the tasks to their local students in class and provided them with guidance towards

---

[2] The exact affiliations of the universities taking part in the VEs have not been included in order to protect confidentiality. Since two Irish institutions took part in the VEs these will be labelled with numbers.

task completion throughout each VE implementation. At the same time, international teachers maintained a close collaboration and continuous communication to favour the correct development of the projects and continuously monitored students' participation and students' needs. Students were assessed based on their self-reported learning on the portfolios as well as on the oral presentations they did in class to report their work and experience in their international working groups. The tasks revolved around global and ecological citizenship and were adapted to the specific context of each VE (i.e. sustainability in daily life, sustainable tourism and the SDGs). That is, while the Filología and Translation students dealt with ecological issues affecting the day-to-day life of their communities and everyday sustainable practices, the Tourism and Business students dealt with sustainable tourism and the creation of potential new businesses for sustainable tourism and the Filología and Teacher Education students dealt with sustainability addressing and contributing towards advancement in specific SDGs in their communities. Table 1 shows a brief general overview of each of the implementations of the PLANET VE:

ARCs	Duration	Participants	Tasks	Tools
1st AR Cycle				
VE1 SP/IE1	October 2020-December 2020	SP: -1 EFL Teacher/ Researcher -1 group of 25 students of Filología (English Studies) IE1: -2 SFL Teachers -2 groups with a total of 54 students of Translation	Task 1: Getting to know each other Task 2: Comparing and Analysing Ecological Issues and Community Measures Task 3: Creating a promotional video of sustainable practices	Synchronous: -Zoom -Whatsapp Asynchronous: -Schoology (VLE) discussion forums -Email -Google Drive
VE2 SP/IE2	October 2020-December 2020	SP: -1 EFL Teacher/ Researcher -1 group of 22 students of Tourism IE2: -1 SFL Teacher -1 group of 19 students of Business	Task 1: Getting to know each other Task 2: Comparing and Analysing Sustainable tourism and business opportunities in their communities Task 3: Creating a promotional video of sustainable tourism	Synchronous: -Zoom -Whatsapp Asynchronous: -Schoology (VLE) discussion forums -Email -Google Drive
2nd AR Cycle				
VE SP/DE	October 2021-December 2021	SP: -1 EFL Teacher/ Researcher - 1 group of 20 students of Filología (English Studies) DE: - 1 EFL Teacher/ Researcher - 1 group of 23 students of Teacher Education	Task 1: Getting to know each other Task 2: Comparing and Analysing specific SDGs and Country Measures Task 3: Reports on the implementation of an action plan designed by students intended to contribute further progress towards one or more of the SDGs in their communities.	Synchronous: -Zoom -Whatsapp Asynchronous: -Mahara (VLE) discussion forums

Table 1: PLANET VE implementations.

3.4.2. Background for the Pedagogical Design of the VEs

This study takes the principles and objectives of various approaches in terms of FL education and education for global and ecological citizenship and combines them with those of the pedagogical approach of VEs in order to develop an effective project model. In terms of FL education it was the principles of the communicative approach seeking the development of communicative competence (Hymes, 1972; Canale and Swain, 1980; Canale 1983) as well as those of the intercultural approach seeking the development of ICC (Byram, 1997) that guided this study. The reference work used for the analysis of the development of proficiency in terms of FL skills was the CEFR (Council of Europe, 2001, 2018b, 2020). In turn, the principles and objectives guiding this study in terms of citizenship education take as reference various compatible and overlapping streams such as intercultural (Byram, 2008), democratic (Council of Europe, 2018a), global (UNESCO, 2014; OECD, 2018) and ecological (Dobson, 2000, 2003, 2007) citizenship education. While the analysis of students' competence development in this regard focuses on global and ecological citizenship taking as reference works the global competence framework (OECD, 2018) and Dobson's (2000, 2003, 2007) virtues of the ecological citizen. At the same time, this study focuses on the pedagogical approach of VEs as an enabler for the development of both FL competences and global and ecological citizenship by exploring its principles and objectives, as well as the different models of implementation, its learning outcomes and modes of assessment and how educators can best implement this approach. Figure 11 shows the four competence sets and how they are interrelated.
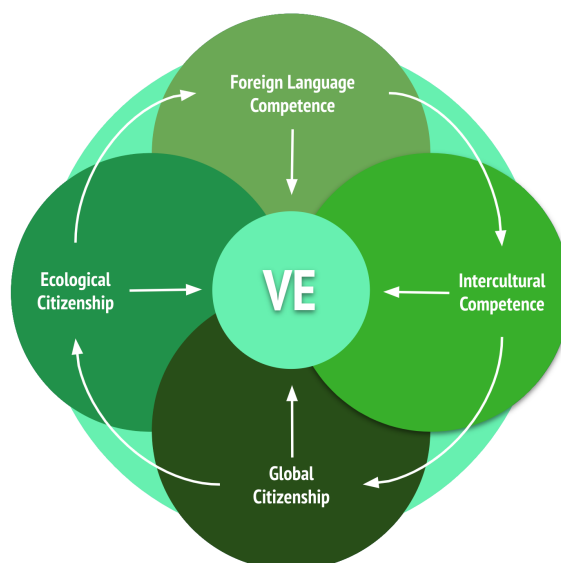
Figure 11: The 4 competence sets developed in this study through VE.

For the design of the PLANET VE, attention was paid to aspects from previous VE projects such as task types, task sequences, ways of communication or assessment tools that had been previously empirically proven to be useful and effective. While it was also intended to fill the gap in the introduction of the topic of ecological citizenship in this type of project. Now, a number of VE projects that have served as a source of inspiration to achieve the aforementioned objectives will be outlined in this section.

The present study contributes to the research effort of exploring how to best exploit the potential of VE for the development of key competences for the present context such as ICC (see

Avgousti, 2018 for a review) and global citizenship (O'Dowd, 2019) and adds to this ongoing discussion an innovative perspective by introducing ecological citizenship into the equation. This is done by putting emphasis on students learning to live together and sustainably through the introduction of a global (OECD, 2018) and ecological (Dobson, 2000, 2003, 2007) approach for those tasks. While ecological awareness and sustainability, as shown by the United Nations Agenda for Sustainable Development 2030, is one of the great challenges of our time, the trend of including political education in the field of FLE, has not yet reflected the need to include projects focusing on ecological citizenship. Therefore, the issue of the effectiveness of VE for the development of ecological citizenship has remained largely unexplored. The exception to this can be found in isolated projects such as, for example, a VE project concerning the environment in the primary English-language classroom carried out in 2013/2014 between Argentina and Denmark as reported by Porto (2015). In this VE, revolving around ecological citizenship, students shared a survey about environmental habits with their family and friends and used the answers to compare and discuss these in their VLE in addition to analysing multimedia sources from both cultures in order to "gain awareness of the power of the media in creating stereotypical images of environmental issues that may influence and behaviors" (Porto, 2015, p. 2).

A comprehensive review of previous VE studies contributed to the understanding of the affordances of the different approaches to class-to-class VEs. During ARC1 a telecollaborative bilingual-bicultural approach, where two groups of learners study each other's languaculture (Agar, 1994), was adopted (Guth & Helm, 2010; Guth, Helm, & O'Dowd, 2012;O'Dowd, 2013; O'Dowd & Lewis, 2016). This has been and remains the most common model of VE in FL education (O'Dowd, 2016) and consists of international partnerships in which students interact and collaborate in tasks designed and organised by VE teachers as part of their classwork involving some kind of recognition. For example, Spanish learners of English can communicate and collaborate online with Irish learners of Spanish and use both languages while working together as was the case in the two VEs implemented during ARC1 of this research. (See Dooly, 2017 and O'Dowd, 2016 for overviews and Belz's early publications (2002, 2003) for research into the interactions and learning outcomes of this model integrated into the classroom). Today, this telecollaborative VE model that is teacher-led and involves class-to-class collaboration and in which learners communicate and collaborate (a)synchronously using a FL on tasks revolving around a culture-related topic is widely implemented and researched. In particular, multiple case studies have focused on analysing its learning outcomes such as language or IC but also digital and soft skills (Ryshina-Pankova, 2018; Mullen and Bortuluzi, 2019). During ARC2, students participated in a lingua franca VE in which students from Spain collaborated with a German partner class interacting and collaborating using EFL. This trend in the field of VEs (Helm, Guth, & Farrah, 2012; Kohn & Hoffstaedter, 2017) recognises that learners are more likely to use a language with other NNSs as themselves rather or more often than with NSs, especially within the work context (Graddol, 2006). More concretely, transnational VEs have been increasingly implemented in HE over the last 10 years involving communication and collaboration of participants around issues of global relevance using a lingua franca enabling students to develop language and intercultural skills relevant to today's global context by engaging them in tasks that require collaboration on issues that go beyond explicit bicultural comparison (O'Dowd, 2019).

The selection of task types for this project was informed by the 3 main task types identified by O'Dowd and Ware (2009): information exchange, comparison and collaboration. Complete VEs can be designed following these 3 categories that, as Guth and Helm (2012) have illustrated, allow for the development of skills and competences in the operational, cultural and critical dimensions. At the

same time, the content of the tasks was designed bearing in mind the key theoretical principles and objectives of the present study so as to develop students' global (OECD, 2018) and ecological citizenship (Dobson, 2000, 2003, 2007) competences in addition to their ICC (Byram, 1997, 2008) and overall FL proficiency (CEFR, 2001, 2018, 2020). Special attention was given to selecting tasks that would allow for a genuine intercultural experience where contact would go beyond the surface involving individuals in collaboration towards common goals in order to foster attitude changes and competences development (Allport, 1958; O'Dowd, 2016b). As identified in numerous studies looking at the effectiveness of VE for communicative, collaborative and intercultural skills development, the inclusion of appropriate collaborative tasks that pose students with the need to collaborate and negotiate to accomplish the task together is key in enabling this type of learning (Helm & Van der Velden, 2019; The EVALUATE Group, 2019).

It should also be noted that during ARC1, the second task type according to O'Dowd and Ware's (2009) classification (i.e. comparing and contrasting) followed a particularly relevant project: The *Cultura* project (Furstenberg et al., 2001; Chun, 2015), which adopts a comparative cultural approach by asking participants to compare and analyse parallel materials from their respective cultures to enable them to notice differences and similarities and to engage in discussions and work together in the progressive co-construction of the meanings and reasons underlying different cultural aspects, reaching a deeper understanding of each other and each other's culture (Furstenberg et al., 2001,pp.58-59). Therefore, in Task 2.1. during ARC1 a Cultura-like questionnaire was posed in order to allow students to compare and contrast their answers to the same questions related to environmental habits and views in their different cultures.

The task sequences proposed to be carried out by the students and the instructions provided to them in the first version of the model implemented during ARC1 were initially inspired by the ones proposed in the EVALUATE VE programme but were adapted to involve contents of ecology and sustainability to meet the needs of this study. The model then evolved from this initial version towards its final one through numerous refinements based on the findings stemming from each of the two iterative ARCs followed. The EVALUATE project is a research study funded by the Erasmus+ KA3 programme (EACEA/34/2015) and a European policy experiment and appeared as a especially suitable source of inspiration to this study since it was the first "large scale study which ha[s] demonstrated the learning gains of a large cohort of students in different exchanges who have taken part in one particular model of virtual exchange" (EVALUATE group, 2019, p.3). Even if the tasks from the EVALUATE project were implemented with students of initial teacher education and the students participating in this project's VEs came from different areas of knowledge, the overall objective of the EVALUATE project was quite similar to the one of the present study: "to prepare their students for the challenges they will meet in the future" (EVALUATE group, 2019, p.1). These challenges include "introducing a European dimension of teaching which includes knowledge of foreign languages and the principles of active citizenship education (Council of Europe, 2016)" (EVALUATE group, 2019, p.5) to which this project adds the need to address the environmental challenges of our time.

When designing the tasks special attention was also paid to the importance of engaging students in the co-creation of shareable artefacts to contribute to students' sense of responsibility and civic engagement: "artefacts should be public, open and shareable. In a global competence virtual exchange whereby artefacts have a social, critical orientation, it is important to create open-access artefacts so as to maximise the impact of the project in the broader community with real time effects"

(Nicolaou, 2020, p.186). Thus, the artefacts students had to co-create together during ARC1 were videos in which they presented environmental problems affecting both their communities and consequent sustainable practices that any citizen could carry out in their daily lives in the case of the English studies-Translation VE (VE 1) and promotional videos for sustainable tourism in destinations for both countries in the case of the Tourism-Business VE (VE 2). In this case, for the action plan of the students, the criteria they had to follow was an adaptation made taking into consideration their level of English and expertise on the field of sustainable tourism from the Global Sustainable Tourism Council Criteria (2019). Application of these criteria will help to contribute towards the 2030 Agenda for Sustainable Development and the 17 SDGs. In contrast with ARC1 in which the artefacts that students had to co-create needed to be online due to the Covid-19 restrictions at the time, in ARC2 students were able to design and implement action plans that could actually involve participating in their communities in various ways. More concretely, the artefacts students had to co-create together were reports on their implementation of the action plan designed by them intended to contribute further progress towards one or more of the SDGs in their communities.

Regarding communication modes, online multimodal means of (a)synchronous oral and written communication have their own conventions, opportunities and limitations (Guth and Helm, 2012) and these were carefully considered by the teacher-researcher when designing the tasks that FL students would carry out in their VEs. In a recent review of the literature, Avgousti (2018) identified that in VE asynchronous CMC was more commonly used than synchronous CMC, being the most common tools for communication between 2004-2010 email and forums. However, Avgousti's research also showed a shift towards multimodal mediums in the last years including audio and video and the use of videoconferencing tools such as Skype. Similarly, reviewing trends in VEs in recent years, O'Dowd (2016) also identified synchronous interaction through videoconferencing tools as an upward trend. The reason why synchronous communication tools may have been less used so far is the added difficulty of making learners available to work together at the same time and the time shifts in different countries. Avgousti (2018) also reported that in more than a third of the studies in the review, the combination of both asynchronous and synchronous CMC were used. Hence, combining both communication modes appeared as the most suitable possibility for the present study since it constitutes the most desirable option for students to benefit from the positive aspects in terms of competency development that both of them offer. At the same time, when choosing the tools for the present study special attention was also paid to selecting not overly complicated ones at a technical level as well as to provide sufficient and appropriate training for students to ensure that they had the necessary knowledge to handle them successfully. To this end students were offered training following the Mentoring Handbook for VE teachers (Gutiérrez et al., 2021).

Finally, assessment has followed recent European projects researching VE at large scale such as EVALUATE (the EVALUATE group, 2019), Erasmus+ VE (Helm & van der Velden, 2019) or EVOLVE (EVOLVE Project Team, 2020) that have tried to tackle the challenge of assessing the complex sets of skills developed through VE such as ICC, intercultural, global citizenship or digital skills that previously had tended to be overlooked (Byram, 2014; Porto, 2019). All these sets of competences tend to be measured using qualitative tools such as "student essays, journals and blog entries, transcripts, or portfolios [that] provide content that can be examined and assessed according to the model and rubrics used" (Helm, 2015; Godwin-Jones,2019,p.12). While in the present study numerous qualitative data sources were collected and triangulated for research purposes as will be explored in the methodology section, portfolios constitute a tool which served for a twofold purpose: assessing students' participation in the VE and gaining understanding of their critical reflections on

their experience and what they learnt from it. The portfolio for this study included questions to foster students' critical reflection in each of the stages of the three different tasks that conformed the PLANET VE as well as space for them to provide evidence of their involvement and participation in the VE (they were allowed to add screenshots and links for that purpose) (see Appendix B for the questions posed to the students in their portfolios for ARC1 and ARC2). However, it should also be noted that trying to assess this kind of intercultural competences poses some ethical issues such as difficulties in assessing 'internal outcomes' (e.g. personal growth and maturity) and the contextual nature of these internal competences; the affective dimension; and inevitably the methods used for evaluating intercultural competences (O'Dowd and Lewis, 2016; Borghetti, 2017). What is certain is that students should be (Godwin-Jones, 2019): "clear about expectations regarding assignments, including length, language,and content" and the feedback provided "frequent, consistent, and substantive" (p.12). Consequently, in the present study students have been exposed to examples of what they were expected to do (e.g. from previous years) and were provided with the rubrics used to grade their work (i.e. their portfolios and oral presentations).

3.5. Research Methodology

In the present study, data was collected adopting a qualitative approach, which can be defined as a type of research that "uses words as data, collected and analysed in all sorts of ways" (Braun and Clarke, 2013, p.3). In this case, the way in which data were analysed was through qualitative content analysis that can be defined as: "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (Hsieh & Shannon, 2005, p.1278). Various qualitative data sources stemming from students' participation in the three VEs implemented as part of the present study in 2 consecutive ARCs (i.e. ARC1 and ARC2) were collected and triangulated in order to gather evidence to address the research questions. These included self-reporting (portfolios and interviews) and interactional data (videoconferences and discussion forums) and were triangulated (Braun & Clarke, 2013) to strengthen the study's validity (Goodman, 2008) and reliability (Yardley, 2008). Therefore, overall qualitative data were gathered and then analysed from a content analysis approach (Hsieh & Shannon, 2005). Table 2 shows a summary of the activities carried out in terms of qualitative data collection and analysis:

Source of data	Activities
Initial interviews and Final interviews	Designing a Semi Structured Interview Scheduling the interviews with the students Carrying out and recording the interviews Transcribing the interviews Setting the codes to analyse the interviews Coding the content of the interviews using the Nvivo software through qualitative content analysis Drawing results from the analysis
Portfolios	Designing a portfolio including questions relevant to this study and suitable to capture students' reflections regarding global and ecological citizenship and FL skills development Setting the codes to analyse the portfolios Coding the content of the portfolios using the Nvivo software through qualitative content analysis Drawing results from the analysis

Forum Discussions	Collecting the discussion of each of the international working groups in each of the tasks Setting the codes to analyse the discussions Coding the content of the discussions using the Nvivo software through qualitative content analysis Drawing results from the analysis
Videoconferences	Collecting all the recordings from students videoconferences in their international working groups Transcribing each of the videoconferences Setting the codes to analyse the videoconferences Coding the videoconferences using the Nvivo software through qualitative content analysis Drawing results from the analysis
Oral presentations	Designing the requirements/rubric for the oral presentation Recording the presentations Transcribing the presentations Setting the codes to analyse the presentations Coding the content of the presentations using Nvivo through qualitative content analysis Drawing results from the analysis

Table 2: Summary of the activities carried out for data collection and analysis.

3.5.1. Qualitative Data Collection

As defined by Dörnyei (2007) qualitative research "involves data collection procedures that result primarily in open-ended, non-numerical data which is then analysed primarily by non-statistical methods" (p.24). As is often the case in research studies comprising qualitative data, this study uses triangulation to strengthen its validity and reliability. Triangulation contributes to the aim of "getting as close to the 'truth' of the object of study as possible" (Braun and Clarke, 2013, p.285) and can be defined as: "the combination of two or more data sources, investigators, methodologic approaches, theoretical perspectives (Denzin, 1970; Kimchi, Polivka, & Stevenson,1991), or analytical methods (Kimchi et al., 1991) within the same study" (Thurmond, 2001, p. 253). As described in Thurmond (2001), there exist different types of triangulation and when more than one of these is used in the same study, as it is the case of the present research, this is referred to as multiple triangulation. In terms of data collection, given the iterative nature of the study, we can talk about time triangulation "time triangulation indicates collection of data at different times to determine if similar findings occur (Kimchi et al., 1991)" (Thurmond, 2001, p. 254). At the same time, within-method triangulation has been included since different qualitative data collection procedures have been combined. In the present study, various tools were used to collect data such as semi-structured personal and group, pre and post VE interviews, student portfolios and interactional data corresponding to videoconference transcripts (synchronous CMC) and forum discussions (asynchronous CMC). Finally, there has also been investigator triangulation engaging 2 coders in the process of analysis of the data set leading to greater research reliability.

Interviews can be defined as "a 'professional conversation' (Kvale, 2007), with the goal of getting a participant to talk about their experiences and perspectives, and to capture their language and concepts, in relation to a topic" (Braun and Clarke, 2013, p. 77). During each PLANET VE implementation in ARC1 two rounds of interviews took place: an initial personal interview right after the end of the first task of the VE to get the first impressions of some randomly selected students as well as the expectations generated by the beginning of the project and a final group interview with the same students and their local partners in their working group to get to know and contrast the impressions after the end of the VE and thus gain a better understanding of the students' feelings. Both

the initial and final interviews were semi-structured with a set of guiding questions prepared in advance (see Appendix A for the questions posed to the students in each of the interview rounds (i.e. initial and final interview questions) but with flexibility to develop conversations that could provide relevant information. Since the number of students was too large to have interviews with each of them, the researcher chose a manageable number of students (approximately half of the students were interviewed). The type of interview selected for this study was semi-structured since the main purpose of carrying out the interviews was to get a deeper and closer insight into the point of view of students. As Norton (2009) notes, this kind of interview enables both interviewer and interviewees to talk more freely while having the questions ready serves to not lose sight of the research objectives when immersed in the conversation. It is worth mentioning that each interview followed a series of steps considered good practice when conducting this type of interview, such as making the students feel comfortable, reminding them that they are going to be recorded, explaining the type of questions they will be asked and the purpose of the interview. In addition, to favour that close and distended ambiance during the interviews, these took place in the mother tongue of the researcher and the students which was Spanish. Finally, interviews took place via Zoom due to the restrictions for the covid-19 and were recorded and later on transcribed.

During ARC2, instead of interviewing students, an initial survey with open questions was carried out right after the end of task 1 and then, working group oral presentations about the VE experience were conducted at the end of the project. It is important to point out that the questions that students were posed in both were the same that students were asked in the pre and post interviews during ARC1 to ensure getting the same information that would allow comparing both ARCs. Given that ARC2 involved a smaller number of participants, using these collection tools ensured higher rates of participation since all the students did the initial survey and gave the oral presentations during class time. Working group oral presentations were conducted in class and recorded with the students' consent. This format allowed the rest of the students in the big group to listen to the experiences of all the other working groups, providing them with a better experience in terms of space for reflection at both the individual and group level. Then, students' testimonies were transcribed for their analysis (see appendix G for the questions posed to the students in the pre-survey and post-oral presentations).

Yet another source for qualitative data collection were students' portfolios which served for a twofold purpose: assessing their participation in the VE and gaining understanding of their critical reflections on their experience and what they learnt from it. A portfolio can be defined as: "a systematic, cumulative and ongoing collection of materials that is produced by the learner as evidence of his or her learning, progress, performance, efforts and proficiency" (Council of Europe, 2018a, p.68) Therefore, the portfolio for this study included questions to foster students' critical reflection in each of the stages of the three different tasks that conformed the PLANET VE as well as space for them to provide evidence of their involvement and participation in the VE (they were allowed to add screenshots and links for that purpose) (see Appendix B for the questions posed to the students in their portfolios for ARC1 and ARC2). Students were encouraged to write the portfolio as they were doing the VE and not afterwards to be able to reflect what they were feeling and thinking at each stage. These written pieces of work were created by the students in English since this tool served for assessment in their subject of EFL and they handed them in online to the teacher-researcher for assessment and research purposes (e-portfolios).

The advantages of using portfolios for collecting qualitative data are multiple. This tool enables learners to demonstrate their competence development throughout the process of the VE and

provides teachers and/or researchers with rich data to get a better understanding of students' reflection and also of what has been going on between participants. At the same time, portfolios encourage students to take a moment to reflect on what they are experiencing and what they can learn from it and provide them with a tool that they can use as a lifelong learning technique when they encounter similar experiences throughout their lives. However, portfolios are also hard work for teachers and researchers due to their length and complexity, and interpreting them properly requires adequate training. This, when dealing with large numbers of students, can result in an overwhelming burden of work. At the same time, as with other research tools, portfolios can be vulnerable to social desirability as students may write what they think their assessor wants to hear (Council of Europe, 2018, pp. 68-69).

The collection of data was conducted also by means of gathering students' synchronous and asynchronous interactions. Regarding synchronous CMC, students were asked to name a person in charge of recording each of their videoconferences with their international work group and upload the recording to a Google Drive folder to which the teacher-researcher had access. Once all the videoconferences were available, the researcher transcribed them manually for subsequent analysis adopting a literal approach. The fact that the teacher-researcher did the transcription is relevant to the data analysis stage since this process enables the researcher to get familiar with the data set: "this is one reason transcription is often described as part of the analytic process" (Braun and Clarke, 2013, p.173). At the same time, with regard to asynchronous CMC, the students' written conversations in their discussion forums in the VLE were also collected for posterior analysis.

3.5.2. Qualitative Data Analysis

Qualitative data analysis was carried out adopting a qualitative content analysis approach. Qualitative content analysis is a common approach in the field of VE research and can be defined as: "any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings" (Patton, 2002, p.453). As Zhang & Wildemuth (2009) point out, qualitative content analysis: "goes beyond merely counting words or extracting objective content from texts to examine meanings, themes and patterns that may be manifest or latent in a particular text. It allows researchers to understand social reality in a subjective but scientific manner" (p.1). According to these definitions, qualitative content analysis appears as a suitable approach to meet the present study's needs which comprise the examination of a large number of qualitative data to identify and interpret the patterns and meanings emerging from them in order to get a better understanding of students' learning experience and competence development during the VEs so that the best possible version of the PLANET VE model can be achieved.

In order to do so, the data comprising the initial and final interviews, the questionnaires, the oral presentations, the students' portfolios, the transcripts of the videoconferences and the discussions in the forums were coded using the NVivo Qualitative Research Software (https://nvivo-spain.com/). Coding can be defined as the process that leads the researcher "from the data to the idea, and from the idea to all the data pertaining to that idea" (Richards & Morse, 2007, p. 137) or as "the "critical link" between data collection and their explanation of meaning" (Charmaz, 2001 cited in Saldaña, 2013, p.3). Codes in turn are: "a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data" (Saldaña,

2013, p.3). In the present study, initially, 2 main categories for analysis were established: (1) Virtual Exchange and (2) Global and Ecological Citizenship. Then, specific codes and subcodes were created based on the research questions and the theoretical theories framing the study. While creating the codes, Global Competence (OECD, 2018) and Ecological Citizenship (Dobson, 2001, 2003, 2007) proved to have several aspects in common and therefore, overlapping codes were found and consequently mixed into single codes for simplification purposes. As Saldaña (2013) explains, some of the initial codes may prove to be not relevant when analysing the data set and also some others may emerge from the information contained in it. That is why it is important for the researcher to engage in the process of 'recoding' data and modify and reorganise the analysis categories or codes in order to advance to the most suited ones to attain the research analysis objectives. These relabelling and modifications are common in the coding process and as Abbott (2004) illustrates, it can be compared to "decorating a room; you try it, step back, move a few things, step back again, try a serious reorganization, and so on" (p. 215).

On the issue of counting codes, as Hannah and Lautsch (2011) explain, qualitative researchers face the "multiple audience problem" (p.15) since there exists no consensus. It has both supporters (Lee, 1999; Miles & Huberman, 1994; Silverman, 2000) and detractors (Fineman & Mangham, 1983; Gephart, 2004; Suddaby, 2006). Those who defend this technique argue that it increases the research validity and makes it more compelling. On the contrary, those who reject it defend that it fails to capture the nuances of the meaning contained in qualitative data thus decreasing the quality of the research. As a result, given the multiplicity of approaches to it, it is left to researchers to decide how to approach their own qualitative research.

Bearing this in mind, in the present study, counting has been used purposefully to indicate the frequency of appearance of each code in the data set analysed. It is considered that the codes which were repeatedly coded in all three VEs provide evidence of the learning outcomes emerging from this model. This goes in line with authors such as Miles & Huberman (1994) and Hanna and Lautsch (2011), who maintain that this technique allows the researcher to offer evidence of a rigorous and objective interpretation of the qualitative data. In the sections that follow, numbers are used to refer to the number of participants who mention a theme, not the overall number of mentions. That is, the number of codes are limited to one per case/student. Each student case included data coming from the student portfolio, pre and post interviews (ARC1) / initial survey and final oral presentation (ARC2) and interactional data (videoconferences and discussion forums). If one student mentioned one code several times, that was counted at 1 appearance of the code. The reason for taking this approach is that it is considered that in this study it would be misleading to simply report the number of mentions if one participant returned to a theme several times. The technique of counting codes to demonstrate their level of importance has been used in previous studies such as Blau et al. (2020).

Authors (Auerbach and Silverstein, 2003) recommend having present in a single page be it in paper or in the screen of the computer as a strategic summary with key aspects concerning the study research questions and underlying theoretical underpinnings or frameworks leading the analysis or any other information that the researcher deems useful to remember while carrying out the coding (p. 44). This technique was also used in the present study, as an initial step towards code definition. Table 3 shows the page that served to the researcher in order to organise the background theory into coherent codes for data analysis:

Global and Ecological Citizenship	(1) Awareness and criticality	(2) Understanding multiple perspectives	(3) Intercultural interaction	(4) Active citizenship
Knowledge about… (OECD,2018)	…how global issues affect lives locally and globally.	…intercultural similarities, differences and relations.	…the world and other cultures.	…consequences and implications of the actions taken.
Skills. Capacity to… (OECD, 2018)+	…critically examine local, global and intercultural issues.	…identify and analyse multiple perspectives and worldviews including one's own.	…engage in open, appropriate and effective interactions across cultures.	…create opportunities to take action.
* (Dobson, 2000, 2003, 2007) / **(CEFR, 2001, 2018, 2020)	…reason with information. [Evaluate information , formulate arguments and explain complex situations].	…gain perspective.	…adapt**. [Adaptability: linguistic and conceptual; shifts in modality, intentional re-use of words and expressions, using body language, gestures and expressive tonalities to facilitate effective communication; Mediation].	…take action*. [Taking action to make a positive difference in other people's lives & to safeguard the environment].
		…manage and solve conflict.	..communicate in a FL **. [Overall FL proficiency; Production ; Reception and Interaction skills].	
Attitudes. Showing… (OECD, 2018)+ * (Dobson, 2000, 2003, 2007)	…eco-concern*. [Being informed, exercising critical thinking and rejecting 'disinformation'. Being aware and critical of the consequences of unsustainable behaviours and responsible for the own actions].	…openness and respect towards others and nature.		…readiness to act *. [Considering actions, readiness to act and take responsibility].
Virtues. Showing… * (Dobson, 2000, 2003, 2007)		Justice, care and compassion towards others and nature *. Global-ecological mindedness*.		Commitment to the common good*.
Virtual Exchange	Types of interaction	Types of tasks (VE content)	VE teachers	Assessment (for pedagogical purposes)
	Lingua Franca Perceptions Behaviours Learning outcomes Bilingual Perceptions Behaviours Learning outcomes	Info. Exchange Strengths Weaknesses Comparison and analysis Strengths Weaknesses Collaboration & product creation Strengths Weaknesses	Online collaborative competence Mentoring Assessment	Questionnaire Changes Portfolio Changes Interviews Changes Changes for next iteration

Table 3: Overview page used by the researcher when setting codes and analysing data.

Then, as the categories were both complex and numerous, a codebook was created including the coding scheme with all the codes and subcodes. Subcodes can be defined as "a second-order tag assigned after a primary code to detail or enrich the entry...the most general code is called the "parent" while its subcodes are the "children" (Saldaña, 2013, p. 77). This codebook made it easier for the researcher to keep all the codes and subcodes in mind while going through the data. Figure 12 shows the NVivo Coding scheme:

- **AWARENESS & CRITICALITY:**
  - EXAMINE
    - EVALUATE INFO
    - FORMULATE ARGUMENTS
    - EXPLAIN COMPLEX SITUATIONS
  - ECO-CONCERN
    - BEING INFORMED
    - AWARE AND CRITICAL
- **UNDERSTAND, APPRECIATE & CARE FOR OTHERS**
  - UNDERSTAND & APPRECIATE
    - OTHERS' PERSPECTIVES
    - ONE'S OWN PERSPECTIVE
    - MANAGE DIFFERENCE & CONFLICT
  - JUSTICE, CARE & COMPASSION
- **INTERCULTURAL INTERACTION**
  - OPEN, APPROPRIATE & EFFECTIVE
    - UNDERSTAND DIFFERENCES
    - CAPACITY TO ADAPT
  - LANGUAGE SKILLS
    - RECEPTION
    - PRODUCTION
    - INTERACTION
      - ADAPTABILITY
      - MEDIATION
    - OVERALL PROFICIENCY
- **ACTIVE CITIZENSHIP**
  - EVALUATE ACTIONS (PRE)
  - TAKE ACTIONS
  - EVALUATE CONSEQUENCES
- **VIRTUAL EXCHANGE**
  - TYPES OF INTERACTION
    - LINGUA FRANCA
      - PERCEPTIONS
      - BEHAVIOURS
      - LEARNING OUTCOMES
    - BILINGUAL
      - PERCEPTIONS
      - BEHAVIOURS
      - LEARNING OUTCOMES
  - TYPES OF TASKS
    - INFO EXCHANGE
      - STRENGTHS
      - WEAKNESSES
    - COMPARISON AND ANALYSIS
      - STRENGTHS
      - WEAKNESSES
    - COLLABORATION AND PRODUCT CREATION
      - STRENGTHS
      - WEAKNESSES
  - VE TEACHERS
    - ONLINE COLLABORATIVE COMPETENCE
    - MENTORING
    - ASSESSMENT
  - ASSESSMENT (FOR PEDAGOGICAL PURPOSES)
    - QUESTIONNAIRE CHANGES
    - PORTFOLIO CHANGES
    - INTERVIEWS CHANGES
    - CHANGES FOR NEXT ITERATION

Figure 12: Nvivo Coding Scheme for the present study.

This coding scheme was established bearing in mind the research questions of this study as well as the conceptual definitions leading the qualitative content analysis. Now, it seems convenient to offer a general overview of these to situate the reader and enable the appreciation of the connection between the codes presented above and the theoretical underpinnings leading the qualitative content analysis:

The 4 dimensions of global competence (OECD, 2018), the virtues of the ecological citizen (Dobson, 2001, 2003, 2007) and the different FL skills (CEFR, 2001, 2018, 2020) in addition to the elements of the VE ecosystem (Nicolaou, 2020) served as the basis for the establishment of a coding scheme. In addition, during coding, patterns that were worth including in the analysis emerged. While coding, the researcher kept memos about her thoughts.

The following definition of global education (NCSS, 1982) captures the overall aim and essence of the learning these VEs intended: "the efforts to cultivate in young people a perspective of the world, which emphasises the interconnections among cultures, species, and the planet" (p. 1). Consequently, the PLANET VE was specifically designed so as to provide students with opportunities to improve a FL while putting into practice the 4 dimensions of global citizenship as well as its interrelated attitudes, values, skills and knowledge while dealing with the topic of ecological issues and sustainability and taking action for the environment. That is, students engaged in intercultural dialogue in a FL for examining local and global environmental issues and exchanged views on sustainable practices to then take action to contribute to improving those issues. Due to the overlapping nature of the concepts analysed, 4 joint categories have been created to analyse and present in an orderly manner the findings identified. Each of the categories is briefly introduced here:

Awareness and criticality: This category explores students learning outcomes related to the first dimension of global citizenship which is the capacity to critically examine local, global and intercultural issues along with what will be called here the eco-concern which refers to being informed, capable of exercising critical thinking and rejecting disinformation and being aware and critical of the negative impact of unsustainable behaviours at the local and the global level. This category includes acquisition of knowledge about how global issues affect lives locally and globally and the skill of reasoning with information (i.e. evaluating information, formulating arguments and explaining complex situations).

Understanding and appreciating multiple perspectives including one's own and showing justice, care and compassion towards others and nature: This category brings together the second dimension of global citizenship and the main virtues of ecological citizenship and makes reference to students' capacity to identify and analyse multiple perspectives and worldviews including one's own and showing positive and respectful attitudes towards them and towards nature. This category includes acquisition of knowledge of intercultural similarities, differences and relations, skills such as perspective taking or conflict resolution and attitudes of openness, respect and global-ecological mindedness.

Engaging in open, appropriate and effective interactions with people from different cultures in a FL: This category makes reference to the third dimension of global citizenship (OECD, 2018) which includes engaging in open, appropriate and effective interactions across cultures and adds to it the FL skills development which has been analysed following the CEFR Companion Volume (2018, 2020)

which updates the CEFR 2001. It explores intercultural communication, adaptability, mediation and overall FL proficiency development (production, reception and interaction skills).

Taking action to safeguard the environment: The last category is concerned with active global and ecological citizenship and explores students' different ways of exercising it which range from individual readiness to take responsibility for the environment and change one's own unsustainable behaviours to the group actions students took in their communities to make a positive difference. This category includes readiness to act, creating opportunities to take action, taking action, taking responsibility and evaluating and reflecting on the consequences and implications of the actions taken. This category includes the ecological citizenship virtue of the commitment to the common good.

Figure 13 shows an overview of the knowledge, skills, attitudes and virtues explored in the qualitative content analysis of competence development in the VEs implemented:

1. KNOWLEDGE	2. SKILLS
Knowledge about the world and other cultures: 1.1. Knowledge of global issues that affect lives locally and globally 1.2. Intercultural knowledge about the similarities, differences and relations between cultures	Skills to understand the world and take action: 2.1. Reasoning with information 2.2. FL communication skills in intercultural contexts 2.3. Perspective taking 2.3. Conflict resolution 2.4. Adaptability
3. ATTITUDES	4. VIRTUES
Openness, respect and global mindedness: 3.1.Openness towards people from other cultures 3.2. Respect for people from different cultural backgrounds 3.3. Global mindedness	Virtues of the Ecological Citizen: 4.1. Commitment to the common good 4.2. Care and compassion 4.3. Justice

Figure 13: Overview of the knowledge, skills, attitudes and virtues explored.

Once the codes were established, the coding was carried out adopting the method of selective coding approach according to the pattern-based forms of qualitative analysis (Braun and Clarke, 2013) which "involves identifying a corpus of 'instances' of the phenomenon that you're interested in, and then selecting those out…It also requires pre-existing theoretical and analytic knowledge that gives you the ability to identify the analytic concepts you are looking for" (p.206). Given this choice, the analysis was led by the following idea: "Your task in analysing the data is a selective one. It's about telling a particular story about the data, a story that answers your research question. It isn't to represent everything that was said in the data" (Braun and Clarke, 2013, p.230).

Right after each of the 'action taking' stages of each ARC had been completed, all the qualitative data from each iteration were organised in folders (i.e. cases) according to their international working group (e.g. FIL01 (group 1 from Filología): DISFIL01 (forum discussion) + INTFIL01PRE (initial interview) + INTFIL01POST (final interview)/ PRESFIL01 (oral presentation) + PORTFIL0101 (student 1 portfolio) + PORTFIL0102 (student 2 portfolio) + VIDFIL01 (videoconferences)) followed by a 1 if it corresponded to ARC1 and a 2 if it corresponded to ARC2 and entered in NVivo. Then several cycles of selective coding and recoding were implemented following the coding scheme introduced above to ensure a clear understanding of the data set. As Saldaña (2013) indicates this iterative process "further manages, filters, highlights, and focuses the

salient features of the qualitative data record for generating categories, themes, and concepts, grasping meaning, and/or building theory" (Saldaña, 2013, p.8).

3.5.3. Validity and Reliability

Validity can be defined as "a piece of research showing what it claims to show (Goodman, 2008)" (Braun and Clarke, 2013, p.280) while reliability refers to "the possibility of generating the same results when the same measures are administered by different researchers to a different participants group (Yardley, 2008)" (Braun and Clarke, 2013, p.279).

With regard to validity of data, the iterative nature of the AR methodology with its 2 iterative consecutive cycles in this research which implied continuous collection and analysis of data contributed to increased validity. In addition, triangulation of various sources of data greatly improved validity since sources complemented each other and provided contrasted evidence of recurrent patterns or findings. In terms of reliability, it was possible to count with a second coder, an expert on the field who engaged in the analysis of the data set. Lincoln and Guba (1985) define this technique of peer debriefing in qualitative research as "a process of exposing oneself to a disinterested peer…for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit within the inquirer's mind" (p.308). Peer debriefing contributed in this study to increasing reliability by engaging the two researchers in the coding of the data set analysed thus reducing bias and confirming findings. To establish intercoder reliability, the second researcher coded a 20% of the data set. Intercoder reliability can be defined as "the extent to which independent coders evaluate a characteristic of a message or artifact and reach the same conclusion" (Lombard et al., 2002, p. 589). This was calculated using the technique of percent agreement and the result was a 90% coincidence. However, as Braun and Clarke (2013) reflect on interpretation of data, it: "transforms data from the words participants tell us, into a story about those words. That story is our story about the data, not the participants' story, and our story may differ from theirs" (p. 64).

3.5.4. Ethical Considerations

The ethical considerations inherent to the adoption of the AR methodology (Norton, 2009; Parsons, Hewson, Adrian & Day, 2013; Gunbayi,2020) haven been taken into consideration in the present study giving careful thought to obtaining students' informed consent and explicitly stating their right to withdraw it at any moment as well as to safeguarding students' privacy and confidentiality.

The ethical approval process was carried out before the start of each of the VEs implemented in the present study ensuring that all the ethics requirements were fulfilled prior to the start of any data collection process. In-class time during each VE's first session was devoted to explaining the research and its objectives to the VE participants so that they could gain a clear understanding of it.

In terms of informed consent, as Gunbayi (2020) points out: "the researcher should get an official letter as legal proof for presenting to the participants for inviting them to take part in action study and data collection process" (p.21). Consequently, at the beginning of each VE students were provided with a consent form for them to be signed in which they were informed about the kind of data that would be used from them and for which purpose (i.e. strictly research purposes) so that

students could be fully informed about all the aspects regarding their data. The document was written in accordance with the General Data Protection Regulation (GDPR) and made it clear for the students that they could withdraw their consent at any time as well as ask for further more detailed information about any issue to the teacher-researcher who gained access to their data through this consent (see Appendix C for the Consent forms used in ARC1 and ARC2). More concretely, the pedagogical research consent forms included the research aims, the kind of data collected and what purpose the data would serve. In addition to the written consent form, before each of the initial and final interviews the researcher always orally reminded students' that these were going to be recorded.

When it comes to students' privacy and confidentiality, at all times, these have been protected during this research project. To this end, identifiers were created to allow for data collection and analysis. Identifiers consisted of the kind of data set + the student's degree + followed by the number of the group + the number of the student + the number of the ARC: e.g. PORTFIL01011 stands for Portfolio from Filología from group 1 student 1 in ARC1. Therefore, every care was taken to remove any possible student's identification from the raw data as well as from the results of their interpretation in this thesis so as to ensure students' privacy.

3.6. Chapter Conclusion III

In chapter III I set out to introduce and justify the research questions and to describe the methodology, research design and pedagogical design applied to answer them. To that end, I outlined the characteristics of the AR and its inquiry cycles along with the relevance and suitability of these for attaining the objectives of this research. I also provided an overview of the inquiry cycles' timeline, schedule and contexts as well as of the projects which set the background for the pedagogical design of the PLANET VE. I concluded by reviewing the procedures of data collection and analysis and addressing the issues of validity and reliability and the ethical considerations.

The main ideas identified in the chapter indicate the suitability and alignment of the AR methodology with the objectives of this study: taking a social practice as the object of study with a strong emphasis on taking action to bring beneficial changes, in this case, to the classroom. This chapter also identified that in order to achieve the objectives of the study it was necessary to undertake an iterative process to plan, implement, observe and refine the designed VE model until a suitable proposal was achieved. For this purpose, the collection of various sources of qualitative data from the students' participation in the three VEs implemented as part of this study and subsequently analysed from a content analysis approach is proposed and advocated as appropriate. As a result the design of this study is structured according to two iterative Action Research Cycles (ARCs) that were carried out over 2 consecutive academic years with 3 diverse cohorts of students as outlined in this chapter. In turn, the review of previous projects provided allowed the pedagogical design of the PLANET VE to be developed, paying attention to aspects of them such as task types, task sequences, forms of communication or assessment instruments that had been previously empirically tested as useful and effective. This review highlighted again the existing gap in the introduction of the topic of ecological citizenship in this type of project.

In the following chapter I go on to present each of the phases of the first iterative AR cycle (i.e. ARC1) of this study in detail reporting on the VE design, implementation and analysis and reflecting on the findings to propose enhancements for the next iteration (i.e. ARC2).

CHAPTER IV: FIRST ACTION RESEARCH CYCLE
(2020/2021)

4.1. Introduction

This chapter reports on the first Action Research Cycle (ARC1) implemented in this research study. It presents each phase of the cycle: action planning, action taking, action evaluation and reconceptualisation. Action planning includes the rationale for the selection of communication and assessment tools and task types, and the introduction of the context for action taking. Action taking and evaluation details the implementation of the PLANET VE, the data collection process and the collaboration with telecollaborative partner teachers as well as the challenges that arose during the implementation phase and the measures that were taken to overcome them. It also presents in a detailed and comprehensive manner the observations derived from the analysis of the interactional and self-reporting data derived from the implementation of the VE. These observations allow for theoretically grounded analysis of the results obtained, generating a series of conclusions that lead to the final phase of the cycle: reconceptualisation. Finally, the reconceptualisation phase proposes the appropriate changes and improvements for the next iteration in order to obtain the best possible PLANET VE model for the development of global and ecological citizenship in the field of FLE.

ARC1 was initiated in January 2020 and finished in August 2021. Figure 14 shows its timeline:
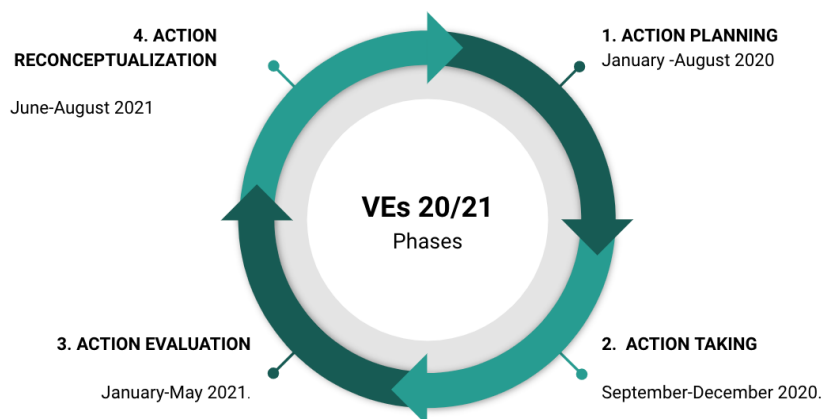
Figure 14: ARC1.

4.2. Action Planning: Introduction of the Virtual Exchange Ecosystem

In her doctoral dissertation, Anna Nicolaou (2020) identified the six fundamental interdependent and interconnected components conforming the VE Ecosystem to which a researcher or VE teacher should pay attention when designing and/or implementing a VE to foster learning opportunities: (1) the Linguistic Mediation, (2) the Participants, (3) the Technological Mediation, (4) the Tasks, (5) the Themes, and (6) the Artefacts (numbers added). This classification offered by Nicolaou (2020) functions as a suitable background for the introduction of the different elements composing the VE model designed in this research. Figure 15 shows the VE ecosystem:
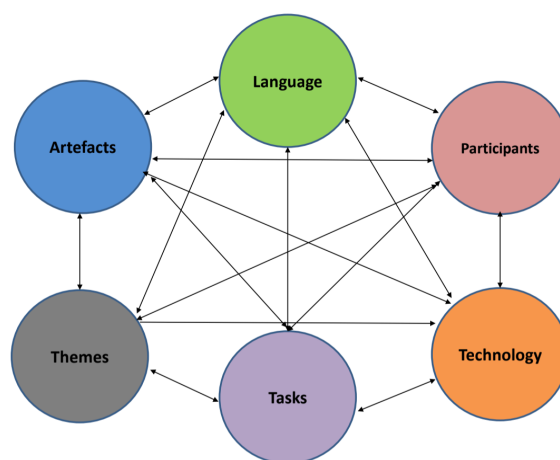
Figure 15: VE Ecosystem (Nicolau, 2020, p. 180).

Components of the VE ecosystem in ARC1	
Linguistic Mediation	English and Spanish
Participants	VE1: 25 English Studies (SP) and 54 Translation (IE) students VE2: 22 Tourism (SP) and 19 Business (IE) students
Technological Mediation	VLE: Schoology Synchronous communication: Zoom Personal correspondence: WhatsApp
Tasks	(1) Getting to know each other (2) Comparing and analysing (3) Collaborating
Themes	VE1: Sustainable tourism VE2: Sustainable lifestyle
Artefacts	Campaigns: VE1: Videos to raise awareness on environmental problems and related sustainable practices. VE2: Promotional videos for sustainable tourism.

Table 4: Components of the VE ecosystem in ARC1.

As regards (1) the language component, during ARC1, both of the VEs implemented were class-to-class bilingual and bicultural telecollaborative VEs. As previously explained in section 2.4.2.1, this approach to VE has been the most commonly reported in the literature of FL education (O'Dowd, 2013; Guth, Helm, & O'Dowd, 2012; Guth & Helm, 2010; O'Dowd & Lewis, 2016) and involves two classes who study each other's 'languaculture' (Agar, 1994) who collaborate by interweaving their mother tongue and the FL they are learning. The language rules proposed for these VEs were the following: during the asynchronous discussion forums students were required to write their posts in their FL and the reactions of their international partners had to be in that same language. At the same time, during the videoconferences, students had to calculate time so half of it would be in each of the languages.

When it comes to (2) the project participants, initially, a VE partner search announcement proposal was drawn up in order to find VE partners with whom to negotiate specific objectives and

needs for the final VEs. O'Dowd and Ware (2009) termed this ability as "online collaborative competence". This referred to finding common ground and establishing compromises in terms of project design while showing openness and willingness to adapt to differing views and approaches with the aim to agree on tasks whose learning objectives and pedagogical understandings are clear and satisfying to all partners. With this in mind, the VE model was open to be adapted to the use of ELF as well as to a bilingual (English/Spanish) approach. Designing a VE model with clear and solid foundations but flexible and adaptable at the same time, proved to be an effective strategy for being able to achieve a satisfactory model for all the parts involved. An announcement was posted on the VE partner search tool provided by the UNICollaboration website:

Figure 16: Announcement of the VE proposal for ARC1.

Several VE teachers from different institutions reacted to this announcement and emails were exchanged with them in order to find the most suitable partners for the specific purposes of the project. Finally, partnerships were established with two Irish universities[3] and the refinement phase began in order to adapt the model to each of the two specific contexts in which it was going to be implemented. In both cases, the VE teachers had various meetings via Zoom to agree on aspects such as the dates for each of the tasks or the technological tools that could be feasibly used at each institution. The instructions to be given to students in class were also agreed and a weekly communication via email kept going throughout the VE to ensure all were on the same page.

The PLANET VE was initially designed to be implemented in FL subjects and to be adaptable to the requirements of various university degrees and different levels of proficiency. All the

---

[3] The data stemming from both VEs will be presented simultaneously since the same VE model was adapted for implementation with two separate cohorts of students at the same time. It is important to point this out as the results are presented together throughout the chapter.

participants in both VEs were undergraduate students pursuing the third year of their university degrees with an approximate B2/C1 level of proficiency in the FLs (i.e. English and Spanish) according to the CEFR (2001). As anticipated, students pertained to different subject areas and while one of the VEs involved students of Translation and English Studies, the other involved students of Tourism who collaborated with students of Business in their FL subjects. While in the Tourism-Business interdisciplinary VE the number of participants was very balanced with 22 Spanish and 19 Irish students working in 8 groups of 2 or 3 participants from each country, in the other VE there were certain institutional asymmetries (Lindner, 2016) in this regard. In the case of the VE formed by students of FL degrees, the Spanish students formed a group with a total of 25 students while the students from Ireland had a total of 54. This meant the creation of 12 working groups formed by 2 Spanish students and between 4 and 5 Irish students.

Virtual Exchanges	Students from	Number of participants	Working groups
VE1	English Studies (SP) Translation (IE)	25 54	12
VE2	Tourism (SP) Business (IE)	22 19	8

Table 5: ARC1 VEs: students, numbers and groups.

Despite the fact that we were living through the corona crisis, while these VEs took place, there were some Erasmus students participating in all the participating institutions. This was perceived by the students as an enriching factor to their experience since they got the chance to learn about various cultural approaches to the topics of their VEs. The following student reflection illustrates this:

E.g. *Because one of the students is from Germany, he commented on the culture shock when he arrived in Spain and realised how much we use plastic bags. This was an interesting insight* (PORTFIL07011).

This multicultural environment also favoured students' development of intercultural awareness and communication skills. In these VEs there were students coming from Poland, Germany, Italy and France in addition to Spain and Ireland.

The technological tools (3) were chosen based on the specific context, needs and goals of the classes involved. Firstly, in the design phase it was necessary to find a suitable tool to host the VEs. To this purpose the search for a VLE began. As Dillenbourg et al. (2002) define, a VLE constitutes a designed information social space where students interact. It is a space co-constructed by students' active engagement that can also be integrated with the classroom activities and that can incorporate multiple technologies and pedagogical approaches. Therefore, after considering the features and affordances of various VLEs, Schoology (https://www.schoology.com/) was selected as the VLE to host both VEs because of its intuitive design that would make it easier for students to work on it and because it offered all the features needed such as discussion forums, surveys or display of multimedia materials and links. Schoology allowed the teachers to upload content materials related to the VE, the instructions for each task and separated international working group forums in which students could have their asynchronous CMC.
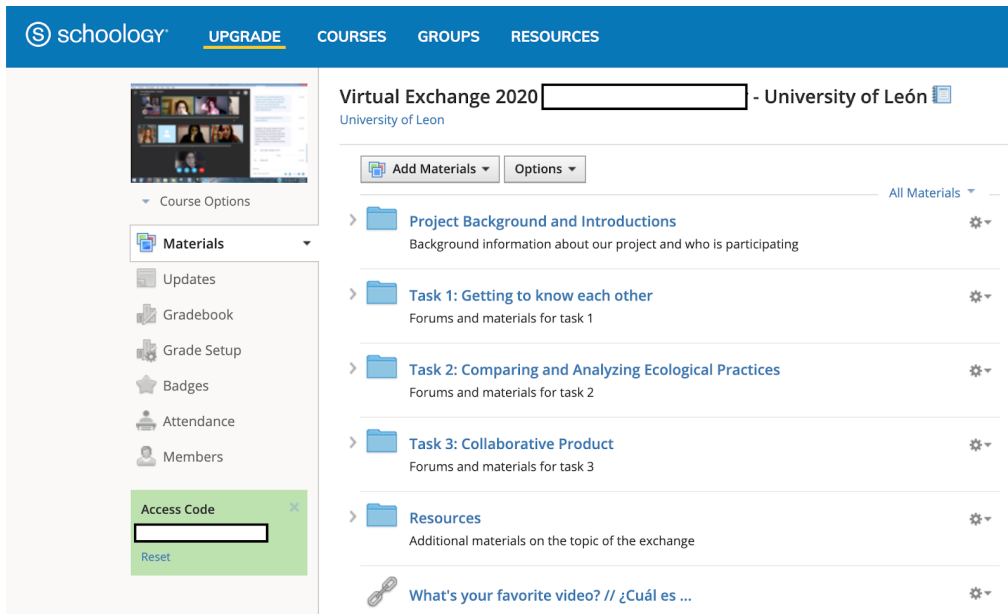
Figure 17: VLE Schoology homepage.

While students' asynchronous communication took place in the discussion forums of the VLE, the synchronous one took place via videoconference. For this purpose, no specific tool was imposed but Zoom was suggested as a possible one and ended up being the preferred method by all of the international groups for their meetings.

The task design (4) started with a comprehensive review of previous VE projects as presented in section 3.4.2. Drawing from this review, the PLANET VE was developed paying attention to aspects of these such as the type of tasks, the ways of communication or the assessment tools that had been empirically proven to be useful and effective. At the same time, it was intended to fill the gap in terms of the introduction of the topic of ecological citizenship in this type of project, thereby addressing the needs of students in the present context, who must be trained to face together the great challenges of today's society, among which is the need to adopt a sustainable way of life for the planet. Table 6 offers a short overview of the tasks:

Task 1	
1.1	Task based on: Getting to know each other. Introducing oneself online and commenting on each other's introductions. Tools used: AdobeSpark to create a video presentation.
1.2	Task based on: Getting to know each other. Local groups presentations of habits and views regarding ecological citizenship/ sustainable tourism. Responding to each other with comments and questions. Tools used: Suggested: Google docs, Google slides, PPT, etc.
1.3	Task based on: Getting to know each other. First videoconference. Creating a group name and a group identity. Tools used: Suggested: Zoom, Google meet, Skype…
Task 2	

2.1	Task based on: Comparing and analysing. Answering a Cultura-like questionnaire and discussing the similarities and differences identified in the answers from the different cultural contexts in the discussion forums. Tools used: Google Docs, discussion forums
2.2	Task based on: Comparing and analysing. Second videoconference. VE1: Sharing a local environmental problem with international partners and discussing possible solutions. Agreeing on a proposal of feasible sustainable practices to improve the problems discussed. VE2: Sharing a local sustainable tourism destination with international partners and discussing possibilities for further development. Agreeing on a proposal of new sustainable businesses/activities for the areas discussed. Tools used: Zoom
Task 3	
3.1	Task based on: Collaborating. Creating and promoting a video of: VE1: sustainable practices feasible for ordinary people like them to address common environmental problem(s) identified. / VE2: sustainable tourism in the destinations discussed in both countries. Third videoconference. Sharing people's reactions to their videos and discussing the relevance of taking active action for the environment. Tools used: VE1: Free choice ; Zoom / VE2: AdobeSpark ; Zoom

Table 6: Overview of the tasks of VE1 and VE2.

When it comes to (5) the themes, in VEs revolving around global critical themes such as environmental issues and sustainable development as proposed in the present study students are given the opportunity to develop relevant competences that go beyond the 4Fs: Food, Festival, Folklore and Fashion (Meyer and Rhoades, 2006) and engage in meaningful interactions with international partners. The present study contributes to the research effort of exploring how to best exploit the potential of VE for the development of key competences for the present context such as ICC (see Avgousti, 2018 for a review) and global citizenship (O'Dowd, 2019) and adds to this ongoing discussion an innovative perspective by introducing ecological citizenship into the equation. This is done by putting emphasis on students learning to live together and sustainably through the introduction of a global (OECD, 2018) and ecological (Dobson, 2000, 2003, 2007) approach for those tasks.

Finally, when introducing the VE ecosystem, Nicolaou (2020) points to the importance of engaging students in the co-creation of (6) shareable artefacts to contribute to students' sense of responsibility and civic engagement. The artefacts students had to co-create together during ARC1 were videos in which they presented environmental problems affecting both their communities and consequent sustainable practices that any citizen could carry out in their daily lives in the case of the VE1 and promotional videos for sustainable tourism in destinations for both countries in the case of VE2. In this case, for the action plan of the students, the criteria they had to follow was an adaptation made taking into consideration their level of English and expertise on the field of sustainable tourism from the Global Sustainable Tourism Council Criteria (2019). Application of these criteria will help to contribute towards the 2030 Agenda for Sustainable Development and the 17 SDGs.

4.3. Action Taking and Evaluation: Implementation of the Model and Reflection

The action taking phase started on October 1st and lasted until December 18th 2020. The VE model was implemented with both cohorts of students (i.e. VE1, VE2) in their EFL subjects with one hour a week in class dedicated to it. Figure 18 shows an overview of the data collection process:

Data collection process: 1st iteration
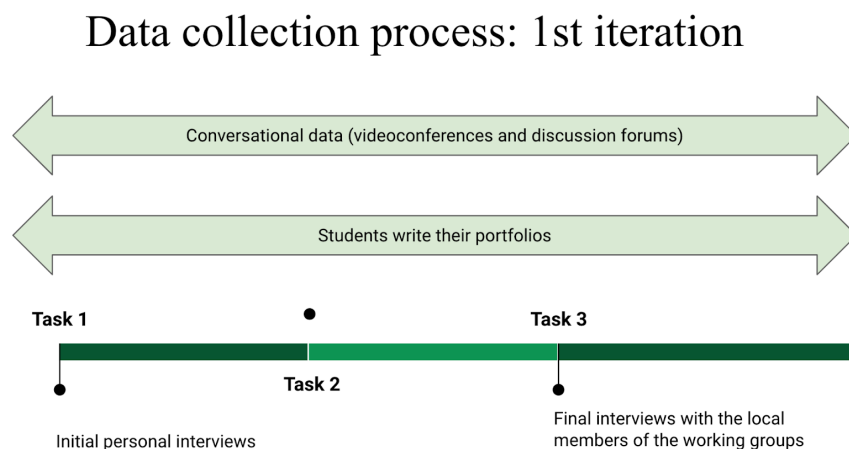
Figure 18: Data collection process during ARC1.

As outlined in chapter 3, this research adopted a qualitative approach and the action taking phase included qualitative data collection (Dörnyei, 2007; Braun and Clarke, 2013). Qualitative data were collected by means of initial and final interviews, portfolios and interactional data stemming from the VLE discussion forums and working groups' videoconferences. Once the tasks were designed, the data collection tools (which in the case of the portfolio overlapped with the assessment tools) were accordingly developed.

Portfolios appeared as a suitable instrument to get a more nuanced understanding of students' interview reflections and learning and were triangulated together with the interview testimonies with interactional data (from the discussion forums and the recordings of the videoconferences) to address its self-reporting nature. The portfolio designed to assess the PLANET VE was developed taking into account the recommendations of the Council of Europe (2018a) and consequently included guidelines that specified the competences being assessed and the types of evidence that students should include. The instructions and questions included in the portfolio were carefully selected and formulated to ensure the collection of the information needed to both answer the research questions and to provide assessment on students' participation in the VE. When it comes to the objectives and the learning outcomes related to ecological citizenship, the Ecological Citizenship Scale Development Study (2018) served as a source of inspiration. One learning objective and one learning outcome were established for each of the main factors in ecological citizenship: Participation, Sustainability, Responsibility, Right and Justice (see appendix B for all the questions included in the portfolio that students completed in ARC1).

At the same time, two kinds of interviews (Kvale, 2007) were designed: The first of these were one-to-one semi-structured interviews to be carried out right after the end of task 1 and the second involved working group semi-structured interviews to be conducted at the end of the VE experience. Each set of interviews had different functions. The purpose of the initial ones was to get a

deeper understanding of students' individual initial feelings towards the VE and to find out what the initial common concerns were. The function of the final ones was to get to know students' experience in their international working groups and their final impressions and reflections on the VE. Students participated voluntarily in the interviews and they were conducted in their mother tongue (i.e. Spanish) via videoconference over Zoom and recorded with their consent. The students' testimonies were transcribed for their analysis. As both rounds of interviews were semi-structured (Norton, 2009), sets of questions were prepared in advance (see appendix A for the questions posed to the students in each of the interview rounds).

The following paragraphs outline the action-taking phase of ARC1 along with its evaluation and consequent reflections. This is done by describing the tasks, the data collection process, the challenges encountered, the actions taken by the VE teachers and all those observations derived from this period that are relevant to answer the research questions. The aspects mentioned throughout this study have been selected due to its high level of occurrence and only one or two illustrative examples have been chosen to make the text reader-friendly even if there exist many. At the same time and for the same reason, only the parts of the examples that are the most relevant have been selected.

First, during the introductory session, the overview of the VE was introduced to students. They also had it available on Schoology to make it easier for them to remember and be aware of the different stages of it. Also in this session, each of the groups envisioned promotional videos from their partner universities and signed up in a Google Doc to their international working groups.
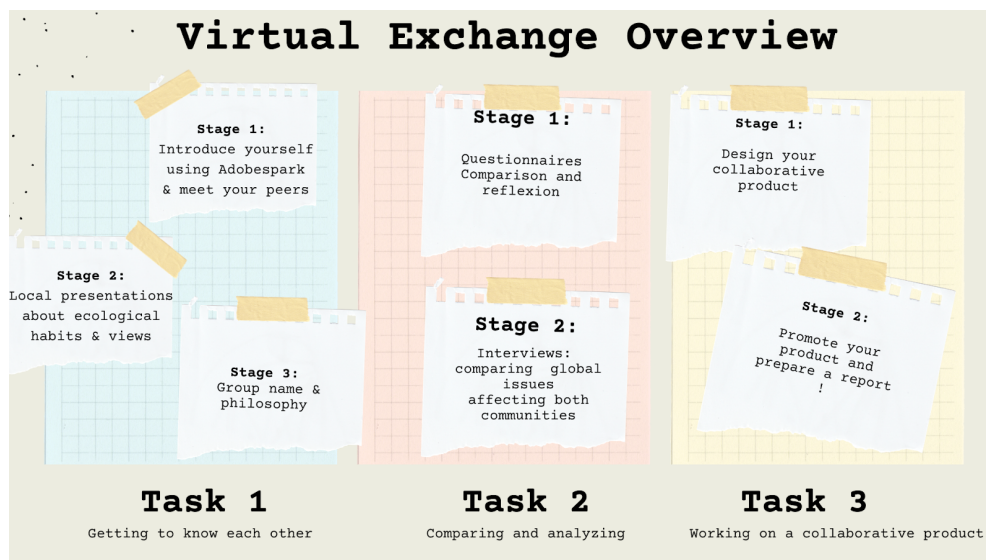
Figure 19: Overview of the VE presented to the students in the first session.

In the following paragraphs, a summary of the tasks is provided to facilitate the reader's overall understanding of the PLANET VE. If the reader wishes to read the full instructions provided to the students these can be found in the appendices.

Task 1	
1.1	Task based on: Getting to know each other. Introducing oneself online and commenting on each other's introductions. Tools used: AdobeSpark to create a video presentation.

In task 1.1 students were asked to introduce themselves creating a video talking about their background, interests, hobbies and university studies trying to present aspects of their life which someone from their partner group would find interesting and different. In this stage students learnt how to use AdobeSpark (https://www.adobe.com) which was the tool that served to create their online presentations. In it students put their favourite photos and then record the voice over narrating an introduction about themselves. They had to do this in their FL. Once they had their presentations ready they had to post them in the discussion forum for their international working groups in Schoology and had to watch and comment on their partners' presentations. In the comments they did to each other it stood out how students tended to look for things in common. In VE1 students highlighted their common interest in learning FLs and in VE2 their love for travel. At this stage students also started to discover their partners' context and their beliefs, world views and practices to which they showed great interest. The aspects that most attracted their attention were those particularly bound to the other's culture as the following example illustrates:

> E.g. - ... *I had never heard of Gaelic football, is it similar to normal one?*
> - *Yes, it is similar to football but you can use your hands and there are goalposts above the goal* (DISTUR051) (translation from Spanish).

It was also common to find messages in which students complimented their partners about their level of proficiency in the FL, to which some students pointed as something that gave them confidence in themselves and helped them face their first synchronous interaction with less nervousness. Indeed, students shared with their partners that they felt excited about getting to know them over video soon.

> E.g. *Hi, I can't wait to meet you over zoom. Your level of Spanish is very good!* **It's nice to get an understanding of your life before meeting you over video chat.** *See you soon!!* (DISFIL071) (emphasis added).

This first stage also made it possible to observe that students could benefit from some training on how to comment on their partners' presentations since in some cases these were a bit simplistic or superficial, often repeating the same or a similar commentary under each video giving an impersonal impression.

> E.g. - *Hello :) Your presentation is very interesting and your photos are very nice* (DISFIL021).

However, these types of reactions were the least common and it was frequent to find comments in which students focused on commenting on and discussing cultural aspects and even controversial topics or traditions such as international politics or bullfights in Spain.

> E.g.- *Hey! I am sorry about the fact you cannot do your Erasmus anymore. I hope you can go next year. Politics is such an interesting field to have a degree in, I really enjoy discussing politics. Do you have a specific interest in politics in a particular country?*

- Thank you! I hope so too, since Ireland seems quite a good place to live in. About politics, I'm especially interested in the United States, and in learning how the electoral system works in each country.
- I agree, the electoral college in the US is really interesting. I think it's a bit weird and doesn't act in the best interests of the people... I find democracy in the US a bit strange, at least compared to here in Ireland.
- I also find democracy in the US a bit strange, it is very different from the kind we have in Europe. I'm looking forward to this presidential election, it will be interesting to see who wins (DISFIL051).

Task 1	
1.2	Task based on: Getting to know each other. Local groups presentations of habits and views regarding ecological citizenship/ sustainable tourism. Responding to each other with comments and questions. Tools used: Suggested: Google docs, Google slides, PPT, etc.

In task 1.2, students were introduced to the topic of the VE: ecology (see appendix G for the full instructions for task 1.2). Concepts such as sustainability, ecological citizenship and ecological tourism in the case of the tourism students were introduced through powerpoint presentations and various related videos. All these materials and some extra ones were available in the VLE. Materials were selected so that an English and a Spanish version would be available to ensure that students from both countries could depart from the same kind of background when it comes to the training provided.

In this task students had to prepare a group presentation with their local partners about their habits and views and the ways they acted in regards to the environment in their daily life (VE1) or sustainable tourism (VE2) and their opinions about it. The aim of this stage was for the students to share and get to know more about each others' contexts, worldviews and practices regarding the topic of the VE while getting to know each other. Students were provided with a script so that they would be able to know what kind of information they should provide in their presentations (see appendix E for the scripts for task 1.2).

Regarding the theme of the VE at this stage, when presenting their habits and views regarding ecological citizenship or sustainable tourism to their partners, students were honest and commented also about their not so eco-friendly behaviours and made a statement of willingness to change them. Some also shared initiatives existing in their local areas to protect the environment and many exchanged their advice and ideas on eco-friendly practices.

E.g. *- Hey! You seem to incorporate a lot of good environmentally friendly habits into your daily routine which is great to see. I hope to be more like you one day. I agree we all need to make small lifestyle changes so as to help the planet, it is not much to ask for but it will make a big difference!* (DISFIL091).

E.g. *- Hey guys! I thought the presentation was really good and it's great that you guys are both doing things to help the environment. I think the environmental issues in Leon are quite similar to the one's in Dublin but it's great to see you guys trying much harder to improve the situation with projects like the Leo Campaign!* (DISFIL081).

These presentations fostered the first reflections about the facts that were the most striking to the students and awakened a great interest in each others' ecological experiences and approaches as well as reflections on one's own environment and sustainability in it. At this stage students also started to engage in deeper topic related discussions and continued finding points in common. An

example of this would be their experiences or interest in the 'Camino de Santiago' for the Business-Tourism students as they considered it a good example of environmentally friendly tourism.

> E.g. -*I liked the fact that you made El Camino de Santiago, it's one of the examples of sustainable tourism I set out in my presentation. I'd like to do it in the future, could you give me some advice after your experience?*
> - *Hey , I did see in your presentation that a lot of emphasis was put on the Camino de Santiago. Of course, my advice would be...I'm no expert on the camino but if you ever have more questions about it, I'm happy to help!* (DISTUR021).

When it comes to the students' initial reflections on the differences they noticed in terms of ecological citizenship in both contexts, some provided reasoned arguments to support their claims while others pointed these out without providing their reasons for it. When this was observed by the VE teachers mentoring was offered to help them post precise comments that provide relevant information to the conversation. The following examples show a well reasoned comment and one that could be improved:

> E.g. *Hey guys, your video was great! In Ireland I feel we are the same as Spain, there is not as much environmental awareness as other european countries, although I feel like we are improving every day! Something I had never heard of was limiting the speed to 30km/h to reduce emissions, that sounds like a good idea although I'm not sure if it would be respected if it was introduced here. In recent years, we have definitely seen an increase in the use of electric cars and charging stations are popping up everywhere. However, I live in Dublin so I can only speak about the situation here, I'm not sure about the rest of the country.* (DISFIL011).

> E.g. *Hello!!! I loved your presentation. It is very similar to what we do in Spain* (In this case, what are the similarities in Spain specifically?) (DISFIL041).

Task 1	
1.3	Task based on: Getting to know each other. First videoconference. Creating a group name and a group identity. Tools used: Suggested: Zoom, Google meet, Skype…

Task 1.3 was the last stage of the first task corresponding to the information exchange category (see appendix G for the full instructions). During this week students held their first videoconference together in which they were asked to agree on a group name and the philosophy behind that name. In order to help students to be ready for this task they were provided with some training on how to schedule and carry out a videoconference during class time. They were introduced to the use of Doodle (https://doodle.com) that is a tool that serves to propose different days and times so that the different participants can indicate when they would be available and were also explained how to create an agenda for the meeting as well as what are the different roles they should take such as spokesperson, leader or time manager. For example, the person in charge of the time management should remind the group when it is time to change to the other language, the leader should take the lead when the conversation is stuck among other duties and the spokesperson should be in charge of posting the results of the meeting in the discussion forum of their working group.

The names and philosophies students came up with during this stage were mostly based on the things they found to have in common during this first task and some students decided to choose names specifically related to the topic of the VE. Many groups also decided to mix both their

languages for their group names and others decided to create a version in each of the languages. Allusions to the pandemic were frequent in the group names chosen too.

> E.g. *We decided to pick the name "Ryanaire" for the group, because all of us have used the airline Ryanair in the past and it's an Irish airline. We replaced "air" with "aire" to represent Spain and the Spanish language, as well as Ireland. We all want to travel as soon as possible after the pandemic ends and this name represents our hope* (DISFIL051).

Students felt that meeting their partners via videoconference at this stage made them feel as if they had got to actually know each other even if it was 'through a screen'. That is, seeing them in real time greatly contributed to their feeling of realness.

> E.g. *At the beginning we were all a bit shy, but then we were fine. Now that we have done a videoconference, at least you know how they act. Seeing their faces, seeing how they act... You say, well, this is how to talk to this person* (INTUR0201PRE1) (translation from Spanish).

Right after the end of task 1, initial personal interviews were conducted with some of the Spanish students via Zoom. The reason for this was twofold: in-person meetings were not possible due to the covid-19 restrictions and this videoconferencing tool allowed to record the interviews for their posterior transcription and analysis. See appendix A for the questions students were posed in this first round of interviews.

At this moment of the VE, right after the end of task 1, taking into consideration all the aspects mentioned above observed by the VE teachers, two in-class mentorings were carried out consisting of two presentations delivered by the VE teachers in all the institutions participating in the project. One with best practices for asynchronous CMC and another one for synchronous CMC. One of them was devoted to improving communication in the forums and the other one was devoted to communication through videoconferencing. With this in mind, real examples from students' communication during the task were anonymised and presented to them so that they could reflect on whether these were examples of things to do or to avoid when communicating with their international partners. Afterwards they were provided with guidelines on best practices which were based on the observations from previous interactions. During the next tasks the teacher-researcher paid attention to whether students applied these strategies or not to measure the impact that this kind of in-class mentoring had on students' actual interactions. Table 7 shows examples of how the mentoring was delivered in class proposing examples taken from real scenarios and consequent communicative strategies[4].

---

[4] Please note that several categories were included in the mentoring but only one from each communicative modality has been selected to illustrate the mentoring dynamic.

	Examples proposed as prompts for discussion and reflection *What do you think about the following extracts? Are they DOs or DON'Ts?*	Guidelines on effective communicative strategies
Asynchronous CMC: Discussion forums [Examples corresponding to the category 'favouring understanding and language learning'] <u>Whole presentation</u>	1)*"Hi, you speak English really well! I think the festivals in Leon look like a lot of fun. También veo que te gusta surfear, ¿a donde vas a la playa?"* 2) - *"juego en el mismo posición de Ramos. No sé el nombre en Espanol. Lo siento!! Defender?"* - *"the position of Sergio Ramos is 'central' in spanish ;)"* 3) *"¡Hola! Me ha encantado vuestro Power Point, se nota que <u>os lo habéis currado</u>."*	1) Respect the use of languages, **avoid mixing languages** in the same interaction/sentence. 2) **Help** your international colleagues with those words or expressions they do not know. 3) Use your everyday language, but when you use words that may be complicated/unfamiliar to a non-native speaker, **explain their meaning** briefly.
Synchronous CMC: Videoconferences [Examples corresponding to the category 'preparation for the videoconference: session organization and group negotiation of online behaviours'] <u>Whole presentation</u>	1) (Appears when the meeting is ending): *IRE: Olvidé sobre la diferencia en el tiempo, sorry.* 2) *SP: I start saying the points of the agenda: First of all, (...)* *Do you think it's fine if...?* *IRE: Yes, I think that's good.* *SP: Okay, so you want to start in English or in Spanish? As you wish.* 3)*IRE: I don't understand...can you write it in the chat?*	1) Bear in mind the **time difference.** 2) Prepare an **agenda** with the points to discuss before the videoconference starts so that you know what to talk about during the call. **Establish roles:** One person should be in charge of **time management** (the duration of the call and the use of each of the languages for half of it). Another person**, the chairperson,**should take the lead in the conversation. 3) Set some ground rules on how you want to use the **Chat box** (e.g. for questions that can be answered with a short phrase or sentence). Also for **turn taking:** Agree how to get the group's attention (e.g. raising your hands, writing in the chat, unmuting yourselves and simply intervening, etc) and avoid talking over your peers.

Table 7: In-class mentoring during ARC1.

Task 2 implied comparison and critical analysis of the environmental problems affecting both countries and the measures being undertaken in both contexts to address these. This kind of task builds on the basis set during the first one and goes a step further in terms of students' interdependence and negotiation of meaning. This kind of comparison and analysis task can have a cultural or a linguistic focus (O'Dowd & Ware, 2009) and in this case the focus was on getting students to engage in dialogue to critically reflect on the culturally bound approaches to common global environmental issues and to be able to draw differences and similarities from them.

Task 2	
2.1	Task based on: Comparing and analysing. Answering a Cultura-like questionnaire and discussing the similarities and differences identified in the answers from the different cultural contexts in the discussion forums. Tools used: Google Docs, discussion forums

Task 2.1 (see appendix G for the full instructions), started with a Cultura like questionnaire. This kind of questionnaire was introduced by Furstenberg et al. (2001) and is based on the notion of cultural comparisons. The idea is that viewing their answers to the same questions one next to the other will enable students to appreciate cultural similarities and differences which could be difficult to identify otherwise because of their rootedness in their cultures (Furstenberg et al., 2001). To this end, a Google Doc was created in which there was a table with two columns that had the same questions. Each of the Spanish students was supposed to write their answer in one of the columns and each of the Irish in the adjacent one. Figure 20 shows an example of how this looked like. See appendix F for the whole questionnaire in both VEs.

Figure 20: Cultura like questionnaire in ARC1.

Students were asked to look at their local and international partners' answers to the Cultura-like questionnaire and to write their critical reflections on the similarities and differences they noticed in their international working groups discussion forums. The following is a good example of a positive contribution to the interaction by one of the Irish students:

E.g. Hi. At the moment the majority of electricity in Ireland is gathered from nonrenewable energy sources so using electric cars is not as good for the environment as they potentially could be. However hopefully this will change in the coming years. Here is a link detailing where Irelands electricity comes from http://ireland2050.ie/questions/where-does-ireland-get-its-electricity/ (DISFIL101).

When it comes to the training students received for improving their communication in the forums, some did show evidence of putting it into practice, interacting to a greater extent and applying some of the strategies, such as using the names of their partners to direct and personalise their comments and including questions to boost communication. The examples of really good interactions at this stage were numerous. The example below shows how some students followed the guidelines for improving communication in the forums and opted for adding the name of their partners to personalise their messages and added emoticons and symbols to reinforce the expression of their positive feelings. They also properly reasoned their thoughts when it came to noticing differences and similarities and also interacted and asked questions to each other.

E.g. *- Hi girls! We have been reading about the differences and similarities of ecological practices in our respective countries and what has caught my eye was how many of you have talked about the fact that your country has banned several products that are not ecologically friendly such as plastic straws and petrol because I do not think that that is a thing here at all. How does that work? Apart from that, it has truly surprised me the term "green mortgages in banks" because I had never heard that before. Can you explain to me what it is and how that works?*

- Hi, I hope you're doing well! I had to educate myself about green mortgages because I had never heard of them before! This exchange is allowing me to learn things not only about Spain but Ireland too! A green mortgage appears to be a special mortgage for people who buy energy efficient houses/properties... I've attached an image which shows the BER system!... I think this is a brilliant idea…!

- That's actually so interesting! I think it is a really good idea to encourage people to buy this kind of house but, if I am completely honest, I think I have never met a person who has an energy-efficient house. Do you know about someone who lives in one of these houses? Is it different in any way from living in a "normal" house? Thank you so much for taking the time to read about this and inform me! I hope everything is going fine! <3 (DISFIL011).

At this stage of the VE, students also started to show signs of their interpersonal relationships development. An example of this is how in their posts students cheered their international partners using their international working group names and also how their register started to be less formal and more of an everyday language with a greater number of symbols and emoticons in their posts.

E.g. *Hi, Ryanaire! I've been reading the questionnaire and I've noticed some similarities and differences between our countries. I'd love to know your opinion! :) (DISFIL051).*

Task 2	
2.2	Task based on: Comparing and analysing. Second videoconference. VE1: Sharing a local environmental problem with international partners and discussing possible solutions. Agreeing on a proposal of feasible sustainable practices to improve the problems discussed. VE2: Sharing a local sustainable tourism destination with international partners and discussing possibilities for further development. Agreeing on a proposal of new sustainable businesses/activities for the areas discussed. Tools used: Zoom

In task 2.2 (see appendix G for the full instructions) students had their second videoconference together. Even though up to this point both VEs had already been dealing with specific topics adapted to their specific areas of knowledge (i.e. sustainability in the daily life for the FL students (i.e. VE1) and sustainable tourism for the Tourism-Business ones (i.e. VE2)) up to here their tasks had been quite similar except for this. However, this task even if proposed from the same approach differed more than the previous ones. The students from VE1 presented to each other an environmental problem affecting their town/village/area which they thought could be improved through the promotion of sustainable practices and then discussed together what practical pieces of action could be taken by them and other ordinary people to try and deal with these problems. VE2 students in turn presented to their partners a destination (town, village, area) of their country which they thought could be further developed to promote sustainable tourism to then discuss together what new sustainable tourism businesses or activities could be introduced into those destinations. A reason for this diversification in the task is that as the VEs moved forward they became more centred on specific topics and consequently became more specialised. This shows how the same model of VE, if designed with a view of being adaptable, can actually be implemented with a broad range of students coming from different areas of knowledge. Following that, after their videoconferences, students had to assign a spokesperson in charge of posting the results of their meeting discussions in their international working group forums answering the questions they had in their task instructions. See table 8 for the questions students had to answer in their reports for task 2.2:

Task 2.2 report- English studies-Translation VE 1	Task 2.2 report- Tourism-Business VE 2
Basic information about the problem - What does it consist of? What are its main causes and effects?	Basic information about the location - where it is located? Is it a town, village or rural area?
What possible solutions or pieces of action did you and your partners discuss?	What current tourism activity and facilities does it have?
What are the new sustainable practices which your partners are proposing?	What are the new sustainable tourism practices which your partners are proposing?

Table 8: Task 2.2 report questions in ARC1.

The reports from students at this stage were quite positive in terms of knowledge acquisition regarding the topic of the VE since students showed in their contributions to have understood complex concepts such as sustainability being composed of three pillars: economic, sociocultural and environmental. These could be appreciated, for instance, in the tourism students' references to these three aspects when describing their sustainable tourism destinations. When it comes to VE1, there were also very good examples of the task well fulfilled including feasible sustainable practices

proposals to address common environmental problems. In both cases, the task asked students to propose something together as the following examples show:

E.g. ***Plastic abuse (VE1):*** *One solution that we all agreed on, and which seems to be quite common among young people, is the use of reusable bottles as a substitute for plastic bottles. Another idea we have come across is the implementation of refill stations, where you can simply bring a bottle from home and refill it with any product you need: water, shampoo, soap, milk, juice etc. We also think that more companies should invest in biodegradable plastic and that the government should encourage the use of less plastic by putting restrictions on plastic production. It was great to talk about environmental issues with students from another country, as it is a global problem. It's important to have conversations like this because the future of the planet is in our hands. We need to work together on a global scale to improve the situation* (DISFIL011).

E.g. ***Report about Irish location: Killarney (VE2):****...Regarding sustainable tourism, in this town we can find 3 important points: 1. a wide range of walking trails granting access to people with reduced mobility, with small children etc. 2. the Eco-Centre aims through a long-term programme at introducing participants to the concept of an environmental management system with teamwork's initiatives to tackle the ignorance of environmental issues. 3. Rich variety of species and habitats for a great wildlife with rare species of flora and fauna. Sustainable activities that can be promoted are: 1. 'tidy towns' an Irish competition which encourages each town to be more clean; 2. a sustainable plan for tourist shops (adding local and handicraft products), and for bars and hotels (supporting and developing European initiatives involving the adoption of innovative technologies for ecology, such as the management and reuse of grey water); 3. change the regular taxis for hybrid/electric car taxis, reducing the air pollution and promoting this "new" tech* (DISTUR031).

In task 3, students were required to collaborate together in the joint creation of a telecollaborative product. Consequently, this type of task is the one out of the three proposed that presents the students with the higher degree of demand in terms of group work since they have not only to communicate with each other in a FL but also coordinate and plan their work together and actually collaborate. For that purpose students need to be able to successfully adapt themselves to the context of online intercultural telecollaboration by deploying several sets of skills at the same time such as their intercultural communicative, digital or teamwork skills among others. These types of activities usually involve a great deal of coordination and planning but they also imply more linguistic and cultural negotiation of meaning (O'Dowd & Ware, 2009).

Task 3	
3.1	Task based on: Collaborating. Creating and promoting a video of: VE1: sustainable practices feasible for ordinary people like them to address common environmental problem(s) identified. / VE2: sustainable tourism in the destinations discussed in both countries. Third videoconference. Sharing people's reactions to their videos and discussing the relevance of taking active action for the environment. Tools used: VE1: Free choice ; Zoom / VE2: AdobeSpark ; Zoom

During task 3.1 VE1 students were asked to come up together with a promotional video of feasible sustainable practices for any citizen like them to help mitigate one or more of the problems they had found to have in common during the VE. In order to achieve this, students were provided with instructions and specific questions they should pose themselves as a group when designing their video together. In addition, they were shown examples of videos and different techniques from which they could take inspiration from. When it comes to the VE2 students, they were provided with specific steps they should follow to create a sustainable tourism promotional video for the destinations they had been talking about using AdobeSpark selecting photos and recording the voice over for them

(see appendix D for the full instructions for task 3). The first step for both groups was to agree on a plan for their work together which they were asked to publish in their Schoology workgroup forums. Once students had their videos ready, they had to share them with their family and friends in order to take action for the environment. The aim of this was for the students to raise awareness in their environment since ecological citizenship is based on the belief that the personal realm is a realm for active citizenship (Dobson 2000, 2003, 2007).

Then, students were asked to meet in what would be their third and last videoconference together to share the reactions of the people they showed their videos to as an exercise of reflection on the importance of active citizenship. Afterwards, as in each of the previous tasks, students had to choose a spokesperson to post the conclusions they reached in their videoconference together in the VLE. To sum up, in this task students had to agree on a plan for their joint product, then had to collaborate to create it, had to disseminate it to take action for the environment and finally had to reflect on the impact their actions had.

> E.g. *For our final task, we have decided to talk about food waste during Christmas time. We will be introducing the problem, with some data about the current situation, and we will talk about causes and consequences as well. Apart from that, we plan on interviewing some peers to get their opinion about the topic and we will give them some tips on how to reduce food waste this month. The video will be done in both languages (Spanish students will speak English whereas Irish students will speak Spanish) and we will include subtitles in the opposite language to ensure that everybody can understand what is being said* (DISFIL021).

> E.g. *For our video we are going to promote the national park of Killarney and the traditions of Cabranes like the gastronomy or the festivals. This video is aimed at travellers interested in sustainable tourism and discovering the culture of other countries. Our video is going to be half in English and half in Spanish with the content about Killarney in Spanish with English subtitles and the one about cabranes in English with Spanish subtitles. Our video is going to be made using AdobeSpark to allow us to easily add pictures, voices, and subtitles at the same time* (DISTUR031).

Once task 3 had ended, students had some time (i.e. two weeks) to finish writing their portfolios since these were the assessment tools to give them a mark. The VE was a 15% of students' final mark for the subject. At this stage, the teacher-researcher conducted the final interviews with half of the groups. The selection criteria was based on the availability of the students to participate in them. The reason why only some groups participated in these interviews is due to the large number of them (20 in total) and the time and capacity limitations of being only one researcher in this study.

All the VE participants were asked to watch the videos created by all the working groups to then answer a poll about their favourite ones. The three most voted videos were published by their institutions in their social networks in order to help them reach a wider audience (e.g.https://www.unileon.es/noticias/la-ule-desarrolla-un-estudio-de-intercambios-virtuales-con-enfoq ue-de-ciudadania-global-y). The three most voted videos can be visualised here and offer good examples of the telecollaborative products stemming from the VEs proposed in the study:

1- https://www.youtube.com/watch?v=YzmQO2GwpHo&feature=youtu.be

2-https://drive.google.com/file/d/1LcMaqVTZjAnn_Hn5CmY0hYahKspWjtC7/view?usp=sharing

3- https://spark.adobe.com/video/knOVLqzrpvMT1

4.4. Action Reconceptualization: Changes for the Next Cycle

Based on the aspects observed in the action taking and evaluation stage for ARC1 a number of reflections emerge that lead to the proposal of some improvements to the PLANET VE for its implementation in ARC2[5].

In task 1.1 students were asked to introduce themselves online by creating a video presentation. The proposed tool for the creation of the video presentation was AdobeSpark. Many agreed that it was useful to have learnt how to use this tool for their future academic and work related activities (and in fact many returned to it in later stages of the VE).

> E.g. *I learned how to use an interesting app like AdobeSpark, which I did not know. I think I learned to synthesise important things about myself and my environment in a short time, which can be useful for future tasks in real life, as it can be a job application* (PORTFIL03021).

Therefore, for ARC2, it seemed appropriate to propose again the AdobeSpark tool for the making of the students' presentation videos due to the positive evaluation that they have had of it together with the development of skills such as the synthesis of relevant information or the reflection on the best way to present oneself in front of a multicultural audience that have been derived from it.

Task 1.2	VEs ARC1	VE ARC2
Task based on	Getting to know each other. Local groups presentations of habits and views regarding ecological citizenship/ sustainable tourism. Responding to each other with comments and questions.	Getting to know each other. First videoconference. Agreeing on a group name, group philosophy, essential group rules for successful online intercultural telecollaboration and a provisional schedule for all the videoconferences.
Tools used	Suggested: Google docs, Google slides, PPT, etc.	Zoom.

Table 9: Reconceptualisation task 1.2 ARC1-ARC2.

In task 1.2, students had to present their habits and perspectives in terms of ecology as a way of introducing the VE theme of ecological citizenship. However, as this is a quite specific topic, in some cases students came to feel that it was repetitive for them to focus on it for so many weeks. With this in mind, in order to promote positive feelings towards the topic during ARC2, a revised version of task 1 was to be focused on the development of group dynamics and bonding and adopt an approach to the topic of the VE that goes from the general to the particular as will be seen in task 1.3.

> E.g. *It would be nice that not everything is focused on the same topic. I think this was a very interesting topic, but probably after so many tasks it became a bit repetitive* (PORTFIL03021).

Although the students valued the videoconferences very positively and would have liked to have more of them, they found the difficulty of organising them to be an obstacle. At the same time,

---

[5] Please bear in mind that the changes and therefore model proposed here constitute a provisional proposal based on the data obtained in ARC1 as once a partnership is established for ARC2 this model may undergo modifications in order to adapt to the needs of all participating institutions.

perhaps the biggest problem encountered by the international working groups was arriving at task 3 without having really collaborated until then and finding that perhaps they did not have the same work standards or approaches as far as the development of the work was concerned. Therefore, in order to introduce more videoconferences and to create a basis for successful interaction a new task was to be proposed for task 1.2.

> E.g. *Sometimes it was difficult to meet with the members of the group and I think that the problem was the lack of organisation. If we had scheduled everything beforehand, it would be much easier for everybody to adapt to this group schedule* (PORTFIL05021).

In light of the above arguments, it was decided that for ARC2, task 1.2 would focus on students' negotiation of group dynamics and the introduction of the topic of the VE would be delayed until task 1.3. During task 1.2. students would be asked to hold their first videoconference which would focus on the organisation of the group work for the VE. For this, students would be provided with the whole plan of activities and its calendar so that they could agree on the dates and times of their weekly videoconferences. The product to be delivered by the students in this phase would be a text based on a template to be filled in together during their videoconference in which they should add a group name, the reasons for the name, their group work philosophy with a list of at least 5 rules they consider essential for a successful intercultural online collaboration and a (at least provisional) calendar of their videoconference dates. It may be that in some groups this kind of pre-planning may not be possible for various reasons, but it seems advisable in order to contribute to the collaboration and organisation of the group. In addition, negotiating the name of the group and the rules that are important to them would help them to get to know each other better and find common ground.

Task 1.3	VEs ARC1	VE ARC2
Task based on	Getting to know each other. First videoconference. Creating a group name and a group identity.	Getting to know each other. Second videoconference. Discussing the SDGs and choosing one (or more if interrelated) to focus on.
Tools used	Suggested: Zoom, Google meet, Skype…	Zoom

Table 10: Reconceptualisation task 1.3 ARC1-ARC2.

Task 1.3 stood out for its effectiveness in pushing students to find common ground and to overcome the initial anxiety regarding synchronous CMC with the international partners. This task was to be modified according to the new VE approach and added in stage 2 as was already seen. According to the new approach adopted based on the data analysis from ARC1, it was more coherent for the students to introduce themselves in task 1.1, have their first videoconference and establish the basis of their working group while finding common ground in task 1.2 and finally begin to discuss the topic of the exchange in task 1.3.

Finally, in order to introduce the topic of the exchange, in ARC2 it seemed convenient to propose tasks that would allow students to go from the general to the particular in order to enable them to discuss and agree on topics of importance to them as global citizens while guiding them towards choosing a specific sustainability topic to be addressed by them as a group during the VE. Adopting this approach would help students to achieve a broader understanding of what global and ecological citizenship entail while contributing to students' sense of freedom when it comes to the

choice of the topics. In addition, seeing that VEs do not last long it seemed interesting to plan the VE so that the groups could choose what they would specialise in from the beginning.

To address all the issues raised, in task 1.3 students would have their second videoconference, prior to which they would prepare an agenda following the strategies learned in class to organise the points to be addressed. In this videoconference students would discuss and agree on which SDG they would like to deal with and why they believed they could influence it positively with their actions. To do this, students would have a summary table and complementary resources (articles, videos, etc.) on the 2030 Agenda and the SDGs available on the VLE. This would allow us to introduce the topic of global and ecological citizenship while giving them the opportunity to choose which specific aspect of it they would like to work on. Students should bear in mind that they have to work on it in the subsequent tasks so a high degree of negotiation would be required. The deliverable expected for this task would be the videoconference recording and a text with their agreements and conclusions.

Task 2.1	ARC1	ARC2
Task based on	Comparing and analysing. Answering a Cultura-like questionnaire and discussing the similarities and differences identified in the answers from the different cultural contexts in the discussion forums.	Comparing and analysing. Third videoconference. Comparing the situation in the participating countries regarding the SDG chosen in the previous meeting. Critically discussing similarities and differences between contexts.
Tools used	Google Docs, discussion forums	Zoom

Table 11: Reconceptualisation task 2.1 ARC1-ARC2.

Task 2 corresponded to the comparison and analysis category (O'Dowd & Ware, 2009) and incorporated a Cultura-like questionnaire for stage 1 (Furstenberg et al., 2001). International students wrote their thoughts in adjacent columns and compared their answers in order to look for similarities and differences afterwards. Regarding the Cultura-like questionnaire, first of all it is important to point out that the effectiveness of the tool is not questioned here as it has been widely recognised in the literature as an extraordinary tool in terms of critical awareness and IC development (see Chun, 2015 for a review of VEs following the *Cultura* model in the literature). However, in these specific VEs, even if this tool has proven to be effective in terms of fostering intercultural knowledge acquisition and reflection up to a certain extent, the instructions provided for task 2.1 and the questions selected by the researcher for the questionnaire did not foster the kind of collaborative construction of knowledge expected but rather several separate contributions from students who posted all their reflections in separate posts in their forum discussions adopting an "assignment approach" instead of developing a debate as was intended. It is true that students commented on their partners' contributions and developed some short interactions but still each of them posted a kind of essay pointing out the differences and similarities they had noticed which was not the scope of the task.

> E.g. *I would like to do the project in a more dynamic way. Doing more interactive activities with the group and not doing things just each one* (PORTFIL07011).

In contrast to its low degree of success in terms of interaction, the comparison and analysis exercise was effective in terms of informing students about intercultural perspectives and provoking reflection.

> E.g. *I realised that there are more similarities than differences in our opinions, problems and ecological habits. So, in some way, this experience has brought me closer to my Irish partners and now I feel that we are together in trying to fight this pollution and find new forms of being environmentally-friendly. This experience has been enriching because I do not usually speak with anyone about what are the environmental problems in our city, so this task has definitely given me the opportunity to think more deeply about the issues our planet is suffering* (PORTFIL04021).

It could have had an impact on this fact that the questions proposed in the Cultura-like questionnaire might have been too general or broad and not "controversial" enough to foster debate *("The biggest environmental issues that exist in my country/ local area are...(name 2)"; "The most important actions that my country is taking to deal with climate change (name 3)"; "Things that I do to protect the environment (name a maximum of 3)"; "Complete the sentence: "In order to deal with climate change more effectively, my government should...")*. At the same time, it is striking to notice the fact that in the Tourism-Business VE the general conclusion was that Spanish students were more focused on fines/laws to promote a more sustainable society and Irish students were more focused on leading a sustainable life on a daily basis. However, in the English Studies-Translation VE students achieved the opposite conclusion. This shows the risk that this kind of comparison entails in terms of overgeneralization and misleading conclusions if not approached from a critical perspective.

As a result, a proposed refinement was to make task 2.1 interactive and collaborative. To this end, the written discussion in the forums of ARC1 would be substituted by a synchronous debate via videoconference. This would sum to the overall purpose of proposing as many videoconferences as possible and it would contribute to deeper and more dynamic comparisons and critical analyses. Starting the collaboration before and giving more time for students to work on their joint product was expected to also contribute to obtaining better deliverables and learning outcomes in the final stage of the VE. It also needs to be taken into account the fact that students are talking about topics and issues that may be hard to deal with for the average student since there is no reason why they should be experts on the field of sustainability. Therefore, students would be asked to look up information and not rely on what they think since they may provide information to their partners which is not accurate and therefore lead their international partners to misleading conceptions. At the same time, encouraging students to do this could address students' lack of information. A good practice to suggest to the students in this regard would be to add news/articles/sources that support their claims so that they have to inform themselves about the topic before they make a statement about the issue/situation in their context during this task. Finally, in the following iteration instead of comparing and contrasting their answers to the same questions students would be asked to present their contexts' situation regarding the SDG related issue/situation they chose in their previous meeting and would collaborate on finding similarities and differences and on achieving group conclusions.

Task 2.2	VEs ARC1	VE ARC2
Task based on	Comparing and analysing. Second videoconference. VE1)Sharing a local environmental problem with international partners and discussing possible solutions. Agreeing on a proposal of feasible sustainable practices to improve the problems discussed. VE2) Sharing a local sustainable tourism destination with international partners and discussing possibilities for further development. Agreeing on a proposal of new sustainable businesses/activities for the areas discussed.	Comparing and analysing. Fourth and fifth videoconference (2 weeks duration). 1st week: Discussing possible actions, arguing the reasons for the action chosen 2nd week: Designing together a detailed and feasible action plan focused on engaging to improve the situation of the SDG(s) chosen in their contexts.
Tools used	Zoom	Zoom

Table 12: Reconceptualisation task 2.2 ARC1-ARC2.

Task 2.2 provided students with the opportunity to develop their global competence (OECD, 2018) by examining global, local and intercultural issues by means of evaluating information, formulating arguments and explaining complex situations as well as their ecological citizenship (Dobson, 2000, 2003, 2007) skills since they got eco-informed about environmental issues. However, there are a couple of aspects that could be refined. Firstly, the instructions provided to the students led them to approach the task as a presentation in which many of them prepared powerpoints and scripts. While they were able to evaluate the information and successfully convey it to their partners showing that they were eco-informed, it would be desirable in the future to encourage students not to approach videoconferencing in this way but to be prepared to discuss the information in more casual conversations with a greater degree of interaction and negotiation of meaning.

> E.g. *I think that even though their presentation was really interesting, and the topic was good, they could have put more effort in preparing it. They literally read all the presentation. This made me lose my focus* (PORTFIL04011).

In addition to comparing and analysing certain aspects in both communities, students were expected to discuss and create together realistic and feasible proposals as a result of the task as a way to start introducing active citizenship into the VE. However, most of the time of the videoconferences as well as the focus of the students' written reports was on the presentations of each group making the low level of interaction and the high assignment conception of the students evident. Finally, along with the desire to have more videoconferences with their international partners, students also reported on numerous occasions their wish to embark on more collaborative tasks from earlier stages of the VE. This goes in line with the findings of numerous previous studies looking at the effectiveness of VE for communicative, collaborative and intercultural skills development, which identify the inclusion of appropriate collaborative tasks that pose students with the need to collaborate and negotiate to accomplish the task together as key in enabling this type of learning (Helm & Van der Velden, 2019; The EVALUATE Group, 2019).

At the same time, in ARC1 task 3 had just enough time to take action (which consisted in the creation and dissemination of a promotional video on sustainable practices) that perhaps the different

steps related to active citizenship were somewhat blurred and could be missed in many cases. In addition, task 3 is the most complex in terms of teamwork, as it involves the joint creation of a telecollaborative product, as well as the work itself. It is therefore advisable that in this task 2.2 they start thinking about the action they are going to take in the next phase so that sufficient time and importance is given to engaging students in the different phases of active citizenship during task 3: prior evaluation of the action, taking the action and evaluation and critical reflection of the consequences of the action (OECD, 2018).

In order to address what has been observed, firstly, during ARC2, the training that would be given to students with strategies for successful intercultural synchronous online communication would address aspects such as those observed in the videoconferences of this task so that students were aware from the start of the VE that strategies such as making powerpoint presentations and reading from a script are not adequate to exploit the potential of this type of communication. At the same time, it has to be taken into account that during ARC1 this videoconference was the second that the international working groups had together, so they may have used the preparation of scripts as a way to feel more confident since, as we have seen, many reported feeling very nervous and insecure when it came to synchronous CMC. With this in mind, ARC2 would provide students with a greater number of videoconferences so that they could gradually lose this fear and become more competent and comfortable in this medium of communication. In order to find a way for international working groups to collaborate and to ensure sufficient time for planning, implementation and evaluation of action, in ARC2 task 2.2 would give time and space for students to negotiate what kind of action they would like to take together for two weeks. This would consist of identifying and evaluating together different courses of action and agreeing on the design of an action plan to engage to improve the situation regarding the SDG chosen in their contexts.

Task 3.1	ARC1	ARC2
Task based on	Collaborating. Creating and promoting a video of: VE1) sustainable practices feasible for ordinary people like them to address common environmental problem(s) identified. VE2) sustainable tourism in the destinations discussed in both countries. Third videoconference. Sharing people's reactions to their videos and discussing the relevance of taking active action for the environment.	Collaborating. Task 3.1 (two weeks duration) Implementing the action plan and reporting the whole process in the VLE including multimedia resources. Task 3.2 Sixth videoconference. Debating and evaluating together the consequences of the action taken and creating a short reflexive conclusion as a group including implications of this experience for the future.
Tools used	VE1) Free choice ; Zoom VE2) AdobeSpark ; Zoom	VLE Zoom

Table 13: Reconceptualisation task 3.1 ARC1-ARC2.

The last task of the VE was the most complex due to several factors. First of all, since it took place during the last weeks of class before the Christmas break, students had some exams and assignments from other subjects to hand in, which made them busier in this phase of the VE when the degree of involvement and collaboration required is higher. The biggest problem occurs when the

students' solution is to divide up the work so that the deliverable is done with little or no interaction since facing challenges in accomplishing tasks together as a group greatly contributes to enhancing students' learning outcomes (Guth and Helm, 2010).

> E.g. *Honestly, the situation was simple. We have a lot of exams and work for the university, and we could not have a meeting to organise us for the product. So, I created the script of the group in class and I informed my WhatsApp group. We recorded our part of the video and they recorded their part separately* (PORTUR08021).

The coincidence of the dates of other assignments and exams in both countries with this task caused tensions in some groups that reported unequal degrees of involvement or division of the workload. During these VEs, due in large part perhaps to the fact that the students did not have to collaborate on joint products until task 3, there were no conflicts in the work groups until this task. As it usually happens in this type of VEs (The EVOLVE group, 2020), students showed some kind of conflict avoidance since they communicated both in their portfolios and in their personal interviews their dissatisfaction in some cases, however, interactional data showed that these aspects were not exposed or addressed by students in a direct way with their international working group partners.

> E.g. *We have not said anything to them, even though we thought things were wrong* (INTFIL01POST1) (translation from Spanish).

It seems that this particular moment of the semester, together with the first real collaboration and the development of the final product, resulted in an overload that negatively affected both the group dynamics and the final results. Students focused on the creation of the joint product (i.e. promotional video) but in most cases left aside the part of active citizenship and critical reflection that involved the product dissemination with their environment in order to take action for the environment as well as to reflect on the impact of their action:

> "*Once it's ready, **take action!** Share it with your friends and family and even on social networks. What is the reaction of the audience? Has your video been effective? Do you think it will contribute to making your family/friends/acquaintances more sustainable citizens? Meet again in what will be your last **videoconference** and share how your environment has reacted to your telecollaborative product*" (task instructions).

In view of the above, several changes were introduced for task 3 for the following implementation. First of all, it is worth remembering that in this refinement of the VE, in task 1.2 students would discuss in a videoconference the rules they consider essential for their collaboration to be successful, hoping that setting the working standards early on would contribute to a smoother collaboration. If students reported finding conflicts in their working group they would be invited to refer to the standards agreed upon by all so that conflicts could be dealt with openly and directly in the working groups to avoid as much as possible the conflict avoidance that often ends up in a bad feeling or experience at the end of the VE. In addition, in ARC2 students were to be asked to collaborate progressively throughout the VE so that they did not encounter a drastic change in the work dynamics when they arrived at this task. This time, they would arrive at task 3 more prepared for the creation of the joint product. As has been pointed out, in some of the VE tasks it was observed that when the instructions were long (i.e. they involved doing several things in the same stage), most of the groups did not cover the different points of the task statement. This shows that the instructions should be very specific and concrete with what is expected of the students and should not concentrate several steps in

the same stage. For this reason, and in order to ensure that each of the different parts that comprise the informed taking of action corresponding to global and ecological citizenship, during ARC2 task 3 would be divided into 2 distinct phases. Therefore, students would design their action plan during task 2.2 and task 3 would have two distinct stages in which students could spend time taking that action and then reflecting on the consequences of their action and the relevance of continuing to take action in the future.

Finally, according to ARC1, data show two main types of active citizenship: actions students took and/or planned to take (e.g. in their reflections in the portfolios) as a result of what they learnt from their partners (e.g. buying bamboo toothbrushes, walking instead of taking the car, recycling, etc) which could be labelled as individual actions and the collective actions they took as part of the project itself (e.g. the promotional videos). Therefore, the last stage of task 3 during ARC2 was to be aimed at encouraging students to reflect on the impact and relevance that their actions have in their immediate environment as well as in the global context so that the VE ended with a thought provoking discussion to contribute to the students' global and ecological mindedness for the future.

4.5. Chapter Conclusion IV

In this chapter I set out to detail the first Action Research Cycle (ARC1) paying attention to the PLANET VE design and implementation to then reflect on the findings to propose enhancements for the next iteration. To that end, the main ideas concerning the action planning, action taking and evaluation and action reconceptualization of the two VEs implemented with 120 undergraduate students from Spanish and Irish HE institutions coming from different fields of expertise in this first round are described.

In order to address the observed limitations, a number of main changes were identified as necessary. For example, increasing the number of videoconferences and helping students to be prepared to engage in more casual conversations with a greater degree of interaction and negotiation of meaning in this medium. Similarly, helping students to build a foundation for successful interaction was identified as beneficial to group dynamics and products. In turn, starting collaboration earlier and giving students more time to work on their joint product was proposed as a measure to contribute to better learning outcomes and group deliverables. In addition, the SDGs are proposed as a suitable theme to introduce the topic of global and ecological citizenship in ARC2 in order to give the groups the opportunity to choose the specific aspect of sustainability they would like to work on. This would, potentially, contribute to students' satisfaction with the project and increased knowledge acquisition due to the focus on a specific issue. Furthermore, for the next iteration, students will be asked to present the situation in their contexts in relation to the SDG-related issue/situation of their choice and to collaborate in finding similarities and differences. This is intended to contribute to more reflective group conclusions given the eminently superfluous nature of the outcomes identified in ARC1 when students compared and contrasted their answers to the same questions. At the same time, in this ARC the different steps related to active citizenship were somewhat blurred and could be lost in some cases. Therefore, it appeared as necessary to allocate sufficient time and importance to students' participation in the different phases of active citizenship in the next one including tasks devoted to prior evaluation of the action, performance of the action and evaluation and critical reflection on the consequences of the action.

In the following chapter I go on to describe the second round of implementation (i.e. ARC2) in which a total of 43 undergraduate students at Spanish and German higher education institutions participated. Following the same structure as in this chapter, I detail the implementation of the PLANET VE including the above-mentioned improvements and discuss the results obtained. In the light of these results, I refine the model for its final design.

CHAPTER V: SECOND ACTION RESEARCH CYCLE (2021/2022)

5.1. Introduction

This chapter reports on the second Action Research cycle (ARC2) implemented in this research. It presents each of the phases of the cycle following the same structure as in chapter IV: action planning, action taking, action evaluation and reconceptualization. ARC2 was initiated in June 2021 and finished in May 2022. Figure 21 shows the timeline for the second AR cycle:
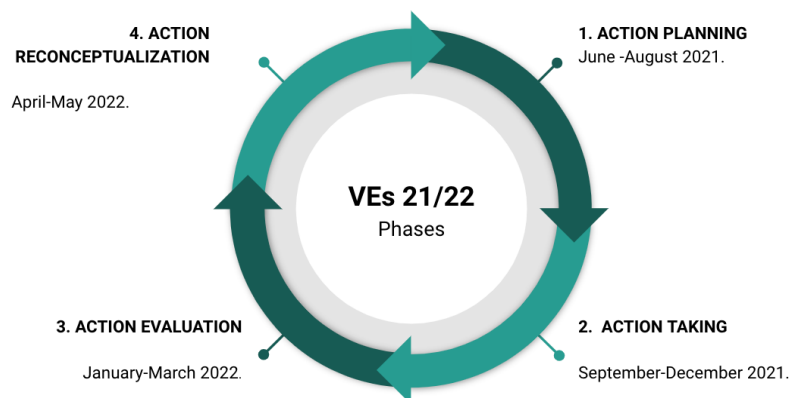
Figure 21: ARC2.

5.2. Action Planning: Introduction of the Virtual Exchange Ecosystem:

For ARC2, again the classification of the fundamental components conforming to the VE Ecosystem identified by Nicolaou (2020) are used as a framework for the introduction of the different elements composing the VE model designed: (1) the Linguistic Mediation, (2) the Participants, (3) the Technological Mediation, (4) the Tasks, (5) the Themes, and (6) the Artefacts.

Components of the VE ecosystem in ARC2	
Linguistic Mediation	English as a lingua franca
Participants	20 English Studies students (SP) and 23 Teacher Education students (DE)
Technological Mediation	VLE: Mahara Synchronous communication: Zoom Personal correspondence: WhatsApp
Tasks	(1)Getting to know each other (2) Comparing and analysing (3) Collaborating
Themes	Sustainable Development Goals
Artefacts	Varied nature: Reports on the implementation of an action plan designed by students intended to contribute further progress towards one or more of the SDGs in their communities.

Table 14: Components of the VE ecosystem in ARC2.

First, when it comes to (1) language, the VE implemented during ARC2 adopted an ELF approach involving undergraduate students from Spain and Germany learning EFL. Nowadays, lingua franca VEs in which students communicate using a common language that is a FL for all of them are beginning to be more and more common (O'Dowd, 2016; Kohn & Hoffstaedter, 2017) recognising that learners are more likely to use a language with other NNSs as themselves rather or more often than with NSs, especially within the work context (Graddol, 2006).

As for (2) the participants, initially, a general and adaptable VE proposal was announced on the VE partner search tool provided by the UNICollaboration website in order to find a VE partner with whom to negotiate specific objectives and needs for the final VE revolving around the thematic of the SDGs:

Figure 22: Announcement of the VE proposal for ARC2.

Thanks to this announcement, the partnership was established with a German university and the refinement phase began in order to adapt the model to the needs of both contexts as O'Dowd and Ware (2009) advise. The teacher from Germany and the teacher from Spain had various meetings via Zoom to agree on aspects of the VE such as the dates for each of the tasks or the technological tools that could be feasibly used at each institution. The instructions to be given to students in class were also agreed and a weekly communication via email kept going throughout the VE.

All the participants were undergraduate students pursuing the third year of their university degrees. This was English Studies in the case of the Spanish University and Teacher Education in the case of the German one. There were 20 participants from the Spanish institution and 23 from the German one. These were divided into 8 working groups with at least 2 or 3 members from each institution. All of them had an approximate B2/C1 level of proficiency in English according to the

CEFR (2001, 2018) and an average age of 20 years. In the Spanish group there were numerous Erasmus students: 3 students coming from Italy and 5 coming from Russia.

> E.g. *This is a very interesting project since we all come from different backgrounds (and I'm not only talking about nationality) since we all study different things and have different plans for the future. Most of us want or are planning to be teachers, but in different fields, age range and some even languages* (PORTFIL04012).

Virtual Exchanges	Students from	Number of participants	Working groups
VE3 (ARC2)	English Studies (SP) Teacher Education (DE)	20 23	8

Table 15: ARC2 VE: students, numbers and groups.

It should be noted that the students who participated in ARC1 had frequently mentioned Germany when holding debates about sustainability since they considered this country to be avant-garde in terms of ecology. Therefore, it was particularly interesting in this iteration to explore Spanish' students interactions with their German partners and see what their attitudes and learning outcomes were.

> E.g. *Germany takes the environment very seriously and tries to solve problems strictly* (PORTFIL07021).

In terms of (3) technology, the VLE that hosted the VE project during ARC2 was Mahara (https://mahara.org/). As described in its homepage Mahara can be defined as "an open-source e-portfolio for education. An e-portfolio is a type of web application that allows users to record and share evidence of lifelong learning. (In technical terms, it's a bit like a content management system crossed with a social network.)" (https://wiki.mahara.org/wiki/Mahara_Wiki). Mahara was primarily selected as the VLE to host the VE because of the partner university institutional requirements. It appeared as an appropriate tool to host the project since it offered all the features needed such as discussion forums or display of multimedia materials and links and allowed the teachers to upload content materials related to the VE and the instructions for each task. However, learning how to use the VLE proved to be challenging for students who needed training on managing it.

Figure 23: VLE Mahara homepage.

At the same time, during this ARC students' interaction took place mainly via videoconference. For this purpose, the German institution provided each working group with a permanent Zoom room for their meetings.

As indicated in chapter IV, (4) the tasks' design for ARC2 departed from the findings stemming from ARC1. Table 16 offers a short overview of the tasks for VE3 (ARC2):

Task 1	
1.1	Task based on: Getting to know each other. Introducing oneself and commenting on each other's introductions: (1) A short video (3-5 minutes) talking about their background, interests/hobbies, university studies; (2) An image telling the others more about themselves and relating it to one or more SDGs; (3) 3-5 SMART learning goals for the VE; (4) a meme generated by each one about their expectations or worries approaching this experience. Tools used: Camera; meme generator; VLE.
1.2	Task based on: Getting to know each other. First videoconference. Agreeing on: (1) A group name and group philosophy; (2) Essential group rules for successful online intercultural telecollaboration; (3)A provisional schedule for all the videoconferences. Tools used: Zoom; VLE
1.3	Task based on: Getting to know each other. Second videoconference. Discussing the SDGs and choosing one (or more if interrelated) to focus on throughout the VE. Reports in Mahara include: (1) reasons for the SDG chosen and its relevance for the group members, (2) the specific issue or situation agreed to focus on and (3) how the group members could make a difference. Tools used: Zoom; VLE
Task 2	

2.1	Task based on: Comparing and analysing. Third videoconference. Comparing the situation in the participating countries regarding the SDG chosen. Discussing and identifying similarities and differences between contexts. Tools used: Zoom; VLE
2.2	Task based on: Comparing and analysing. Fourth and fifth videoconference (2 weeks duration). 1st week: Discussing possible actions, arguing the reasons for the action chosen. 2nd week: Designing an action plan focused on engaging to improve the situation of the SDG(s) chosen. Tools used: Zoom; VLE
Task 3	
3.1	Task based on: Collaborating (two weeks duration). Implementing the action plan and reporting the whole process in the VLE including multimedia resources. Tools used: Zoom; VLE
3.2	Task based on: Collaborating. Sixth videoconference. Debating and evaluating the consequences of the action taken and creating a short reflexive conclusion as a group including implications for the future. Tools used: Zoom; VLE

Table 16: Overview of the tasks of VE3.

For ARC2, (5) the theme of the SDGs was introduced to enable students' global and ecological citizenship skills development offering them multiple and specific topics in which they could focus. In 2015, the UN adopted the 2030 Agenda for Sustainable Development with the aim to provide a global framework for the achievement of the 17 SDGs. This agenda addresses the major challenges in terms of development for the whole of humanity and consequently presents the goals to cover them. The objective of the 17 SDGs is "to secure a sustainable, peaceful, prosperous and equitable life on earth for everyone now and in the future" and they specifically address "key systemic barriers to sustainable development such as inequality, unsustainable consumption patterns, weak institutional capacity and environmental degradation" (UNESCO, 2017, p.6). This theme was proposed due to several aspects that were observed during the first round of VEs in terms of their thematic focus. Some students mentioned that the topic of ecological practices in general terms had become repetitive at a certain point and that they would have appreciated a wider range of topics or would have preferred to have been able to choose these topics themselves. So the idea arose to propose the topic of the SDGs so that the thematic of sustainability or ecological citizenship could be introduced in more general terms at first. This would allow each group to choose and agree on a more specific topic in relation to the SDGs to specialise in for the development and implementation of an action plan for sustainable development as the project progressed.

In contrast with ARC1 in which the (6) artefacts that students had to co-create needed to be online due to the Covid-19 restrictions at the time, in ARC2 students were able to design and implement action plans that could actually involve participating in their communities in various ways. More concretely, the artefacts students had to co-create together were reports on their implementation of the action plan designed by them intended to contribute further progress towards one or more of the SDGs in their communities.

5.3. Action Taking and Evaluation: Implementation of the Model and Reflection

The VE started in mid October and lasted until mid December 2021 and was implemented in both institutions' EFL subjects with one hour a week in class dedicated to it. Figure 24 below shows an overview of the data collection process.

Data collection process: 2nd iteration
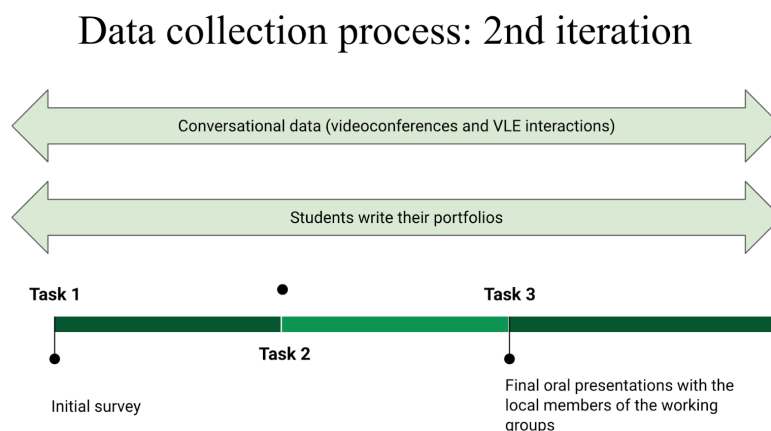
Figure 24: Data collection process during ARC2.

The data collection tools were mainly the same as in the previous cycle but some adjustments were made. The portfolio was used again as an instrument to collect data for this study and at the same time to assess student's participation, reflections and learning outcomes stemming from the project, counting 1 point of the total mark (10) of the subject for the Spanish students. At the same time, in ARC2 students participated as part of the subject evaluation process in a final oral presentation and were given up to 0,5 of the final subject mark for it.

Students' individual portfolios followed the same structure as in the previous year but their questions were adapted to the tasks proposed in this one. The portfolio designed to assess the PLANET VE was developed taking into account the recommendations of the Council of Europe (2018a) based on the one used during ARC1 but adapted to the tasks presented in the second one (see appendix E for the questions posed to the students in their portfolios for ARC2). Consequently, it included guidelines that specified the competences being assessed and the types of evidence that students should include. The instructions and questions included in the portfolio were carefully selected and formulated to ensure the collection of the information needed to both answer the research questions and to provide assessment on students' participation in the VE.

Regarding the adjustments mentioned above, in this iteration pre- and post-interviews were substituted for two different tools to collect students' testimonies before and after the VE project. First, an initial survey with open questions to be carried out right after the end of task 1 and then, working group oral presentations about the VE experience to be conducted at the end of the project. Given that ARC2 involved a single VE project and therefore a smaller number of participants, using these collection tools (i.e. initial survey and final oral presentation) ensured higher rates of participation since all the students did the initial survey and gave the oral presentations during class time. It is important to point out that the questions that students were posed in the initial survey as well as the ones they were asked to include in their final oral presentations were the same that students were asked in the pre and post interviews during ARC1 to ensure getting the same information that

would allow comparing both rounds of implementation. When it comes to the working group oral presentations, these were conducted in class and recorded with the students' consent. This format allowed the rest of the students in the big group to listen to the experiences of all the other working groups, providing them with a better experience in terms of space for reflection at both the individual and group level. Then, students' testimonies were transcribed for their analysis (see appendix G for the questions posed to the students in the pre-survey and post-oral presentations). These data coming from students' portfolios, initial survey answers and final oral presentation were triangulated with the actual interactional data from the recordings of the videoconferences as well as students' asynchronous interactions in the VLE to address the self-reporting nature of students' reflections and testimonies. Table 17 shows an overview of the data collection process in each ARC.

Virtual Exchanges	Interactional data	Self-reporting data	Assessment tools
VE 1 (ARC1)	Videoconferences Discussion forums	Pre and post interviews Portfolios	Portfolios (15%)
VE 2 (ARC1)	Videoconferences Discussion forums	Pre and post interviews Portfolios	Portfolios (15%)
VE3 (ARC2)	Videoconferences	Initial survey Final oral presentation Portfolios	Oral presentation (5%) Portfolios (10%)

Table 17: Data collection in ARC1 and ARC2.

The following paragraphs detail the action-taking phase of ARC2. This is done by describing the tasks, the data collection process, the challenges encountered, the actions taken by the VE teachers and all those observations and reflections derived from this period that are relevant to answer the research questions in the subsequent chapter (Chapter VI: Results and discussion). The implementation of the VE started on September 29 2021 with a phase of training prior to the project which started in mid October due to the German calendar. In the VE introductory session students were introduced to the VE ecosystem as shown in figure 25 and to the overview of the tasks as shown in figure 26.

Figure 25: Overview of the VE ecosystem presented to the students in the first session in ARC2.
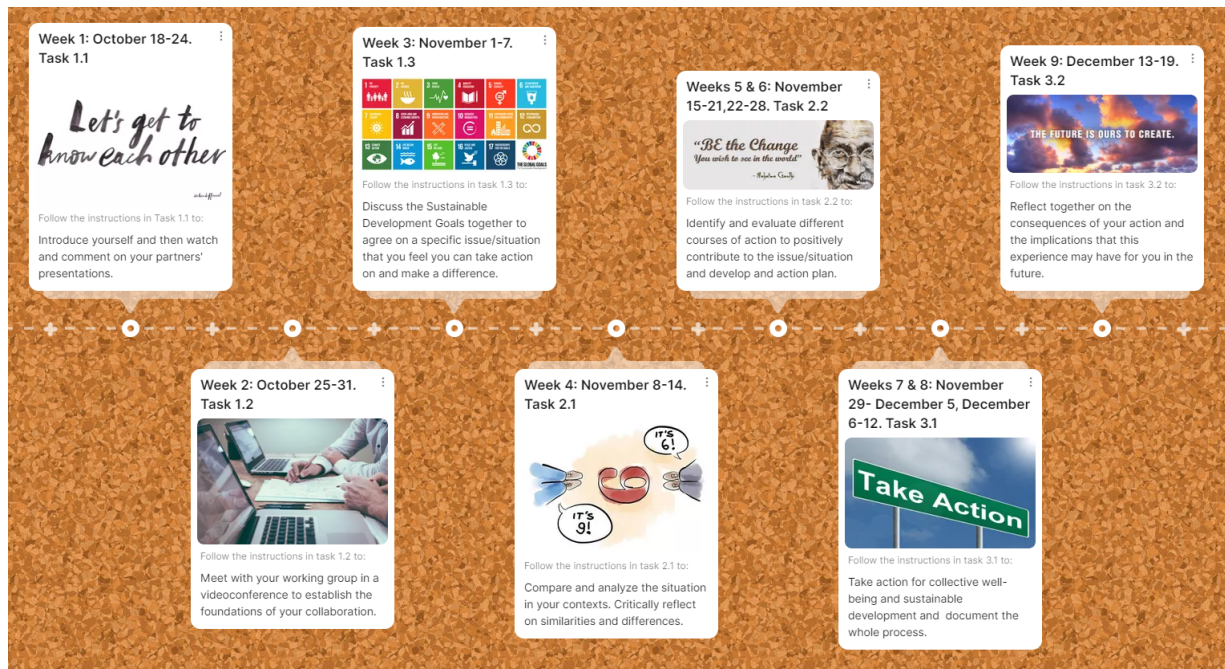
Figure 26: Overview of the VE tasks presented to the students in the first session in ARC2.

Students were also asked questions specifically selected in order to foster critical group reflection on two key aspects of the project prior to its start:

- *What do you think could be the reasons why we are going to do a VE with Germany? How do you think that you could benefit from interacting in English as a lingua franca?*

- *Can you think of any examples of specific issues/situations in your daily life that you can relate to the SDGs?*

Students discussed these questions in small groups and then shared their ideas in a whole class debate. The most mentioned benefits of interacting using ELF according to the students' initial perceptions were gaining experience working with international people for their future jobs, developing their social and digital skills, learning about their partners' culture, gaining proficiency and confidence in communicating in English, getting used to different accents and becoming more open minded. As for the second question, students found it easy to link the SDGs to issues or situations of their daily lives even if they reported not to be familiar with them. Examples of their answers were: reducing fast fashion consumption (responsible consumption), recycling and raising awareness on the importance of it for elder people (sustainable communities and education) or promoting more bike lanes to go to different places (climate action) among others. Thus, the first session allowed us to introduce the students to the PLANET VE and to explain to them the benefits of communicating using ELF such as developing the skills to communicate in English in international lingua franca contexts in which multiple cultures and accents are involved. This type of communication enables students to develop language and intercultural skills relevant to today's global context by engaging them in tasks that require collaboration on issues that go beyond explicit bicultural comparison (O'Dowd, 2019). Studies on this VE model have reported positive self-reported outcomes in terms of language and intercultural competence acquisition (Guth and Helm, 2012) and have also been identified as helping learners overcome perceptions of linguistic and cultural

difference and instead contributing to the creation of stronger intercultural and team bonds (Lindner, 2011). Another important benefit of communicating using ELF is to address native speakerism, which means having NSs as a model to imitate (Byram, 1997; Liaw & English, 2014).

At the end of this first session, those students who were willing, were invited to sign the informed consent that allowed the teacher-researcher to analyse their data for the purposes of this research study. The consent form for this AR cycle was adapted for the context and needs of the VE researched (see appendix F for the consent form for ARC2).

The second session, still prior to the start of the VE, was devoted to preparing students for online intercultural interaction. There is a widely held assumption that students that have been born in the age of the internet (often referred to as digital natives (Prensky, 2001)) will be naturally prepared to successfully interact and collaborate using technological tools. However as observed in ARC1, pedagogical mentoring is key in supporting students in achieving successful online intercultural interaction and collaboration. To this end, the 'before the interaction' presentation from the Mentoring Handbook of VE teachers (Gutiérrez et al., 2021) was used in this session. According to this Handbook, VE teachers can prepare their students before their interaction starts by paying attention to three different aspects: effective technology use, organisational skills and awareness of common concerns. The slides presented students with quotes taken from real scenarios from previous VEs and were used as prompts for in class discussion in small groups and with the whole class based on the questions below. Table 18 shows the questions discussed in this preparatory session:

PREPARING FOR INTERACTION IN VE	SYNCHRONOUS ONLINE COMMUNICATION
A) Effective Technology Use	-What are some technical problems that might occur in videoconferencing? Brainstorm and make a list. -What are some ways of preventing or preparing for these problems? -How would you prepare in order to avoid this situation in a first video-conference? -What does netiquette mean to you?
B) Organisational Skills	-What do you need to think about when scheduling a videoconference? -How would you prepare in order for your first meeting to be an active and engaging one?

C) Awareness of Common Concerns	-Can you relate to the following concerns? How would you address these worries? What other concerns can you think of?
	
	-In groups, discuss your own feelings about:
	  o Shyness and insecurities
	  o Foreign language anxiety
	  o Worries about technology
	  o Any other concern that you might think of in the context of VE
	
	-Now, how would *you* help a VE partner overcome anxiety and worry?

Table 18: In-class mentoring 1 during ARC2 (Before interaction starts).

The answers that students gave to these questions, in addition to allowing for them to reflect on these issues and for the teacher to offer them training and support, also served to the teacher to get an understanding of the group's initial digital skills and common concerns. When it comes to effective technology use, students felt that they could benefit from the teacher's guidance on technical aspects of their videoconferencing tool as well as on netiquette since they felt that *"learning it before"* would

help them *"feel more comfortable with the technology"*. As for the organisational skills, students were taught how to create an agenda as well as the different roles each group member can take on to contribute to moving the meeting forward such as note taker, leader, spokesperson, etc… Students signalled that they were not aware of this possibility before and that this could help them to avoid *"not knowing what to talk about"* or *"uncomfortable silences"*. Actually, one of the initial common concerns that students shared was *"to be in the first meeting and realising that our international partners don't want to participate"* so counting on these strategies made them feel more confident. The final category, awareness of common concerns, allowed the participants to share their feelings about the upcoming VE. Table 19 summarises students' initial concerns:

Shyness and insecurities	Fear of not doing it well enough. Nervousness about meeting new people. Nervousness about the personal image given to strangers.
Foreign language anxiety	Fear of mispronunciation. Fear to make mistakes speillay if these are considered 'stupid' by others. Discomfort because of unknown people listening and focusing 'on every word' one says. Concern about not understanding other people's accents. Nervousness about forgetting or not finding the words.
Worries about technology	Fear of not knowing how to fix the technology if it doesn't work. Technology is something that can't be controlled. Concern about poor internet connection.

Table 19: Students' initial common concerns in ARC2.

Learning how the students felt before the VE began allowed, through the analysis of their interactions and reflections, to identify to what extent they gained confidence or mastery in these areas after the exchange.

On the contrary, students also mentioned aspects that made them feel confident or more comfortable about their upcoming interactions with their German partners. Two aspects that stood out in this regard were the fact that they would be communicating with students of EFL like them instead of NSs (e.g. *"It makes us feel better the fact that they're not English native speakers"*) and the fact that the interactions would take place online and not face-to-face *(e.g. "I feel shy and insecure when talking in English but since it is going to be online is not a problem for me")* as the online environment may constitute for some individuals a less threatening environment for self-expression. This finding goes in line with research in this area that suggests that learners tend to feel less anxious as well as closer to each other (i.e. feeling of mutual support) when they interact with other NNs using a lingua franca (Guarda, 2013; Helm, 2015).

In their third preparatory session, the last one before the start of the VE, students were introduced to the VE assessment: working group oral presentations to be delivered at the end of the VE and personal portfolios to be submitted after the Christmas break. In addition to spending in-class time looking at what students were expected to do in order to successfully complete their oral presentations and portfolios, the rubrics for assessment were made available to them in Moodle so that they could always go back to them and be aware of what they were going to be assessed for.

After this session, the VE teachers from Germany and Spain met in a videoconference to create the working groups that would start interacting the following week. In order to create these groups different criteria were taken into account. First, and based on the experience from ARC1

students were asked if they would or could commit to actively participating in the VE before assigning them to a group to avoid unexpected dropouts. Then, counting on the students who agreed to actively participate in the VE, the groups were created. Once the groups had been created, no more changes were made. Dooly (2008) recommends that keeping the groups together throughout the project despite the challenges that may arise will push students towards collaborating on finding solutions. However, inevitably during task 1, some groups had to be re-structured due to some dropouts. As Godwin-Jones (2019) explains, it is important to act quickly to reassign students when they find themselves in groups where partners are unresponsive and/or drop out to prevent them from falling behind in the project.

The tasks for VE3 in ARC2 presented in the following paragraphs were designed in light of the lessons learned from the findings stemming from the analysis of VE1 and VE2 in ARC1.

Task 1, corresponding to the information exchange category was divided into 3 stages as in the previous round of VEs but the tasks students had to fulfil in each of them varied as will be explained in these paragraphs.

Task 1	
1.1	Task based on: Getting to know each other. Introducing oneself and commenting on each other's introductions: (1) A short video (3-5 minutes) talking about their background, interests/hobbies, university studies; (2) An image telling the others more about themselves and relating it to one or more SDGs; (3) 3-5 SMART learning goals for the VE; (4) a meme generated by each one about their expectations or worries approaching this experience. Tools used: Camera; meme generator; VLE.

For task 1.1 (see appendix H for the full instructions) students were asked to individually introduce themselves in their international working group sharing a number of multimedia materials created by them in their introductory pages which were embedded in their working groups separate space in the VLE. These included: (1) a short video (3-5 minutes) talking about their background, interests/hobbies and university studies, (2) an image telling the others more about themselves and relating it to one or more SDGs, (3) 3-5 SMART learning goals for the VE and (4) a meme generated by each one about their expectations or worries approaching this experience. In order to introduce themselves and illustrate how students were supposed to do the task the VE teachers created their own introductions in the VLE as examples. Figure 27 illustrates how an introductory page for task 1.1 would look like.

1. My video introduction

2. My picture: It represents two SDGs that I try to contribute to in my daily life at work: achieving inclusive and quality education for all (Goal 4) and ending all discrimination against women and girls (Goal 5).

3. My smart goals for this Virtual Exchange (VE)

- Throughout the VE I will guide and support my students as they proactively engage in uncovering key (in)appropriate and (in)effective communicative strategies when reflecting on their interactions with their international working groups.
- During these months, the VE tasks will allow all of us to get to know more about each other's beliefs, worldviews and practices. I want to learn more about the German culture and more specifically I want to learn new sustainable practices that I could implement in my daily life. I will also pay special attention to my co-teachers' pedagogical practices and their educative context and I want this to help me to reflect on my own.
- I expect my students to critically reflect on this experience too and through the portfolio I will provide them with a reflection tool to look at the experience with some perspective and come to their own conclusions.
- When December comes, I want everyone to gain confidence and to feel comfortable using English as a lingua franca for online intercultural interaction and collaboration. To achieve this, I will make sure that my class and this virtual learning environment will be safe spaces. In addition, every individual will need to make an effort to be participative in the tasks, so that little by little the nerves and embarrassment disappear.
- Thanks to what the students from Spain and Germany share in their assignments in Mahara, my weekly meetings with Kristina and my discussions in class with my group of students I want to know what they all think and feel about this learning experience so that I can improve this VE model and my own teaching practice in the future.

4.1. Students after the first videoconference:

IMG_20210829_184700.jpg

4.2. Mahara madness

Figure 27: Introductory page task 1.1 ARC2.

In terms of technological tools, students were free to record themselves using the tool they preferred and were provided with some websites that served as meme generators such as https://imgflip.com/memegenerator or https://memegenerator.net/create. When it comes to the task instructions, in addition to showing students their teachers' introductions as an example, background was given to them about what SMART goals are and how to write them. Once students had posted their introductions, they watched and commented on their international partners' ones. Students' memes and SDGs related pictures generated the greatest amount of reactions and interactions among students followed by the video presentations. At the same time the SMART goals, while useful for each individual's learning experience planning and further reflection, did not foster much interaction among the students and could have fitted better in each student's personal reflective portfolio. When designing tasks for this first stage it is important for VE teachers to try and propose the ones that will be more likely to foster interaction among students to encourage getting to know each other (O'Dowd and Ware, 2009). Recording the video introduction proved to pose a challenging scenario for students who frequently reported having spent a lot of time re-recording it until they got one they were satisfied with. The task proposed in ARC1 in which students used the tool AdobeSpark to add a voiceover to their images proved to be more enjoyable for students. In contrast, adding the image and meme tasks greatly contributed to students' bonding process in a more relaxed atmosphere.

> *E.g. I was nervous at first, especially to record the video, but I think the tasks we had to do in order to present ourselves like the memes and the picture helped to lighten the tension while doing it* (PORTFIL04012).

Proposing students to deal with humour through the creation of memes at such an early stage of the project proved to be a good way to create a more relaxed atmosphere as well as for the students to find common ground. At the same time, it allowed students to reflect again on the topic of initial

common concerns they had been discussing in class in the pre-interaction training. In addition, memes are commonly used by young people and the most viral ones tend to have a shared meaning across countries.

> E.g. *I was very excited because I love memes (...) it makes us more excited to actually meet and know the people who made them, since they could be very similar to us in many aspects. I have seen from the memes that we all share worries and interests, and especially meme culture* (PORTFIL01032).

Proposing students to take a picture they felt identified with and relating it to the SDGs made it possible to introduce the topic of the VE in a distended way while encouraging students to reflect on how these affect or relate to their own personal daily lives. Figure 28 shows an example of a student's picture for task 1.1.

This was the first time I made my own cleaning products - it went pretty well :) I'd file it under SDG 12: responsible action and consumption.

Figure 28: Picture related to the SDGs taken by a student for task 1.

Task 1	
1.2	Task based on: Getting to know each other. First videoconference. Agreeing on: (1) A group name and group philosophy; (2) Essential group rules for successful online intercultural telecollaboration; (3)A provisional schedule for all the videoconferences. Tools used: Zoom; VLE

In task 1.2 (see appendix H for the full instructions), students had their first videoconference together. In this first synchronous meeting students were asked to agree on (1) a group name, (2) the essential rules of the group for successful online intercultural interaction and (3) a provisional schedule for the rest of the videoconferences in the project (see figure 29 for an illustrative example of a working group results from this stage). It is important to note that the dynamics of the project consisted in the students engaging in weekly videoconferences and then posting the results of the tasks carried out during these in their VLE. This was key for the teachers to be able monitor their progress along with the in-class discussions.
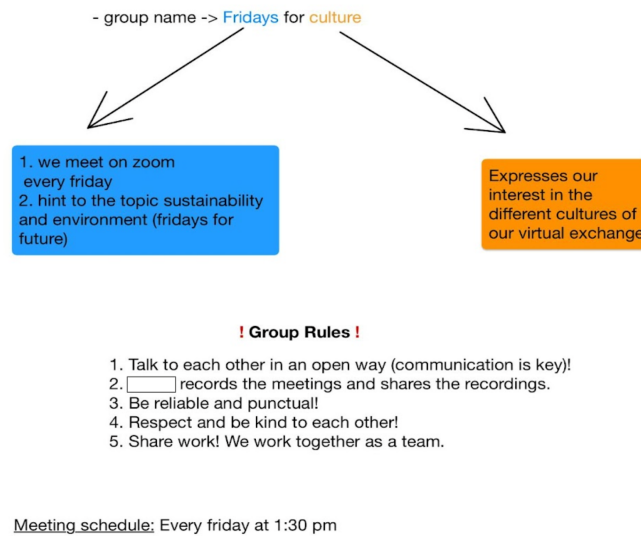
Figure 29: Example of a group product for task 1.2 in ARC2.

The reasons for designing the task in this way were the following:

(1) Agreeing on a group name and explaining the reasons behind it: this specific task as it was the case in ARC1 proved to be a good prompt for students to engage in finding common ground. Creating a group name and identity has successfully initiated in both ARCs the socialisation process in the groups. Students have frequently used their group names to create their Whatsapp groups and to friendly refer to each other during the project.

(2) Agreeing on the essential rules of the group for successful online intercultural interaction: The most repeated rules included (or were related to) showing respect to each other, openly addressing misunderstandings and disagreements, punctuality to show to the meetings and to complete the group tasks and reliability and fairness in terms of workload division and completion. This part of the task, together with agreeing on a tentative schedule for the videoconferences, required a high level of negotiation on the part of the students in order to reach agreements. This helped to establish a basis for group dynamics that all the members were comfortable with, providing a framework of reference for their future interactions and potential disagreements. Students' reflections and conversations reflect how this part of the task contributed to starting the project with positive feelings towards the group:

> E.g. *- I think you all seem really friendly and we get along really well. We converge in our ideas and we agree to treat each other with respect on everything.*
> *- Yeah and I think we're all motivated to do that.*
> *- It makes it really easy because we just all want the same thing and you all seem really responsible.*
> *-That really gives me a light heart. Like I don't have to worry about people not submitting the task and everything. So I'm really grateful for that* (VIDFIL042).

> E.g. *From the beginning, we set up rules that helped us feel free and comfortable expressing our ideas* (PORTFIL02012).

(3) Agreeing on a provisional schedule for the videoconferences: this part of the task was proposed based on the findings from the ARC1 in which students found agreeing on a date and a time for their synchronous sessions as one of the most challenging aspects of the project.

E.g. *Perhaps I would establish an unmovable time and date for all calls, to avoid the headaches of adjusting schedules* (PORTFIL05021).

Taking this into account and bearing in mind that this iteration of the project involved a higher number of videoconferences (i.e. weekly vs. 1 per task in the previous round of VEs), asking students to agree on a regular day and time for their weekly meetings appeared as the most convenient strategy to help students overcome this organisational challenge.

E.g. - *We should find a point in the week where we always do meetings*
- I think that's super good, like one hour in which we can meet every week
- Yeah, so that we don't have to schedule a meeting every week on a different day (VIDFIL062).

The analysis of students' interactions during task 1.2 together with their testimonies in class and their answers to the initial survey showed the impact that the pedagogical mentoring they received to be prepared for their first synchronous interaction had on their communication. All the groups used the agenda as well as the assignment of specific roles to the group members as strategies to move their meetings forward and reported that this greatly contributed to their confidence and the flow of their interaction. It was also common to observe references to netiquette and technical aspects students had learnt during the mentoring sessions.

E.g. - *The next bullet point in the agenda is to establish the roles. The leader is the one who has to follow the agenda. So who wants to be the leader?*
- I'm pretty good at doing agendas because I tend to forget everything. So if you want me to, I will do it. In class the teacher was like, we need to do it for the Zoom meeting, and we were like yeah, that will be so useful.
- Definitely! (VIDFIL052).

E.g. *This week we've been working in class on preparing our agenda. Our teacher told us that this could help us ensure that we don't miss anything. So if you don't mind, I can be the one in charge of covering the agenda. And also, we need a note taker. Any of you would like to be the note taker today?* (VID032).

Task 1	
1.3	Task based on: Getting to know each other. Second videoconference. Discussing the SDGs and choosing one (or more if interrelated) to focus on throughout the VE. Reports in Mahara include: (1) reasons for the SDG chosen and its relevance for the group members, (2) the specific issue or situation agreed to focus on and (3) how the group members could make a difference. Tools used: Zoom; VLE.

Finally, in task 1.3 (see appendix H for the full instructions for task 1.3) students had their second videoconference in which they started to discuss the SDGs together. To this end, students were introduced to the topic in class (see appendix I for the materials provided in class to introduce students to the SDGs). This week students had to agree on a specific issue/situation related to one of these goals that they felt they could take action for and make a difference. See figure 30 for an example of a group's product for this stage where it can be seen how students included in their reports their reasons for the SDG chosen and its relevance for them as a group of young global citizens, the specific issue or situation that they had agreed to focus on in relation to the SDG chosen and how they thought they could make a difference. This last point constituted a first stage of reflection preceding the following weeks in which each of the groups would work together on the development of an action plan to

contribute to improving the issue chosen.

Figure 30: Group product for task 1.3.

Since they were talking about topics and issues that may be hard to deal with and there is no reason why they should be experts on the field of sustainability and based on the findings from ARC1, students were asked to look up information instead of relying on what they thought. It had been seen in ARC1 that students may provide information to their partners which is not accurate and therefore lead them to misleading conceptions. Therefore, they were asked to add reliable news/articles/sources that supported their claims and were provided with useful materials (see appendix L).

At the end of task 1.3, the initial survey was delivered using Google Forms and students were given 15 minutes of time in class to fulfil it using their laptops or smartphones. In order to ensure anonymity students identified themselves with their university institutional email addresses that do not include their names. Table 20 shows the 6 questions posed to students in this initial survey in order to get a better understanding of their initial thoughts.

Q1	So far, how do you feel about your interactions with your international partners? What have you found easy/difficult in communicating with them?
Q2	How did you feel communicating with them before and after the first videoconference?
Q3	What impact has had this first task on your opinion on your partners' culture/ ecological habits?
Q4	Has this first task made you reflect on your own culture/ ecological habits?
Q5	Do you think it will change the way you think or act after participating in this VE?
Q6	What do you hope to learn/gain from your participation in the VE?

Table 20: initial survey questions ARC2.

In students' answers regarding how they felt about their interactions during task 1 (Q1) the most frequent words were 'comfortable' and 'motivated' followed by 'friendly' and 'nice'. This contrasts with ARC1 in which the first synchronous interaction according to students' testimonies in their initial interviews was mainly 'uncomfortable'. There may be two key factors contributing to this: the pedagogical mentoring provided before interaction and the lingua franca approach of the VE. Indeed students frequently mentioned in their answers in their survey being learners of EFL as a reason for feeling comfortable.

When it comes to the second question (Q2), 100% of the participants said that the impact of the first videoconference for them was that they initially felt 'nervous' or 'worried' and afterwards concluded that it was 'easier that they thought', 'not difficult' and that they felt 'relaxed', 'confident' and even 'happy'. These answers are similar to those obtained in the initial interviews in ARC1 in which students mainly reported that having a synchronous session had made them feel that they 'really got to know their partners'. This may be due to the fact that in ARC1 students had more asynchronous communication (i.e. task 1.1 and task 1.2) until they actually got to meet synchronously.

Although the answers to both the third question about the culture and ecological habits of their partners (Q3) and the fourth about their own are positive and show an initial state of reflection on a cultural level, it is clear that the students had not yet begun the phase of comparison and analysis of cultural practises covered in task 2, given the eminently superficial nature of the answers. Finally, the answers to Q5 and Q6 will be discussed at the end of the chapter in order to compare students' initial responses and expectations regarding the VE project and their final conclusions.

Task 2 implied comparison and critical analysis. In this iteration students had to deal with the specific issue/situation related to one or more SDG(s) they had chosen and compare measures being undertaken in both contexts to address these.

Task 2	
2.1	Task based on: Comparing and analysing. Third videoconference. Comparing the situation in the participating countries regarding the SDG chosen. Discussing and identifying similarities and differences between contexts. Tools used: Zoom; VLE

Seeing that task 2.1 in ARC1 did not foster the kind of interaction and critical thinking expected in terms of comparison and analysis of the cultural contexts of the participants, the first stage of this second task (see appendix H for the full instructions for task 2.1), started by adopting a different approach focused on fostering students' interaction and critical reflection in terms of cultural similarities and differences. To this end, students were asked to meet in their third videoconference and to compare the situation in their contexts regarding the issue/situation related to the SDG chosen in their previous meeting. Before attending the meeting, with their local partners, students had to select and weigh appropriate evidence to reason about the issue/situation regarding this SDG that they had chosen in their local community (see appendix I for the materials students were provided with in order to be prepared for the task). They also were asked to critically evaluate the information found, formulate their own arguments and get ready to explain these to their international partners in an accessible and comprehensive way. In order to avoid the low levels of interaction and highly task-oriented approach found in ARC1, teachers highlighted that students were not expected to prepare "presentations" or "powerpoints" and they just had to get ready to have a conversation about

this topic and engage in online dialogue with their partners. At the same time, teachers also put emphasis on students preparing a bibliography to make it very transparent to their team members, what were the articles, websites, books, book chapters, etc. that they were talking about.

Therefore, during task 2.1 what students had to produce was a group critical reflection on how the issue they had chosen affects lives locally and around the world by finding similarities and differences between their contexts and sharing their conclusions on their Mahara page. These included well referenced data and graphics illustrating their findings. Students relied on the following tool https://dashboards.sdgindex.org/map that allowed them to compare and contrast how each of their countries was doing in each of the SDGs (see figure 31 for an example of the tool). Most groups reported to have shared their screens during their videoconference and explored this tool together to carry out their comparison and analysis. The use of this tool did indeed foster the kind of reflection intended in this task.

E.g. *In terms of the analysis of the SDGs ranking, we saw that Germany is better positioned than Spain in the overall ranking. However, in the targets we are focusing on, Spain is above. I was quite surprised, but when I discussed it with my colleagues we could imagine what it was due to. Germany has a very important industry, for example in the automobile sector, and for this reason, they are in a worse position in the objective of responsible production and consumption. As far as education is concerned, we concluded that the public education system here is quite good and that in Germany there is a lack of teachers. But there is no doubt that both countries have to make improvements in the SDGs, so both countries should learn to make improvements in sustainable production and consumption through education, legal measures, etc* (PORTFIL05022).
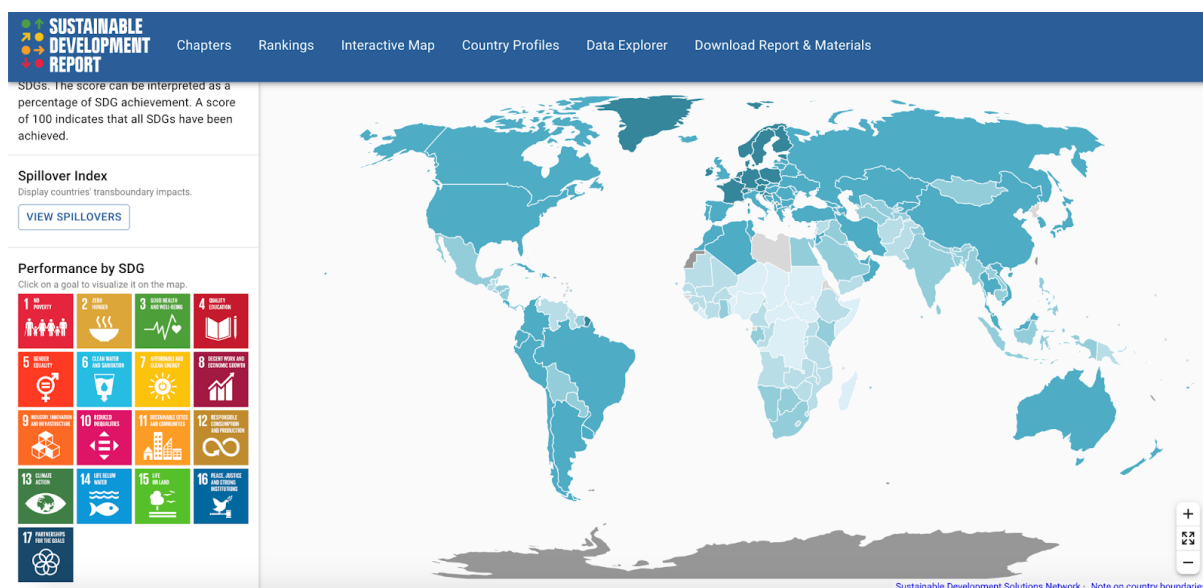
Figure 31: Tool used for comparison in task 2.1.

However, it should be noted that also an unintended consequence arose at this stage. The conclusion of some groups was that Germany and Spain are quite similar. One reason for this may have been the fact that by exploring the global situation through the interactive map and the ranking of the SDGs, students appreciated that their countries are European countries with similar policies in relation to these and therefore this may have led them to a certain extent in some cases to overgeneralization or minimisation of difference which had also been observed during ARC1.

E.g. *As both are rich countries, there are no big differences between them…* (PORTFIL03032).

E.g. *Once the results were uploaded to Mahara, we could easily see the fact that Spain and Germany are very similar, so it was very difficult for us to find differences between both countries* (PORTFIL01032).

Task 2	
2.2	Task based on: Comparing and analysing. Fourth and fifth videoconference (2 weeks duration). 1st week: Discussing possible actions, arguing the reasons for the action chosen. 2nd week: Designing an action plan focused on engaging to improve the situation of the SDG(s) chosen. Tools used: Zoom; VLE

In task 2.2 (see appendix H for the full instructions) students entered the first stage of their collaboration by working together on (1) identifying and evaluating different courses of informed reflective action to positively address their chosen issue/situation in their local communities, (2) providing critical arguments for the action chosen and (3) designing a concrete action plan following the template that appears of figure 32.

> ✔ **The problem** we are going to address is…
>
> [Remember to tackle a problem that is current, common to both countries and to which you can contribute in any way].
>
> ✔ **The action** we are going to take is…
>
> [Be realistic and specific. Agree on an action with which you can contribute to sustainability and make sure it is feasible for you].
>
> ✔ Our **objective(s)** by taking this action is/are…
>
> ✔ This is **how** we are going to do it: The **steps** we are going to take to implement the action and achieve the objective(s) are…
>
> ✔ Our **roles** and **deadlines** are...
>
> [Indicate **who** is going to carry out each of the specific steps/tasks and by **when.** Bear in mind that these dates refer to the implementation stage that will last from the 29 November until the 12 December].

Figure 32: Template for task 2.2 ARC2.

As a prompt for discussion, students were invited to ask themselves as a group the following questions: "Where do we want to be?" "How do we get there?" and to focus on responding to the global issue/situation they had been discussing together by weighing different possible actions against one another, for example by assessing the conditions that may make actions feasible and agreeing on the design of an action plan to engage to improve the situation. This phase lasted two weeks: During the first week's videoconference students discussed possible actions they could take until they agreed on the one they liked best as a group. In the second week's videoconference they developed the action plan. Figure 33 shows an example of a group's product for task 2.

✔ **The problem** we are going to address is…

The current situation regarding public transport because it is not used enough and we need to move around in our cities in a more sustainable way.

✔ **The action** we are going to take is…

We are going to create an Instagram account and a website in order to raise awareness and be more sustainable (following a challenge during the next weeks, each of us being more sustainable).

✔ Our **objective(s)** by taking this action is/are…
  ★ Raising awareness
  ★ Improving public transport in our cities
  ★ Motivating others to use public transport instead of cars (starting with ourselves)
  ★ Informing about other ways of transport that could be implemented in our cities in order to be more sustainable

✔ Our **roles** and **deadlines** are...

1. We are going to do some research about the situation of this topic in both☐g and ☐n to upload it to our webpage (deadline 26th November). ☐ and☐ will be in charge of doing research about ☐, and☐a and☐a will do the same but regarding León.
2. We will create a webpage with all the information found by our peers (deadline 28th-29th November) and☐li will be in charge of this.
3. We will create an Instagram account where we will upload different things and experiences to implement our objectives (deadline 28th-29th November) and☐a will be in charge of this.
4. Each of us will upload a fun fact or experience every single day in the Instagram account when we start the action (we will start on the 29th of November and finish on the 12th of December).

Figure 33: Example of group product for task 2.2 ARC2.

In order to be ready to discuss possible courses of action as well as to design an action plan students were prepared in advance during class time by being introduced to key principles and strategies of effective active citizenship (see appendix I for the materials provided to the students to be prepared for task 2.2 in ARC2). Students were also introduced to the key principles of ecological citizenship (Dobson 2000, 2003, 2007) as well as its motto of of thinking global and acting local and were invited to consider the effects of the common problem(s) or challenge(s) they had identified on people's daily lives in order to try to focus on realistic actions to contribute to improving the situation in their contexts. Students were also trained on how to design an action plan bearing in mind aspects such as setting the specific objectives they aimed to achieve, dividing these into specific attainable tasks, assigning specific roles to the group members or establishing concrete deadlines for each of the specific tasks. The videoconference recordings of the transnational groups for this task reveal that this previous training proved to be key in the development of their work at this stage of the project. For instance, in their training students were asked to watch the following video https://www.youtube.com/watch?v=Qx0AVjtdq_Q and to reflect on the kind of active citizens they would like to be: inventors, innovators or campaigners. The following excerpt from a group's videoconference shows how students made reference to this during their interactions.

E.g. - *I think that we can be campaigners to make sure to promote awareness.*
  - *So we have thought of doing like an animated video if you agree, of course.*
  - *Yeah and maybe we relate it to education. We can, for example, make a video with a teacher who is explaining gender equality to the students. Because the students are going to be the next generation and they need to be conscious* (VIDFIL012).

Task 2.2 proved to be very positive in terms of knowledge acquisition as it was the case in ARC1. The particularity in ARC2 is that the knowledge acquisition was more targeted and possibly insightful due to the selection of specific topics related to sustainability. In other words, the focus on the SDGs and allowing the students to concentrate on a specific topic or situation related to one or more of them played an important role in enabling the students to engage in a detailed study of a specific topic and to gain an extended understanding of it. The following example illustrates this:

E.g. - *Something that I found really interesting is the FIFO method, which stands for first in first out. You put in the front the old food and in the back the new one, so that you are sure that you consume first what is likely to get closer to the expiration date. Another one is compositing swaps, even if it seems a little bit difficult, I found that in some places there are people that run campaigns for doing this* (VIDFIL032).

After these initial two weeks of collaboration dedicated to the preparation of the action plan, the international groups moved on to task 3, dedicated to active action for sustainable development and common welfare followed by critical reflection on the implications and consequences of such action. Task 3, lasted 3 weeks. This was based on the findings from ARC1 in which students reported that they could have benefited from two distinct stages during task 3: a first one to take the action on the one hand and then a second one to critically reflect on the consequences of their action and the relevance of continuing to take action in the future. In addition, students in ARC2 arrived at task 3 more prepared for the creation of the joint product thanks to the fact that they started to progressively collaborate in task 2.2 which contributed to avoiding a drastic change in the work dynamics when they arrived at this task thus diminishing the conflicts related to this.

Task 3	
3.1	Task based on: Collaborating (two weeks duration). Implementing the action plan and reporting the whole process in the VLE including multimedia resources. Tools used: Zoom; VLE

Task 3.1 (see appendix H for the full instructions) provided students with two weeks to put into practice as a team the joint action plan they had designed together. At this moment of the project, depending on the type of action they had chosen, students needed to organise themselves in different ways, but in any case they had to take ownership of the organisation of their time and workload as efficiently as possible to successfully complete this task. The action taking process could range from the group members themselves carrying out certain sustainable actions during these two weeks to contribute to the chosen issue/situation, to the creation and dissemination of awareness raising materials or any other type of action. Whatever the chosen action was, students had to document the whole process in Mahara including photos, videos, links, etc. to report this experience. Figure 34 shows the template students were asked to complete during task 3.1.

Figure 34: template for task 3.1 ARC2.

While students were free in both the topics they could choose and the way they could take action, certain common patterns can be identified. The most frequently chosen SDG was responsible consumption and production (addressed by 4 groups) followed by quality education (2), achieve gender equality and empower all women and girls (2) and take urgent climate action (2) and finally zero hunger (1) and sustainable cities and communities (1). Given the current capitalist context it is not surprising that students found the SDG of responsible consumption to be one in which they could make a difference. It is also logical that some groups related their topics to the goal of quality education given that the German students were future teachers.

> E.g. *We opted for those SDGs because they are the ones that are most in our hands. We as individuals do not have many options to change things with respect to certain SDGs in our day to day, since they require the work and will of higher positions or institutions. Let's say that for some goals we have little to contribute, but for others, we can do our part and make it count* (PORTFIL02022).

> E.g. *I have also learned a lot through my classmates and their individual projects, like the best ways to avoid fast fashion or a lot of tips to regulate my consumption* (PORTFIL01032).

In terms of how to take active action to advance towards the achievement of the chosen SDGs in their communities, commonalities could also be observed. Social media emerged as the most effective way of reaching their audience for students who in many cases opted to create public accounts on the social network Instagram in which to share information and tips aimed at raising awareness of their chosen topics.

> E.g. *I think this is a very feasible action, since we all use Instagram on a daily basis* (VIDFIL052).

> E.g. *We created an Instagram account because we thought that it is the best way nowadays to connect to young people and to share information* (PRESFIL022).

Also common was the creation of QR codes and web pages as a way of disseminating the content created by the working groups. Table 21 shows an overview of each group's SDGs and the actions they took.

SDG(s) Chosen	Action Taken [Creation of…]
(4) Quality education (12) Responsible consumption and production	An Instagram account and a QR to access an infographic to denounce fast fashion and inform about sustainable fashion based on information collected through a survey answered by 117 respondents.
(5) Achieve gender equality and empower all women and girls	An informative video and 3 posters accessible through a QR code to share advice to fight against domestic violence: (1)what to do if I am planning to escape?; (2) what to do if I suspect someone is suffering from domestic violence?; (3) what to do if I am in a situation of domestic violence?. Available in German, Spanish and Russian.
(2) Zero hunger (12) Responsible consumption and production	An Instagram account to share tips, information and the personal actions students took at home to show how these can be implemented in people's daily lives in order to avoid food waste and promote food responsible consumption (e.g. growing herbs at home, organising the fridge or creating natural fertilisers).
(11) Sustainable cities and communities	A web page and an Instagram account to share sustainable ways of moving around in the cities participating in the VE. Launch of a challenge for people to join and move sustainably.
(4) Quality education (5) Achieve gender equality and empower all women and girls	An animated video to be used as a raising awareness prompt in a lesson plan for teenagers about gender equality.
(12)Responsible consumption and production (13) Take urgent climate action	An Instagram account documenting the whole process students undertook to reduce improper consumption of food and entice others to do the same.
(12) Responsible consumption and production	A clothes-swap event and creation of charity packages including clothes, toys and food donated to the Red Cross.
(13) Take urgent climate action	An Instagram account where students published their own advent calendar sharing every day a new tip for a more environmentally friendly Christmas season.

Table 21: SDGs chosen and actions taken by the international groups in ARC2.

The varied nature of the topics chosen by the students and even the different approaches and ways of taking action on the same or similar matters allowed the whole group to learn also from their partners' topics, enriching their knowledge acquisition regarding sustainability since they shared their project in class on a weekly basis and also during their final oral presentations.

> E.g. *Our goal was gender equality so it was not really about the environment, but we listened to our partners in class and they made us reflect on our behaviour. For example, a team proposed the others to go walking to the places or taking the bus instead to reduce pollution and we joined their challenge* (PORTFIL01012).

Students frequently reported in their final reflections and testimonies about their VE experience that having chosen the topic themselves determined their attitude towards the project and positively affected their group dynamics and artefacts.

E.g. *We were really excited about doing this project because we like the topic we chose, so working on this has been enjoyable and fun. This has been important because we have been working on this for a long period of time, so we feel that we made the right decision choosing it* (PRESFIL052).

E.g. *I do think that this choice was essential in the long term. If we had worked on something less appealing, the results (and the overall experience) would not have been as good as they were* (PORTFIL03022).

Task 3	
3.2	Task based on: Collaborating. Sixth videoconference. Debating and evaluating the consequences of the action taken and creating a short reflexive conclusion as a group including implications for the future. Tools used: Zoom; VLE

Finally, during task 3.2 (see appendix H for the full instructions) which was the last week of the VE, students were asked to reflect together via videoconference on the consequences of their actions. To guide their reflection students were provided with the following list of questions for discussion: *What have been the immediate consequences or implications of our action?; Has our action had indirect consequences or implications?; Can we identify short- and long-term consequences?; Can we think of any unintended consequences as a result of the action?; How will this experience of active global and ecological citizenship affect the way we think and act in the future?* (task instructions).

Based on their conclusions, students came up with a short reflective text showing the consequences of their actions and the implications of this experience for them in the future on their Mahara-page. During task 3.1 students were already advised to collect evidence of their environments'/audience's reactions in order to count on these to reflect on their impact. Thanks to this, students were able to recognise the importance that exercising active citizenship can have on those around them and to realise that they can actually make a difference in their contexts.

E.g. *Our parents created an Instagram account just with the purpose of following us and they liked the idea (...) I think this has also affected my family because I learnt about this project and I brought home short term solutions* (PRESFIL022).

E.g. *We told our friends and family about the project, because the aim is to act locally and to help people around you to become aware. So apart from spreading qr-codes, we have talked with our relatives and friends about everything* (PRESFIL082).

Students' artefacts did not only reach their family and friends but thanks to the social media they were able to reach a wider audience, something that greatly motivated students as the following examples illustrate:

E.g. *One day we found out that a big Instagram account of an organisation with 10.000 followers was following us and we thought that was amazing because they were actually taking an interest in our content so we were very excited about it. They even liked some of our posts* (PRESFIL042).

E.g. *Some bigger accounts contacted us and they appreciated the fact that we were sharing their content as well so that was very nice of them* (PRESFIL022).

E.g. *We reached more than 6000 instagram accounts* (PRESFIL052).

Students also recognised the importance of their participation in the project on a personal level as one of the most important factors to consider. According to their testimonies and reflections, the experience provided them with background knowledge on the topic of their specialisation, resources and strategies to inform themselves. They also reported to have experienced a change of attitudes and habits encouraged by the need to look for realistic and feasible ways to carry out concrete actions in favour of the environment.

E.g. *On the personal side, we have all consumed more responsibly and we have learned a lot about this issue by getting to know relevant facts and information. We are now more aware and for this reason, we can contribute by doing small actions. We have also had an impact on the outside world, on our friends, our account followers, our classmates, etc* (PORTFIL05022).

E.g. *The project has impacted all the members of our group more than anyone else because we are the ones who looked for information, read articles and pieces of news and carried out the individual actions* (PRESFIL022).

In order to allow for a whole group in-class discussion mentoring on critical reflection on the VE experience and its related learning outcomes was delivered during this week's session using the materials designed to this end available on the Mentoring Handbook for VE teachers (Gutiérrez et al., 2021): https://www.stevensinitiative.org/resource/mentoring-handbook-for-virtual-exchange-teachers/

Finally, the local members in each of the working groups shared their experiences in the VE through oral presentations delivered in class which accounted for 0,5 of their mark for the subject. These presentations were also recorded and transcribed for research purposes. The questions that students answered in their oral presentations in ARC2 matched the questions posed to students in their final interviews in ARC1. At the same time, students completed individually their VE portfolios which accounted for another point of their mark for the subject.

5.4. Action Reconceptualization: Changes for the Final Model

Based on the aspects observed in the action taking and evaluation stages for ARC2 a number of reflections emerge that lead to the proposal of some improvements for the final model.

Task 1.1	VE ARC2	Final model
Task based on	Getting to know each other. Introducing oneself online and commenting on each other's introductions: (1) A short video (3-5 minutes) talking about their background, interests/hobbies, university studies; (2) An image telling the others more about themselves and relating it to one or more SDGs; (3) 3-5 SMART learning goals for the VE; (4) a meme generated by each one about their expectations or worries approaching this experience. Once students had posted their introductions they had to watch and comment on their international partners' ones.	Getting to know each other. Introducing oneself online and commenting on each other's introductions: (1) A short video (3-5 minutes) talking about their background, interests/hobbies, university studies using AdobeSpark; (2) An image telling the others more about themselves and relating it to one or more SDGs; (3) a meme generated by each one about their expectations or worries approaching this experience. Once students had posted their introductions they had to watch and comment on their international partners' ones.
Tools used	Camera; meme generator; VLE.	AdobeSpark; meme generator; VLE.

Table 22: Reconceptualisation task 1.1 ARC2-Final Model.

Based on the observations stemming from the two iterative AR cycles, task 1.1 could benefit from a number of refinements for the final PLANET VE model.

(1) Recording the video introduction directly using a camera during ARC2 proved to pose a challenging scenario for students who frequently reported having spent a lot of time re-recording it until they got one they were satisfied with. On the contrary, in ARC1 in which students used the tool AdobeSpark to add a voiceover to their images, they frequently mentioned having enjoyed this process. Therefore, and bearing in mind the importance of this initial stage for the students to embark on the project with positive attitudes, it would be advisable to suggest this tool or any other tool VE teachers consider convenient for their groups as long as it is not too demanding or intimidating.

(2) Taking a picture students felt identified with and relating it to the theme of the VE, which in this iteration were the SDGs, is a point that should stay in the final model since it allowed us to introduce the topic of the VE in a distended way while also encouraging students to get to know more about each other and reflect on how this theme affects or relates to their own personal daily lives and those of their local and international partners.

On the contrary, asking students to write their own individual SMART goals for the VE project in their introductory pages did not fit well with the purpose of this task which is getting to know each other and its interactive approach. These could have fitted better as part of their learning portfolios since they can be convenient for their personal learning process but will not be introduced in the final model. Another reason to omit these in the final model proposed is that this task had several subsections and could benefit from some reduction.

(3) Finally, the stage in task 1.1 which students enjoyed the most was the creation of their own memes about their concerns embarking on the VE project adopting a humorous perspective. This part of the task greatly contributed to creating a more relaxed atmosphere in a tense moment of the project in which students are nervous about their interactions. It generated a high level of interaction and positive reactions amongst students and contributed to the initial bonding process. Therefore, this part of the task should be introduced in the final model.

Task 1.2	VE ARC2	Final model
Task based on	Getting to know each other. First videoconference. Agreeing on: (1) A group name and group philosophy; (2) Essential group rules for successful online intercultural telecollaboration; (3)A provisional schedule for all the videoconferences. Publishing the results in Mahara.	Getting to know each other. First videoconference. Agreeing on: (1) A group name and group philosophy; (2) Essential group rules for successful online intercultural telecollaboration; (3)A provisional schedule for all the videoconferences. Publishing the results in the VLE
Tools used	Zoom; VLE	Zoom; VLE

Table 23: Reconceptualisation task 1.2 ARC2-Final Model.

Task 1.2 in ARC2 was very positive in terms of group identity creation and group dynamics establishment which were the main goals at this stage. It constituted an adequate gradual step from getting to know each other on a more general and also personal level during the first week to getting

to know each other on a more academic level and establishing a common group identity and working dynamics in the second week in order to establish the basis for the common work of the international group. At the same time, the negotiation of the group rules, the videoconference schedules and the selection of the group name and its philosophy also contributed to the construction and development of the social relations of the group members. At this point they also started to establish their methods of personal correspondence (i.e. Whatsapp groups of the international working groups). Based on its positive outcomes it is proposed to maintain task 1.2 as it is for the final model.

Task 1.3	VE ARC2	Final model
Task based on	Getting to know each other. Second videoconference. Discussing the SDGs and choosing one (or more if interrelated) to focus on throughout the VE. Reports in Mahara include: (1) reasons for the SDG chosen and its relevance for the group members as young global citizens, (2) the specific issue or situation agreed to focus on in relation to the SDG chosen and (3) how the group members could make a difference.	Getting to know each other. Second videoconference. Discussing the theme of the VE and choosing one aspect (or more if interrelated) to focus on throughout the VE. Reports in the VLE include: (1) reasons for the topic chosen and its relevance for the group members as young global citizens, (2) the specific issue or situation agreed to focus on and (3) how the group members could make a difference.
Tools used	Zoom; VLE	Zoom; VLE

Table 24: Reconceptualisation task 1.3 ARC2-Final Model.

Task 1.3 in ARC2 constituted, again, a gradual logical step in terms of the interdependence of the group and the complexity of the task in which the topic of VE was introduced. Once the students had been able to get to know each other on a personal level during week 1 and on an academic/group level during week 2, getting to know the topic of VE and each other's perspectives was introduced during week 3. This was a way of culminating the introductory stage of getting to know each other, the project and its dynamics. This task offered students the opportunity to engage for the first time in discussion with their international partners about the relevance of global issues in their lives allowing them to continue identifying commonalities as well as multiple perspectives. Given the positive outcomes observed in task 1.3 in ARC2 it is proposed to maintain the task as it is for the final model.

Task 2.1	VE ARC2	Final model
Task based on	Comparing and analysing. Third videoconference. Comparing the situation in the participating countries regarding the SDG chosen in the previous meeting. Critically discussing and identifying similarities and differences between contexts.	Comparing and analysing. Third videoconference. Comparing the situation in the participating countries regarding the topic chosen in the previous meeting. Critically discussing and identifying similarities and differences between contexts.
Tools used	Zoom; VLE	Zoom; VLE

Table 25: Reconceptualisation task 2.1 ARC2-Final Model.

Students met in their third videoconference in task 2.1 and compared the situation in their contexts regarding the issue/situation related to the SDG chosen in their previous meeting. This task was proposed adopting an approach that primarily focused on fostering students' interaction and critical reflection in terms of cultural similarities and differences bearing in mind the results from

ARC1 in which this task did not foster the degree of interaction and group reflection expected. This time, students produced a group-based critical reflection on how the issue they had chosen affects lives locally and around the world by finding similarities and differences between their contexts and sharing their conclusions on their Mahara page. In this ARC2 a lot of attention was paid to making it clear for students that the information they shared needed to come from reliable sources. The effect of this could be observed in the reports that included well referenced data and graphics illustrating their findings as well as reasoned arguments for their identification of similarities and differences. This along with providing students with specific tools to support their comparisons were key factors in fostering the kind of comparison and analysis intended in this task. Therefore, it is proposed to maintain task 2.1 for the final model.

Task 2.2	VE ARC2	Final model
Task based on	Comparing and analysing. Fourth and (fifth videoconference) (2 weeks duration). 1st week: Discussing possible actions, arguing the reasons for the action chosen 2nd week: Designing together a detailed and feasible action plan focused on engaging to improve the situation of the SDG(s) chosen in their contexts (optional videoconference).	Comparing and analysing. Fourth and fifth videoconference (2 weeks duration). 1st week: Discussing possible actions, arguing the reasons for the action chosen 2nd week: Designing together a detailed and feasible action plan focused on engaging to improve the situation chosen in their contexts.
Tools used	Zoom; VLE	Zoom; VLE

Table 26: Reconceptualisation task 2.2 ARC2-Final Model.

Task 2.2 lasted two weeks and provided students with time for (1) discussing the action they would like to take and (2) designing their action plan. Due to the high number of videoconferences and the varied nature of this stage (i.e. each group's plan and needs could be very different), the second week's videoconference was optional and students could agree as a group to work asynchronously this week. However, based on the observation of students' management of this two-week stage, a possible refinement would be to propose that students hold a videoconference in each of the weeks since those groups who decided to do so clearly benefited from it. In addition, given that students had a weekly schedule for their synchronous CMC this also contributes to maintaining their work dynamics. With the exception of this modification, it is proposed to maintain the rest of the task as the results observed during ARC2 were as planned. At this point of the project, students entered the first stage of their collaboration and the outcomes were very positive in terms of negotiation of group work dynamics and strategies, adaptability and targeted knowledge acquisition (i.e. of the specific topic each group dealt with). Another aspect that has been observed to be crucial in this stage and needs to be maintained in the final model has been the training offered to students (i.e. introduction to key principles and strategies of effective active citizenship and action plan design).

Task 3.1	VE ARC2	Final model
Task based on	Collaborating. Task 3.1 (two weeks duration) Implementing the action plan and reporting the whole process in the VLE including multimedia resources.	Collaborating. Task 3.1 (two weeks duration) Implementing the action plan and reporting the whole process in the VLE including multimedia resources.
Tools used	Zoom; VLE	Zoom; VLE

Table 27: Reconceptualisation task 3.1 ARC2-Final Model.

Task 3.1 also lasted two weeks and this proved to be a key aspect in order to give students enough time to take active part for sustainable development in their communities. Up to this point, the approach taken in the formulation of the task instructions had been to offer very specific guidelines and a lot of resource and training materials, and the level of intervention or guidance offered by the teachers had been quite high. However, task 3.1 constitutes a shift in order to encourage learner autonomy: At this point it is considered that students have acquired a level of familiarity with the project in terms of both dynamics and content that they can take full ownership of the management of their work. With this in mind, in ARC2 while students had to create a report of their action taking, they were free to choose and develop this action which in turn could be considered to be their collaborative artefact (alongside the report) in any way they saw fit. The results of this phase show that this approach was very effective in fostering students' motivation, awareness and involvement in this phase of active citizenship and it is therefore proposed to keep this task in the final model.

Task 3.2	VE ARC2	Final model
Task based on	Collaborating. Task 3.2 Sixth videoconference. Debating and evaluating together the consequences of the action taken and creating a short reflexive conclusion as a group including implications of this experience for the future.	Collaborating. Task 3.2 Sixth videoconference. Debating and evaluating together the consequences of the action taken and creating a short reflexive conclusion as a group including implications of this experience for the future.
Tools used	Zoom; VLE	Zoom; VLE

Table 28: Reconceptualisation task 3.2 ARC2-Final Model.

Finally, task 3.2 was introduced in ARC2 for the first time based on the findings from ARC1 which indicated that students would benefit from a final week of critical reflection on the VE experience. Indeed, students' testimonies in their portfolios and oral presentations in ARC2 reflect a much higher level of awareness in terms of the implications and consequences of their actions if compared to those of ARC1. Consequently, since this final week of reflection proved to be key in fostering critical reflection and awareness, it is proposed to be maintained for the final model of the PLANET VE.

5.5. Chapter Conclusion V

In this chapter I set out to describe the second cycle of action research (i.e. ARC2). To do so, I followed the same structure as in the previous chapter. I started with the action planning, where I introduced the VE ecosystem for this second round of implementation in which a total of 43 undergraduate students from Spanish and German Higher Education institutions participated. I then moved on to the description of the implementation of the refined PLANET VE model derived from the reconceptualisation stage of ARC1. Finally, I reported on the findings derived from the action evaluation which led to the introduction of the consequent reconceptualisation for the final PLANET VE.

From the aspects observed, a number of ideas were identified that led to the proposal of the final model. The main results indicated that task 1, focusing on getting to know each other, the project and its dynamics, would benefit from a gradual increase in the interdependence of the groups and the complexity of the task. This would involve getting to know each other on a personal level during week 1, on an academic/group level during week 2 and the topic of VE and each other's perspectives during week 3. Given the importance of this initial phase for students to embark on the project with positive attitudes, it was seen that the tools should not be too demanding or intimidating. It was also found that the introduction of activities such as taking a photo that the students could identify with and relating it to the topic of VE, as well as the creation of a meme, contributed to creating a more relaxed atmosphere, introducing the topic of VE and encouraging students to reflect on how it affects or relates to their personal daily lives and those of their partners. This together with the negotiation of group rules, philosophy and videoconference schedules resulted in higher levels of interaction which contributed to the initial bonding process. Taking into account the results of ARC1, the second task focused on fostering learners' interaction and critical reflection in terms of cultural similarities and differences. To this end, the focus in this ARC2 on students sharing information from reliable sources, together with providing students with specific tools to support their comparisons, were key factors in fostering the kind of comparison and analysis desired. As expected, in this iteration, providing students with time to discuss the action they would like to take and design their action plan proved to be a key aspect of giving students sufficient time to actively participate in the sustainable development of their communities. Another aspect that was found to be crucial was the training offered to students (i.e. introduction to the key principles and strategies of effective active citizenship and the design of action plans). The third and final task sought to foster learner autonomy by enabling them to take full ownership of the management of their work. Students were free to choose and develop their collaborative artefact as they saw fit. The results show that this approach was very effective in fostering students' motivation, awareness and involvement in this phase of active citizenship. Finally, the results of ARC1 indicated that students would benefit from a final week of critical reflection on the VE experience and, indeed, ARC2 reflects a much greater level of awareness of the implications and consequences of their actions.

In the following chapter I go on to report the findings of my study. To that end I present and discuss the results in relation to each of my research questions and situate them in the literature.

CHAPTER VI: RESULTS AND DISCUSSION

6.1 Introduction

This study set out to investigate how to integrate the objectives of global and ecological citizenship in the field of FL teaching through VE. Based on the empirical experience of the two ARCs, progress has been made towards devising an effective VE model for this purpose that includes detailed task instructions, materials, assessment tools and tutoring guidelines for teachers. Considering that the learning outcomes developed in the PLANET VE focusing on environmental issues, sustainable development and ecological citizenship have not yet been explored, a question worth exploring is how VE contributes to the development of global and ecological citizenship. At the same time, the exploration of the results derived from the adoption of both a bilingual and a lingua franca approach in the present study has offered the opportunity to compare and contrast the possibilities of each telecollaborative learning configuration in order to draw reliable conclusions about their effectiveness for the implementation of the PLANET VE model. Finally, authors have called in the literature for the need to train VE teachers to be equipped with the necessary skills to lead VEs and to be prepared to offer sufficient and appropriate support and guidance to their students. Consequently, how teachers can support students in their learning during a VE has been explored in relation to the PLANET VE.

The implementation of the VE with three different cohorts of students in two iterative ARCs has provided sufficient data to answer these research questions. The first table (table 29) below summarises the participants in each of the VEs and the second table (table 30) shows an overview of the data set that has led to the findings presented in the following sections.

Virtual Exchanges	Students from	Number of participants	Working groups
VE 1 (ARC1)	Tourism (SP) Business (IE)	22 19	8
VE 2 (ARC1)	English Studies (SP) Translation (IE)	25 54	12
VE3 (ARC2)	English Studies (SP) Teacher Education (DE)	20 23	8

Table 29: VEs: students, numbers and groups.

Virtual Exchanges	Interactional data	Self-reporting data	Assessment tools
VE 1 (ARC1)	Videoconferences Discussion forums	Pre and post interviews Portfolios	Portfolios (15%)
VE 2 (ARC1)	Videoconferences Discussion forums	Pre and post interviews Portfolios	Portfolios (15%)
VE3 (ARC2)	Videoconferences	Initial survey Final oral presentation Portfolios	Oral presentation (5%) Portfolios (10%)

Table 30: Data set analysed in this study.

In the following sections the research questions will be considered based on the findings of the study.

6.2. How Can the Goals of Global and Ecological Citizenship Be Integrated into the Field of Foreign Language Education through Virtual Exchange?

The findings stemming from this study confirm that the goals of global and ecological citizenship can be successfully integrated into the field of FL education through the implementation of a suitable VE project. However, the results reported in the previous chapters have also shown that a number of specific aspects need to be taken into account to be able to achieve this goal effectively. The comparison and analysis of the outcomes of each of the iterative ARCs and its consequent refinements have enabled the achievement of the best possible model of VE to ensure the successful development of the target competences for the study. Based on the results obtained, the final version of the PLANET VE is presented here. Table 31 provides an overview of the VE ecosystems from each of the ARCs (if the reader wishes to read a full description of the VE ecosystems these are available in chapter IV for ARC1 and chapter V for ARC2).

VE Ecosystem	ARC1	ARC2
Language(s)	English and Spanish	English as a lingua franca
Participants	(VE1) Tourism (SP)-22 Business (IE)-19 (VE2) English Studies (SP)-25 Translation (IE)-54	English Studies (SP)-20 Teacher Education (DE)-23
Technology	VLE: Schoology Synchronous communication: Zoom Personal correspondence: WhatsApp	VLE: Mahara Synchronous communication: Zoom Personal correspondence: WhatsApp
Tasks	(1)Getting to know each other (2) Comparing and analysing (3) Collaborating	(1)Getting to know each other (2) Comparing and analysing (3) Collaborating
Theme	(VE1) Sustainable tourism (VE2) Sustainable lifestyle	Sustainable Development Goals
Artefacts	Campaigns: (VE1) Videos to raise awareness on environmental problems and related sustainable practices. (VE2) Promotional videos for sustainable tourism.	Varied nature: Reports on the implementation of an action plan designed by students intended to contribute further progress towards one or more of the SDGs in their communities.

Table 31: Overview of the VE ecosystems in ARC1 and ARC2.

The analysis, comparison and contrast of the data collected during ARC1 and ARC2 have made it possible to identify the strengths and weaknesses of the PLANET VE as discussed in chapters IV and V and has allowed for the proposal of the final refined model. The following table provides an overview of the final PLANET VE (see appendix J for the full instructions):

Task 1	Task based on	Objectives
1.1	Introducing oneself online and commenting on each other's introductions: (1) A short video (3-5 minutes) talking about their background, interests/hobbies, university studies. (2) An image telling the others more about themselves and relating it to the theme of the VE; (3) A meme generated by each one about their expectations or worries approaching this experience. Tools suggested: AdobeSpark; meme generator; VLE.	Getting to know each other (on a personal level).
1.2	First videoconference. Agreeing on: (1) A group name and group philosophy; (2) Essential group rules for successful online intercultural telecollaboration; (3) A provisional schedule for all the videoconferences. Publishing the results in the VLE. Tools suggested: Videoconferencing tool; VLE.	Getting to know each other (as a working group).
1.3	Second videoconference. Discussing the theme of the VE and choosing one aspect (or more if interrelated) to focus on throughout the VE. Reports in the VLE include: (1) reasons for the topic chosen and its relevance for the group members as young global citizens, (2) the specific issue or situation agreed to focus on and (3) how the group members could make a difference. Publishing the results in the VLE. Tools suggested: Videoconferencing tool; VLE.	Getting to know each other (and the theme of the project together).
Task 2	**Task based on**	**Objectives**
2.1	Third videoconference. Comparing the situation in the participating countries regarding the topic chosen in the previous meeting. Critically discussing and identifying similarities and differences between contexts. Publishing the results in the VLE. Tools suggested: Videoconferencing tool; VLE.	Comparing and analysing cultural contexts and sustainable practices. Identifying similarities and differences. Critical thinking.
2.2	(2 weeks duration). Fourth and fifth videoconference. 1st week: Discussing possible actions, arguing the reasons for the action chosen. 2nd week: Designing together a feasible action plan focused on engaging to improve the situation chosen. Publishing the results in the VLE. Tools suggested: Videoconferencing tool; VLE.	Comparing and analysing proposals. Collaborating on plan design and product creation.
Task 3	**Task based on**	**Objectives**
3.1	(2 weeks duration). Implementing the action plan and reporting the whole process in the VLE including multimedia resources. Publishing the results in the VLE. Tools suggested: Videoconferencing tool; VLE.	Collaborating on active citizenship and product creation.
3.2	Sixth videoconference. Debating and evaluating together the consequences of the action taken and creating a short reflexive conclusion as a group including implications of this experience for the future. Publishing the results in the VLE. Tools suggested: Videoconferencing tool; VLE.	Collaborating on product creation. Critical thinking.

Table 32: Overview of the final PLANET VE.

The findings of this study raise key considerations to be taken into account in order to optimise the potential of the pedagogical approach of VEs for the development of global and ecological citizenship in the field of FLE. These are summarised below.

During the first weeks, learners should be given tasks designed for interaction and which are not overly demanding for them in terms of technicalities or theoretical underpinnings. Three stages in which the information exchange task type (O'Dowd and Ware, 2009) could be divided in order to maximise its effectiveness have been identified. These are: getting to know (1) each other on a personal level, (2) as a working group and (3) the project topic. The topic should be introduced progressively in order to promote positive feelings towards it and not to stress students with complex topics and concepts related to sustainability in an abrupt way. To this end, the proposed tasks should move from the general to the particular. As the VE progresses, allowing students to freely choose both the specific topics related to sustainability and how to act, has been very positive in terms of acquiring deeper and more insightful knowledge, as well as increasing students' motivation towards the project. This positively affects both the group dynamics and the artefacts produced by the groups.

However, in line with Boix Mansilla and Jackson (2011), this study points to the need for teachers to be prepared to teach for global competence bearing in mind that learners need adequate and sufficient resources and training. More specifically, this study has identified the need for teachers to help students in learning how to (1) select and weigh appropriate evidence to reason about their chosen topic (e.g. by providing adequate resources); (2) critically evaluate the information and formulate their own arguments (e.g. by holding class discussions) and (3) prepare themselves to explain complex situations to international partners in an accessible and comprehensive way (e.g. by providing training on effective communicative strategies for intercultural communication).

Another key conclusion that can be drawn is the importance of asking students to seek reliable information and add news, articles and/or sources to support their claims. There is no reason for students to be experts in the field of sustainability and they may unintentionally provide their peers with information that is not accurate and thus lead them to form misconceptions. The final collaborative phase, which was seen in numerous other studies to be key for students' skills development (Helm & Van der Velden, 2019; The EVALUATE Group, 2019), entails students' taking action for sustainable development in their communities. Particular attention should be paid to providing students with tasks and sufficient time to follow the different phases of active citizenship at this stage: planning, action, evaluation and critical reflection. Involving students in all these differentiated phases constitutes a practical application of ideas such as those of Vives Rego (2013). He highlights the importance of encouraging educational institutions to form citizens who care about being informed and are able to exercise critical thinking. This will enable them to assess the local and global consequences of their consumption decisions and to act in the interests of sustainability. Finally, as suggested by Gutiérrez et al. (2021, 2022), implementing a closing period dedicated to critical reflection on the VE experience, has been key for students to recognise the importance and consequences of active citizenship for them and those around them.

To summarise, the study has demonstrated that the goals of global and ecological citizenship can be successfully integrated into the field of FL education through VE when these recommendations are applied.

6.3. In what Ways Can VE Contribute to Global and Ecological Citizenship Development?

This study also looked at how the PLANET VE model can provide students with opportunities to put into practice their FL skills as well as the 4 dimensions of global citizenship (OECD, 2018) and the interrelated attitudes, values, skills and knowledge of ecological citizenship (Dobson, 2000, 2003, 2007). Due to the overlapping nature of the concepts analysed, 4 joint categories were created to present in an accessible manner the learning outcomes which were identified in the data. These were: (1) awareness and criticality, (2) understanding multiple perspectives, (3) intercultural interaction and (4) active citizenship. Figure 35 shows a graphical representation of the 4 categories of learning outcomes according to the frequency of occurrence of the codes related to each of them in the analysed data set.
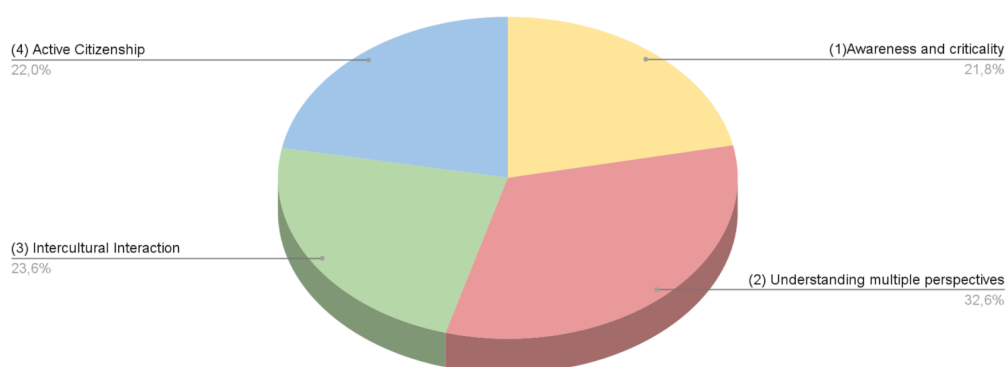
Figure 35: Graphic of the development of the 4 categories of learning outcomes.

On the issue of counting codes, as explained in section 3.5.2, in the present study, it is considered that the codes which were repeatedly coded in all three VEs provide evidence of the learning outcomes emerging from this model. In the sections that follow, numbers are used to refer to the number of participants who mention a theme, not the overall number of mentions. That is, the number of codes are limited to one per case/student. Each student case included data coming from the student portfolio, pre and post interviews (ARC1) / initial survey and final oral presentation (ARC2) and interactional data (videoconferences and discussion forums). If one student mentioned one code several times, that was counted at 1 appearance of the code. The reason for taking this approach is that it is considered that in this study it would be misleading to simply report the number of mentions if one participant returned to a theme several times.

Table 33 shows an overview of the specific knowledge, skills, attitudes and virtues identified in the data according to each of the learning outcomes. The numbers in brackets indicate (1) the frequency of appearance of each of these in the coded data set and (2) the percentage out of the total of 67 Spanish students that this number represents. It is considered that percentages may be more illustrative for the reader and for this reason they are used in the following sections when presenting the most coded aspects.

	(1) Awareness and criticality	(2) Understanding multiple perspectives	(3) Intercultural interaction	(4) Active citizenship
Knowledge	Knowledge about how global issues affect lives locally and globally (OECD, 2018) [47/67; 70,1%]	Knowledge of intercultural similarities, differences and relations(OECD, 2018) [60/67; 89,5%]	Knowledge about the world and other cultures (OECD, 2018) [46/67; 68,7%]	Knowledge about consequences and implications of the actions taken (OECD, 2018) [47/67; 70,1%]
Skills	Capacity to critically examine local, global and intercultural issues (OECD, 2018) [56/67; 83,4%] Skill of reasoning with information (OECD, 2018) [57/67;85,2%]	Capacity to identify and analyse multiple perspectives and worldviews including one's own (OECD, 2018) [58/67; 85,9%] Perspective taking (OECD, 2018) [50/67; 74,8%] Conflict resolution (OECD, 2018) [15/67; 9,2%]	Capacity to engage in open, appropriate and effective interactions across cultures (OECD, 2018) [57/67; 84,7%] Adaptability (OECD, 2018) [32/67; 48,5%] Mediation (CEFR, 2001, 2018, 2020) [39/67; 58,3%] Overall FL proficiency: production, reception and interaction skills (CEFR, 2001, 2018, 2020) [60/67; 89,6%]	Capacity to create opportunities to take action (OECD, 2018) [52/67; 77,6%] Taking action (OECD, 2018; Dobson, 2000,2003,2007) [56/67; 83,5%]
Attitudes	Eco-concern (Dobson, 2000, 2003, 2007) [48/67; 71,8%]	Openness and respect towards others and nature (OECD, 2018) [50/67; 74,8%]		Readiness to act (OECD, 2018; Dobson, 2000,2003,2007) [50/67; 74,6%]
Virtues		Global-ecological mindedness(OECD, 2018; Dobson, 2000,2003,2007) [62/67; 92%] Justice, care and compassion towards others and nature (Dobson, 2000, 2003, 2007) [43/67; 63,8%]		Commitment to the common good (Dobson, 2000, 2003, 2007) [56/67; 83,5%]

Table 33: Overview of the knowledge, skills, attitudes and virtues developed in the VEs and their frequency of appearance.

In the next sections I will review each of the main categories and discuss the main findings. To discuss and illustrate these findings, I will use extracts from students' portfolios, pre and post interviews, oral presentations, videoconferences and VLE forum discussions.

6.3.1 Awareness and Criticality

It was seen in the data analysis that a model of VE such as the PLANET VE can allow students to develop a critical awareness of global ecological issues. This was seen to occur when the VE provided them with opportunities to get informed, get involved in intercultural dialogue about these issues, to take informed action and reflect on its impact in order to achieve one's own conclusions. The following table presents the most coded aspects in terms of students' learning outcomes in the awareness and criticality category. In the following paragraphs, I will provide examples to illustrate them and back up my ideas.

Category	
(1) Awareness and Criticality	
Students learning outcomes related to…	The first dimension of global citizenship (OECD, 2018): - Capacity to critically examine local, global and intercultural issues [83,4%] - Acquisition of knowledge about how global issues affect lives locally and globally [70,1%] - Skill of reasoning with information (i.e. evaluating information, formulating arguments, explaining complex situations) [85,2%] The eco-concern (Dobson, 2000,2003,2007): Being informed, capable of exercising critical thinking and rejecting disinformation and being aware and critical of the negative impact of unsustainable behaviours at the local and the global level [71,8%]

Table 34: Students' learning outcomes: Awareness and criticality.

Through the different tasks, students were able put into practice the first dimension of global citizenship (OECD, 2018) which implies critically examining contemporary issues of local, global and intercultural significance (83,4%) for which they needed to acquire knowledge of global issues affecting lives locally and globally (70,1%) and to develop the skills of reasoning with information (i.e. evaluating information, formulating arguments and explaining complex situations) (85,2%). Students' showed evidence of being able to successfully combine these knowledge and skills

throughout the VEs in order to reach their own conclusions[6]. The following examples from students' portfolio reflections illustrate students applying critical thinking skills to achieve their own conclusion:

> E.g. *We agreed that there is a problem with the public transport system in both countries that refrains people from taking it and therefore be more eco-friendly. However, initially they thought that in Spain we had better public transport, while I thought that they did. I realised that we tend to idealise the situation in foreign countries* (PORTFIL04022).

> E.g. *The most important thing I learned from this stage is how similar, and critical, the ecological situation is in both countries. Ireland is often portrayed as this amazingly green place where all is green and blue and perfect, whereas the real situation is far from that. I am certain that Ireland has many beautiful natural locations, just as Spain, but pollution is an issue there too and needs to be addressed* (PORTFIL12021).

Students' interactions, pieces of work and reflections also showed evidence of the potential of such VE projects for developing their ability to select information from relevant and reliable sources of information and to evaluate it from a critical approach. It should be highlighted here that materials and resources provided by the teachers constitute a valuable input for students and therefore should be carefully selected. Most students showed evidence or reported that they compared different sources of information to get a deeper, more nuanced and reliable understanding of the local and global issues they were talking about with their international partners. When asked about what specific kinds of sources they relied on most of them reported to have looked on official websites from institutions such as ministries or reputed environmental organisations.

> E.g. *We looked for information in the official websites of the governments of our countries and we also looked for information in pages from the UN such as the Agenda 2030 because we thought it was the best idea to go to the official resources in order to get real information. We also looked for information in global newspapers and in national ones for us to check how these topics were treated in the press in each context* (PRESFIL022).

Globally competent students are not only able to look at the right sources of information or to approach these critically, they also have the ability to use and combine information to pose questions or to explain phenomena to others and to themselves and to formulate their own arguments regarding local, global and cultural issues by employing these sources and reasoning with evidence (Boix Mansilla and Jackson, 2011; OECD, 2018). Evidence for this was found in observations in the student videoconferences such as this one:

> E.g. - *After all this information we've been sharing I feel like we should really try to raise awareness and spread the message that it is better to buy less and better. I've come to realise that if a piece of clothing is not expensive, someone is paying that price for you, I mean that is because they are exploiting someone* (VIDFIL052).

The learning outcomes related to the skill of reasoning with information also include students' ability to combat misinformation primarily online by being able to identify unreliable sources of information and fake news (Buckingham, 2007; Kellner and Share, 2005; OECD, 2018). Working in groups allowed students to contrast information among both local and international working group members and this proved to be very helpful in fighting misinformation and fake news since they were

---

[6] Only one or two illustrative examples have been selected for each category in the interest of readability and clarity.

able to combine their knowledge and skills. The following examples taken from the students' online interactions and portfolios illustrate this:

E.g.- *No! This article is not true.*
- Oh, it's not true?
- Yes, it's fake news... I sent this article but then I reflected and saw that it's not true. (VIDFIL051) (translation from Spanish).

E.g. *There were some web pages that I felt the information was not useful nor reliable, so I didn't share them with my partners* (PORTFIL05032).

The final aspect regarding reasoning with information skills is that of being able to use information to describe, explain and discuss complex situations or concepts. In this regard, taking into consideration that students were not experts on environmental issues and sustainability, they were required to put effort into being able to inform themselves about complex situations or concepts and to successfully transmit that information to their international partners in a FL. To this end students used strategies such as summarising, using specific examples or adapting the linguistic features to their level of proficiency. The following example illustrates the process students followed from looking up information to transmitting it to their international partners which reflects their acquisition of the skill of reasoning with information that includes evaluating information, formulating arguments and explaining complex situations:

E.g. *We looked up information from reliable sources, such as scientific articles, institutional writings and trustworthy newspapers. We found a lot of information, so we had to establish which was more relevant to be shared and discussed in the videocall. We did this by checking which data was repeated in more cases in different sources and also thinking about the information that might be different in the German context so it would be useful in order to compare both situations. Once we had collected enough information, we elaborated a document where we put what we had found: we summarised it, made lists, highlighted the most important parts, added images, maps, graphics, etc. So when the call came we shared our document with our German partners and explained it in the easiest way for them to understand what we thought the essential ideas were, and we took advantage of the visual support we had added* (PORTFIL02022).

A competent global citizen is likely to be also an ecological citizen since these are equally concerned with being informed, capable of exercising their critical thinking and rejecting disinformation when it comes to local and global issues. However, there is a concern that is very specific to ecological citizenship: the eco-concern. Being an eco-concerned citizen means being aware and critical of the risks and negative consequences of unsustainable behaviours and practices and feeling responsible for one's own actions as they affect everyone, including unknown people living elsewhere and future generations while acknowledging that there are several factors that condition the consumption decisions of individuals (Dobson, 2000, 2003, 2007). In other words, ecological citizens are able to assess the local and global consequences of their decisions and to act in the interests of sustainability. A large number of students participating in these VEs (71,8 % of the VE participants) felt that one of the main take-away lessons from their participation in them was to acquire this ecological concern. The different tasks in the VEs allowed them to gradually become aware of their unsustainable practices and behaviours and to acquire a sense of responsibility to care for the environment. At the same time, students also critically acknowledged that while they carried a responsibility as individuals to take informed action for the environment in their daily lives, this had a vast range of limitations ranging from economical or social reasons (e.g. ecological products can be more expensive) to their governments innoperance or ineffectiveness in addressing these issues

institutionally. These comments show students' reflections on each individuals' responsibility to take action for the environment and its limitations:

> E.g. *I understand how laws would help the situation by fining for pollution etc but on the other hand **I think it is time for people to take their own responsibility.** We are all hearing about the damage we are causing so we should be the ones to make our own effort to prevent our world from more damage before it's too late* (DISTUR021) (emphasis added).

> E.g. *We have also observed problems on a personal level …For these problems, solutions are proposed such as…**However, we are also aware that this would require much more money and not everyone can afford it*** (DISFIL011) (emphasis added).

> E.g. ***The government needs to take more action*** *in educating people as they carry the most influential power in a society. Education is definitely key to combating climate change* (DISFIL091) (emphasis added).

6.3.2. Understanding Multiple Perspectives

As regards understanding and appreciating multiple perspectives, this category brings together the second dimension of global citizenship (OECD, 2018) and the main virtues of ecological citizenship (Dobson, 2000, 2003, 2007). The second dimension of global citizenship is concerned with both the capability and the willingness to understand and appreciate multiple perspectives including one's own:

> As individuals acquire knowledge about other cultures...they acquire the means to recognise that their perspectives and behaviours are shaped by multiple influences, that they are not always fully aware of these influences, and that others have views of the world that are profoundly different from their own (Hanvey, 1975) (OECD, 2018, p. 9).

The following student portfolio reflection illustrates this dimension's development:

> E.g. *I have learned to listen to other people's opinions, to understand what they say and to look at things from different perspectives* (PORTUR05021).

Table 35 shows the most coded aspects in terms of students' learning outcomes in the 'understanding multiple perspectives' category. In the following paragraphs, examples will be discussed in order to illustrate them.
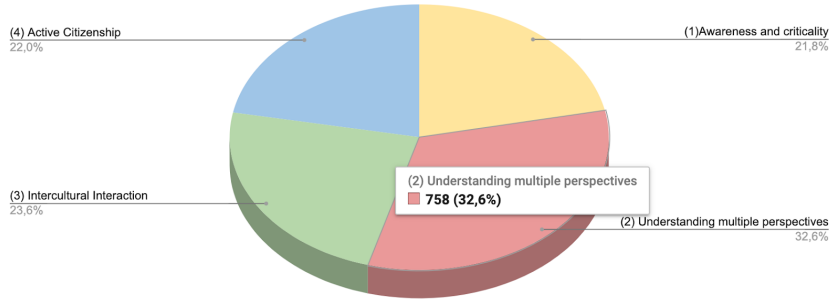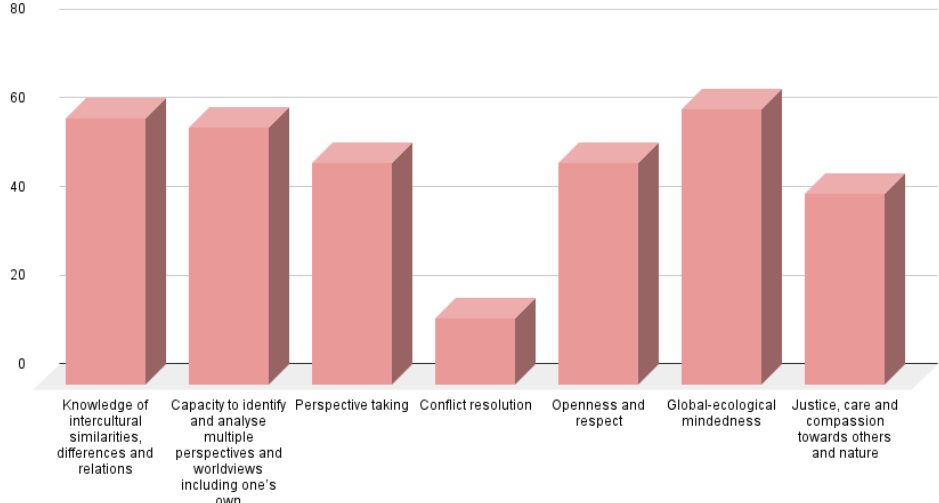
Category	
(2) Understanding multiple perspectives	 (4) Active Citizenship 22,0% (1)Awareness and criticality 21,8% (3) Intercultural Interaction 23,6% (2) Understanding multiple perspectives 758 (32,6%) (2) Understanding multiple perspectives 32,6%
Students learning outcomes related to…	The second dimension of **global citizenship** (OECD, 2018): - Acquisition of knowledge of intercultural similarities, differences and relations [89,5%] - Capacity to identify and analyse multiple perspectives and worldviews including one's own [85,9%] - Skills such as perspective taking [74,8%] or conflict resolution [9,2%] - Attitudes of openness and respect towards others and nature [74,8%] The main virtues of ecological citizenship (Dobson, 2000,2003,2007): - Global-ecological mindedness [92%] - Justice, care and compassion towards others and nature [63,8%]

Table 35: Students' learning outcomes: Understanding multiple perspectives.

Through this learning experience, students have shown evidence of having acquired knowledge of intercultural similarities, differences and relations (89,5%). They discovered their partners' worldviews and practices when engaging in intercultural dialogue along the 3 tasks (i.e. getting to know each other, comparison and analysis of cultural practices and collaboration) and consequently reflected on their own (85,9%). VE participants shared their perspectives on global ecological issues and sustainability and also got to know their partners' perspectives in many other aspects such as their approaches to teamwork or their cultures of use regarding technologies as well as more personal aspects. An illustrative example of this can be found in the following comment from a discussion forum in which a student reports having gotten a better understanding of their partners' culture thanks to their explanations:

E.g. *Thank you for your detailed explanation on the various eco-friendly measures Spaniards are taking to show their commitment to a more sustainable environment...**I definitely have a greater understanding of Spanish people's ecological habits now, so thank you for that.*** (DISFIL121) (emphasis added).

In addition, the following reflection from a student's portfolio shows evidence of learning about multiple perspectives on the same issues:

E.g. *I could say that doing the exchange and comparing both countries has led me **to open my eyes to other perspectives of the same thing**. For example, when we did the activity of the questionnaire, I could appreciate how they see the same situation by answering the same question* (PORTUR05021) (emphasis added).

At the same time, engaging with worldviews and practices that are diverse to one's own tends to trigger reflection on individuals' assumptions and the origins of these. Achieving this kind of self-knowledge or self-understanding is something characteristic of global competent citizens (OECD, 2018) as well as of intercultural speakers (Byram, 1997; Byram et al., 2002) who are successful in communicating in the FL but also able to develop and maintain respectful and egalitarian relationships with people of other cultures and languages and as a consequence of these relationships are more conscious of their home culture and that of others. In the following excerpt from a personal interview a student reflects on the impact this VE has had on his/her own conceptions:

E.g.-*Has this experience made you reflect in any way on your own culture/ecological habits?*
- Yes, when we had to prepare the first task about what we were doing here, I realised that it was not enough....
-Do you think you will change your way of acting or your way of thinking in any way after participating in this exchange?
-Yes, because it has made me aware, it has helped me to realise that there are many things we do wrong here and I also feel more open to interact with other people, not only on the issue of ecology but also in terms of relating culturally with people from other countries... (INTFIL02POST1) (translation from Spanish).

While all the students showed throughout the VEs and in their posterior reflections attitudes of openness and respect towards the other, this aspect was coded in explicit examples coming from 74,8% of the VE participants. Both in the VEs adopting a bilingual and lingua franca approach, students frequently reported to have acquired confidence in interacting with people from other countries which in turn had made them feel more open to seeking and engaging in this kind of interaction in the future. The following student portfolio reflections show examples of openness and respect towards the other:

E.g. *I have learned that it doesn't matter how different your partner is, the important thing is to want to know each other. We have a different culture, education, customs and language. But we have never questioned any aspect of the other's life, we have always had respect. I think they have always shown curiosity about our lives here in Spain. Just like us about their lives in Ireland* (PORTUR08011).

E.g. *Distance does not mean that we are individuals from different planets, but we have many things in common. There are obviously differences, but we can all learn from each other, especially in this kind of situation regarding global issues, where any help is necessary and can be of great use to our society. From the very beginning, we could all see that we would be able to work together without any kind of problems. We were all very respectful towards others and, even if we ever needed to give any opinion or feedback (negative or positive), we had the confidence to do so (respectfully)* (PORTFIL04012).

Students also showed evidence of this experience having helped them to overcome prejudices against their international partners in some cases but foremost against their own home culture. For instance, many Spanish students reported to having started off the VE holding prejudices against their country and feeling inferior since they overestimated their partner countries (i.e. Ireland in ARC1 and Germany in ARC2) as being more eco-friendly countries than Spain. According to their assumptions, southern European countries were less eco-friendly than northern ones. However, after the VEs, students reported realising that this kind of thinking was not based on the realities they experienced in their interactions. The following excerpts from students' reflections about their initial prejudices against their own culture illustrate this:

E.g. *Most people in Spain tend to idealise Germany and underestimate Spain so maybe, without realising it, I had idealised Germany too* (PORTFIL01022).

E.g. *I started the project with a bit of a complex about the environment. You are aware that the further North you go, the more responsible they are, but no... The problems they presented, we presented them here as well. It didn't seem to me that there was that much difference. So we are self-conscious, but the reality is that there is a lot to do, not only here but in many places* (INTFIL02POST1) (translation from Spanish).

Similar to the misconceptions some students held against their home culture, they also recognized having some erroneous preconceived ideas about their partners' cultures which this experience helped them leave behind. This could be grounded in the fact that VE offers an intercultural learning experience which prevents young people from clinging to preconceived ideas and instead offers them the opportunity to engage in intercultural dialogue in which they can get to know each other better. As the Council of Europe argues: "the better we understand ourselves, the better we can understand others and vice versa" (2018a, p.18). The following excerpt illustrates this:

E.g. *We decided to talk about the stereotypes of each nationality regarding weather, personality, typical food and even fashion, and how we all view those things as foreigners and what opinions the actual inhabitants of that country had about them. We basically reacted and discussed stereotypes about each culture, and saw if they were myths or not. One of the most important things I have learned from this is that we tend to stick to stereotypes and be biassed about our opinions or attitudes towards people coming from certain countries. However, we should avoid doing this, because most of the time, stereotypes are wrong or do not apply to the great majority of the population. We need to know the people in order to have an idea (not certain nor generalised by any means since everyone is different) about them* (PORTFIL04012).

Task 3, corresponding to the collaboration category, was the most demanding for students in terms of dealing with differences and interpersonal relationships as it required students to collaborate and negotiate in order to accomplish the task together. However, it was also the most effective for communicative, collaborative and intercultural skills development as identified in numerous previous studies looking at the effectiveness of VE (Helm & Van der Velden, 2019; The EVALUATE Group, 2019). At this moment of the VE the first misunderstandings and conflicts appeared since it was when students had to actually face challenges in accomplishing the task together as a group. The findings of this study in this regard coincided with those previously presented by the European research project EVOLVE (EVOLVE Project Team, 2020) that looked at the impact of VE on student learning and reported on how students managed these situations by deploying their conflict resolution skills in some cases but resorted to conflict avoidance in many others:

Numerous examples have been found where participants in their desire to be respectful and prevent conflict, stopped expressing their opinions honestly and asking questions in which they had a real

interest, or participating in one way or another. This can be interpreted as intercultural sensitivity, but, and at the same time, as conflict avoidance constituting a barrier to the potential for intercultural learning (EVOLVE project team, 2020, p.56).

Similarly to these findings, students in both ARCs in this study avoided entering in conflict with their partners. Indeed instances of conflict resolution were coded for only a 9,2% of the VE participants. When misunderstandings arose during the VEs, these had to do with workload division and task completion among the working groups members. In most cases students reported their disappointment or dissatisfaction to their teachers informally but just a few (15 references) have been found in the data set of students openly addressing their disagreements with each other. The following paragraph exemplifies a student portfolio reflection showing conflict avoidance:

> E.g. *We felt that we were not valued enough and that they relied on us upon seeing that we were really hard-working and that is what made things go wrong. **To be honest, we avoided confronting the situation and maybe that was our mistake from the very first moment that we saw what was happening*** (PORTFIL01021) (emphasis added).

To this dimension, ecological citizenship brings the virtues of justice, compassion and care for other humans and nature (63,8%). The reason why this percentage may be lower than others is because students were purposefully not prompted to mention it since the idea is that ecological citizens behave in a sustainable manner out of an intrinsic conviction that is guided by seeking the common good to prescind from any kind of extrinsic motivation such as punishment or incentives (Dobson, 2003). In this regard, VE is key in offering learners educational experiences to foster reflection in the hope that they autonomously decide to adopt a sustainable life approach and embrace ecological citizenship virtues. Dobson writes: *"Given that ecological citizenship is at least in part about regard for vulnerable others, and given that this regard cannot always be expressed in terms of justice, then care and compassion can legitimately be regarded as citizenship virtues"* (2000, p. 10). From the analysis of the data, a large number of students adopted the virtues of eco citizens: global-ecological mindedness (92%), justice, care and compassion towards others and nature (63,8%) and commitment to the common good (68,7%). In fact, a special sense of responsibility is noticeable on the part of the students in both collaborative group interactions and individual reflections. Most students considered that younger generations tend to be more aware of the seriousness of the environmental crisis and therefore should be the ones to take a stand for the environment in order to preserve the earth and the life of future generations. These students' comments in the discussion forums show care, compassion and commitment to the common good:

> E.g. *I think our generation is very conscious of the fact that we are in an environmental crisis…**I hope that we can make this planet a safer place for future generations.*** (DISFIL071) (emphasis added).

> E.g. *It's great to see that young people like us all over the world are committed to mitigating the effects of climate change. Hopefully our generation will be the one to stop it!* (DISFIL121).

> E.g. *Thanks to this exchange I hope to improve my practices and become more aware of what is going on around me and **not to put my personal needs before the common good*** (DISTUR031) (emphasis added) (translation from Spanish).

This section has shown evidence that a model of VE focused on global and ecological citizenship is effective in fostering a series of knowledge and attitudes that could be encompassed in a global mindset attitude and that for the purposes of this study we could call global ecological mindedness (although using only the word global would already imply ecological as we have already

seen). A very large number of students, up to 92%, showed evidence of having developed global-ecological mindedness thanks to their participation in the PLANET VE. Global ecological mindedness refers to the mentality that a person adopts towards individuals, groups, issues...and integrates beliefs, worldviews, practices and behaviours. Globally and ecologically competent behaviour requires an attitude of openness towards people from other cultural backgrounds, respect for cultural differences and the firm intrinsic belief that one is a citizen of the world with commitments and obligations towards the planet and others regardless of one's particular cultural background (OECD, 2018; Dobson, 2000, 2003, 2007). The following excerpt from a final interview with the local members of a working group shows global-ecological mindedness thanks to their participation in the VE:

> *E.g. - I've been told all my life that you have to do things for the environment but I've never seen, I mean recycling, but bigger things like people taking initiative or doing things. I've never seen it and, for example, this has helped me to get fully involved in the problem and say, how can I solve this, how can I do it better individually? Then you have to come up with a concrete solution and you have to put it into practice and I think it's a good learning experience.*
> *- Yes, I think that up to this point for me it was like a problem that was there but I didn't give it much importance and now I realise that it is something that we have to start taking care of because otherwise there will be no future for anyone.*
> *- I think that having participated in the exchange is going to affect how I act, both in relation to the environment, to change habits, and personally to be more open, more transigent, more accepting of other people's opinions...*
> *- Yes, you have to adapt more both socially and ecologically, and learn to dialogue with other people and see different points of view. There are practices that you can do, you go shopping and you say oh well, instead of buying this, which has a lot of plastic in it, I'll take a cloth bag, these are small changes that I think we've kept in mind* (INTFIL03POST1) (translation from Spanish).

6.3.3. Intercultural Interaction

Moving on, this section as a whole reports on student learning outcomes in relation to intercultural communication and overall FL proficiency development paying attention to production, reception and interaction skills, adaptability and mediation. In other words, this category makes reference to the third dimension of global citizenship (OECD, 2018) that deals with engaging in open, appropriate and effective interactions across cultures and adds to it the FL skills development which has been analysed following the CEFR for Languages' Companion Volume (2018, 2020) which updates the CEFR from 2001. Table 36 shows the most coded aspects in the intercultural interaction category which will be discussed and illustrated in the following pages.

Category	
(3) Intercultural interaction	
Students learning outcomes related to…	The third dimension of global citizenship (OECD, 2018): - Knowledge about the world and other cultures [68,7%] - Engaging in open, appropriate and effective interactions across cultures [84,7%] FL skills development (CEFR, 2001, 2018, 2020): - Overall FL proficiency development [89,6%]: production [92,5%], reception [71,6%] and interaction skills - Adaptability [48,5%] - Mediation [58,3%]

Table 36: Students' learning outcomes: Intercultural interaction.

For many of the participants in the VEs analysed, this experience entailed their first real life experience with online intercultural communication in a FL. At first, these students found this challenging but afterwards most of them felt that they had acquired the skills to successfully navigate this kind of communication and were willing to engage in it in the future. The data set analysed showed how students' perceptions did indeed match the interactional data in which it could be observed that students gained confidence and fluency and improved both their receptive and productive skills in the FL (89,6%). The following students' reflections on their portfolios about their online intercultural communication experience illustrate this:

> *E.g. I had never worked with foreign people before and it's not as difficult as it seems at first. In fact, I had a really good time exchanging opinions with them and if I have another opportunity like this in the future, I will be more than grateful to participate* (PORTUR05011).

E.g. Before the exchange I hadn't been able to speak with people from other backgrounds and I thought it was difficult but if you put effort in it is not as difficult as it seems, and it is also very enjoyable (PORTFIL12021).

84,7% of VE participants showed evidence of having acquired or developed the capacity to engage in open, appropriate and effective interaction. This skill is characteristic of globally competent individuals and entails showing not only respect but curiosity and willingness to listen to and engage with the other for the interaction to be open. For it to be appropriate, interlocutors need to respect and adapt to the cultural norms of all the participants involved. Finally, effective refers to the ability to understand the other and make oneself understood (OECD, 2018).

Open interactions stands here for "relationships in which all participants demonstrate sensitivity towards, curiosity about and willingness to engage with others and their perspectives" (OECD, 2018, p. 10). Students entered the VEs with positive attitudes towards each other and approached intercultural dialogue with respect from the outset and above all with a special interest in the other's language (in the case of the bilingual VEs) and culture (in all the VEs). While engaging in intercultural dialogue, particularly in synchronous CMC via videoconference, the students were proactive in acting inclusively and seeking the participation of all group members through communicative strategies such as calling their partners by name or asking them questions. Likewise, the recordings of the videoconferences show evidence that students sought balance so that all participants had the opportunity to speak and an equal chance to practise the FL. However, it should be noted that students received in-class training on these communicative strategies previous to their interactions. The following interview excerpt illustrates openness:

E.g. *At first, the group was quite shy in the videoconferences. So we tried to get everyone to participate by addressing them by name, as we saw the other day in class, or by pointing out things in common to get them to open up* (INTFIL0201PRE).

Appropriateness is used here to refer to "interactions that respect the expected cultural norms of both parties" (OECD, 2018, p. 10). As far as appropriateness is concerned, students tried to regulate their behaviour to suit the communicative context in the international working groups. Regarding cultural norms and interactive styles, students frequently reported feeling close in these aspects and not having found major differences. Numerous students argued that this closeness was due to the fact of coming from European and geographically close countries (i.e. Spain, Ireland and Germany). Throughout the VEs it was common to find references to being young and to being European citizens to explain the similarities between cultures, which on some occasions may have resulted in a minimization of difference.

E.g. *I think that their "cultural background" is not that different from ours. The only difference is the language, but it is not a problem as we are interested in English and they are interested in Spanish. Overall, we are the same age, and, with the Internet, we have something that connects us (popular music on Spotify, jokes from Twitter or trends in Instagram). I did not find it much different from working with a Spanish student via Zoom* (PORTFIL05021).

However, with regard to register use or degrees of formality, it can be seen both in the interactions in the discussion forums and in the recordings of the videoconferences as well as in the students' own testimonies in their portfolios and interviews that most of them tried to pay special attention to flexibly adapting their behaviour and their communication in this regard. In both ARCs, at first, especially in their first written interactions, the participants tended to use a formal register and then shift towards a register that, although still appropriate for an academic context during the tasks,

turned out to be much more relaxed and closer. This usually occurred after two key events: the first videoconference of the international working groups and the creation of whatsapp groups for their personal correspondence. Although this study does not have access to private conversations via Whatsapp, students reported having used a much more informal register in this mode of communication and to have learned aspects of each other's language such as abbreviations or slang expressions among others.

E.g. *The truth is that now we act much closer because the truth is that before the video call everything was more formal... each one sends their message in the forum very well written with everything just as it should be and then in the video call and after that in the whatsapp group and we have been talking much more often and much more casually* (INTFIL0501PRE).

Finally, with respect to effectiveness, which refers to the ability to understand the other and to make oneself understood, some students felt some nervousness regarding dialogue with their international partners. One aspect that numerous Spanish students mentioned was having started the VE with some apprehension about the Irish English variety or their German partners' English being particularly complex for them to understand. However, it was common to find that most of the students concluded that it was more relevant to show willingness to listen and to participate in the dialogue than the interlocutors' accent. Example of a student portfolio reflection on accents:

E.g. *I learned that the most important thing about communicating in different languages is not your accent but the message you want to convey* (PORTFIL11011).

It was common to observe how students openly addressed in their videoconference conversations their willingness to cooperate in order to reach understanding by using different strategies such as mediation or negotiation of meaning among others as will be explained in detail below.

Taking all this into account, it can be concluded that engaging in intercultural dialogue throughout the VE can allow students to gradually develop the skills necessary for their interactions to be open, appropriate and effective. From the beginning the students showed attitudes of respect, curiosity and openness necessary for this type of interaction, although throughout the exchange they became more confident and more willing to participate in intercultural dialogue. The following example illustrates all of the above mentioned:

E.g. *We learnt to communicate across cultural differences, we became more open to international interactions; we learnt how to listen and respect the others, both for the communicative process itself and the respect for others' ideas* (PORTFIL12031).

6.3.3.1. Foreign Language Skills Development

Moving on to language skills development, the PLANET VE was implemented as a curricular activity in the subject of EFL in the third year of the university degrees of English studies (in ARC1 and ARC2) and Tourism (in ARC1). These subjects bear 6 ECTS (European Credit Transfer and Accumulation System) credits. 15% of the final mark was devoted to the students' participation in the VE in each case. This participation was evaluated according to the students' portfolios and the reports and reflections they did in class each week about their experience with their international working group (and a final oral presentation in ARC2). The main goals of the courses the VE made part of were those any intercultural course should aim for: "(1) increasing language proficiency, (2) gaining factual knowledge about the target culture, (3) acculturating, and/or (4) mediating between cultures" (Corbett, 2003, p.193). To which the present study adds the goals of developing global and ecological citizenship.

In order to look into detail at the FL skills development a series of categories for analysis in the coding were created following the CEFR (2001, 2018, 2020) as explained in section 2.2.1.: overall language proficiency, production, reception and interaction. Under the category of interaction, adaptability, mediation and negotiation of meaning were looked at separately due to their relevance in online intercultural interaction in a FL. Therefore, this dimension reports on the students' interactions and perceptions in their journey towards becoming intercultural speakers.

In terms of production skills development, as a result of their participation in the PLANET VE students had the opportunity to engage in diverse activities involving speaking and writing in the target language. Table 37 details the instances of each task of the PLANET VE in which each of the activities for the development of the productive skills of the CEFR (2020) was practised. As can be seen in the table, most of the activities related to the development of both oral and written productive skills (see figure 3 in page 27) were present in the tasks proposed.

Task	Production activity (CEFR)
[1.1.]Video introduction Commenting on each other's introductions	Sustained monologue (giving information) Overall written production
[1.2.]Agreeing on a group identity, rules and schedule Reporting the conclusions reached in the VLE	Overall oral production (videoconference) Reports and essays
[1.3.]Discussing the theme of the VE Reporting the results in the VLE	Overall oral production (videoconference) Reports and essays
[2.1.]Identifying similarities and differences between contexts Reporting the results in the VLE	Overall oral production (videoconference) Sustained monologue (describing experience) Reports and essays
[2.2.]Discussing possible actions, arguing the reasons for the action chosen Designing together a detailed action Reporting the results in the VLE	Overall oral production (videoconference) Sustained monologue (putting a case) Overall oral production (videoconference) Reports and essays
[3.1.]Implementing the action plan Reporting the whole process in the VLE	Overall oral production (videoconference) Reports and essays

[3.2.]Evaluating the consequences of the action taken Creating a short reflexive conclusion Final oral presentation followed by Q&A	Overall oral production (videoconference) Reports and essays Addressing audiences and overall oral production

<div align="center">Table 37: the VE tasks and their related productive skills development.</div>

As a result of students' engagement in all these activities, the data analysis of their interactions and reflections has made it possible to identify concrete aspects and instances of productive skills development (92,5%). One of the aspects that has stood out is that the fact that the VEs revolved around the theme of ecological citizenship served them to acquire new vocabulary related to this topic with which they were not familiar before. For example, it was common to find that students felt the need to look up words while composing their written posts and that they then added this new vocabulary to their repertoire trying to proactively use these words in their synchronous CMC with their international partners. This could be proved thanks to the triangulation of the students' self-reported data stemming from their portfolios and interviews reflections with the interactions per se. The following example illustrates a student reflection on vocabulary acquisition thanks to the participation in the VE:

> *E.g. I have learnt vocabulary that is more specific and new expressions adapted to a more professional field. When writing I have had to look up words related to sustainability in English, which is a vocabulary that is not normally studied. Also, as I had never been in the situation of having to make an effort to speak in English all the time, I think this helps me to improve my English more quickly because you force yourself to use what you are learning in order to have a more fluent conversation* (INTUR05POST1) (translation from Spanish).

In terms of the overall written productive skills, most tasks involved regular practice on report writing. In addition, students' personal written correspondence via Whatsapp with their international working groups served for the students to be able to communicate in a more comfortable and relaxed atmosphere in which they could learn how each other communicated in this context (i.e. abbreviations, use of emojis, use of gifs, memes, etc.). The following examples present students' reflections on their written productive skills development:

> *E.g. I've developed my writing skills more because I have communicated more in English than other times through Whatsapp* (PORTFIL05011).

> *E.g. I found that my writing skills had improved from the first day* (PORTUR08021).

Undoubtedly, the most prominent aspect highlighted by the participants in the VEs regarding not only productive skills but the overall language proficiency development has been the acquisition of ease and fluency in oral expression in it (89%). Virtually all of the students shared a certain level of nervousness about their first synchronous CMC via videoconferencing. This is something common in this type of experience due to the fact that in addition to having to interact with strangers, having to do it in a FL is something that commonly produces to a greater or lesser extent, depending on the individuals, what is known as FL anxiety. FL anxiety is a unique kind of anxiety specifically experienced by those individuals involved in the FL process and resulting from it (Horwitz et al., 2010). The literature has documented how FL learners feel more socially and communicatively self-conscious about interaction via videoconferencing than written interaction (Van der Zwaard & Bannink, 2014). Contributing to this there is the fact that being watched by others while speaking causes physiological arousal (Takac et al., 2019). Even more during videoconferencing where one sees the other participants in a closer fashion than in actual F2F communication (Van der Zwaard &

Bannink, 2018; Bailenson, 2021). Marull and Kumar (2020) observed that scheduling synchronous sessions along with anxiety about speaking in an FL with NSs were the drawbacks most often cited by their learners. In contrast, in the present study students signalled that thanks to engaging in videoconferences on a regular basis with their international partners throughout their VEs they were able to overcome these feelings and to develop the necessary skills to successfully engage in this communicative scenario. Students highlighted that videoconferencing did indeed constitute for them the most valuable practice in terms of FL skills development overall. The following excerpt from students' first videoconferences illustrate their initial common concerns regarding communicating in the FL:

> *E.g.- When I have to talk in English, I'm starting...I start getting nervous and I forget how to speak and I make a lot of stupid mistakes*
> *- Don't worry, we are the same*
> *- I understand* (VIDFIL091).

The following examples illustrate students' reflections on their oral productive skills development afterwards:

> *E.g. The video calls have been a good way to improve my English, in particular the fluency in expressing myself...I consider that being able to talk about different topics with a small group of people is a good practice to improve my skills* (PORTUR08021).

> *E.g. I had the opportunity to practice the language that I am studying, which is the most important part for me. I think that the best part was that I was able to communicate fluently and with no fear. I made mistakes but I learned from them* (PORTFIL04011).

> E.g. *This project has helped me to improve my English-speaking skills, because I am very shy and I get nervous very easily when talking in English, especially with people I don't know well. I feel that I have learned to express myself with more fluency, to talk about topics I don't usually talk about and get out of my comfort zone* (PORTFIL01032).

The PLANET VE was also seen to provide students with the opportunity to engage in diverse activities that allowed them to develop their reception skills in the target language including oral, audio-visual and reading comprehension. Table 38 shows the CEFR (2020) reception activities (see page 28) and how these are related to the specific tasks of the final model of PLANET VE. This shows that most of the activities related to the development of both oral and written receptive skills have been present in the VE tasks.

Task	Reception activity
Preparation for the VE: videos introducing the institutions and VE theme Extra materials available: videos, films and documentaries about VE theme Throughout the VE students read the instructions for each task in the FL Throughout the VE students interact via WhatsApp	Audio-visual comprehension Reading instructions Reading correspondence
[1.1]Students watch their partners' video introductions Students read each others' commentaries about their introductions	Understanding audio (recordings) Overall reading comprehension
[1.2] First videoconference for establishing group identity	Overall oral comprehension
[1.3] Reading about the topic of the VE before the videoconference Second videoconference to discuss the theme of the VE	Reading for information and argument Overall oral comprehension

[2.1]Reading about each context in relation to the topic chosen Third videoconference to compare and analyse similarities and differences	Reading for information and argument Overall oral comprehension
[2.2] Fourth and fifth videoconferences to discuss possible actions and to design together a detailed and feasible action plan	Reading for information and argument Overall oral comprehension
[3.2] Sixth videoconference to debate and evaluate the consequences of the action taken Final oral presentations in class	Overall oral comprehension Understanding as a member of a live audience

Table 38: VE tasks and their related receptive skills development.

The data analysis of the students' interactions and perceptions has also made it possible to identify concrete aspects and instances of receptive skills development thanks to their participation in the tasks proposed (71,6%). In the case of oral comprehension students were seen to greatly benefit from exposure to the target language in real communicative scenarios as well as from dealing with different accents (i.e. Irish and German). The following example shows a student reflection on reception skills development:

> E.g. I have learned to listen carefully to what they tell. It is great to see how people from other countries express themselves in another language, their habits and customs. I found this to be a great way to discover other accents (PORTFIL05011).

While participation in the VE provided students with activities and scenarios that allowed them to develop their productive and receptive skills per se (in the sense of besides during the interaction), the core and essential part of VE is interaction. The activities in the PLANET VE have primarily offered students the opportunity to engage in diverse activities that allowed them to develop their interactive skills including oral, written and online interaction. The PLANET VE has involved students in both synchronous and asynchronous CMC offering them a prolific context for the development of their overall FL proficiency. Interaction is defined within the CEFR (2020) as an act in which two or more interlocutors participate in the co-construction of discourse whether for collaborative, interpersonal or transactional purposes. This involves interaction strategies such as turn-taking, cooperation and asking for clarification which are key to both communication and collaborative learning processes. The CEFR (2020) stresses that the scales provided pay more attention to spoken than to written interaction since when the CEFR was created (2001) written interaction was not what it has become today (i.e. writing in much the same way as speaking, in a slowed-down dialogue). The new category of online interaction has been developed to reflect this. Most of the interaction activities and strategies (CEFR Companion Volume, 2020) (see page 29) related to the development of oral, written and online interaction skills have been present in the VE tasks. Table 39 shows the VE tasks and their related interactive skills development.

Task	Interaction activity
Throughout the VE students interact via WhatsApp	Notes, messages and forms Correspondence
[1.1]Students interact for the first time in their VLE (commentaries about their video presentations)[7] Students publish commentaries in the VLE to agree on a mode of communication for their personal correspondence with their international working groups during the VE	Overall written interaction Correspondence Correspondence
[1.2]Students hold their first videoconference together and agree on a group name, rules and videoconference schedule [1.3] Students hold their second videoconference and discuss the theme of the VE and choose one aspect (or more if interrelated) to focus on throughout the VE. [2.2] Students hold their fourth and fifth videoconferences and discuss possible actions and design together a detailed and feasible action plan focused on engaging to improve the situation chosen in their contexts. [3.2] Students hold their ixth videoconference and evaluate together the consequences of the action taken	Overall oral interaction Understanding an interlocutor Conversation Informal discussion Goal-oriented cooperation Information exchange
[2.1]Students hold their third videoconference and compare the situation in the participating countries regarding the topic chosen in the previous meeting identifying similarities and differences between contexts.	Overall oral interaction Understanding an interlocutor Conversation Informal discussion Goal-oriented cooperation Information exchange Interviewing and being interviewed
[3.1]Students implement the action plan and report the whole process in the VLE including multimedia resources.	Overall oral interaction Overall written interaction Correspondence

Table 39: VE tasks and their related interactive skills development.

The data analysis of the students' interactions and perceptions has also made it possible to identify concrete aspects and instances related to interactive skills development such as adaptability (48,5%), mediation (58,3%) and negotiation of meaning (55,2%). The lower percentages are probably due to the fact that students were not explicitly asked about these and only spontaneous use of the strategies in interaction or the proactive reference to them in the rest of data sources were coded. These three strategies will be looked at in detail in the following paragraphs.

Through this learning experience students were able to develop their adaptability skills in terms of global competence and also in linguistic terms. Linguistic adaptability entails strategies such as shifts in modality, intentional re-use of words and expressions, using body language, gestures and expressive tonalities to facilitate effective communication. Students used strategies to adapt their communication to the needs of their communicative context in both synchronous and asynchronous modalities. When it comes to the communication in the forums, students reported to have had their audience in mind while composing their posts trying to make them understandable (i.e. using words

---

[7] The categories online conversation and discussion and goal-oriented online transactions and collaboration apply to all the interactive activities in the VE.

and expressions that their international partners would be able to comprehend) and providing more detailed information when presenting a culturally bound topic or expression. In addition, students signalled to have started off the VE using more of a formal register and to then have gradually shifted to a more casual one based on what they perceived from their partners' one. Finally, students also reported that when having to inform their international partners about environmental questions which may be more complex they used strategies such as summarising or rewording the information they found to make it more accessible to them.

Regarding synchronous CMC students used a larger and more spontaneous repertoire of adaptability strategies such as repeating, rewording, switching intonation or modality, adapting the speed of the speech or emphasising body language and facial expressions. When analysing the recordings of the videoconferences it was found that in both ARCs it was common practice to openly address this among students and to carry out an open negotiation in terms of language use (i.e. students asked their international partners to let them know if/when they did not understand so that they could adapt). The following examples illustrate linguistic adaptability:

E.g.- *I was really afraid of Irish English because everyone says that it's different and when I watch films I find it difficult to understand but…*
- If I'm ever talking quickly just tell me
- Same with me. If I talk too fast and you don't understand something I say, say it to me.
- Same happens with Spanish because I speak like really quick (VIDFIL061).

E.g. *From the beginning we established the rules and one of them was to speak openly because we understand that we come from different countries, backgrounds and mother languages and we can have some language barriers. So we were open about this and tried to adapt to each other* (PORTFIL05022).

In terms of global competence, the OECD (2018) provides the following definition of adaptability:

the ability to adapt one's thinking and behaviours to the prevailing cultural environment, or to novel situations and contexts that might present new demands or challenges. Individuals who acquire this skill are able to handle the feelings of "culture shock", such as frustration, stress and alienation in ambiguous situations caused by new environments. Adaptable learners can more easily develop long-term interpersonal relationships with people from other cultures, and remain resilient in changing circumstances (OECD, 2018, p.15).

While ultimately the development of this skill may prove to be a more personal or autonomous growth or learning exercise than others seen here, the interactive tasks that the international students had to undertake together in their working groups exposed them to the kind of scenarios in which they had the opportunity to be able to develop this skill. This was especially the case during task 3 in which the students had to collaborate in the creation of a joint product, co-depending on each other and thus needing to exercise high degrees of adaptability in order to successfully complete the task. In referring to the concrete experience of the students it could be used here the term 'telecollaborative adaptability' referring to all those aspects of online intercultural communication and collaboration in which the students have had to exercise adaptability such as group work, intercultural dialogue, cultural concepts, etc. The following examples show students' development of 'telecollaborative adaptability':

E.g. *I have learned how to do collaborative projects and adapt to other people's way of working. This project with students from a different country taught me that it is important to listen to everybody's*

opinion and that, sometimes, it is difficult for us because we must adapt to someone else's plan (PORTFIL12011).

E.g. I learned that in order to do a common project with people you barely know, it is necessary to understand that you have different lives and that sometimes you must make a sacrifice. It was difficult at first, but after the first meeting, we were able to organise the next ones more quickly because we learnt how to do it at this stage (PORTFIL05022).

In the PLANET VE, students have also developed their skills in terms of linguistic and conceptual mediation, mostly in synchronous CMC contexts (i.e. during their videoconferences). As indicated in the CEFR Companion Volume (2020) acting as a mediator implies facilitating understanding and successful communication by 'creating bridges' and helping interlocutors to 'construct or convey meaning' both within a language and from a language to another. Mediation is also an important skill for intercultural speakers and intercultural citizens in the sense of being able to successfully play intercultural intermediary roles to help others overcome conflict and misunderstanding (Byram et al., 2017, p. xix). In the Mentoring Handbook for VE teachers (Gutiérrez et al., 2021) examples of mediation in VEs are provided such as "if/when there is confusion in a working group regarding a task or an issue trying to solve the problem by asking questions, making suggestions and going through the challenges together and also proactively acting as mediators by explaining the meaning of the expressions or concepts included in the posts that may be unfamiliar to the international partners" (Gutiérrez et al., p. 23). The following examples illustrate linguistic and conceptual mediation:

E.g. ...However our government does not pay much attention to all these issues and when it does it is for 'postureo' ('postureo' means to make believe you are doing something you are not actually doing. For example, on Instagram people do a lot of 'postureo' of their holidays (DISFIL041) (translation from Spanish).

E.g. I wanted to show them how we see 'embutidos' here in Spain, so when I went for a walk I recorded the vending machines with 'embutidos' and sent it to them (PORTFIL05021).

Another communicative strategy students showed evidence of having developed specially while communicating synchronously is that of negotiating meaning, which can be defined as "an interactional repair sequence…aimed at reaching shared understanding and solving the breakdown in communication" (Van der Zwaard & Bannink, 2014). This could be observed in students' use of strategies such as asking for clarification or repetition, asking partners to write in the chat, asking information about unfamiliar concepts or rephrasing to facilitate understanding (Gutiérrez et al., 2021). The following examples illustrate negotiation of meaning during online intercultural interactions in the VEs:

E.g. - I don't know the word 'moratones' like...the purple when you are hitted
- Wait what? Brushes?
-Oh, brushes, moratones (writes it down) (VIDFIL061).

E.g.- I don't know the word...How…ayyy!...(makes gestures of frustration)
- Say it in Spanish
- I forgot even in Spanish
- Describe the word if you can
- In any job the man earns more money than the woman but doing the same job
- Inequality?
- Yeah (VIDFIL111).

Taking into account what has been detailed in this section regarding the development of receptive, productive and interactive skills in the FL, it is evident that indeed both the students' interactions in the VEs and their reflections show that their participation in them led to an improvement in their overall FL proficiency (89,6). Students gained confidence and fluency, learned new vocabulary including slang and informal language and topic specific vocabulary and improved their comprehension, production and interaction skills. The following examples show students' reflections on the value of the VE experience for the improvement of their overall FL proficiency:

> E.g. *I have been able to develop my oral, writing and listening skills, since I have communicated with my international partners orally (in our videoconferences), by using WhatsApp and the forum of our web Schoology (to develop our writing skills) and I have tried to understand what other participants said (so my listening skills have also improved during this project)* (PORTFIL10011).

> E.g. *I feel more confident with my English now. I think I have improved my overall English skills, it was good to talk to somebody in English outside our class hours, and with somebody that you know is not judging you because they are also studying English* (PORTFIL03012).

6.3.4. Active Citizenship

One of the key objectives of the PLANET VE is for participants to be able to actively engage in civic action so that they can have the opportunity to develop an awareness of active global and ecological citizenship through this experience. This is an approach that has gained momentum in recent years in the field of VE with the aim to develop students' global or international citizenship (O'Dowd, 2019). The present study reflects this trend and introduces the thematic of sustainability and environmental issues. With this in mind, this study follows Dobson's (2000, 2003, 2007) notion of ecological citizenship. Very similarly and overlapping with his ideas, the fourth dimension of global citizenship (OECD, 2018), focuses on taking action for collective well-being and sustainable development. Overall, this section reports on students' development of ecological awareness and their willingness to take action to make a positive difference in other people's lives and to safeguard the environment. In order to present the findings related to this in a clear and orderly manner, they are shown below according to three different categories: evaluate actions, take actions and evaluate consequences.

The following table lists the most frequently coded aspects. Below, as in the previous sections, I will give examples to illustrate and support my ideas in relation to them.

Category (4) Active Citizenship	
Students learning outcomes related to…	The fourth dimension of global citizenship (OECD, 2018) / Ecological citizenship (Dobson, 2000, 2003, 2007): - Knowledge about consequences and implications of the actions taken [70,1%] -Capacity to create opportunities to take action [77,6%] - Taking action [83,5%] - Readiness to act [74,6%] - Commitment to the common good [83,5%]

Table 40: Students' learning outcomes: Active Citizenship.

Evaluating actions refers to students' readiness to act and take responsibility (74,6%) and focuses on the processes and stages that led them to the action taking phase as such. Table 41 shows the parts of each task of the VE in which students got involved in action evaluation as well as related examples.

Task	Action evaluation	Example
Task 1.3: Exchange of views regarding sustainability	Students get to know each other's actions and the possibilities available to them and discuss them	*E.g. -Are you planning to buy a house with a high energy efficiency rating in a few years time? or is it not a priority for you, I mean maybe because that rating means a very expensive house or whatever other reason?* *- I would like to buy a home with a good energy efficiency rating because it will be cheaper in the long-term. Energy costs can be high in Ireland, especially in the winter, so using less energy can actually help me to save money.* (DISFIL021).
	Students learn good practices from each other	*E.g. Something that caught my attention and that I think is a good initiative from my international colleagues is the fact that in the universities they give the coffee for free if you bring your own reusable cup. With this action, they avoid the excessive use of plastic. I think if something similar would be done in Spain, we would surely make a lot of progress* (PORTFIL09011).
Task 2.1: Comparison and analysis of contexts	Students compare and contrast their cultural contexts	*E.g. - I also believe the misuse of plastic in our country is a problem. Take for instance supermarkets: most of the products we buy have plastic wrappers; or the plastic bags we have to use for the fruit and veg, that go straight to the bin when we arrive home!* *- Yes, I completely agree with you that plastics surround us and that in supermarkets plastic is everywhere so it is a little bit difficult to not have, at least, one plastic wrapper at home. However I still believe that people can deal with this situation and act in the right way: Recycling and being aware of the damage caused by plastics* (VIDFIL011).
Task 2.2: Proposal of sustainable actions to engage in improving the issues discussed	Students discuss possible actions to tackle the environmental problems affecting both their communities	*E.g. As a consequence of our discussion, we decided to think about short term solutions that we can actually do in our little world of students. Sometimes it is easier to adopt an eco-friendly habit than our regular wrong ones. For example, we can cycle or take public transport instead of using the car. We proposed to stop eating meat at least for a certain period of time and to avoid plastic and buy local products. Since we are in Christmas time we thought of some short term solutions we can implement for this season* (PRESFIL082).
Task 3.1: Implementation of the action	Students plan and implement their action together	*E.g. We decided we could do a video and raise awareness about the importance of reducing the consumption of plastic. This was a problem that affected both countries very severely and it was also something in which the daily practices of people like us could make the difference. We planned to record a video in which everyone would talk for more or less the same time, trying to cover the different aspects of the topic* (PORTFIL03021). *E.g. One thing that we all agreed on was that the use of social media was very important. Crucial. If we want to involve people in this matter, and to make people aware of these issues, it is necessary to have a presence in social media* (PORTFIL05012).
Task 3.2: Reflection on the consequences of the actions	Students evaluate the consequences of their actions	E.g. *For me, the simple fact of talking about sustainability is already an act of global and ecological citizenship. In the case of the SDG that we elected, responsible consumption and zero hunger, many ideas also arose for us to exercise that citizenship* (PORTFIL02012).

Table 41: Action Evaluation in the VE tasks.

When exchanging their habits and views regarding sustainability students were invited to be honest with their partners about what they were doing well in this regard and also about what they could improve in order to share their reality. This enabled students to evaluate and reflect on their actions and those of their partners. Therefore, students were honest and commented also about their not so eco-friendly behaviours as well as their statement of willingness to change them.

*E.g. ...I agree that people need to be educated first so that they can change their habits. **Recognising bad habits is the first step to being a more ecological citizen*** (DISFIL091) (emphasis added).

From this first task and throughout the VE students shared with each other the problems affecting their communities as well as the measures being taken to address them. For this, students needed to first inform themselves and learn about these issues and measures in their own community in order to be able to inform their international partners about it. This in turn, allowed them to be able to discuss the situations in each context with their international partners and to count on local and global perspectives to form their own opinions and plan their own actions. The following examples illustrate this:

E.g. Something I had never heard of was limiting the speed to 30km/h to reduce emissions. That sounds like a good idea although I'm not sure if it would be respected if it was introduced here. In recent years, we have definitely seen an increase in the use of electric cars and charging stations are popping up everywhere. However, I live in Dublin so I can only speak about the situation here, I'm not sure about the rest of the country (DISFIL011).

E.g. In response to our presentation, they told us that they had never heard about the 30 km/h speed limit to reduce gas emissions from vehicles, so we were delighted to explain to them how it is being implemented and how people are reacting to it. This gave me the opportunity to do some research and to ask some relatives about their particular opinions on the topic (PORTFIL01011).

Task 2 fostered further and deeper discussions by enabling students to compare and analyse the environmental problems affecting their communities and the measures being taken to improve them. To carry out this second task students needed to inform themselves about problems affecting their communities, their causes, their consequences and the measures being taken to address them in order to be able to successfully inform their partners about them in the FL and then to be able to collaborate on evaluating different courses of action. This allows students to start realising how local environmental issues have a global reach and to start becoming aware of the actual significance and relevance of the global ecological citizenship motto 'think local act global': "there are aspects of globalisation that can be positive for the transition to a sustainable society…the approximation between the global and the local that it fosters makes it possible for citizens to apply the fundamental principle of environmentalism to think globally and act locally" (Sáiz, 2003, p. 280). The following example shows a student portfolio reflection on the value of the second task of the VE for evaluating differents courses of action together:

E.g. After presenting the two locations, the debate began on the new sustainable tourism activities that can be created and developed in these territories. This was a moment of creativity, exchange of opinions and contrasts, useful to find one or more common solutions (PORTUR03031).

Finally, during task 3 students engaged in the actual implementation of their own group action to safeguard the environment. In order to do so, students had to put into practice their capacity to create opportunities to take action (77,6%) by holding various videoconferences with their international groups in which they planned and discussed the various aspects of their actions to enhance their effectiveness such as selecting a topic that needs to be brought up, focusing on a target audience, reflecting on how to convey their message or how to reach a bigger audience among others. The following examples illustrate students' conversations in the videoconferences evaluating the possible courses of action for the telecollaborative task (creating opportunities to take action):

E.g. - Maybe, we can use the topic of reducing consumption in general, it's very big, it's not specific, but maybe everyone can talk about a smaller part for example: "fast fashion" (makes the quotation mark gesture with her hands) you know? and bottles and plastic bags, and a little bit of everything.
-Yes, I think it's good because we can talk about many things, about reducing consumption in general, because we spend a lot of money and resources on clothes, on petrol, on plastics, on everything. We can talk about many things.
-I think it could be good to make a video about how each one of us, during these two weeks for example, have tried to save on something and if we have thought that it is easy, that it is difficult... I think it could be good.
-Yes, it's a good idea (VIDFIL051) (translation from Spanish).

The action taken by this group can be visualised here: https://www.youtube.com/watch?v=YzmQO2GwpHo

The outcome of education for global citizenship is the 'global graduate' which could be defined as one who is able to: "engage and assume active roles, both locally and globally, to face and resolve global challenges and ultimately to become proactive contributor to a more just, peaceful, tolerant, inclusive, secure and sustainable world" (Orsini-Jones and Lee, 2018, p. 8). After evaluating possible courses of action, students moved on to the action taking stage (83,5%). This section reports on students taking informed, reflective action and having their voices heard. The kind of action that students took in this specific project were specifically aimed at upholding the common good (83,5%) following the ideals of ecological citizenship. As we have seen before, actions in the private, public, local and global arenas are equally valid and relevant to the development of a sustainable world. Ecological virtues are first learned and put into practice in the private sphere (the relationships of individuals with their families, friends and acquaintances) and then spread throughout the world. At the same time, global citizenship refers to a sense of belonging that goes beyond identification with the nation state and appeals to a sense of common humanity. Furthermore, global citizenship attaches importance not only to peaceful and respectful relations between humans around the world but also to their respectful and sustainable relationship to the environment. Education for this type of citizenship focuses on students becoming people who relate to and act in the local and global context in a conscious and critical manner according to values of respect for diversity (UNESCO, 2014).

Two different types of action could be identified through the analysis of the data stemming from this project: the collective actions students took as part of the project itself and also actions students took as a result of what they learnt from their international and local partners which could be labelled as individual actions. Students reported proactively having started to take actions to make more eco-friendly choices in their daily lives. This shows the impact that participating in this VE had in developing students' ecological awareness. The following excerpts illustrate students' reflections derived from their participation in the VE and showing having acquired ecological awareness:

E.g. They really motivated me to be more concerned about the planet and to make good environmental actions. In fact, it's just changing a few things in my daily life (PORTFIL07011).

E.g. You learn new things that you can implement in your life no matter how small they are. For example, one of the girls, she used to drink with bamboo straws and the other day I went to a shop and I saw them and I said, I'm going to try them! and yes it's small, but whether you like it or not, it makes a difference (INTFIL0101PRE1) (translation from Spanish).

E.g. From the very first moment I learned habits, for example, thanks to a partner who mentioned bamboo toothbrushes, we are now all using them at home (INTFIL0401PRE1) (translation from Spanish). */ The most important and impressive measure for me was the one that X mentioned about the toothbrush made from bamboo. I have spent the whole week looking for one of these and I finally have my own* (PORTFIL04011).

Finally, the last stage of active citizenship development involves evaluating the consequences of the actions taken (70,1%). Thus, this section reports on students' critical reflections and assessment of the consequences and implications of their actions. After implementing their action plans in their communities, students were asked to meet in what would be their last videoconference together to reflect on its consequences and share the reactions of their surroundings as an exercise of reflection on the importance of active citizenship since every action as small as it may be has an impact and contributes to improving the situation. In the same way that the analysis of the data made it possible to identify the exercise of active citizenship by the students at the individual and group levels, the reflections also cover both courses of action. Both the videoconferences in which students discussed the impact of their group actions and the personal portfolios in which each student reflected on the impact, consequences and relevance of taking an active part for the environment showed that students had developed a global ecological mindset and were able to critically evaluate its implications. In their personal portfolios students reflected on both the influence that their international partners had had on them (i.e. they had learnt new practices and perspectives on the topic of the VE thanks to them) and the other way round. The following example shows a student portfolio reflection on how students had influenced each other during the VE:

> E.g. *My partner made me realize that by showing our habits we can influence people to change theirs and it was rewarding seeing that he wants to change because of something I taught him* (PORTFIL05021).

Discussing the reactions of their environment to their joint telecollaborative product in their last videoconference together gave students a moment to reflect as a group on the meaning and relevance of what they had done together before the end of their collaboration. The following example shows a student portfolio reflection on the impact that their group action had on their environment:

> E.g. *We showed the video to our family and friends to see how they reacted and what they thought about the problem and the solutions we had proposed and discussed people's reactions in our last video call. Many of them hadn't thought about it before but when they saw the images of masks thrown in the sea or in the streets, they realized the seriousness of the problem. So, after analyzing their reactions we realized that our video served to raise people's awareness* (PORTFIL09011).

In conclusion, the analysed dataset has shown evidence of the potential of VEs focusing on sustainability-related issues for the development of students' competence in terms of global (OECD, 2018) and ecological citizenship (Dobson, 2000, 2003, 2007) along with FL proficiency (CERF, 2001, 2018, 2020). In such a project, in accordance with the ideas proposed by global citizenship education (UNESCO, 2014), through intercultural dialogue and collaboration students became aware and critical of global ecological issues, as it offered them the opportunity to gain knowledge about these and to critically examine them. At the same time, bearing in mind that intercultural learning and understanding do not happen automatically because of contact (Kern, 2000; Kramsch & Thorne, 2002), by sharing their views on such issues, students also developed their ability and willingness to understand and appreciate multiple perspectives. They were seen to discover the worldviews and practices of their partners and reflect on their own, gaining knowledge of intercultural similarities, differences and relations. Engaging in online intercultural dialogue throughout the VE also enabled learners to gradually develop the skills necessary for their interactions to be open, appropriate and effective (Byram et al., 2017; OECD, 2018). In terms of FL acquisition, this study has come to confirm previous studies ideas (Richards and Renandya, 2002; Dooly and O'Dowd, 2012) that have

signalled to the adoption of an interactive approach in which learners engage in real meaningful interaction during VE, leading to an improvement in overall proficiency (learners' receptive, productive and interactive skills) in the FL (Belz & Thorne, 2006; O'Dowd, 2007; Dooly, 2008). Participation in such learning experiences has also shown to develop students' virtues in terms of ecological citizenship (Dobson, 2000, 2003, 2007). It stands out the acquisition of ecological concern, which is the ability to assess the local and global consequences of one's decisions and to act in the interests of sustainability (UNESCO, 2014). As for active citizenship within the project, the aims of political education (Gagel, 2000) and education for global citizenship (Abdullahi, 2010; Orsini-Jones and Lee, 2018) were pursued through the different tasks that enabled learners to move from acquiring the will to act, to creating opportunities to act, taking action, taking responsibility and evaluating and reflecting on the consequences and implications of actions taken. The type of active citizenship that students can exercise in this type of project ranges from individual willingness to take responsibility for the environment and to change one's own unsustainable behaviours to group actions that students take in their communities to make a positive difference.

6.4. What Are the Different Affordances of the Bilingual and Lingua Franca Models in Virtual Exchange?

Once the two ARCs had been completed, the bilingual (ARC1) and lingua franca (ARC2) approaches could be compared and contrasted and the potential of each approach for the proposed model of VE assessed. The findings derived from the analysis of the data reveal a number of different aspects regarding the impact that communicating and collaborating with NSs or with NNSs had on students' perceptions, behaviours and learning outcomes during their participation in their online exchanges. These findings may be relevant for other VE practitioners who are interested in implementing VEs based on global and ecological citizenship. The aspects that stood out in this regard are detailed below.

6.4.1. Students' perceptions

The motivation of learners is a key factor in the development and success of a VE project. The adoption of a bilingual approach, where learners study each other's language and culture, usually means that most participants tend to be motivated from the very beginning of the project. In ARC1 students showed a particular interest in their partner country, which most had visited at least once. Indeed, many shared their interest in doing an Erasmus or moving for work after their degree to the other's country.

Students' perceptions ARC1 (bilingual approach). Motivation:

E.g. *Hey! I lived in Oviedo last year for my Erasmus year. I loved the north of Spain and the delicious free tapas. I hope to return to the North of Spain when it's safe to do so, and visit Leon!* (DISFIL071).

E.g. *The best thing has been meeting native speakers, talking to them and learning more about the culture there and the language, obviously. I have loved meeting Irish people and when I go to Ireland I can call them* (INTFIL05POST).

At the same time, in ARC2, which adopted a lingua franca approach, students expressed their motivation and interest in broader terms, referring mainly to the international experience and, as might

be expected, less frequently to the particular culture of their partners.

Students' perceptions ARC2 (lingua franca approach). Motivation:

E.g. *This is a very interesting project since we all come from different backgrounds (and I'm not only talking about nationality) since we all study different things and have different plans for the future. We are all very eager to start this project…I think this is going to be a very enriching experience since my partners are very friendly, open and excited to start working together, just like me* (PORTFIL04012).

E.g. *During this project I have learned about my own and other countries and got to know people that I never thought I would meet. I have learned not to get carried away by stereotypes, as I initially did* (PORTFIL02012).

The aforementioned interest in each other's language and culture in the bilingual approach provided students with a sense of commonality (i.e. of having things in common). This was also manifested, in both approaches, in students' identification with each other's concerns and feelings towards learning a FL.

Students' perceptions ARC1 (bilingual approach). Things in common:

E.g. *I really enjoyed talking to the Irish, especially about our different languages and how we were studying English and they were studying Spanish, sharing the difficulties we encountered* (INTUR0301PRE).

Students' perceptions ARC2 (lingua franca). Things in common:

E.g. *We all have many common interests and are very eager to do our best. Even though we come from very different backgrounds we are still students learning English with a common goal* (PORTFIL05022).

In terms of learners' feelings towards interaction, ARC1 VE participants initially felt some nervousness about interacting with NSs of the target language, especially in synchronous CMC (i.e. via videoconferencing). The main arguments given by learners in their portfolios and interviews were that they feared not being able to understand their partners or not being able to make themselves understood in the FL. In fact, during the first videoconference it was common to find interactions in which students openly addressed together their concerns about communicating in the FL.

Students' perceptions ARC1 (bilingual approach). Students' feelings towards interaction:

E.g. *When we speak in a language which is not our mother tongue, we get very nervous, **especially if it is with native speakers**. **If we must do it by videoconference the situation is worse** because we may have problems at the time of listening to each other, we may not be understood, etc.* (PORTUR02011) (emphasis added).

In contrast, in ARC2 students mentioned that the lingua franca approach made them feel confident or more comfortable about their upcoming interactions with their German partners.

Students' perceptions ARC2 (lingua franca approach). Students' feelings towards interaction:

E.g. *I was, at first, scared of pronouncing something wrong but then, I remembered that they are also studying English* (PORTFIL05012).

Two aspects students highlighted in this respect were the fact that they would communicate

with learners of EFL like themselves rather than with NSs (e.g. *"It makes us feel better that they are not native speakers of English"*) and the fact that the interactions would take place online rather than face-to-face (e.g., *"I feel shy and insecure when I speak in English, but as it is going to be online it is not a problem for me"*), as the online environment may constitute for some individuals a less threatening environment for self-expression.

In summary, students' attitudes towards each of the approaches demonstrated that language choice in VE has a clear impact on how students approach these interactions.

6.4.2. Students' behaviours

The data analysis also revealed how language choice influenced how students interacted in their VEs. In the case of the bilingual approach, for instance, it was possible to notice how the students proactively assumed the role of teaching their partners new expressions and vocabulary, as well as acting somehow as representatives of their culture. The teachers did not intervene to suggest this at any stage.

Students' behaviours ARC1 (bilingual). Feedback:

E.g. *-If I'm talking to you in Spanish and I say it the wrong way, please correct me*
-Okay, If I make any mistake in English, I was really glad if you correct me
-Yeah, we'll help each other out (VIDFIL061).

E.g. *I found it gratifying that I could teach her something. Also, she corrected me, and it was nice to learn something new about vocabulary* (PORTFIL05021).

E.g. *She made some comments about my language skills which I found really helpful* (portfolio)

E.g. *FIL0102: This is a good way to learn a language because they correct you.*
FIL0101: Who better to teach you than a native speaker? (INTFIL011POST).

While references to mutual feedback were very frequent in the bilingual model, there was no reference to this in the lingua franca approach. By contrast, in the latter, references to the international groups' interactions as a 'safe place' for FL practice were quite frequent.

Students' behaviours ARC2 (lingua franca). Feedback:

E.g. *We were all pretty nervous about making mistakes, we would apologise for mispronouncing a word, saying something wrong or forgetting how to say something in English. This all changed when we all realised that it was okay to make mistakes, since we are all learning a language different from our own, nobody is a native speaker and we are all practising* (PORTFIL04012).

E.g. *I think that this kind of project is one of the best ways to learn a language. You can take away the fear of speaking in English because the other person is in the same situation as you. We are learning to speak in a foreign language* (PORTFIL03022).

In ARC1 it was common to find in interactions, especially in videoconferences, how they asked each other for advice and feedback. This illustrates another aspect worth mentioning: especially in the bilingual-bicultural model, students regard their international partners as reliable sources of information in both linguistic and cultural terms. This was manifested in the questions addressed to

them in which it could be observed that they considered their partners as experts or representatives of their language and culture and how they used the information provided by their partners when coming to conclusions or forming opinions.

Students' behaviours ARC1 (bilingual). Partners as reliable sources of information:

E.g. *In gathering information, we have asked our partners and have relied on what they have told us* (INTFIL01POST).

E.g. *I think we tend to think we speak bad English because our accent or our pronunciation isn't always the best, but seeing English native speakers compliment us made me more confident in my abilities* (PORTFIL05021).

E.g. *This year I was supposed to be in Galway on exchange, so I'm really looking forward to meeting these Irish people and learning about their country and culture to see if it's worth going next year or not. So far, yes, I am looking forward to keep talking to them* (INTPREFIL05011).

The perception that students had of their partners in the bilingual approach also had an impact on their own confidence, both in positive and negative terms. Most learners claimed to have gained confidence through positive comments from their partners about their proficiency in the target language. Conversely, they sometimes received their partners' comments in a negative way or as criticism which, in turn, could make some feel offended.

Students' behaviours ARC1 (bilingual). Feedback/Partners as reliable sources of information:

E.g. FIL0101: *They should be very careful when correcting because when we uploaded our part ; X corrected things that, I'm not an expert in English but I've been studying it for many years and they were more about preferences than correctness so it was like... Why do you correct me in that way? Well, correct me up to the comma!* (INTPREFIL01011).

In the case of the lingua franca approach, retaining partners as reliable sources of information could also be observed in cultural and to a lesser extent linguistic terms. Instead, it was observed that VE participants often turned to local partners for help in overcoming language barriers.

Students' behaviours ARC2 (lingua franca). Partners as reliable sources of information:

E.g. *To avoid misunderstandings when we were talking about something and a word didn't come to our mind we asked for the word in our own language to our local partners in order not to lose the fluency in the conversation* (PRESFIL022).

E.g. *- I love that you said the word in Spanish for us to say it in English and you're even saying the German word to [your local partner]*
-Yeah, sometimes I forget words in English but I know it in German or Spanish
- I just think that it's beautiful that we can do that we can just go on different languages and just find the word that we need
- It's like a meme (VIDFIL042).

A wide repertoire of communicative strategies for overcoming communication difficulties could be identified in both approaches, although these took different forms depending on the communicative contexts. For example, in the bilingual context it was more common to observe how learners engaged in negotiating meaning in an attempt to decipher meanings together.

Students' behaviours ARC1 (bilingual). Communicative strategies:

E.g. *-I don't know the word...*
-Say it in Spanish
-I forgot even in Spanish
-Describe the word if you can
-Muestra la barrera entre hombres y mujeres
-the barrier, the difference
-in any job the man earns more money
- inequality?
- yeah (VIDFIL061).

In contrast, in the lingua franca context learners resorted to practices such as sharing the screen to use a translator, looking up the meaning of words, simplifying or exemplifying.

Students' behaviours ARC2 (lingua franca). Communicative strategies:

E.g. *Sometimes words came to our mind in Spanish and the same happened to our German colleagues. So we shared our screen during our meetings in order to show pictures or the translation of what we wanted to say. We got used to this in order to show each other what we meant when we were literally lost in translation* (PRESFIL082).

E.g. *-One question, what are scraps? I've never heard of this word.*
- Wait. Maybe I can Google it.
-Do you know what it means?
-I have an idea, but I don't know how to explain it. So I will look it up. (...) It's pretty much like leftovers (VIDFIL032).

Finally, code switching was present in both approaches, albeit in different ways. While in the bilingual approach learners were sometimes observed to intersperse and even mix languages in the same sentence, in the lingua franca approach learners included some words in their mother tongue much less frequently when seeking help from local partners.

Students' behaviours ARC1 (bilingual). Code switching:

E.g. *When writing through our WhatsApp group sometimes they wrote in English or Spanish and we just responded each other in mixed languages* (PORFIL05021).

Students' behaviours ARC2 (lingua franca). Code switching:

E.g. *When we created our Whatsapp group, one member started to speak in German. But he was asking how to say it in English to his partner* (PORTFIL01012) (code switching ARC2).

In summary, students' behaviours in each of the communicative scenarios confirmed that the adoption of these different approaches (i.e. bilingual or lingua franca) in VE has a clear impact on how students act when engaging in these interactions.

6.4.3. Students' learning outcomes

Finally, in terms of learning outcomes, while both approaches helped students in developing their FL skills, gaining confidence and fluency, and acquiring cultural insights into each other's contexts, some specific aspects are worth noting. For example, although participation in both

approaches led students to acquire new vocabulary and expressions, this occurred differently in each case. Students who participated in the bilingual approach reported observing how their international partners communicated, for example, through chatting via their personal correspondence and trying to 'imitate' their partners' use of abbreviations, expressions, etc. Another manifestation of this is to be found in the students' interactions and reflections, which showed how they adopted the vocabulary and expressions of their partners, especially with regard to the more informal expressions to which (as is the case of the chat communication) they do not usually have access in regular classes.

Students' learning outcomes ARC1 (bilingual). Vocabulary and expressions:

E.g. *They helped me with some Irish "slang" which I did not know and I started using it with them* (PORTFIL07011).

E.g. *We were all girls (or lads as they would say and know, I prefer)* (PORTUR03031).

E.g. *You learn words or expressions that you don't learn in class. We have learned a lot of expressions like more Irish or more of an informal register that we didn't know before* (INTFIL09PRE1).

Students who participated in the lingua franca VE referred to other sources for vocabulary acquisition such as the resources available in their VLE which they used to inform themselves about the VE topic. At the same time, the learners' interactions also reveal how they showed interest in each other's language despite the lingua franca approach and it could be observed that they asked each other for some words in their mother tongues and tried to learn and introduce them sometimes in their interactions.

Students' learning outcomes ARC2 (lingua franca). Vocabulary and expressions:

E.g. *-I'm wondering what was the word that you say in German for explanation?*
-Erklärung. Not the easiest German word (VIDFIL042).

E.g. *In terms of vocabulary, I learned a lot of new words from the sources I read to prepare for our group meeting and when it comes to oral expression it was a little bit hard because we are not used to talk long conversations in English but we managed to keep up with the conversation and it got better every time* (PORTFIL08022).

Another key learning outcome identified as a result of students' participation in both approaches is confidence building. Students pointed to a number of aspects that contributed to developing their confidence and that were common to both communicative scenarios, such as being able to understand and be understood by others, realising the commonality of their feelings and concerns about communicating in a FL and gaining experience in real communicative scenarios. In addition, learners who participated in bilingual VEs referred to positive feedback from their partners as an additional source of confidence.

Students' learning outcomes ARC1 (bilingual). Confidence:

E.g. *I have gained confidence in speaking, especially because they kept telling us that we do it very well* (INTFIL02POST1).

E.g. *You practice your English, because in class you can speak for 5 minutes but here you have to speak for half an hour on your own in English and that really helps you to practice a lot. And you also gain confidence that you can speak and they understand you and tell you how well you speak English* (INTUR04POST1).

Students' learning outcomes ARC2 (lingua franca). Confidence:

E.g. *I feel more confident with my English now. It was good to talk to somebody that is not judging you because they are also studying English* (PORTFIL01022).

E.g. *My confidence in speaking English as a lingua franca has improved. I remember being a little bit insecure of how well I was going to make myself understood. Now, I have learned that there are a lot of methods you can use to solve misunderstandings* (PORTFIL04032).

Finally, with regard to learners' cultural learning, what could be observed when analysing the interactions and reflections of both ARCs, is that in the bilingual approach these tended to be more culture-specific and focused more on the particular cultures of the participants, whereas in the lingua franca approach learners acquired more of a sense of global mindset and belonging.

Students' learning outcomes ARC1 (bilingual). Cultural learning:

E.g. *I have learnt many interesting things of Irish people and their way to communicate as well about the issues relating to the environment and I think they learned from us and our culture too* (PORTFIL08011).

Students' learning outcomes ARC2 (lingua franca). Cultural learning:

E.g. *We may think that we are different, because we are from different countries and everything. But from what we've talked about, it is clear that we live in a globalised world and our situations are actually so similar* (VIDFIL022).

In short, the present study has identified some key considerations concerning the question 'what are the different affordances of the bilingual and lingua franca models in virtual exchange?'. These will be now reflected on briefly.

The adoption of a bilingual approach, where learners study each other's languaculture (Agar, 1994), was seen to lead to higher levels of motivation in regards to the project. This finding coincides with previous studies (Lee, 2007; Jauregi et al., 2012; Canals, 2020) that had also found students' increased motivation thanks to their participation in VEs with NSs. However, when it comes to learners' initial feelings towards interaction, students interacting with NSs reported to feel higher degrees of nervousness about it, especially via videoconferencing. This coincides with Marull & Kumar's findings (2020) whose students of Spanish as a FL reported anxiety and discomfort speaking with a NSs as one of the main drawbacks of the VE experience. At the same time, this anxiety about communicating with NSs can constitute a barrier to language acquisition as Fernandez and Pozzo (2017) have pointed out. References to mutual feedback were very frequent in such an approach in which students' behaviours revealed that they tend to proactively assume the role of teaching their partners new expressions and vocabulary (Wang, 2006), as well as acting as representatives of their culture (Kern, 2014). Learners referred to their partners' feedback as positively and/or negatively affecting their confidence and reported observing and trying to 'imitate' their partners' use of abbreviations, vocabulary, expressions, etc., especially with regard to a more informal register to which they do not usually have access in regular classes. This can be interpreted in a number of ways. First, through VE, learners can gain access to aspects of their partners' languaculture such as colloquial speech patterns, regional linguistic variations or gain a realistic view of the diversity and cultural heterogeneity of countries (Goodwin-Jones, 2019). But, at the same time, this reveals the underlying presumption in this type of bilingual bicultural VE that the 'native speaker' is the ideal

interlocutor and can act as a cultural informant and/or language expert, providing error correction, feedback and cultural information (Helm, 2015). With regard to learners' cultural learning, in this approach it tended to be more culture-specific and focused more on the particular cultures of the participants. However, in today's global context it is complex to talk about cultural representatives and there is a risk of reinforcing a simplistic equation of nation, language and cultural identity (Risager, 2007; Kern, 2014). O'Dowd (2021b) analysed 345 learner portfolios from 13 VEs to compare learning outcomes for bilingual and lingua franca models and identified that learners who participate in the first are at greater risk of developing negative feelings towards the other's languaculture if the experience does not turn out as expected.

In contrast, the lingua franca approach to VE (Basharina, 2007; Guarda, 2013; Helm, Guth & Farrah, 2012) has gained popularity due to the questioning of the role of the native speaker in FL education (Goodwin-Jones, 2019; O'Dowd, 2021) as an idealised and erroneous model of aspiration and assimilation which must be replaced by the much more realistic and convenient idea of the intercultural speaker (Byram, 1997, 2008; Kramsch, 1998). Students who participated in such an approach expressed their motivation and interest in broader terms, referring mainly to the international experience and less frequently to the particular culture of their partners and students' identification with each other tended to be related to common concerns and feelings towards learning a FL and the VE experience. Similarly, Lindner (2011) found that the use of English as a lingua franca in a VE with German and Slovenian undergraduates reduced students' perception of cultural and linguistic difference and encouraged instead the building of the particular international teams identities more focused on task completion. This approach also made students feel more confident about their interactions with their international partners which coincides with the findings of previous studies (Lindner, 2011; Guarda, 2013; Helm, 2015) in which VE participants have also reported to feel less anxious about interacting with NNSs like themselves which has in turn encouraged team bonding, support and proximity among them. In this scenario references to using local interlocutors as reliable sources of information to overcome language barriers were quite frequent and a wide repertoire of communicative strategies for overcoming communication difficulties could be identified. This led to the development of mediation skills (Council of Europe, 2001; 2018). Students who participated in this model of VE referred to other sources for vocabulary acquisition such as the resources available in their VLE. With regard to learners' cultural learning, this model of VE (O'Dowd, 2019; 2021) moves the focus away from bilingual-bicultural comparison and enables learners to acquire more of a sense of global mindset and belonging which goes in line with the principles of global citizenship that refers to a sense of belonging that goes beyond identification with the nation state and appeals to a sense of common humanity (UNESCO, 2014).

Ultimately, although this occurred differently in each case, both approaches helped students in developing their FL skills, gaining confidence and fluency, and acquiring cultural insights into each other's contexts and both approaches led students to acquire new vocabulary and expressions. Another key learning outcome identified in both approaches is confidence building thanks to being able to understand and be understood by others, realising the commonality of their feelings and concerns about communicating in a FL and gaining experience in real communicative scenarios. This is consistent with the findings of O'Dowd (2021b), who concluded that through this type of learning experience in the FL classroom learners gain confidence to communicate in the target language for real purposes and come to see its real value beyond the classroom walls.

6.5. How Can Teachers Support Students in Their Learning During a Virtual Exchange?

The analysis of the data from both ARCs also enabled the identification of key areas which VE teachers may need to focus on in their classes in order to prepare their students for online intercultural collaboration projects. Specifically, three key areas that VE teachers who are interested in integrating global and ecological citizenship into their FL subjects need to take into account have been identified. These are, first, online collaborative competence which has to do with the collaboration among the VE teachers involved in the partnership; second, mentoring which has to do with training and guiding students before, during and after the VE; and, finally, assessment, which involves being prepared and able to properly assess this complex learning experience.

6.5.1. Online Collaborative Competence for Teachers

Online collaborative competence for teachers (O'Dowd & Ware, 2009) refers to the capacity of VE teachers to express and negotiate aspects related to the online exchange in order to find common ground and reach the necessary compromises. These aspects include those related to the design and implementation of the VE, such as establishing learning objectives and the tasks to achieve them. The online collaborative competence of teachers is key to facilitating the correct development of the telecollaboration. Based on the two iterative rounds of implementation of this VE model,we can propose a number of recommendations.

First, in regard to the introduction of the theme of global and ecological citizenship in the tasks, it is advisable to start from a general and versatile model that can be adapted once the partnership has been established. Proof of this is the model proposed in ARC1 which, following the same basic structure with the same number and typology of tasks, was adapted to the curricular needs of the university degrees of Tourism, Business, English studies and Translation. Once the partnership has been established and when it comes to detailing the specific subject matter and content around which the telecollaboration is going to be developed, it is necessary to adjust the model so that it is relevant and engaging for the students of all the institutions involved in the project. It is important to remember that global and ecological citizenship are not subjects in themselves but competence sets that can be adapted to any educational formal or non-formal context through the introduction of action-based transformative methodologies such as international collaboration projects (UNESCO, 2014).

The theme of global and ecological citizenship is one that may at first seem unknown or unfamiliar to those coming from fields of academic study far removed from it. Therefore, it is always convenient to put the learners at the centre so that they take an active part in the individual and group co-construction of knowledge in the topic so that a certain independence and interdependence is built as to how much they want to be informed or get involved in the subject. This has been the case of the PLANET VE in which, although a basic and general background has been offered in class and through resources in the VLE, the burden of informing themselves has fallen on the students at the individual and group level. This has enabled them to develop skills such as the critical evaluation of information, the ability to formulate their own arguments or to explain complex situations. For this to be possible, the specificity and difficulty of the tasks should be increased gradually and exponentially so that students are not overwhelmed by this topic. If it is not presented in the right way, students may feel disinterested or even frustrated if the topic is introduced in such a way that they perceive it as too complicated or too far from their comfort zone. The PLANET VE model is a good example of

moving from the general to the particular and from the simple to the more demanding as students started in task 1 by talking about sustainability based on their own knowledge and experience. Then, in task 2 they started to need to search for information about the problems and measures in their contexts in order to be able to compare and discuss these in their contexts. Finally, in task 3, the students as a group needed to focus on a particular topic that they had discovered they had in common and deepen their knowledge together so that they were able to take action together and co-create the final telecollaborative product.

Not only this, but a number of more general considerations that any VE teacher, whether or not focused on the subject of ecology, needs to take into account have been identified. See table 42 for an overview of the considerations for VE teachers that will be discussed in more detail in the following pages:

Key areas	Considerations
Online Collaborative Competence	- Start from a general and versatile model that can be adapted - Adjust the model so that it is relevant and engaging for the students of all the institutions involved - Due dates for each assignment should be agreed upon on a specific day for all the parties - Assignments should be agreed upon and discussed in detail so that they are conveyed to students in the same way with attention to detail - Close collaboration and communication between teachers should continue throughout the project
Mentoring	- Put learners at the centre so that they have to take an active part in the individual construction and group co-construction of knowledge in the topic - The specificity and difficulty of the tasks should be increased gradually and exponentially - Provide support in terms of theoretical underpinnings - Implement mentoring in terms of effective and appropriate use of synchronous and asynchronous communication tools for intercultural online communication before, during and after the interaction - Implement mentoring in terms of intercultural learning and critical reflection - Deal with conflict
Assessment	- The final products required from the students and the recognition students receive as a result of their telecollaboration should be similar - Be prepared and able to properly assess this complex learning experience

Table 42: Considerations for VE teachers.

Regarding the above mentioned considerations, in terms of online collaborative competence, the due dates for each assignment should be agreed upon on a specific day for both parties to avoid confusion among students. Likewise, assignments should be agreed upon and discussed in detail so that they are conveyed to students in the same way with attention to detail. It has been observed that when the instructions were long (they involved doing several things in the same stage), most of the groups did not cover the different points of the task statement. This shows that the instructions should be very specific and concrete with what is expected of the students and should not concentrate several steps in the same stage. In task 2.1 in ARC1, for instance, it was observed that asking students to prepare a presentation about their ecological habits and views for their international partners without specifying the tools and formats expected ended up with very different products coming from each end. At the same time and as far as possible, the final products required from the students as a result of their telecollaboration should be similar, otherwise those with a greater load may feel more pressure, affecting the dynamics of the work group. This was observed in the Tourism-Business VE (ARC1) during task 3 in which Irish students were required to create some additional products for their evaluation that did not coincide with the telecollaborative product students created in their international groups. However, this is not always possible since often each institution dedicates a

certain number of credits or points to this task, which need not be the same between institutions, although it is convenient. After taking all these aspects into consideration in the design and preparation period of the VE, close collaboration and communication between teachers should continue throughout the project so that both are informed of what is happening on each side and can take action if necessary. Therefore, the VE teachers should be in contact at all times, aware of the development of the interactions and available to act for the successful development of the VE. For instance, in all the implementations of the PLANET VE, the teachers involved kept regular communication via WhatsApp and engaged in weekly videoconferences.

6.5.2. Mentoring

In terms of mentoring, students can benefit from support and guidance from their teachers in a number of areas (O'Dowd et al., 2020). Firstly, contrary to popular belief, those classified as 'digital natives' (Prensky, 2001) born from 1984 onwards also need and benefit from training in the use of technology as much as their predecessors (Kirschner & De Bruyckere, 2017). In this regard, O'Dowd et al. (2020) identify three distinct moments during a VE when teachers can offer mentoring to their students: (1) pre-mentoring: before the beginning of the VE online interactions, (2) mentoring: during the online interaction, usually synchronously, and (3) reflective-mentoring: after online interactions to reflect on interaction examples. Gutiérrez et al. (2021, 2022) identify mentoring techniques for each of these mentoring stages for students to achieve effective and appropriate intercultural synchronous and asynchronous CMC: Prior to the interaction, aspects such as knowing how to use technology effectively, having specific organisational skills, or working on awareness of common concerns are key to preparing students for successful interactions. Once interactions between international students begin to take place, they benefit from the support of their teachers in identifying key (in)appropriate and (in)effective communicative strategies to successfully engage in (a)synchronous online intercultural interaction. Finally, once the interactions have ceased, it is useful to take time for guided reflection on the learning experience.

Both the Handbook for VE teachers and the slides provided in it (Gutiérrez et al., 2021) have been used in the implementation phase of ARC2 in this study in order to offer students proper mentoring for online intercultural communication through (a)synchronous communication tools. When it comes to effective technology use, students participating in this study felt that they could benefit from the teacher's guidance on technical aspects of their videoconferencing tool as well as on netiquette since they felt that *"learning it before"* would help them *"feel more comfortable with the technology"*. As for organisational skills, students were taught how to create an agenda as well as the different roles each group member can take on to contribute to moving the meeting forward such as note taker, leader, spokesperson, etc… Students signalled that they were not aware of this possibility before and that this could help them to avoid *"not knowing what to talk about"* or *"uncomfortable silences"*. Actually, one of the initial common concerns that students shared was *"to be in the first meeting and realising that our international partners don't want to participate"* so counting on these strategies made them feel more confident. Dealing with awareness of common concerns, also allowed the participants to share their feelings about the upcoming VE. The analysis of students' interactions together with their testimonies in class and their answers to the initial survey showed the impact that the pedagogical mentoring they received to be prepared for their first synchronous interaction had on their communication. All the groups used the agenda as well as the assignment of specific roles to the group members as strategies to move their meetings forward and reported that this greatly contributed

to their confidence and the flow of their interaction. It was also common to observe references to netiquette and technical aspects students had learnt during the mentoring sessions.

> E.g.- *So I was thinking that maybe when we are not talking, we could turn off our microphones. So to avoid background noise.*
> *- That definitely makes sense. But I think we should always keep our cameras on so that we can actually talk face to face.*
> *- Yes, it's important. Cameras are always on. Turn off your microphone when you're not talking and prepare in advance for a meeting.*
> *- I was thinking that maybe if someone doesn't talk that much, maybe we could encourage them to introduce them in the conversation* (VIDFIL052).

Another area in which FL teachers implementing VEs revolving around global and ecological citizenship can act as mentors to their students is by offering support in terms of theoretical underpinnings. It needs to be taken into consideration that students are not (nor are expected to be) experts on environmental issues and sustainability and that they need to put effort into being able to inform themselves about complex situations or concepts and to successfully transmit that information to their international partners in a FL. Therefore, since students are talking about topics and issues that may be hard to deal with for the average student, an effective strategy for teachers is to provide them with reliable and useful information resources. Teachers can also ask students to look up information elsewhere and to add news, articles and/or sources that support their claims. This way, they have to inform themselves about the topic before they make a statement instead of relying on what they think. This can help to avoid that they may provide information that is not accurate to their partners who tend to consider them 'experts' as we have seen. VE teachers can also provide some guidance to students when choosing their more specific topics to make sure that these allow for the students to propose sustainable actions feasible for young ordinary people like them since students may propose environmental problems that even though are extremely relevant and important, allow for little room for action for ordinary people.

> E.g. *I collected the majority of the material from the links provided on the Moodle platform, the official portal of United Nations SDGs (in particular reports, indicators, statistics, index of different countries etc.), and I also did research on the internet by myself. I felt more confident talking about the SDGs in English because I had prepared the material before the meeting* (PORTFIL03012).

FL teachers implementing VEs can also mentor their students up to a certain extent in terms of socialisation. As Byram (2008) indicates, the teacher can contribute to avoiding the creation of a divide between 'us' and 'them' and encourage the development of bonding based on the shared 'international' identity of the collaborating groups. To this end, in-class time can be devoted to hold a semi-structured discussion (using questions specifically selected by the teachers to meet their objectives) of what has gone well and what could be improved in the interaction and collaboration among the international working groups so that the whole group can learn from each other's experiences and the teacher can offer some constructive advice. For example, it is important to highlight that the international partners do not speak on behalf of their whole country to avoid overgeneralizations. In addition, most of the students who participated in this study report as essential the support of their local partners during the VE, therefore, allowing them to choose their local partners could be a beneficial strategy for the international group outcomes and dynamics.

In terms of socialisation, another area of action for VE teachers' mentoring is conflict mediation. Students need to be encouraged to address their misunderstandings with their partners in a

constructive way since, similarly to the findings above mentioned from the EVOLVE project (2020) in this study, VE participants avoided entering in conflict with their partners. All the misunderstandings that arose during the VEs had to do with workload division and task completion among the working groups members and in most cases students resorted to their teachers to share their disappointment or dissatisfaction but no record has been found in any of the data sets analysed of students openly addressing their disagreements with each other.

6.5.3. Assessment

Finally, the last key area identified in this study to which VE teachers need to pay attention when introducing the thematic of global and ecological citizenship into the FL classroom through the implementation of VEs is assessment. Assessment competence for teachers has to do with being prepared and able to properly assess this complex learning experience.

In this study there have been two kinds of assessment. One has been assessment for pedagogical purposes (Byram, 2008), focused on identifying the learning outcomes, weaknesses and strengths of the PLANET VE in order to refine it for further implementations. To this end interactional and self-reporting data have been collected and analysed through content analysis. The other kind of assessment carried out has been summative assessment of the learning experience which consists of "a final assessment of the learner's competences at the end of a period of learning" (CoE, 2018a, p.12). In this case the VE teacher-researcher evaluated the students' final local working group oral presentations about their VE experience (5% of their mark for the subject) and their individual portfolios that counted for 10% of the final grade of the course and in which the participation in the VE reflected in the portfolios was assessed.

The Council of Europe (2018a) defines a portfolio as a learning tool that enables learners to collect evidence (i.e. data, documents) of their work and competence development and provides them with a space for reflection about it. This serves both the learners themselves to reflect on what they have achieved and to plan their future learning and for teachers to use for assessment purposes. The evaluation of portfolios, whether formative or summative, requires specific training for their interpretation by the evaluator as otherwise it can become complex, time-consuming and unreliable. One aspect to be taken into account when dealing with portfolios is that they are likely to contain socially desirable responses (i.e. students record those data and reflections that they consider will be positively evaluated), constituting a challenge for the validity of this tool, especially for assessment purposes (Council of Europe, 2018a).

Finally, VE teachers interested in implementing the PLANET VE can look at the following table that summarises some concrete recommendations for each of the tasks. These recommendations basically underline the importance of devoting time in all the different stages of the VE to provide sufficient and appropriate training in order to ensure the successful progress of the project.

Task	Recommendation for VE teachers
1	-Devote time to group creation and reorganisation during the first stage of the VE (e.g. due to dropouts) and ensure all participants have a group assigned and are aware of it. - If adopting a bilingual approach, often repeat and make clear the language use rules until students get used to them. In this scenario, the materials provided to students should be selected so that a version in each of the target languages is available so that students depart from the same background when it comes to the training provided. - If the participant institutions pertain to different time zones, remind students until they get used to it. - Offer pre-interaction mentoring on key aspects such as how to schedule and carry out a videoconference. - Task 1 is devoted to getting to know each other. All the participating teachers can introduce themselves at this stage so that the international students get to know them and at the same time illustrate how students are supposed to do the task.
2	-Based on the observations stemming from the first task, offer mentorings consisting, for instance, of presentations delivered in class devoted to improving communication and collaboration. To this end, real examples from students' communication can be anonymised and presented to them so that they can reflect on whether these are examples of things to do or avoid. - Provide sufficient and appropriate training and materials for the students to be able to provide accurate information (specially relevant for the comparison and analysis stage). Specific tools designed for comparison such as interactive maps or information repositories can make a difference in students' reflections.
3	- Ensure progressive collaboration so that the international working groups arrive at task 3 prepared for the creation of the joint product and avoid a drastic change in the work dynamics when they arrive at this task. - If still they find that perhaps they do not have the same work standards or approaches as far as the development of the work is concerned, encourage them to openly and respectfully address this in their group. Ask them to refer to the ground rules they setted together during task 1 to help them resolve their misunderstanding/conflict. - Set aside time at the end of the exchange (one session) for group reflection on the project experience.

Table 43: Recommendations for VE teachers for each task of the VE model proposed.

In conclusion, in order to support students in their learning during a VE, the experience of the action researcher in these exchanges would suggest that teachers should pay attention to three key areas. These are: online collaborative competence, mentoring and assessment. Online collaborative competence for teachers (O'Dowd & Ware, 2009) involves the capacity to express and negotiate, showing openness and adaptability, aspects related to the VE design and implementation in order to find common ground and reach the necessary compromises. As widely acknowledged in the literature (O'Dowd & Eberbach, 2004; O'Dowd and Ritter, 2006), VE teachers should be in contact at all times and close collaboration and communication should continue throughout the project so that they are informed of what is happening on each side and can take action if necessary. In terms of mentoring, students can benefit from support and guidance from their teachers in a number of areas (O'Dowd et al., 2020) task for which they need to be equipped with the necessary skills (Stevens Initiative Virtual Exchange Impact and Learning Report, 2019; Dooly & Vinagre, 2021). Gutiérrez et al. (2021, 2022) identify three distinct moments during a VE when teachers can offer mentoring to their students in effective and appropriate intercultural (a)synchronous CMC. Prior to the interaction, aspects such as knowing how to use technology effectively, having specific organisational skills, or working on awareness of common concerns are key to preparing students for successful interactions. Once interactions between international students begin to take place, they benefit from the support of their teachers in identifying key (in)appropriate and (in)effective communicative strategies to successfully engage in (a)synchronous online intercultural interaction. In teacher-led group discussions in class, the integration of real-life situations drawn from learners' own interactions and/or reflections proves fruitful in terms of linguistic and intercultural learning (Belz and Muller-Hartmann, 2003; Ware and Kramsch, 2005) and it also helps to prevent learners from forming stereotypes or misconceptions about their international partners, which may occur if they do not receive support or training in this regard (Belz, 2003; Guth, Helm & O'Dowd, 2012). Finally, once the interactions have ceased, it is

useful to take time for guided reflection on the learning experience as this can contribute to engage learners at deeper levels and achieve a critical intercultural stance (Ware 2005; Ware & Kramsch, 2005; Helm, 2015). Another area in which FL teachers implementing VEs revolving around global and ecological citizenship can act as mentors to their students is by offering support in terms of theoretical underpinnings. Finally, the last key area identified to which VE teachers need to pay attention is assessment. Assessment competence for teachers has to do with being prepared and able to properly assess this complex learning experience (Godwin-Jones, 2019) and in recent years an increasing number of studies, which have informed this research, have addressed the question of the assessment of learning outcomes derived from the VE experience, such as EVALUATE (the EVALUATE group, 2019), Erasmus+ VE (Helm & van der Velden, 2019) or EVOLVE (EVOLVE Project Team, 2020).

6.6. Chapter Conclusion VI

In this chapter I set out to present and discuss my findings. First, I answer the question that explores how to integrate the objectives of global and ecological citizenship in the field of FL eduaction through the proposal of a suitable VE model. The PLANET VE is the result of the progress resulting from the empirical experience of the two ARCs implemented and includes detailed task instructions, materials, assessment tools and tutoring guidelines for teachers. Second, I present the specific learning outcomes developed in the PLANET VE. I present the key knowledge, skills, attitudes and virtues identified by providing illustrative examples according to four main categories: awareness and criticality, understanding multiple perspectives, intercultural interaction and active citizenship. Third, I go on to compare and contrast the results derived from the adoption of both a bilingual and a lingua franca approach in the present study and discuss the affordances of each telecollaborative learning configuration in order to draw reliable conclusions about their effectiveness for the implementation of the PLANET VE model. Finally, I provide key recommendations for VE teachers to be prepared to support students in their learning during a VE as the one proposed.

In the following chapter I go on to provide a brief overview of the key findings identified in this study. I then argue the significance of the research carried out and also acknowledge its limitations. I conclude the chapter outlining some recommendations for future research.

CHAPTER VII: CONCLUSION

7.1. Introduction

This final chapter aims to provide a brief overview of the key findings identified in this study, while also recognising the study's significance and limitations. It then proceeds to provide some recommendations for future research in light of these.

7.2. Summary of the Study

Every year, the UN presents an annual 'Progress towards the Sustainable Development Goals Report of the Secretary-General' which provides an overview of the current situation of the SDGs based on data stemming from more than 50 national and regional organisations. In reflecting on the present context the 2022 publication of this report states:

> The multiple and interlinked global crises we are facing – the COVID-19 pandemic, the climate crisis and the impacts of the conflict in Ukraine and elsewhere – are putting the very viability of achieving the SDGs by 2030 at great risk. An urgent rescue effort is needed to rapidly change course, grounded in a comprehensive response to these interlinked global crises and a renewed commitment to multilateralism and international cooperation as called for in Our Common Agenda (UN, 2022, p. 3).

With this in mind, it is the responsibility of educators and educational institutions to proactively contribute to this effort by getting involved in introducing the global and ecological dimensions in their teaching in order to prepare learners for the present context. FL teachers wishing to achieve this aim through the implementation of VE can look at and adapt the main outcome of this study: a VE model comprising specific tasks, materials and mentoring guidelines ready to be used and/or adapted by them. In addition, the research undertaken provides an evidence-based understanding of the possibilities of VEs to develop FL, global and ecological competences through both bilingual and lingua franca approaches. Furthermore, the study also identifies key aspects to be considered by teachers when designing and implementing VEs for the development of these competences.

With regard to the general overall question of this study, it explored whether and how the goals of global and ecological citizenship could be integrated into the field of FL education through VE. The findings derived from this research confirm that this is possible through the implementation of a suitable VE project such as the PLANET VE. This has been described and discussed in chapters IV and V where the strengths and weaknesses of such a VE model were identified, and in chapter VI where a final suitable model is proposed.

When it comes to the study's specific questions, the second research question explored the learning outcomes observed as a result of implementing a VE model focused on global and ecological citizenship. A model of VE as the PLANET VE allows students to become aware and critical regarding global ecological issues since it provides them with opportunities to get informed, get involved in intercultural dialogue about them and to take informed action and reflect on its impact in order to achieve one's own conclusions. Through the different tasks, students have been able to put into practice the four dimensions of global citizenship (OECD, 2018) as well as the virtues of the

ecological citizen (Dobson, 2000, 2003, 2007). At the same time, bearing in mind that intercultural learning and understanding do not happen automatically because of contact (Kern, 2000; Kramsch & Thorne, 2002), by sharing their views on such issues, students also develop their ability and willingness to understand and appreciate multiple perspectives. They discover the worldviews and practices of their partners and reflect on their own, gaining knowledge of intercultural similarities, differences and relations. Engaging in online intercultural dialogue throughout the VE also enables learners to gradually develop the skills necessary for their interactions to be open, appropriate and effective (Byram et al., 2017; OECD, 2018). In terms of FL acquisition, learners engage in real meaningful interaction during VE, leading to an improvement in overall proficiency (learners' receptive, productive and interactive skills) in the FL (Belz & Thorne, 2006; O'Dowd, 2007; Dooly, 2008). Participation in the present study's VEs has also shown to develop students' ecological concern, which is the ability to assess the local and global consequences of one's decisions and to act in the interests of sustainability (UNESCO, 2014). As for active citizenship within the project, the aims of political education (Gagel, 2000) and education for global citizenship (Abdullahi, 2010; Orsini-Jones and Lee, 2018) are pursued through the different tasks that enable learners to move from acquiring the will to act, to creating opportunities to act, taking action, taking responsibility and evaluating and reflecting on the consequences and implications of actions taken.

The third research question focused on exploring the different affordances of the bilingual and lingua franca models in VE. Once the two ARCs had been completed, the bilingual (ARC1) and lingua franca (ARC2) approaches could be compared and contrasted and the potential of each approach for the PLANET VE assessed in the light of learners' experiences. The findings derived from the analysis of the data reveal a number of different aspects regarding the impact that communicating and collaborating with NSs or with NNSs had on students' perceptions, behaviours and learning outcomes during their participation in the PLANET VE. These findings could be very relevant for other VE practitioners in the future willing to design and implement VEs from any of these approaches.

Finally, the fourth and last research question outlined a number of aspects VE teachers need to pay particular attention to in order to support students in their learning during a VE. The analysis of the data from both ARCs also enabled the identification of key areas which VE teachers may need to focus on in their classes in order to prepare their students for online intercultural collaboration projects. Specifically, three key areas that VE teachers willing to integrate global and ecological citizenship into their FL subjects need to take into account have been identified. These are: online collaborative competence which has to do with the collaboration among the VE teachers involved in the partnership, mentoring which has to do with training and guiding students before, during and after the VE and assessment which has to do with being prepared and able to properly assess this complex learning experience.

7.3. Study Significance

A number of key findings have been identified in the research outcomes of the present study that can be put into line with other publications in the literature and either confirm or question previously published ideas. These will be discussed in the following paragraphs.

First, the overall general question of the present study explored how the goals of global and ecological citizenship can be integrated into the field of FL education through VE. As a response, a model of VE has been developed in which a number of key considerations have been identified in relation to the literature:

The present study proposes that the information exchange task type identified by O'Dowd and Ware (2009) could be divided into three separate stages in the initial weeks of VEs in order to maximise its effectiveness: getting to know (1) each other on a personal level, (2) as a working group and (3) the project topic. Another key conclusion that can be drawn and which coincides with the recommendations of previous studies (Helm & Van der Velden, 2019; The EVALUATE Group, 2019) is the relevance of including appropriate collaborative tasks (i.e. that present students with the need to collaborate and negotiate to accomplish the task together) in the final phase of the VE. These studies as well as the present one have found that while these collaborative tasks tend to prove to be the most challenging and complex for learners, they are also the most effective when it comes to students' communicative, collaborative and intercultural skills development. Agreeing with Guth and Helm (2010) the complexity of these tasks can be found in aspects such as group work, division of workload, balancing of schedules or reciprocity in involvement among others which may be the reason why collaborative tasks are the least frequently reported in the literature.

The PLANET VE is also particularly aligned with a number of key ideas raised by Byram (2008) in his 'Framework for Intercultural Citizenship' such as the relevance of planning a curriculum involving tasks devoted to engaging FL students in action taking. Such tasks urge FL learners to move beyond their own cultural assumptions and to engage in intercultural dialogue, active participation in society and consequent critical thinking. According to the findings stemming from the present study tasks should also provide students with sufficient time to follow the different phases of active citizenship: planning, action, evaluation and critical reflection. Involving students in all these differentiated phases constitutes a practical application of ideas such as those proposed by Vives Rego (2013) that highlight the importance of encouraging educational institutions to form citizens who care about being informed and are able to exercise critical thinking, which will enable them to assess the local and global consequences of their consumption decisions and to act in the interests of sustainability. At the same time, as suggested by Gutiérrez et al. (2021, 2022), implementing a closing period dedicated to critical reflection on the VE experience, has been key for students to recognise the importance and consequences of active citizenship for them and those around them and can contribute to engage learners at deeper levels and achieve a critical intercultural stance (Ware 2005; Ware & Kramsch, 2005; Helm, 2015).

The second research question focused on the identification of the specific learning outcomes that stem from the implementation of a VE model focused on global and ecological citizenship. Consequently, the present study has provided empirical evidence of the potential of VEs focusing on sustainability-related issues for the development of students' competence in terms of global (OECD,

2018) and ecological citizenship (Dobson, 2000, 2003, 2007) along with FL proficiency (CERF, 2001, 2018, 2020).

In terms of FL acquisition, this study's findings agree with previous studies ideas (Richards and Renandya, 2002; Dooly and O'Dowd, 2012; Belz & Thorne, 2006; O'Dowd, 2007; Dooly, 2008) that have signalled to the adoption of an interactive approach in which learners engage in real meaningful interaction during VE, leading to an improvement in overall proficiency in the FL. Similarly, engaging in online intercultural dialogue throughout the VE has also enabled learners to gradually develop the skills necessary for their interactions to be open, appropriate and effective (Byram et al., 2017; OECD, 2018). Undoubtedly, the most prominent aspect highlighted by the participants in the VEs regarding the overall FL proficiency development has been the acquisition of ease and fluency in oral expression in it. FL anxiety has been explored in the literature as a unique kind of anxiety specifically experienced by those individuals involved in the FL process and resulting from it (Horwitz et al., 2010). More concretely, the literature has documented how FL learners feel more socially and communicatively self-conscious about interaction via videoconferencing than written interaction (Van der Zwaard & Bannink, 2014) as has been the case in the present study. In contrast, in this research students signalled that thanks to engaging in videoconferences on a regular basis with their international partners throughout their VEs they were able to overcome these feelings and to develop the necessary skills to successfully engage in this communicative scenario. Students highlighted that videoconferencing did indeed constitute for them the most valuable practice in terms of FL skills development overall.

Participation in such learning experience has also shown to develop students' virtues in terms of ecological citizenship (Dobson, 2000, 2003, 2007). It stands out the acquisition of ecological concern, which is the ability to assess the local and global consequences of one's decisions and to act in the interests of sustainability (UNESCO, 2014). As for active citizenship within the project, the aims of political education (Gagel, 2000) and education for global citizenship (Abdullahi, 2010; Orsini-Jones and Lee, 2018) are pursued through the different tasks that enable learners to move from acquiring the will to act, to creating opportunities to act, taking action, taking responsibility and evaluating and reflecting on the consequences and implications of actions taken. The type of active citizenship that has been identified in the project ranges from individual willingness to take responsibility for the environment and to change one's own unsustainable behaviours to group actions that students take in their communities to make a positive difference.

It should also be noted that due to the specific context in which the VE model has been implemented (i.e. European HE), it has been possible to identify the development of VE participants' European identity (European Commission, 1995), a shared feeling of common belonging and of identification with its diversity, cultural wealth and values (e.g. democracy and human rights). The findings of this study coincide then with the correlation established in the literature (European Commission, 1995; Byram, 2008) between acquiring proficiency in community languages (i.e. English and Spanish in the case of the present study) and the development of a European identity. As Byram (2008) indicates, language learning can help learners to reflect on their own national and international/European identity, helping them question culture-bounded issues such as values or meanings that they could have taken for granted. Another aspect of the EU policy on language education (Council of Europe, 2018c) that has been confirmed through this study's research outcomes

is the relationship between language learning and active participation in the European multilingual context.

The third research question identified some key considerations concerning the question of what are the different affordances of the bilingual and lingua franca models in VE.

The adoption of a bilingual approach reflected in the present study higher levels of motivation in regards to the project coinciding with previous studies (Lee, 2007; Jauregi et al., 2012; Canals, 2020) that had also identified students' increased motivation thanks to their participation in VEs with NSs. However, students interacting with NSs also reported to feel higher degrees of nervousness about it, especially via videoconferencing. This coincides with Marull & Kumar's findings (2020) whose students of Spanish as a FL reported anxiety and discomfort speaking with NSs as one of the main drawbacks of the VE experience. In contrast, students participating in the lingua franca VE mentioned that the fact that they would be communicating with students of EFL like them instead of NSs made them feel confident or more comfortable about their upcoming interactions with their German partners. This finding goes in line with research in this area that suggests that learners tend to feel less anxious as well as closer to each other (i.e. feeling of mutual support) when they interact with other NNs using a lingua franca (Guarda, 2013; Helm, 2015). Similarly, Lindner (2011) found that the use of ELF in a VE with German and Slovenian undergraduates reduced students' perception of cultural and linguistic difference and encouraged instead the building of the particular international teams identities more focused on task completion. However, it should be noted that both approaches have been identified as effective in terms of FL learners' confidence building. This is consistent with the findings of O'Dowd (2021b), who concluded that in both approaches learners gain confidence to communicate in the target language and come to see its value for real purposes.

References to mutual feedback were frequent in the bilingual approach in which students' behaviours revealed that they tend to proactively assume the role of teaching their partners new expressions and vocabulary (Wang, 2006), as well as acting as representatives of their culture (Kern, 2014). Learners reported observing and trying to 'imitate' their partners which reveals the commonality in bilingual VEs of assuming that the 'native speaker' is the ideal interlocutor and can act as a cultural informant and/or language expert, providing error correction, feedback and cultural information (Helm, 2015). In contrast, communicating using ELF in ARC2 helped VE participants to address native speakerism, which means having NSs as a model to imitate (Byram, 1997; Liaw & English, 2014). The lingua franca approach to VE (Basharina, 2007; Guarda, 2013; Helm, Guth & Farrah, 2012) has gained popularity due to this questioning of the role of the NS in FL education (Goodwin-Jones, 2019; O'Dowd, 2021) as an idealised and erroneous model of aspiration and assimilation which must be replaced by the much more realistic and convenient idea of the intercultural speaker. The findings of this study support the idea presented by both Byram (1997, 2008) and Kramsch (1998) that imitation with respect to the NS must be replaced by the training of intercultural speakers who learn, analyse and reflect on the beliefs, worldviews and practices of others and also their own, creating a critical and proper sense of intercultural experience. This is also reflected in the CEFR (2001) in which learners are considered as 'complete' and autonomous individuals who in no case have to aspire to become 'almost native'.

With regard to learners' cultural learning, especially when engaging FL learners in bilingual VEs it has been observed that, in line with previous research (Risager, 2007; Kern, 2014), in today's global context it is complex to talk about cultural representatives and there is a risk of reinforcing a

simplistic equation of nation, language and cultural identity. With regard to this issue, the lingua franca approach (O'Dowd, 2019; 2021b) moves the focus away from bilingual-bicultural comparison and enables learners to acquire more of a sense of global mindset and belonging which goes in line with the principles of global citizenship that inform the present study in which the acquisition of a sense of belonging that goes beyond identification with the nation state and appeals to a sense of common humanity is seeked (UNESCO, 2014).

The fourth and last research question tackled the issue of VE teachers' role in supporting students in their learning during a VE.

Given that intercultural learning and understanding do not happen automatically because of contact (Kern, 2000; Kramsch & Thorne, 2002), VE participants benefit from support and guidance from their teachers in a number of areas (O'Dowd et al., 2020). With this in mind, this study agreeing with numerous calls in the literature (Stevens Initiative Virtual Exchange Impact and Learning Report, 2019; Dooly & Vinagre, 2021), points to the need for teachers to be prepared to provide VE participants with adequate and sufficient resources, task for which they need to be adequately trained. More specifically, in the present study it has been identified the need for teachers to help students in learning how to (1) select and weigh appropriate evidence to reason about their chosen topic (e.g. by providing adequate resources); (2) critically evaluate the information and formulate their own arguments (e.g. by holding class discussions) and (3) prepare themselves to explain complex situations to international partners in an accessible and comprehensive way (e.g. by providing training on effective communicative strategies for intercultural communication). Gutiérrez et al.'s (2021) identification of three distinct moments during a VE when teachers can offer mentoring to their students (i.e. before, during and after interaction) in effective and appropriate intercultural (a)synchronous CMC has proved useful and effective in the VEs implemented in this research.

This study has implemented multiple strategies that authors had previously noted as effective in the literature such as closely observing online interactions in international working groups and presenting students with real anonymised examples (Ware, 2013; Muller-Hartmann and O'Dowd, 2017). These included both interesting conversations or rich points (Agar, 1994) and delicate or failed conversations (i.e. communicative breakdowns) (O'Dowd and Eberbach, 2004). This enabled class discussion of these with the whole group and encouraged active participation in knowledge construction as well as critical reflection. In teacher-led group discussions in class, the integration of these real-life situations drawn from learners' own interactions and/or reflections proves fruitful in terms of linguistic and intercultural learning (Belz and Muller-Hartmann, 2003; Ware and Kramsch, 2005) and it also helps to prevent learners from forming stereotypes or misconceptions about their international partners, which may occur if they do not receive support or training in this regard (Belz, 2003; Guth, Helm & O'Dowd, 2012).

As widely acknowledged in the literature (O'Dowd & Eberbach, 2004; O'Dowd and Ritter, 2006), in the present study it has been also identified that in order to encourage the successful unfolding of the VE, teachers should be in contact at all times and close collaboration and communication should continue throughout the project. This has been referred to as online collaborative competence for teachers (O'Dowd & Ware, 2009) involving the capacity to express and negotiate aspects related to the VE design and implementation.

Finally, VE teachers need to take into account the context in which these will take place. Online multimodal means of synchronous, asynchronous, oral and written communication have their own conventions, opportunities and limitations and this is something that has to be considered when designing and implementing collaborative projects (Guth and Helm, 2012). At the same time, students need to receive credit or recognition for their participation in VE (Lamy & Hampel, 2007; Helm, 2015) for which teachers need to select the appropriate tools to assess the learning outcomes of students, which in turn have to be in line with the objectives of the course in which it is being implemented (Helm, 2015; Godwin-Jones,2019).

7.4. Study Limitations

This study presents challenges inherent to the implementation of the AR methodology. Both Kember (2000) and Norton (2009) warn that there exist limitations that result from individual AR, as is the case of the present study, such as the issue of objectivity due to the lack of multiple perspectives in the research process or the achievement of assumptions that may depend on the researcher's individual considerations, skills or even interests. The fact that this research involves a single teacher-researcher leading to possible bias issues may have affected the validity of the data analysis and conclusions drawn. In this regard, the present study takes this limitation into account as well as its dependence on the context in which it is carried out and does purposefully not intend to be prescriptive. In contrast, dissemination of this research via publications and conferences has been tackled in order to share and discuss its findings with other colleagues in the field. For instance, the results stemming from the first AR cycle implemented in the present study were shared and discussed with expert colleagues in various international conferences on the thematic of VE taking their insights into consideration for the consequent refinements in view of the second AR cycle. At the same time, peer debriefing contributed in this study to increasing reliability by engaging the two researchers in the coding of the data set analysed thus reducing bias and confirming findings.

Another limiting factor can be found in the generalisability of the study findings due to the relatively small size of the samples researched (i.e. 163 VE participants). This has been addressed by introducing techniques such as the triangulation of multiple data sources and the cyclical iterative nature of AR in order to refine the action as necessary until the findings were deemed reliable. In order to get a deeper understanding of learners' collaboration, socialisation and learning it would have been beneficial to have had access to learners' online interaction on their personal correspondence WhatsApp groups which was not analysed due to students' privacy.

It is also possible that students' responses in terms of global ecological awareness or mindedness development may have been vulnerable to social desirability. At the same time, portfolios, which have been one of the tools used for collecting information about this, have been criticised in the literature for their likelihood to contain responses in which students record those data and reflections that they consider will be positively evaluated, constituting a challenge for the validity of this tool (Council of Europe, 2018a). With this in mind, during the implementation of the VEs it was explicitly pointed out that the answers should be honest and that in no case would they negatively affect the student's evaluation.

In addition, despite the great potential of FL education for promoting active participation in society (Byram, 2001, 2008, 2012, 2014; Byram et al, 2017; Byram and Goluveba, 2020), isolating

the real impact that it has on active citizenship is indeed really complex due to the several surrounding factors that may affect it such as the learners' family, friends or community. At the same time, even if students become aware and are willing to take action in society, they may encounter financial, time, location and information barriers that may prevent them from doing so (European Commission, 2008) as well as individual, psycho-social or economic factors that may condition their consumption habits and decisions in terms of sustainability (Vives Rego, 2013).

7.5. Recommendations for Future Research

The findings stemming from this study do confirm that the goals of global and ecological citizenship can be successfully integrated into the field of FL education through VE. However, the results reported have also shown that a number of specific aspects need to be taken into account to be able to do it appropriately and effectively. It would be valuable if the VE model designed and refined in the present study could be taken up and adapted by other VE teachers who could explore the effectiveness of the model and guidelines provided in this study with further cohorts of students and in different educational contexts. For instance, the present doctoral thesis has been developed in the educational context of European HE and all the institutions that have participated in the different VEs implemented have been part of this context. It would be enlightening to explore the model in other educational contexts outside the European one and to be able to observe what are the outcomes as well as what modifications would be envisaged. At the same time, while specific tools, tasks and themes have been proposed in the model developed in the present study, it would also be enriching for it to explore the affordances of a larger number of tools and themes related to ecological global citizenship in the future.

As mentioned above, it is possible that students' responses in terms of global ecological awareness or mindedness development may have been vulnerable to social desirability. In this regard, future research could explore ways to encourage data collection methods that can shed light on this issue, as ecological citizenship can only be consolidated on the assumption that citizens act in a sustainable way genuinely thinking about the good of all (i.e. virtue of commitment to the common). When incentives (such as the learners' mark for their contributions to the project in the case of the present study) are established for individuals to behave in a sustainable manner, a change in behaviour is observed that may be due to these. However, once the incentive ceases, those who do not have an ecological conviction return to previous bad habits and practices (Dobson, 2003). With this in mind, it would also be desirable to explore in further detail how to maximise learners' change of behaviour due to intrinsic motivations.

When it comes to conflict resolution skills (OECD, 2018), globally competent individuals are able to "approach conflicts in a constructive manner" (p.15). However, the findings of this study indicate that while students communicated both in their portfolios and in their personal interviews their dissatisfaction in some cases, interactional data showed that these aspects were not exposed or addressed by students in a direct way with their international working group partners. This coincided with the findings previously presented by the European research project EVOLVE (EVOLVE Project Team, 2020) that looked at the impact of VE on student learning and reported that VE participants frequently resorted to conflict avoidance when faced with conflicting situations: "This can be interpreted as intercultural sensitivity, but, and at the same time, as conflict avoidance constituting a barrier to the potential for intercultural learning" (EVOLVE project team, 2020, p.56). Therefore,

future research could look into effective strategies for VE teachers to lead their students in overcoming conflict avoidance and successfully managing such situations in the context of online intercultural communication and collaboration during VE.

7.6. Chapter Conclusion VII

This chapter aims to provide the reader with a brief overview of the key findings identified in this study. It argues the significance of the research carried out and also acknowledges its limitations. The chapter concludes outlining some recommendations for future research.

REFERENCES

Abbott, A. (2004). Methods of discovery: Heuristics for the social sciences. New York: W.W. Norton.

Abdullahi, S. A. (2010). Rethinking global education in the twenty-first century. In *Global pedagogies: schooling for the future* edited by J. Zajda, (pp. 23-34). Dordrecht, New York: Springer.

Agar, M. (1994). Language shock. *New York*.

Akiyama, Y., & Cunningham, D. J. (2018). Synthesizing the Practice of SCMC-based Telecollaboration: A Scoping Review. *Calico Journal*, *35*(1), 49–76. Retrieved from https://journals.equinoxpub.com/index.php/CALICO/article/view/33156

Allport, G. (1958). The nature of prejudice. Reading, MA: Addison-Wesley.

Alvarez, X. P. (2019, October). The virtual collaborative work and the development of intercultural competences in university student's: The case of Virtual Global Teams. In *Proceedings of the Seventh International Conference on Technological Ecosystems for Enhancing Multiculturality* (pp. 738-744). ACM.

Auerbach, C. F., & Silverstein, L. B. (2003). Qualitative data: An introduction to coding and analysis. New York: New York University Press.

Avgousti, M. I. (2018). Intercultural communicative competence and online exchanges: a systematic review. *Computer Assisted Language Learning*, *31*(8), 819–853. https://doi.org/10.1080/09588221.2018.1455713

Bailenson, J. N. (2021).Nonverbal overload: A theoretical argument for the causes of Zoom fatigue. Technology, Mind, and Behavior, 2(1). https://doi.org/10.1037/tmb0000030

Batardière, M.-T., Giralt, M., Jeanneau, C., Le-Baron-Earle, F., & O'Regan, V. (2019). Promoting intercultural awareness among European university students via pre-mobility virtual exchanges. Journal of Virtual Exchange, 2, 1-6. Research-publishing.net. https://doi.org/10.14705/rpnet.2019.jve.4

Barrett, M., M. Byram, I. Lázár, P. Mompoint-Gaillard and S. Philippou (2014), Developing Intercultural Competence through Education, Council of Europe Publishing, Strasbourg.

Barrett, M. D. (2016). Competences for democratic culture and global citizenship: components and assessment. Invited plenary paper presented at the Korea-OECD International Conference on "Fostering Global Competence and Quality Learning Based on PISA and PISA-D. South Korea, 10-11 March.

Barrett, M. D., & Zgaga, P. (2018). *Reference Framework of Competences for Democratic Culture*. Council of Europe.

Beatty, K. (2013). *Teaching & researching: Computer-assisted language learning*. Routledge.

Beck, U. (1998). La política de la sociedad de riesgo. *Estudios demográficos y urbanos*, 501.

Belz, J. A. (2001). Institutional and individual dimensions of transatlantic group work in network-based language teaching. *ReCALL*, *13*(2), 213–231. https://doi.org/10.1017/S0958344001000726a

Belz, J. A. (2002). Social Dimension of Telecollaborative Foreign Language Study. *Language Learning & Technology*, *6*(1), 60–81. Retrieved from http://llt.msu/edu/vol6num1/belz/

Belz, J. A. (2003). Linguistic Perspectives on the Development of Intercultural Competence in Telecollaboration. *Language Learning & Technology*, *7*(2), 68–99. Retrieved from http://llt.msu.edu/vol7num3/belz

Belz, J. A. (2004). Learner corpus analysis and the development of foreign language proficiency. *System*, *32*(4), 577-591.

Belz, J. A. (2005). Intercultural Questioning, Discovery and Tension in Internet-mediated Language Learning Partnerships. Language and Intercultural Communication, 5(1), 3–39.

Belz, J. A., & Müller–Hartmann, A. (2003). Teachers as intercultural learners: Negotiating German–American telecollaboration along the institutional fault line. *The modern language journal*, *87*(1), 71-89.

Belz, J., & Kinginger, C. (2006). The Cross-linguistic Development of Address Form Use in Telecollaborative Language Learning: Two Case Studies. *Canadian Modern Language Review*. https://doi.org/10.3138/cmlr.59.2.189

Blau, I., Shamir-Inbal, T., & Avdiel, O. (2020). How does the pedagogical design of a technology-enhanced collaborative academic course promote digital literacies, self-regulation, and perceived learning of students?. *The internet and higher education*, *45*, 100722.

Blin, F. (2012). Introducing Cultural Historical Activity Theory for Researching CMC in Foreign Language Education. In *Researching Online Foreign Language Interaction and Exchange* (Melinda Dooly & Robert O'Dowd, Vol. 3, pp. 79–106). Bern: Peter Lang.

Boix Mansilla, V. & Jackson, A. (2011). Educating for global competence: preparing our youth to engage the world. New York: Asia Society.

Borghetti, C. (2017). Is there really a need for assessing intercultural competence? Journal of Intercultural Communication, (44). Retrieved from http://mail.immi.se/intercultural/nr44/borghetti.html

British Council: https://www.teachingenglish.org.uk/article/negotiation-meaning#:~:text=Negotiation%20of%20meaning%20is%20a,for%20the%20negotiation%20of%20meaning.

Buckingham, D. (2007), "Digital Media Literacies: rethinking media education in the age of the Internet", Research in Comparative and International Education, Vol.2/1, pp.43-55.

Byram, M. (1997). *Teaching and assessing intercultural communicative competence*. Clevedon: Multilingual Matters.

Byram, M., & Zarate, G. (1997). Defining and assessing intercultural competence: Some principles and proposals for the European context. Language Teaching, 29, 14–18.

Byram, M. (2001). Language teaching as a political action. *Reflections on language and language learning. In honour of Arthur van Essen*, 91-104.

Byram, M. (2008). *From foreign language education to education for intercultural citizenship: essays and reflections*. Clevedon: Multilingual Matters.

Byram, M. (2012). Language awareness and (critical) cultural awareness–relationships, comparisons and contrasts. *Language awareness*, *21*(1-2), 5-13.

Byram, M. (2014). Twenty-five years on–from cultural studies to intercultural citizenship. *Language, culture and curriculum*, *27*(3), 209-225.

Byram, M., Goluveba, I., Hui, H. and Wagner, M. (Eds.). (2017). From Principles to Practice in Education for Intercultural Citizenship. Bristol: Multilingual Matters.

Byram, M., & Golubeva, I. (2020). Conceptualising intercultural (communicative) competence and intercultural citizenship. In *The Routledge Handbook of Language and Intercultural Communication* (Second Edition, pp. 70–85). Routledge.

Byram, M., Gribkova, B., & Starkey, H. (2002). *Developing the intercultural dimension in language teaching: A practical introduction for teachers*. Language Policy Division, Directorate of School, Out-of-School and Higher Education, Council of Europe.

Byrd Clark, J. S. (2020). Reflexivity and criticality for language and intercultural communication research and practice. In *The Routledge Handbook of Language and Intercultural Communication* (Second Edition, pp. 86–106). Routledge.

Brammerts, H. (2003). Autonomous language learning in tandem: The development of a concept. *Autonomous language learning in tandem*, 27-36.

Brammerts, H. (2006). Tandemberatung. *Zeitschrift für interkulturellen Fremdsprachenunterricht*, *11*(2).

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*. Sage.

Cambridge University Press. (2022). Lingua Franca. In Cambridge English Dictionary. Retrieved July 17, 2022, from https://dictionary.cambridge.org/es/diccionario/ingles/lingua-franca

Canale, M., & Swain, M. (1980). Theoretical bases of communicative approaches to second language teaching and testing. *Applied linguistics*, *1*(1), 1-47.

Canale, M. (1983). From Communicative Competence to Communicative Language Pedagogy. In J. C. Richard, & R. W. Schmidt (Eds.), *Language and Communication* (pp. 2-14). London: Longman.

Canals, L. (2020). The effects of virtual exchanges on oral skills and motivation. Language Learning & Technology, 24(3), 103–119. http://hdl.handle.net/10125/44742

Canals Fornons, E. (2022). The role of the language of interaction and translanguaging on attention to interactional feedback in virtual exchanges. *System, 2022, 105*.

Carr, W. & Kemmis, S. (1986). Becoming Critical: Education, Knowledge and Action Research. *The Journal of Educational Thought*. 23(3) pp. 209-216.

Chambers, N.; Simmons, C., y Wackernagel, M. (2000): Sharing Nature's Interest: Ecological Footprints as an Indicator ofSustainability, Londres y Stirling, VA: Earthscan.

Charmaz, K. (2001). Grounded theory. In R. M. Emerson (Ed.), Contemporary field research: Perspectives and formulations (2nd ed.) (pp. 335–52). Prospect Heights, IL: Waveland Press.

Chen, G. M., & Starosta, W. J. (2000). The development and validation of the Intercultural Sensitivity Scale.

Chomsky, N. 1965. *Aspects of the Theory of Syntax*. Cambridge, Mass: MIT Press.

Chun, D. M. (2014). *Cultura-inspired intercultural exchanges: focus on asian and pacific languages*. Honolulu, HI: National Foreign Language Resource Center.

Chun, D. M. (2014). A Meta-Synthesis of Cultura-Based Projects. In *Cultura-inspired intercultural exchanges: Focus on Asian and Pacific languages* (Chun DM, pp. 33–69). Honolulu: University of Hawaii, National Foreign Language Resource Center.

Chun, D. M. (2015). Language and culture learning in higher education via telecollaboration. *Pedagogies: An International Journal*, *10*(1), 5-21.

Cohen, L., Manion, L., & Morrison, K. (2000). *Research Methods in Education* (5th ed., pp. 226-241). London and New York: RoutledgeFalmer.

Colpaert, J. (2020) Editorial position paper: how virtual is your research?, Computer Assisted Language Learning, 33:7, 653-664, DOI: 10.1080/09588221.2020.1824059

Cook, T. (1998). The importance of mess in action research. *Educational Action Research*, *6*(1), 93-109.

Council of Europe. Council for Cultural Co-operation. Education Committee. Modern Languages Division. (2001). *Common European framework of reference for languages: Learning, teaching, assessment*. Cambridge University Press.

Council of Europe. (2004). A revised strategy for Social Cohesion, Council of Europe, Strasbourg.

Council of Europe. (2009). *Autobiography of Intercultural Encounters*. Council of Europe, Language Policy Division.

Council of Europe. (2016). Competences for democratic culture: Living together as equals in culturally diverse democratic societies. Executive Summary. Strasbourg: Council of Europe Publishing.

Council of Europe. (2018a). Reference Framework of Competences for Democratic Culture. Strasbourg: Council of Europe Publishing.

Council of Europe. (2018b). Common European framework of reference for languages (CEFR). Learning, teaching, assessment. Companion Volume with New Descriptors. Council of Europe.

Council of Europe. (2018c). Language education policy. Retrieved from https://www.coe.int/en/web/language-policy/language-policies

Council of Europe (2020), Common European Framework of Reference for Languages: Learning, teaching, assessment – Companion volume, Council of Europe Publishing, Strasbourg, available at www.coe.int/lang-cefr.

Corbett, J. (2003). An Intercultural Approach to English Language Teaching. Clevedon: Multilingual Matters Ltd.

Corbett, J. (2010). Intercultural Language Activities. Cambridge: Cambridge University Press.

Deardorff, D. K. (2006). Identification and assessment of intercultural competence as a student outcome of internationalization. *Journal of studies in international education*, *10*(3), 241-266.

Deardorff, D., & Jones, E. (2012). Intercultural competence: An emerging focus in international higher education. In D. Deardorff, H. de Wit, J. Heyl, & T. Adams (Eds.), The SAGE handbook of international higher education. Thousand Oaks, CA: SAGE publications.

Dellicarpini, M. (2012). ACTION RESEARCH. BUILDING COMPUTER TECHNOLOGY SKILLS IN TESOL TEACHER EDUCATION. *Language Learning & Technology.*, *16*(2), 14-23. Retrieved from http://llt.msu.edu/issues/june2012/action.pdf

De Wit, H., Hunter, F., & Coelen, R. (2015). 21. INTERNATIONALISATION OF HIGHER EDUCATION IN EUROPE: FUTURE DIRECTIONS.

De Wit, H., Hunter, F., Howard, & L., Egron-Polak, E. (2015). Internationalisation of higher education. European Parliament, Policy Department B: Structural and Cohesion Policies. Retrieved from http://www.europarl.europa.eu/RegData/etudes/STUD/2015/540370/IPOL_STU(2015)540370_EN.pdf accessed July 21, 2021

De Wit, H. (2016). Internationalisation and the role of online intercultural exchange. In R. O'Dowd & T. Lewis (Eds.), Online intercultural exchange: Policy, pedagogy, practice (pp. 192–208). London/New York: Routledge.

Dillenbourg, P., Schneider, D., & Synteta, P. (2002, September). Virtual learning environments. In *Proceedings of the 3rd Hellenic conference information & communication technologies in education* (pp. 3-18). Rhodes, Greece: Archive Ouverte HAL.

Dobson, A. (2000). Ecological citizenship: a disruptive influence?. In *Politics at the Edge* (pp. 40-62). Palgrave Macmillan, London.

Dobson, A. (2003). *Citizenship and the Environment*. OUP Oxford.

Dobson, A. (2007). Environmental citizenship: towards sustainable development. *Sustainable Development*, *15*(5), 276-285. doi: 10.1002/sd.344

Dooly, M. (Ed.). (2008). *Telecollaborative language learning: A guidebook to moderating intercultural collaboration online*. Peter Lang.

Dooly, M. A., & O'Dowd, R. (2012). *Researching online foreign language interaction and exchange: theories, methods and challenges*. Bern ; New York: Peter Lang.

Dooly, M., & Hauck, M. (2012). Researching Multimodal Communicative Competence in Video and Audio Telecollaborative Encounters. In *Researching Online Foreign Language Interaction and Exchange* (Vol. 3, pp. 135–161). Bern: Peter Lang.

Dooly, M. (2015). It takes research to build a community: Ongoing challenges for scholars in digitally-supported communicative language teaching. CALICO Journal, 32(1), 172–194.

Dooly, M. (2017). Telecollaboration. *The handbook of technology and second language teaching and learning*, 169-183.

Dooly, M., & Vinagre, M. (2021). Research into practice: Virtual exchange in language teaching and learning. *Language Teaching*, 1-15.

Dörnyei, Z. (2007). Research methods in applied linguistics: Quantitative, qualitative and mixed methodologies. Oxford: Oxford University Press.

Efron, S. E., & Ravid, R. (2019). *Action research in education: A practical guide*. Guilford Publications.

European Commission/EACEA/Eurydice, 2020. The Structure of the European Education Systems 2020/21: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

European Commission. (1995). Directorate-General XXII. Education, Training and Youth. White paper on education and training: teaching and learning towards the learning society.

European Commission. (2008). "Progress towards the Common Objectives in Education and Training Indicators and Benchmarks." Staff working paper. Luxembourg: Office for the Official Publications of the European Communities.

European Commission. (2020). The Digital Education Action Plan (21-27). Retrieved from https://ec.europa.eu/education/sites/default/files/document-library-docs/deap-communication-sept2020_en.pdf

The EVALUATE Group. (2019). Evaluating the impact of virtual exchange on initial teacher education: a European policy experiment. Research-publishing.net. https://doi.org/10.14705/rpnet.2019.29.9782490057337

EVOLVE Project Team. (2020). The Impact of Virtual Exchange on Student Learning in Higher Education: EVOLVE Project Report.

Fernández, S. S., & Pozzo, M. I. (2017). Intercultural competence in synchronous communication between native and non-native speakers of Spanish. *Language Learning in Higher Education*, *7*(1), 109-135.

Fennes, H., & Hapgood, K. (1997). *Intercultural learning in the classroom: Crossing borders*. Burns & Oates.

Flowers, Simeon, et al. "Learner Autonomy versus Guided Reflection: How Different Methodologies Affect Intercultural Development in Online Intercultural Exchange." *ReCALL*, vol. 31, no. 3, 2019, pp. 221–37, doi:10.1017/S0958344019000016.

Furstenberg, G., & Levet, S. (2014). Cultura: From then to now. Its origins, key features, methodology, and how it has evolved. Reflections on the past and musings on the future. In *Cultura-inspired intercultural exchanges: Focus on Asian and Pacific languages* (D.M.Chun, pp. 1–31). Honolulu, Hawaiii: University of Hawaii, National Foreign Language Resource Center.

Furstenberg, G., Levet, S., English, K., & Maillet, K. (2001). Giving a virtual voice to the silent language of culture: The Cultura project. *Language learning & technology*, *5*(1), 55-102.

Gagel, W. 2000, Einführung in die Didaktik des politischen Unterrichts. (2nd ed.) Opladen: Verlag Leske und Budrich.

Garcés, P., & O'Dowd, R. (2020). Upscaling Virtual Exchange in University Education: Moving From Innovative Classroom Practice to Regional Governmental Policy. *Journal of Studies in International Education*, 102831532093232. https://doi.org/10.1177/1028315320932323

Georgescu, M. (2018). *T-Kit 4-Intercultural learning* (Vol. 4). Council of Europe.

Gibbs, G. R. (2007). Analysing qualitative data. London: Sage.

Giralt, M., & Jeanneau, C. (2016). Preparing higher education language students to their period abroad through telecollaboration: the I-TELL project. AISHE-J: The All Ireland Journal of Teaching and Learning in Higher Education, 8(2), 2781-2801. http://ojs.aishe.org/index.php/aishe-j/article/view/278

Gleason, Jesse, and Ruslan Suvorov. "Promoting Social Justice With CALL." *CALICO Journal*, vol. 36, no. 1, Aug. 2018, pp. i–vii, doi:10.1558/cj.37162.

Godwin-Jones, R. (2019). Telecollaboration as an approach to developing intercultural communication competence. Language Learning & Technology, 23(3), 8–28. http://hdl.handle.net/10125/44691

Godwin-Jones, R. (2019). Bridging Cultural Divides through Telecollaboration. *Intercultural Communication Studies*, *28*(2).

Graddol, D. (2006). *English next* (Vol. 62). London: British council.

Guadamillas Gómez, M. V. (2017). Building global graduates and developing transnational professional skills through a telecollaboration project in foreign language education. In C. Álvarez-Mayo, A. GallagherBrett, & F. Michel (Eds), Innovative language teaching and learning at university: enhancing employability (pp. 49-58). Research-publishing.net. https://doi.org/10.14705/rpnet.2017.innoconf2016.654

Guarda, M. (2013). Negotiating a transcultural place in an English as a lingua franca telecollaboration exchange. Unpublished PhD thesis. Retrieved from http://paduaresearch.cab.unipd.it/5337/1/guarda_marta_tesi.pdf

Gunbayi, I. (2020). Action research as a mixed methods research: Definition, philosophy, types, process, political and ethical issues and pros and cons. *Ilhan Gunbayi*, 16.

Guth, S., & Helm, F. (Eds.). (2010). *Telecollaboration 2.0: Language, literacies and intercultural learning in the 21st century* (Vol. 1). Peter Lang.

Guth, S., & Helm, F. (2012). Developing multiliteracies in ELT through telecollaboration. ELT Journal, 66(1), 42-51.

Guth, S., Helm, F., & O'Dowd, R. (2012). University language classes collaborating online. *A report on the integration of telecollaborative networks in European universities*.

Gutiérrez, B. F., & O'Dowd, R. (2021). Virtual exchange: connecting language learners in online intercultural collaborative learning. In T. Beaven & F. Rosell-Aguilar (Eds), Innovative language pedagogy report (pp. 17-22). Research-publishing.net. https://doi.org/10.14705/rpnet.2021.50.1230

Gutiérrez, B.F., Glimäng, M.R., O'Dowd, R., & Sauro, S. (2021). Mentoring handbook for virtual exchange teachers. Strategies to help students achieve successful synchronous and asynchronous online intercultural communication. Stevens Initiative https://www.stevensinitiative.org/resource/mentoring-handbook-for-virtual-exchange-teachers/.

Gutiérrez, B. F., Glimäng, M. R., Sauro, S., & O'Dowd, R. (2022). Preparing students for successful online intercultural communication and collaboration in virtual exchange. *Journal of International Students*, *12*(S3), 149-167.

Hannah, D. R., & Lautsch, B. A. (2011). Counting in qualitative research: Why to conduct it, when to avoid it, and when to closet it. *Journal of Management Inquiry*, *20*(1), 14-22.

Hanisch, C. (1969). The personal is political.

Hanvey, R. G. (1975), An Attainable Global Perspective, Center for War/ Peace Studies, New York.

Hayward, T. (2006). Ecological citizenship: justice, rights and the virtue of resourcefulness. *Environmental politics*, *15*(03), 435-446

Helm, F., Guth, S., & Farrah, M. (2012). Promoting dialogue or hegemonic practice? Power issues in

telecollaboration. *Language Learning & Technology*, *16*(2), 103-127.

Helm, F. (2015). The practices and challenges of telecollaboration in higher education in Europe. Language Learning & Technology, 19(2), 197–217. Retrieved from http://llt.msu.edu/issues/june2015/helm.pdf.

Helm, F. (2017). Critical Approaches to Online Intercultural Language Education. In S. L. Thorne & S. May (Eds.), *Language, Education and Technology* (pp. 219–231). Springer International Publishing. https://doi.org/10.1007/978-3-319-02237-6_18

Helm, F., & Van der Velden, B. (2019). Erasmus+virtual exchange impact report 2018, Publications Office of the European Union, Luxembourg. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/a6996e63-a9d2-11e9-9d01-01aa75e-d71a1/language-en/format-PDF

Holliday, A. (2020). Culture, communication, context and power. In *The Routledge Handbook of Language and Intercultural Communication* (Second Edition, pp. 39–54). Routledge.

Hombres, B. d', Hoskins, B., Campbell, J., European Commission, Joint Research Centre, & Institute for the Protection and the Security of the Citizen. (2008). *Does formal education have an impact on active citizenship behaviour?* Luxembourg: Publications Office.

Horton, J. (1998): Personal communication.

Horwitz, E. K., Tallon, M., & Luo, H. (2010). Foreign language anxiety. *Anxiety in schools: The causes, consequences, and solutions for academic anxieties*, *2*, 96-115.

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative health research*, *15*(9), 1277-1288.

Hult, M. and Lennung, S. (1980) Towards a definition of action research: a note and bibliography. Journal of Management Studies, 17, 241-250.

Hymes, D. (1972). On communicative competence. *Sociolinguistics*, *269293*, 269-293.

Jackson, K. (2019). *Qualitative data analysis with NVivo* (3rd edition). SAGE Publications.

Jackson, J. (Ed.). (2020). *The Routledge handbook of language and intercultural communication* (Second edition). Routledge.

Karatekin, K., & Uysal, C. (2018). Ecological citizenship scale development study. *International Electronic Journal of Environmental Education*, *8*(2), 82-104.

Kellner, D. and J. Share (2005), "Toward Critical Media Literacy: Core concepts, debates, organizations, and policy", Discourse: Studies in the Cultural Politics of Education, Vol. 26/3, pp. 369-386.

Kelly, M. (2013). European higher education in the world. European Journal of Language Policy, 5(2), 268-279.

Kember, D. (2000). *Action learning, action research: Improving the quality of teaching and learning*. Routledge.

Kemmis S & McTaggart R. (1988). The action research planner. Victoria: Deakin University Press.

Kern, R. (2000). Computers, language and literacy. *Literacy and language teaching*, 223-266.

Kern, R., Ware, P., & Warschauer, M. (2004). 11. Crossing frontiers: New directions in online pedagogy and research. *Annual review of applied linguistics*, *24*, 243-260.

Kern, R. (2014). Technology as Pharmakon: The Promise and Perils of the Internet for Foreign Language Education. *The Modern Language Journal*, *98*(1), 340–357. doi: 10.1111/j.1540-4781.2014.12065.x

Kohn, K., & Hoffstaedter, P. (2017). Learner agency and non-native speaker identity in pedagogical lingua franca conversations: Insights from intercultural telecollaboration in foreign language education. *Computer Assisted Language Learning*, *30*(5), 351-367.

Kramsch, C. (1993). Context and culture in language teaching. Oxford university press.

Kramsch, C. (1998). Language and culture. Oxford: Oxford University Press.

Kramsch, C. (2009). The Virtual Self. In *The multilingual Subject. What Foreign Language Learners Say about their Experience and Why it Matters* (pp. 154–187). Oxford: Oxford University Press.

Kramsch, C., & Thorne, S. L. (2002). *Foreign language learning as global communicative practice* (pp. 93-110). Routledge.

Kvale, S. (2012). *Doing interviews*. Sage.

Ladegaard, H. J. (2020). Constructing the cultural Other. Prejudice and stereotyping. In *The Routledge Handbook of Language and Intercultural Communication* (Second Edition, pp. 191–203). Routledge.

Lamy, M. N., & Goodfellow, R. (2010). Telecollaboration and learning 2.0. *Telecollaboration*, *2*, 107-138.

Lamy, M., & Hampel, R. (2007). *Online communication in language learning and teaching*. Springer.

Leas k., B. (2015). Internationalization of the curriculum in context. New York : Longman.

Lee, J., & Sauro, S. (2021). Assessing language learning in virtual exchange: suggestions from the field of language assessment. *Journal of Virtual Exchange*, *4*, 33-49.

Leone, P., & Telles, J. A. (2016). The teletandem network. In R. O'Dowd & T. Lewis (Eds), Online intercultural exchange: policy, pedagogy, practice (pp. 241-247). Longman.

Levy, M., & Stockwell, M. (2006). Effective use of CALL technologies: Finding the right balance. *Changing language education through CALL*, *1*(18), 301-320.

Lewin, K. (1951) Field Theory in Social Science; Selected Theoretical Papers, edited by D. Cartwright, New York: Harper and Row.

Lewin, K. and Lewin, G.W. (eds) (1948) Resolving Social Conflicts; Selected Papers on Group Dynamics, New York: Harper and Row.

Li, J., & Erben, T. (2007). Intercultural Learning via Instant Messenger Interaction. *CALICO Journal*, *24*(2), 291–311.

Liaw, M.-L., & English, K. (2014). A tale of two cultures. In D. M. Chun (Ed.), Cultura-inspired intercultural exchanges: Focus on Asian and Pacific languages (pp. 67–90). Honolulu, HI: University of Hawaii, National Foreign Language Resource Center.

Liaw, M. L., & Bunn-Le Master, S. (2010). Understanding telecollaboration through an analysis of intercultural discourse. *Computer Assisted Language Learning*, *23*(1), 21-40.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. sage.

Lindner, R. (2011). ESAP Students' Perceptions of Skills Learning in Computer-Mediated Intercultural Collaboration: *International Journal of Computer-Assisted Language Learning and Teaching*, *1*(2), 25–42. https://doi.org/10.4018/ijcallt.2011040103

Lindner, R. (2016). Developing communicative competence in global virtual teams: A multiliteracies approach to telecollaboration for students of business and economics. *CASALC Review*, 5(1), 144-156.

Lombard, M., Snyder−Duch, J., & Bracken, C. C. (2002). Content analysis in mass communication: Assessment and reporting of intercoder reliability. *Human communication research*, *28*(4), 587-604.

MacDonald, M. N. (2020). A global agenda for ethical language and intercultural communication research and practice. In *The Routledge Handbook of Language and Intercultural Communication* (Second Edition, pp. 555–568). Routledge.

Marull, C., & Kumar, S. (2020). Authentic language learning through telecollaboration in online courses. TechTrends, 64(4), 628-635.

Meadows D, Meadows D, Randers J, Behrens W III. 1974. The Limits to Growth. Pan: London.

Meagher, M. E., & Castaños, F. (1996). Perceptions of American Culture: The Impact of an Electronically-Mediated Cultural Exchange Program on Mexican High School Students. In *Computer-Mediated Communication* (pp. 187–201). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Meyer, C. F., & Rhoades, E. K. (2006). Multiculturalism: Beyond food, festival, folklore, and fashion. *Kappa Delta Pi Record*, *42*(2), 82-87.

Möllering, M., & Levy, M. (2012). Intercultural Competence in Computer-Mediated-Communication: An analysis of Research Methods. In *Researching Online Foreign Language Interaction and Exchange* (Vol. 3, pp. 233–264). Bern: Peter Lang.

Morse, J. M. (1995). The significance of saturation. *Qualitative health research*, *5*(2), 147-149.

Mullen, A., & Bortoluzzi, M. (2019). ASSESSING INTERCULTURAL AWARENESS: Reflection vs. Interaction in Telecollaboration. *Lingue e Linguaggi*, *33*.

Muller-Hartmann, A. (2007). Teacher role in telecollaboration: Setting up and managing exchanges. *Languages for Intercultural Communication and Education*, *15*, 167.

Müller-Hartmann, A. (2012). The Classroom-Based Action Research Paradigm in Telecollaboration. In *Researching Online Foreign Language Interaction and Exchange* (Melinda Dooly & Robert O'Dowd, Vol. 3, pp. 163–204). Bern: Peter Lang.

Müller-Hartmann, A., & O'Dowd, R. (2017). A training manual on telecollaboration for teacher trainers. *Retrieved June*, *25*, 2017.

National Council for the Social Studies. (1982). Position statement on global education. *Social Education*, *46*(1), 36-38

N. Martin, J., K. Nakayama, T., & Carbaugh, D. (2020). A global look at the history and development of language and intercultural communication studies. In *The Routledge Handbook of Language and Intercultural Communication* (Second Edition, pp. 19–38). Routledge.

A. Noels, K., Yashima, T., & Zhang, R. (2020). Language, identity, and intercultural communication. In *The Routledge Handbook of Language and Intercultural Communication* (Second Edition, pp. 55–69). Routledge.

Norton, B. (1991). Toward Unity Among Environmentalists, Nueva York y Oxford, Oxford University Press.

Norton, L. (2001) 'Researching your teaching: The case for action research', Psychology Learning and Teaching, 1 (1): 21–27.

Norton, L. (2009). *Action research in teaching and learning: a practical guide to conducting pedagogical research in universities*. Abingdon, Oxon: Routledge.

Nicolaou, A. (2020). The affordances of virtual exchange for developing global competence and active citizenship in content-based language learning. Unpublished doctoral thesis. Trinity College Dublin, the University of Dublin.

OECD. (2018). Preparing our youth for an inclusive and sustainable world. The OECD PISA global competence framework.

OECD (2020), PISA 2018 Results (Volume VI): Are Students Ready to Thrive in an Interconnected World?, PISA, OECD Publishing, Paris, https://doi.org/10.1787/d5f68679-en.

O'Dowd, R. (2003). Understanding the "other side": Intercultural learning in a Spanish-English e-mail exchange. *Language learning & technology*, *7*(2), 118-144.

O'DOWD, R. & Eberbach, K. (2004). Guides on the side? Tasks and challenges for teachers in telecollaborative projects. *ReCALL*, *16*(1), 5-19.

O'Dowd, R., & Ritter, M. (2006). Understanding and working with failed communication in telecollaborative exchanges. *CALICO journal*, 623-642.

O'Dowd, R., & Ware, P. (2009). Critical issues in telecollaborative task design. *Computer Assisted Language Learning*, *22*(2), 173–188. https://doi.org/10.1080/09588220902778369

O'Dowd, R. (2011). Online foreign language interaction: Moving from the periphery to the core of foreign language education?. *Language Teaching*, *44*(3), 368-380.

O'Dowd, R. (2013). Telecollaborative networks in university higher education: Overcoming barriers to integration, Internet and Higher Education, http://dx.doi.org/10.1016/j.iheduc.2013.02.001

O'Dowd, R., & Lewis, T. (2016). *Online intercultural exchange: policy, pedagogy, practice*. New York: Routledge.

O'Dowd, R. (2016a). Emerging trends and new directions in telecollaborative learning. *calico journal*, *33*(3), 291-310.

O'Dowd, R. (2016b). Learning from the Past and Looking to the Future of Online Intercultural Exchange. In R.O'Dowd & T. Lewis (eds.) Online Intercultural Exchange: Policy, Pedagogy, Practice. Routledge: London.

O'Dowd, R. (2018). From telecollaboration to virtual exchange: state-of-the-art and the role of UNICollaboration in moving forward. *Journal of Virtual Exchange*, *1*, 1–23. doi: 10.14705/rpnet.2018.jve.1

O'Dowd, R. (2019). A transnational model of virtual exchange for global citizenship education. Language Teaching, 1-14. doi:10.1017/S0261444819000077

O'Dowd, R., & Dooly, M. (2020). Intercultural communicative competence development through telecollaboration and virtual exchange. In *The Routledge Handbook of Language and Intercultural Communication* (Second Edition, pp. 361–375). Routledge.

O'Dowd, R., Sauro, S., & Spector‐Cohen, E. (2020). The Role of Pedagogical Mentoring in Virtual Exchange. *TESOL Quarterly*, *54*(1), 146–172. https://doi.org/10.1002/tesq.543

O'Dowd, R. (2021a): Virtual exchange: moving forward into the next decade, Computer Assisted Language Learning, DOI: 10.1080/09588221.2021.1902201

O'Dowd, R. (2021b). What do students learn in virtual exchange? A qualitative content analysis of learning outcomes across multiple exchanges. *International Journal of Educational Research*, *109*, 101804.

O'Dowd and Beelen (2021): https://www.eaie.org/blog/virtual-exchange-iah-terminology.html

O'Rourke, B. (2007). Models of telecollaboration (1): eTandem. In R. O'Dowd (Ed.), Online intercultural exchange (pp. 41-61). Multilingual Matters. https://doi.org/10.21832/9781847690104-005

Orsini-Jones, M., & Lee, F. (2018). *Intercultural Communicative Competence for Global Citizenship*. London: Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-58103-7

Parsons, J., Hewson, K., Adrian, L., & Day, N. (2013). *Engaging in action research: A practical guide to teacher‐conducted research for educators and school leaders*. Brush Education.

Patton, M. Q. (2002). Two decades of developments in qualitative inquiry: A personal, experiential perspective. *Qualitative social work*, *1*(3), 261-283.

Porto, M. (2013). Language and intercultural education: An interview with Michael Byram. *Pedagogies: An International Journal*, *8*(2), 143-162.

Porto, M. (2014). Intercultural citizenship education in an EFL online project in Argentina. *Language and Intercultural Communication*. doi: 10.1080/14708477.2014.890625

Porto, M. (2015). Ecological and intercultural citizenship in the primary English as a foreign language (EFL) classroom: an online project in Argentina. *Cambridge Journal of Education*. doi: 10.1080/0305764X.2015.1064094

Porto, M. (2019). Affordances, complexities, and challenges of intercultural citizenship for foreign language teachers. *Foreign Language Annals*, 1-24. doi: 10.1111/flan.12375

Pierre Dillenbourg, Daniel Schneider, Paraskevi Synteta. Virtual Learning Environments. 3rd Hellenic Conference ''Information & Communication Technologies in Education'', 2002, Rhodes, Greece. pp.3- 18. Ffhal-00190701f

Rapoport, R. N. (1970). Three dilemmas in action research: with special reference to the Tavistock experience. *Human relations*, *23*(6), 499-513.

Richards, L., & Morse, J. M. (2007). Coding. *Readme first for a user's guide to qualitative methods*, 133-151.

Richards, J. C. & Renandya, W. A. (Eds.). (2002). *Methodology in language teaching: An anthology of current practice*. Cambridge university press.

Rinhardt, J. (2012). Accomodating Divergent Frameworks in Analysis of Technology-Mediated L2 Interaction. In *Researching Online Foreign Language Interaction and Exchange* (Melinda Dooly & Robert O'Dowd, Vol. 3, pp. 45–77). Bern: Peter Lang.

Risager, K. (2007). Language and culture pedagogy. In *Language and Culture Pedagogy*. Multilingual Matters.

Risager, K. (2020). Linguaculture and transnationality. The cultural dimensions of language. In *The Routledge Handbook of Language and Intercultural Communication* (Second Edition, pp. 109–123). Routledge.

Ryshina-Pankova, M. (2018). Discourse moves and intercultural communicative competence in telecollaborative chats. *Language Learning and Technology*, *22*(1), 218–239.

Rossouw, D. (2009). Educators as action researchers: some key considerations. *South African Journal of Education*, *29*(1), 1-16.

Sáiz, Á. V. (2003). Ciudadanía ecológica: una noción subversiva dentro de una política global. *Revista de estudios políticos*, (120), 269-300.

Sáiz, Á.V. (2005). 'Globalisation, Cosmopolitanism and Ecological Citizenship', *Environmental Politics*, 14(2), 163-178, DOI: 10.1080/09644010500054848

Saldaña, J. (2013). *The coding manual for qualitative researchers*. Sage.

Sandelowski, M. (1995). Sample size in qualitative research. *Research in nursing & health*, *18*(2), 179-183.

Schön D. (1983). The reflective practitioner: How professionals think in action. New York: Basic Books.

Schneider, J., & von der Emde, S. (2006). Conflicts in Cyberspace: From Communication Breakdown to Intercultural Dialogue in Online Collaborations. In *Internet-mediated Intercultural Foreign Language Education* (Julie A. Belz & Steven L. Thorne, pp. 178–206). Boston, USA: Thomson Heinle.

Simpson, J. (2002). Computer-mediated communication. ELT Journal, 56 (4), 414-415.

Strang, L., Bélanger, J., Manville, C., & Meads, C. (2016). Review of the Research Literature on Defining and Demonstrating Quality Teaching and Impact in Higher Education. *Higher Education Academy*.

The Stevens Initiative. (2020). *The Stevens Initiative's 2020 Annotated Bibliography on Virtual Exchange Research*. Washington: The Aspen Institute.

Bart Rienties, Tim Lewis, Robert O'Dowd, Irina Rets & Jekaterina Rogaten (2020): The impact of virtual exchange on TPACK and foreign language competence: reviewing a large-scale implementation across 23 virtual exchanges, Computer Assisted Language Learning, DOI:10.1080/09588221.2020.1737546

Smith, M.K. (1996; 2001, 2007) 'Action research', The Encyclopedia of Informal Education. Online. Available: www.infed.org/research/b-actres.htm .

Smith, Mark (1998), Ecologism: towards ecological citizenship (Milton Keynes: Open University Press)

Sorrells, K. (2020). Social justice, diversity, and intercultural-global citizenship education in the global context. In *The Routledge Handbook of Language and Intercultural Communication* (Second Edition, pp. 376–394). Routledge.

Stenhouse, L. (1975). The teacher as researcher. In *QfBrints Reuder, E835, Open*.

Stevens Initiative. (2019). Virtual exchange impact and learning report 2019. Retrieved from https://www.stevensinitiative.org/resource/virtual-exchange-impact-and-learning-report/#:~:text=The%20Steven%20Initiative's%202019%20Virtual,and%20common%20challenges%20for%20implementers

Stevens Initiative. (2020). The Stevens Initiative's *2020 Annotated Bibliography on Virtual Exchange Research*. Retrieved from https://www.stevensinitiative.org/wp-content/uploads/2020/02/2020-Annotated-Bibliography-on-Virtual-Exchange-Research.pdf

Strange, S. (1999). Dinero loco, Paidós.

Takac, M., Collett, J., Blom, K. J., Conduit, R., Rehm, I., & Foe, A. D. (2019). Public speaking anxiety decreases within repeated virtual reality training sessions. PLOS ONE, 14(5), Article e0216288. https://doi.org/10.1371/journal.pone.0216288

Thorne, S. L. (2003). Artifacts and Cultures-of-Use in Intercultural Communication. *Language Learning & Technology*, 7 (2), 38–67, http://llt.msu.edu/vol7num2/thorne/.

Thorne, S. L. (2006). Pedagogical and Praxiological Lessons from Internet-Mediated Intercultural Foreign Language Education Research. In *Internet-mediated Intercultural Foreign Language Education* (Julie A. Belz & Steven L. Thorne, pp. 2–30). Boston, USA: Thomson Heinle.

The EVALUATE Group. (2019). Evaluating the impact of virtual exchange on initial teacher education: a European policy experiment. Research-publishing.net.https://doi.org/10.14705/rpnet.2019.29.9782490057337

Thurmond, V.A. (2001), The Point of Triangulation. Journal of Nursing Scholarship, 33: 253-258. https://doi.org/10.1111/j.1547-5069.2001.00253.x

Train, R. (2006). A Critical Look at Technologies and Ideologies in Internet-mediated Intercultural Foreign Language Education. In *Internet-mediated Intercultural Foreign Language Education* (Julie A. Belz & Steven L. Thorne, pp. 247–277). Boston, USA: Thomson Heinle.

UN. (2022). Progress towards the Sustainable Development Goals Report of the Secretary-General. https://sustainabledevelopment.un.org/content/documents/29858SG_SDG_Progress_Report_2022.pdf

UNESCO, Education Sector, & Tang, Q. (2014). *Global citizenship education: preparing learners for the challenges of the 21st century*. Paris: UNESCO.

UNESCO. (2015). SDG4-Education 2030, Incheon Declaration (ID) and Framework for Action. For the Implementation of Sustainable Development Goal 4, Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning Opportunities for All, ED-2016/WS/28.

UNESCO. (2017). *Education for sustainable development goals: learning objectives.*

UNESCO. (2020). Education for Sustainable Development a Roadmap.

UNHCR website: https://www.unhcr.org/flagship-reports/?gclid=Cj0KCQjwpImTBhCmARIsAKr58cw4aDhpPJCtosqXcwXlIezP7A3Z6ByFhzclHw2cihrM1ThW6xyUHVIaAg26EALw_wcB&gclsrc=aw.ds

Van Ek, J. A. (1986). Objectives for Foreign Language Learning. Volume I: Scope.

Van der Zwaard, R., & Bannink, A. (2014). Video call or chat? Negotiation of meaning and issues of face in telecollaboration. *System*, *44*, 137-148.

Van der Zwaard, R., & Bannink, A. (2018). Reversal of Participation Roles in NS-NNS Synchronous Telecollaboration. calico journal, 35(2), 162-181.

Van Steenbergen, B. (1994): «Towards a global ecological citizen», en van Steenhergen, Bart (ed.), The Condition ofCitizenship, Londres, Sage).

Vives Rego, J. (2013). El ciudadano ecológico: reflexiones sobre algunos contextos sociales y elementos cosmovisionales. *Sociology and Technoscience*, *3*(1), 83–104.

Wackernagel, M., & Rees, W. (1996). *Our ecological footprint: reducing human impact on the earth* (Vol. 9). New society publishers.

Ware, P. (2005). " Missed" communication in online communication: Tensions in a German-American telecollaboration. *Language learning & technology*, *9*(2), 64-89.

Ware, P., & Kessler, G. (2014). Telecollaboration in the secondary language classroom: case study of adolescent interaction and pedagogical integration. *Computer Assisted Language Learning*, *29*(3), 427–450. doi: 10.1080/09588221.2014.961481

Ware, P. D., & Kramsch, C. (2005). Toward an Intercultural Stance: Teaching German and English through Telecollaboration. *The Modern Language Journal*, *89*(2), 190–205. https://doi.org/10.1111/j.1540-4781.2005.00274.x

Ware, P., & Rivas, B. (2012). Researching Classroom Integration of Online Language Learning Projects: Mixed Methods Approaches. In *Researching Online Foreign Language Interaction and Exchange* (Melinda Dooly & Robert O'Dowd, Vol. 3, pp. 107–131). Bern: Peter Lang.

Ware, P. (2013). Teaching comments: Intercultural communication skills in the digital age. *Intercultural Education*, *24*(4), 315-326.

Warschauer, M. (1995). *Virtual Connections: Online Activities & Projects for Networking Language Learners*.

Wilkinson, J. (2020). From native speaker to intercultural speaker and beyond. Intercultural (communicative) competence in foreign language education. In *The Routledge Handbook of Language and Intercultural Communication* (Second Edition, pp. 283–298). Routledge.

Wiśniewska, D. (2011). Mixed Methods and Action Research: Similar or different? Glottodi-dactica-An International Journal of Applied Linguistics, XXXVII, Poznan: Adam Mickiewicz University Press.

Zhang, Y., & Wildemuth, B. M. (2009). Qualitative analysis of content. *Applications of social research methods to questions in information and library science*, *308*, 319.

APPENDICES

Appendix A: Initial and Final Interview Questions

	ENTREVISTAS INICIALES (SP)	INITIAL INTERVIEWS (EN)
1	Hasta ahora, ¿cómo te sientes en cuanto a tus interacciones con tus compañeros de Irlanda? ¿Qué has encontrado especialmente fácil/difícil hasta el momento a la hora de comunicarte con ellos?	So far, how do you feel about your interactions with your peers in Ireland? What have you found easy/difficult so far in communicating with them?
2	¿Cómo te sentías a la hora de comunicarte con ellos antes de la videoconferencia y después de ella?	How did you feel about communicating with them before and after the videoconference?
3	¿Qué impacto ha tenido esta primera tarea en tu punto de vista/tu opinión en cuanto a la cultura/hábitos ecológicos de tus compañeros?	What impact has this first task had on your point of view/your opinion regarding your colleagues' culture/ecological habits?
4	¿Te ha hecho esta primera tarea reflexionar de alguna manera acerca de tu propia cultura/ hábitos ecológicos?	Has this first task made you reflect in any way on your own culture/ecological habits?
5	Aunque solo estemos empezando, ¿Crees que cambiarán tu forma de actuar o tu forma de pensar de alguna manera después de participar en este intercambio?	Even though we are just starting out, do you think that it will change the way you act or think in any way after participating in this exchange?
6	¿Qué es lo que esperas sacar/aprender del intercambio?	What do you hope to gain/learn from the exchange?

	ENTREVISTAS FINALES (SP)	FINAL INTERVIEWS (EN)
1	**Examinar temas locales, globales e interculturales:** Contadme un poco acerca de cómo organizábais el trabajo a la hora de tener que informaros acerca de un tema y luego tener que explicárselo a vuestros compañeros: cómo buscábais la información (contraste de fuentes de info. diversas y fiables,consulta de las acciones/iniciativas del gobierno local/nacional) y luego esa información cómo se la explicabáis a vuestros compañeros para que lo entendieran (resumen, simplificación,, uso de ejemplos concretos para presentar el tema)	**Examine local, global and intercultural issues:** Tell me a little bit about how you organised your work when you had to inform yourself about an issue and then had to explain it to your partners: how you looked for information (contrast of diverse and reliable info. sources,consultation of local/national government actions/initiatives) and then how you explained that information to your partners so that they understood it (summarising, simplifying, using concrete examples to present the topic).
2	**Entender y valorar las perspectivas y visiones del mundo que tienen otros:**	**Understand and appreciate the perspectives and worldviews of others:**

	-Ha habido ocasiones en las que os habéis encontrado con que ambos países tienen que enfrentar el mismo problema, un problema de relevancia global, y sin embargo, en cada contexto se toman unas medidas específicas diversas. A raíz de vuestra experiencia en el intercambio ¿Podríais explicar uno de estos casos y qué pensamientos os provoca? -Siguiendo en la línea de la pregunta anterior, seguramente las respuestas diversas a los mismos problemas tengan que ver con las diferentes culturas de cada uno de vuestros contextos. ¿Podríais pensar en algún caso en el que alguno de vuestros compañeros tenía una perspectiva diferente a la vuestra que os haya llamado la atención y cómo habéis reaccionado o qué os hizo pensar?	-There have been occasions when you have found that both countries have to deal with the same problem, a problem of global relevance, and yet in each context different specific measures are taken. From your experience in the exchange, could you explain one of these cases and what are your thoughts on it? -Following on from the previous question, it is likely that the different responses to the same problems have to do with the different cultures in each of your contexts. Can you think of a case where one of your colleagues had a different perspective to yours that struck you and how you reacted or what made you think?
3	**Participar en interacciones abiertas, apropiadas y efectivas con personas de diferentes culturas:** -Habladme acerca de vuestra experiencia en vuestro grupo de trabajo internacional en cuanto a la comunicación y a la colaboración. -¿Habéis notado alguna diferencia en la forma en que os comunicáis vosotros y en la que se comunican ellos? Ya sea en las videoconferencias el lenguaje verbal o gestual o en vuestras comunicaciones escritas el uso de emoticonos, de registro, etc… ¿Podríais dar algún ejemplo? -¿Cómo funcionó vuestra colaboración? Si hubo malentendidos: ¿cómo los gestionasteis? ¿qué podríais haber hecho mejor? ¿qué haríais de otra manera en el futuro?	**Engage in open, appropriate and effective interactions with people from different cultures:** -Tell me about your experience in your international working group in terms of communication and collaboration. -Have you noticed any differences in the way you communicate and the way they communicate? Whether it is verbal or gestural language in your video conferences or the use of emoticons, registering, etc. In your written communications, could you give an example? -How did your collaboration work? If there were misunderstandings: How did you handle them? What could you have done better? What would you do differently in the future?
4	**Actuar por el bienestar colectivo y el desarrollo sostenible:** -Habladme del tipo de acción que habéis tomado en el proyecto y cómo os sentís a nivel personal después de esta experiencia (qué impacto va a tener en vuestras acciones futuras). -¿Creeis que cambiarán vuestra forma de actuar o vuestra forma de pensar de alguna manera después de participar en este programa?	**Acting for collective well-being and sustainable development:** -Tell me about the kind of action you have taken in the project and how you feel on a personal level after this experience (what impact it will have on your future actions). -Do you think you will change the way you act or think in any way after participating in this programme?
5	**Preguntas generales:** -¿Qué fue lo que más y menos os gustó del intercambio? -¿Cómo ha impactado vuestra participación en este intercambio en vuestra opinión del país con el que habéis trabajado? -¿Consideráis que esta es una buena manera de aprender un idioma? -¿Qué creeis que podría mejorarse en el futuro?	**General questions:** -What did you like most and least about the exchange? -How has your participation in this exchange impacted on your opinion of the country you worked with? -Do you think this is a good way to learn a language? -What do you think could be improved in the future?

A Virtual Exchange Student Portfolio

Ireland-Spain 2020-2021

Student Name:	
Your partner class:	

Introduction

What are the objectives of your Virtual Exchange Portfolio?
Over the coming weeks you will be taking part in a Virtual Exchange project. During this time, you will have the opportunity to collaborate and work online together with students from different cultural backgrounds.

This portfolio is intended to help you to do two things: First of all, it is a place where you can collect and organise in one document your most interesting or significant experiences from your online interactions. Second, it is a place where you can reflect on what you have learned during your intercultural interactions.

It is important to keep in mind that we take part in Virtual Exchanges because they can help you to achieve different learning goals, including:
- Improve your ability to communicate and establish relationships with members of other cultures in foreign languages.
- Become more aware of the differences and similarities between your cultures and the cultures of your partner. (Remember the word "culture" implies something dynamic and always evolving. A same person inhabits different cultures.)
- Learn how to use digital technologies effectively and safely for learning and communication.
- Collaborate with peers on the comparison and discussion of relevant global issues.

So what is a portfolio?
A portfolio is essentially two things: First of all, it is a collection of materials and interactions which have come from your virtual exchange and which you consider to be evidence of your learning, progress and efforts. Second, in your portfolio you are also asked to talk about these materials and interactions and to **reflect** on what you have learned from these experiences.

How to complete this portfolio?
1. First, you should store your portfolio safely, so you can access it and add materials and reflections to it regularly as your Virtual Exchange progresses. You might decide to save it as a Google doc so you can have it online and you can easily add links to online materials.
2. Complete the portfolio in English, although parts in Spanish may appear corresponding to the tasks or discussions you have carried out in this language with your colleagues.
3. As you communicate with your international partners each week, add different examples of your online interactions and creations to the different sections of the portfolio related to the task you have been working on. You can cut and paste examples of messages (on Moodle forums, WhatsApp, email, Google docs, etc.) or add screenshots in order to show examples of different problems or interesting learning moments in your exchange. You can copy/paste pieces of your interactions or add screenshots or you can simply write about something that happened during your project.
4. Very importantly, you should also write commentaries and reflections about why you think these examples are important and what you learned from them. Don't be afraid to be honest when you write these reflections. Online intercultural exchange is not a simple process and you can learn a lot from mistakes and from when communication does not work out like you expected.

Task 1: Getting to Know Each Other

Task 1: Stage 1:

In this first section you should write about your Virtual Exchange partner(s) that you have 'met' in this task. Who are your Virtual Exchange partners? What do you know about their background? How would you describe them?

And what have been your experiences creating an online presentation of yourself? What are the challenges of trying to 'present yourself' online?

Remember, you can add links to your presentations as well as quotes from your partners' messages, but you should also comment on what you learned from this information.

Participation: Examples of my work and interactions:
Reflection:What did I learn from this?:

Task 1:Stage 2:

How was the experience of preparing the presentation with the members of your local group? Has it made you reflect in some way on your own ecological habits and opinions or, more generally, on those in your environment or culture?

What have you discovered about your international colleagues and their context through their presentation? Was there any aspect of their presentation that was particularly striking to you? Mention aspects of your life that you think may be different from those of the students in your partner class based on the information exchanged during this phase.

What were the reactions of your international colleagues to your presentation?
Have the responses to your presentation or the presentation from your international colleagues awakened any thoughts in you?

Participation: Examples of my work and interactions:
Reflection:What did I learn from this?:

Task 1: Stage 3:

In this stage you were given the opportunity to develop your ability to collaborate successfully with others on shared activities by deciding on the group name and its philosophy, as well as negotiating a means of communication for the rest of the project.
In this section write your reflections about what happened in this task and what you learned from these interactions. Can you add any examples of your online interactions which show how you used your online negotiation skills during this task? What impact did synchronous communication through video conferencing have on your way of communicating?

Participation: Examples of my work and interactions:
Reflection:What did I learn from this?:

Task 2: Comparing and Contrasting

Task 2: Stage 1:

Compare the answers to the surveys from your classmates with those of the students in your partner class. What differences and similarities you noticed between the two classes' responses? Did your partner class provide any responses which you found strange or particularly interesting? Mention things you noticed when you compared the results of the questionnaires, responses from your partners which you found interesting or surprising, their reactions to your responses in the questionnaires…

Participation: Examples of my work and interactions:
Reflection:What did I learn from this?:

Task 2: Stage 2:

After you have completed your interviews, reflect on the situation regarding the environmental issue that you have chosen in both countries/local areas. What differences have you noticed? What could your country/locality learn from your partner country/locality? And what could they learn from yours?

Participation: Examples of my work and interactions:
Reflection:What did I learn from this?:

Task 3: Collaborating on a joint product

In this task you were asked to create a telecollaborative product together.
Now write your reflections about what happened in this task and what you learned from your interactions and collaboration with your partners. In particular, can you add any examples of the online interactions which helped you to learn about your partners' beliefs, worldviews or practices? You can copy/paste pieces of your interactions or add screenshots or you can simply write about something that happened during your project.

Participation: Examples of my work and interactions:
Reflection:What did I learn from this?:

Looking back

In this section you can write your concluding comments and reflections. Use some of these questions to help you write your ideas:
What are the most important things you have learned from this project?
Has it changed the way you think about your collaborating with people from other cultural backgrounds?
Did you have any kind of conflict during the exchange in your working group? If so, how did you deal with the situation?
Has it led you to change the way you think about your own society and culture in any way?
What do you feel you have learned about communicating and collaborating with online technologies?
If you were to do a virtual exchange like this again, is there anything you would do differently?
Finally, how could the project have been improved?

A Virtual Exchange Student Portfolio

Germany – Spain

2021-2022

Student name:

International working group:

Introduction

What are the objectives of your Virtual Exchange Portfolio?

Over the coming weeks you will be taking part in a Virtual Exchange project. During this time, you will have the opportunity to collaborate and work online together with students from different cultural backgrounds.

This portfolio is intended to help you to do two things: First of all, it is a place where you can collect and organise in one document your most interesting or significant experiences from your online interactions. Second, it is a place where you can reflect on what you have learned during your intercultural interactions.

It is important to keep in mind that we take part in Virtual Exchanges because they can help you to achieve different learning goals, including:

- Improve your ability to communicate and establish relationships with members of other cultures in foreign languages.
- Become more aware of the differences and similarities between your cultures and the cultures of your partner. (Remember the word "culture" implies something dynamic and always evolving. A same person inhabits different cultures).
- Learn how to use digital technologies effectively and safely for learning and communication.
- Collaborate with peers on the comparison and discussion of relevant global issues.

So what is a portfolio?

A portfolio is essentially two things: First of all, it is a collection of materials and interactions which have come from your virtual exchange and which you consider to be evidence of your learning, progress and efforts. Second, in your portfolio you are also asked to talk about these materials and interactions and to **reflect** on what you have learned from these experiences.

How to complete this portfolio?

1. First, you should store your portfolio safely, so you can access it and add materials and reflections to it regularly as your Virtual Exchange progresses. You might decide to save it as a Google doc so you can have it online and you can easily add links to online materials.
2. Complete the portfolio in English.
3. As you communicate with your international partners each week, add different examples of your online interactions and creations to the different sections of the portfolio related to the task you have been working on. You are expected to record your videoconferences and to use otter.ai to automatically transcribe them. There are tutorials on Moodle on how to do both things. This will allow you to cut and paste examples of your interactions in order to show examples of different problems or interesting learning moments in your exchange. You can also cut and paste examples of messages (on Mahara forums, WhatsApp, email, etc.) or add screenshots.
4. Very importantly, you should also write commentaries and reflections about why you think these examples are important and what you learned from them. Don't be afraid to be honest when you write these reflections. Online intercultural exchange is not a simple process and you can learn a lot from mistakes and from when communication does not work out like you expected.

Task 1: Getting to Know Each Other

Task 1: Stage 1:

Go to your team's Mahara-Group. In the section, "Pages and Collections", you'll see that we have created a collection called "Team Introductions" for you. In this collection, we created a page for each team member. Go to your page and:
- *Share a short video (3-5 minutes) in which you introduce yourself to your partners, by talking about your background, interests/hobbies, university studies and anything you would like to share.*
- *Add an image to your page to tell the others more about yourself and relate it to one or more SDGs.*
- *Set yourself 3-5 SMART learning goals for this Virtual Exchange.*
- *Generate your own meme(s) about your expectations or worries approaching this experience. Use https://imgflip.com/memegenerator or https://memegenerator.net/.*

Once you have created your introduction page, look at your partners' pages and respond to their introductions in the comment section of their page. Point out things you have in common/ differences.
In the next week you will be having your first ZOOM meeting. To give you more flexibility but also allow you to take ownership of your group project, you should schedule your weekly meeting by yourselves. This means that you should also schedule your first videoconference together.

In this first section you should write about your Virtual Exchange partners that you have met in this task. Who are your Virtual Exchange partners? What do you know about their background? How would you describe them?

What have been your experiences creating an online presentation of yourself? What are the challenges of trying to 'present yourself' online?

And what have been your experiences creating your own meme(s) about your expectations or worries approaching this experience and looking at your partners' ones? Have you noticed any cultural differences between memes coming from each context?

Remember, you can add links to your presentations as well as quotes from your partners' messages, but you should also comment on what you learned from this information.

Participation: Examples of my work and interactions:
Reflection:What did I learn from this?:

Task 1: Stage 2:

Meet your transnational team in a videoconference. Please use the ZOOM Link that we've provided to each of the teams. (*Important: Remember to record the videoconferences). Since now you will be working together in your international working groups, create a group name, some general group rules (at least 5) that you consider essential for successful online intercultural telecollaboration and a provisional schedule for all your videoconferences (e.g. agree on a day of the week and a time that would suit all of you to have your video calls together for the months that the VE lasts). Use this template page and fill it in during your ZOOM-Meeting. Then, choose a spokesperson to take care of your video recording (i.e. download of ZOOM recording, upload on WueLecture, share link on your mahara page).

Template:
Name of the group:
Reasons behind the name (e.g. things in common):
Essential rules of the group for successful online intercultural interaction:
Schedule for videoconferences:

In this stage you were given the opportunity to develop your ability to collaborate successfully with others on shared activities by deciding on the group name and its philosophy, as well as negotiating your encounters for the rest of the project.

In this section write your reflections about what happened in this task and what you learned from these interactions. Can you add any examples of your online interactions which show how you used your online negotiation skills during this task?

What impact did synchronous communication through videoconferencing have on your way of communicating?

Task 1: Stage 3:

Now that you know each other and have laid the foundations of success for your work together, it is time for your second videoconference.
This week you will discuss the Sustainable Development Goals together. While they are all very important, there may be some that particularly affect or concern you or that you simply feel you can contribute positively to. The goal is that as a group of young global citizens and future educators you will agree on a specific issue/situation related to one of these goals that you feel you can take action and make a difference in your life and in your potential teaching in the future. Please make sure that you are all in agreement and satisfied with your choice, because you'll collaboratively develop your project based on this in the following weeks.
Keep in mind that you are talking about topics and issues that may be complex to deal with and there is no reason why you should be experts on the field of sustainability. Look up information instead of relying only on what you think since you may provide information to your partners which is not accurate and therefore lead them to misleading conceptions. To this end, try to add reliable news/articles/sources that support your claims. Follow the same procedure as in the previous videoconference. Also for this week, we have created a template page in your team's process portfolio. Please edit this page collaboratively during your videoconference. Remember to appoint one team member to upload your ZOOM recording, too.

Write about the thoughts that this stage has awakened in you:

How was the experience of discussing the SDGs and how these relate to your own lives with the members of your group?

Has it made you reflect in some way on your own habits and opinions in terms of sustainability or, more generally, on those in your environment or culture?

What have you discovered about your international colleagues and their context in this task? Was there any aspect they mentioned that was particularly striking to you? Mention aspects of your life that you think may be different from those of the students in your partner class based on the information exchanged during this phase.

Task 2: Comparing and Contrasting

Task 2: Stage 1:

The main purpose of this task is for you to critically reflect together on how global issues affect lives locally and around the world by finding similarities and differences between your contexts.With your local partners, look up information which will help you to analyse the issue/situation that you have chosen in your local community and future potential teaching context. Critically evaluate the information you find, formulate your own arguments and get ready to explain complex situations to your international partners in an accessible and comprehensive way.
Get together with your transnational team for your third videoconference and compare the situation in your contexts regarding the issue/situation related to the SDG you chose in your previous meeting. Be willing to consider and engage with multiple perspectives and world views and reflect on your own. You are not expected to prepare "presentations" or "powerpoints" and you should not read what you explain to your partners. Just get ready to have a conversation about this topic and engage in online dialogue with your partners.
Share your conclusions on your Mahara page for this week.

"Global issues are also local issues: they are global in their reach but local communities experience them in very diverse ways" (OECD, 2018, p.13).

Write about your experience in the process of looking up information and transmitting it to your international partners (e.g. how did you inform yourself about a new topic, how you evaluated which information was useful or relevant to you and how you transmitted it to your partners in a comprehensible way…)

Compare the information provided by your international peers with the information that you presented to them. What differences and similarities you noticed between the two classes' contexts and perspectives?

What could your country/locality learn from your partner country/locality? And what could they learn from yours?

Did your partner class provide any responses which you found strange or particularly interesting?
Mention things you noticed when you compared the information coming from your different contexts, information from your partners which you found interesting or surprising, their reactions to your information…

Participation: Examples of my work and interactions:
Reflection:What did I learn from this?

Task 2: Stage 2:

Where do we want to be? How do we get there? Create opportunities to take informed reflective action and have your voices heard:
Respond to the global issue/situation you've been discussing together by identifying and evaluating different courses of action to positively address this issue/situation in your local communities and in your future teaching context. Weigh these actions against one another, for example by assessing the conditions that may make actions possible and agree on the design of an action plan to engage to improve the situation.
This phase will last two weeks. During the first week's videoconference you can discuss possible actions you can take until you agree on the one you like the best as a group. Once you have agreed on the action to take, in the second week's videoconference you can develop the action plan. (The second week's videoconference is optional; students can agree on working asynchronously during this week too).
Collaborate together in Mahara during and after your videoconferences and respond to the following aspects:
- *Possible actions discussed*
- *Reasons for the action chosen*
- *Design of the action plan*

After you have completed your action plan, reflect on active global and ecological citizenship and different ways of exercising it. Up to here has this experience fostered your individual readiness to take responsibility for the environment and change your own unsustainable behaviours?

How was the experience of discussing different courses of action and developing a group action plan together with your international peers? What challenges did you face at this stage?

Participation: Examples of my work and interactions:
Reflection:What did I learn from this?:

Task 3: Collaborating on a joint product

Task 3: Stage 1

Now that as a team you have designed a joint action plan, it is time to put it into practice. Depending on the type of action you have chosen you will need to organise yourselves in different ways, but in any case it is important that as a group you organise your time and workload as efficiently as possible.

Implementation of the action: taking action can range from the group members themselves carrying out certain sustainable actions during these two weeks to contribute to the chosen issue/situation to the creation and dissemination of awareness raising materials or any other type of action that comes to their mind. Whatever the chosen action is, it is important that the group documents the whole process in Mahara. Photos, videos, links, etc. can be included to report this experience.

Write about what happened in this task in which you took an active part to improve the issue/situation related to a SDG.

What have you learned from your interactions and collaboration with your partners while implementing an action plan together? What challenges did you face?

Can you add any examples of the online interactions which helped you to learn about your partners' beliefs, worldviews or practices?

You can copy/paste pieces of your interactions or add screenshots or you can simply write about something that happened during your project.

Participation: Examples of my work and interactions:
Reflection:What did I learn from this?:

Task 3: Stage 2

Once you have taken the action it is important that as a group you have a dialogue to reflect on the consequences it has had via videoconference. To guide your reflection you can ask yourselves the following questions and discuss them together:
What have been the immediate consequences or implications of our action?
Has our action had indirect consequences or implications?
Can we identify short- and long-term consequences?
Can we think of any unintended consequences as a result of the action?
Finally, think about the future: How will this experience of active global and ecological citizenship affect the way we think and act in the future?
As a group, come up with a short reflective text or video reflecting on the consequences of your action and the implications that this experience may have for you in the future and include your reflection on your Mahara-page.

Which were the conclusions you reached as a group on the impact that your actions had?

What are your own thoughts and conclusions on the relevance of taking an active part for a sustainable world?

Participation: Examples of my work and interactions:
Reflection:What did I learn from this?:

Looking back

In this section you can write your concluding comments and reflections. Use these questions to help you write your ideas:

What are the most important things you have learned from this project?
Do you feel that this project has been a good way to improve your English skills in some way? If so, how? Give concrete examples.
Has it changed the way you think about collaborating with people from other cultural backgrounds?
Has it led you to change the way you think about your own society and culture in any way?
Did you have any kind of conflict during the exchange in your working group? If so, how did you deal with the situation?
Has this experience changed your way of thinking about or acting for collective well-being and sustainable development in any way?
What do you feel you have learned about communicating and collaborating with online technologies?
If you were to do a virtual exchange like this again, is there anything you would do differently?
Finally, how could the project have been improved?

Appendix C: Consent forms Action Research Cycle 1 and 2

Consent Form ARC1

Consent form regarding Student Competencies Research

Authorization for audio and/or video recording or written versions of videoconferences among and interviews with students who have been engaged in virtual exchanges. The information collected will serve to enhance the research team's understanding of the development of student learning outcomes and students' experiences during VE projects.

Members of the student competencies research team:

Ms.--------------, University of ---------,---------
Mr. -------------, University of ---------,---------

For more information about the data management of the project, you may contact the project coordinators: —@-----.; —@-----

Participant's Full Name:

I hereby expressly grant permission to the research team the right to make and store video and/or audio recordings of me as part of the student competency research in the context of this virtual exchange between the University of --------- and the University of ---------.

I understand that the recordings will only be used for the purpose of collecting research data aimed at informational and research purposes.

In accordance with the General Data Protection Regulation (GDPR), I have the right to access and require rectification of the personal information that has been collected about me.

I have the right to withdraw my consent at any time without prejudice, now or in the future. I may lodge a complaint with a supervisory authority. To enforce this right and obtain the information, you may contact the project coordinators: —@-----.; —@-----

Date:
Participant's signature:

Consent Form ARC2

Intercultural telecollaboration: Global citizenship in the EFL classroom

Whom to Contact about this study:

Ms.xxxxxx, University of xxxxxx, xxxx

I.   INTRODUCTION/PURPOSE:

I have been asked to participate in a research study. The purpose of this study is to examine the extent to which telecollaborative encounters will enhance my global, intercultural and English language competences.

II.   PROCEDURES:

As a participant in this study, I am asked to complete three tasks with a partner institution using mainly synchronous tools, to record these interactions and to write my own reflections in a portfolio which shall help the instructor/researcher learn about my understanding of the benefits of the intercultural telecollaboration. All the online activities are part of the class assignments. As soon as all data is collected my personal identification will be deleted and destroyed and a pseudonym will be used in its place.

III.   RISKS AND BENEFITS:

My participation in this study does not involve any significant risks. I have been informed that my participation in this research might benefit me personally since it is expected that I would gain from discussing topics of global relevance with members from another culture. The outcome of study will potentially benefit other learners, the educational community or, ultimately, society.

IV.   CONFIDENTIALITY:

Any information learned and collected from this study in which I might be identified will remain confidential. Although the researcher requested my name to match my initial and final opinions about the topics discussed in class, my name will be immediately changed by a pseudonym. The key between the names and the pseudonyms will be kept in a password protected computer, and will be deleted as soon as the researcher collects all the information and substitutes the students' names by the pseudonyms. To help protect my confidentiality, the researcher will keep all the information in an external hard drive only accessible with a password. My name will also be changed for an identification code.

Only the members of the research team will have access to these records. If information learned from this study is published, I will not be identified by name.

Consenting to participate in this research also indicates my agreement that all information collected from me individually may be used by current and future researchers in such a fashion that my personal identity will be protected. Such use will include sharing anonymous information with other researchers for checking the accuracy of study findings and for future approved research that has the potential for improving human knowledge.

Specific types of research may require the following statements for consent documents:

As already stated, (1) my name will not be included on the collected data; (2) a code will be placed on the collected data; (3) through the use of an identification key, the researcher will be able to link my deliverables to my identity; and (4) only the researcher will have access to the identification key.

I give permission to use all the data obtained from my work in scientific publications or presentations.

V.   COMPENSATION/COSTS:

My participation in this study did involve no cost to me.

VI.   CONTACTS AND QUESTIONS:

The principal investigator,xxxxx, has offered to and has answered any and all questions regarding my participation in this research study. If I have any further questions, I can email her at xxxxxx.

VII.   VOLUNTARY PARTICIPATION

I have been informed that, although I had to complete the above-mentioned activities as part of my class assignments (except the questionnaires which collect my personal opinion), my participation in this research study is voluntary. The research team will not be able to use my information from class if I refuse to sign this document. I have been informed that data collected for this study will be retained by the investigator and analysed even if I choose to withdraw from the research.

VIII.   SIGNATURE FOR CONSENT

The above-named investigator has answered my questions and I agree to be a research participant in this study.

Participant's Name: _____   Date: _____

Participant's Signature: _____Date: _____

Investigator's Signature: _____Date: _____

Appendix D: Full Instructions Tasks Action Research Cycle 1

Task 1 Stage 1: Instructions for English Studies/Translation

In Schoology go to Task 1 and then to Discussions and post a video created with AdobeSpark in the discussion forum in which you **introduce yourself** to your partners, by talking about your background, interests/hobbies, university studies and anything you would like to share. Try to present aspects of your life which someone from your partner group might find interesting and different.

Once you have posted your presentation in the discussion, look at your partners' presentations in your working group and **comment on their presentations in your schoology working group forum.** When you have written in your own group, you can also look at presentations in other groups and leave comments there, too.

Language rule: If the presentation was in English, then react in English. If the presentation was in Spanish, then answer in Spanish.

Suggested tools: Adobe spark: https://spark.adobe.com/es-ES/make/video-maker/

Task 1 Stage 1: Instructions for Tourism/Business

In Schoology go to Task 1 and then to your working group forum and **introduce yourself** to your partners, by talking about your background, interests/hobbies, university studies and anything you would like to share. Try to present aspects of your life which someone from your partner group might find interesting and different. Post a video (**using AdobeSpark**, for example) in the discussion forum. Once you have posted your presentation in the discussion, **comment on your international partners' presentations.** When you have written in your own group, you can also look at presentations in other groups and leave comments there, too.

Adobespark:

Example of teachers' presentations from previous exchanges:

https://spark.adobe.com/video/NDyoq65SbhZK7

https://spark.adobe.com/video/McmRt7FZWACu8

Task 1 Stage 2: Instructions for English Studies/Translation

In your local class, taking into account what you have just learned about **ecological citizenship**, **work with the other members of your group to create a presentation of yourselves and your habits and views regarding ecological citizenship** using texts and multimedia materials (photos, video etc.) and post a link to the presentation on your Schoology working group forum.

Try to mention aspects of your life which you think might be different to the students in your partner class. Tell them about your habits and views, the ways you act in regards to the environment in your daily life and your opinions about it. Since you are going **to design an action plan together**, it is important that you understand each other's ecological approaches. To make the presentation follow **the script** with the points to be included.

You can create your presentation using Google docs, powerpoint or whatever tool you are comfortable with.

When your partner class shares their presentations, view the presentations. Now you can **respond with questions and comments** and respond to the comments and questions which they send to you.

Language rule: If the presentation was in English, then react in English. If the presentation was in Spanish, then answer in Spanish.

Suggested tools: Google docs, google slides, PPT etc.

In your local classroom, your local working group can make a short class presentation reporting what you have learned about your international partners and **compare their ecological experiences and views with yours**.

Task 1 Stage 2: Instructions for Tourism/Business

In your local class, taking into account what you have just learned about sustainable tourism, **work with the other members of your group to create a presentation of yourselves and your habits and views regarding ecology and tourism** using texts and multimedia materials (photos, video etc.) and post a link to the presentation on Schoology. Try to mention aspects of your life which you think might be different to the

students in your partner class. When you write about sustainability and tourism, tell them about your habits and views, the ways you act in regards to the environment and the way in which you use to travel in your daily life and your opinions about it. Since you are going **to design an action plan together**, it is important that you understand each other's ecological and touristic approaches. To make the presentation follow **the script** with the points to be included.

When your partner class shares their presentations, view the presentations. Now you can **respond with questions and comments** and respond to the comments and questions which they send to you.

In your local classroom, your local working group should now make a short class presentation reporting what you have learned about your international partners and **compare their touristic experiences and views with yours**.

Task 1 Stage 3: Instructions for English Studies/Translation

Meet your international working group partners in a videoconference **(*Important: Remember to record the videoconference)**. You can suggest a time and communication tool in your international working group forums. Try and establish a means of communication for the rest of the project. Since now you will be working together in your international working groups, it is a good idea to **create a group name and your group identity**. Work together to agree on a name that will best show the spirit of your group. Try spotting things that you have in common. Once you have decided on a group name, please come up with a short text which explains the philosophy behind your group name. If you work with google docs, please don't forget to save your chats in the doc. Then, publish your text on Schoology. Language rule: Try to speak for half the meeting in Spanish and half in English.

Suggested tools: zoom, google meet, skype

Task 1 Stage 3: Instructions for Tourism/Business

Meet your international working group partners in a videoconference **(*Important: Remember to record the videoconference)**. You can suggest a time and communication tool in your international working group forums. Try and establish a means of communication for the rest of the project. Since now you will be working together in your international working groups, it is a good idea to **create a group name and your group identity**. Work together to agree on a name that will best show the spirit of your group. Try spotting things that you have in common. Once you have decided on a group name, please come up with a short text which explains the philosophy behind your group name. If you work with google docs, please don't forget to save your chats in the doc. Then, publish your text on schoology.

Task 2 Stage 1: Instructions for English Studies/Translation

Complete the questionnaire. This questionnaire asks you to either complete a sentence or give three words or phrases which come to your mind when you think of a certain topic. Simply write whatever comes into your mind.

Compare the answers to the surveys from your classmates with those of the students in your partner class. What differences and similarities you noticed between the two classes' responses? Did your partner class provide any responses which you found strange or particularly interesting? Make a note of some questions and comments that you would like to ask them.

In the forum of your international working group, tell your partners what things you noticed when you compared the results of the questionnaires. Ask them to explain in more detail some of their responses which you found interesting or surprising. Ask them about their reactions to your responses in the questionnaires.

Task 2 Stage 1: Instructions for Tourism/Business

Complete the questionnaire. This questionnaire asks you to either complete a sentence or give three words or phrases which come to your mind when you think of a certain topic. Simply write whatever comes into your mind.

Now, in your local classroom, **compare the answers to the surveys from your classmates with those of the students in your partner class**. What differences and similarities you noticed between the two classes'

responses? Did your partner class provide any responses which you found strange or particularly interesting? Make a note of some questions and comments that you would like to ask them.

In the forum of your international working group, tell your partners what things you noticed when you compared the results of the questionnaires. Ask them to explain in more detail some of their responses which you found interesting or surprising. Ask them about their reactions to your responses in the questionnaires.

Task 2 Stage 2: Instructions for English Studies/Translation

You will now work together in a **videoconference** with your **international working group**. *Remember to **record** your videoconference. See the instructions **here**.

In your **videoconference** you are going to present to your partners an environmental problem affecting your town/village/area which you think could be improved through the promotion of sustainable practices. It might be a problem affecting your town, your neighbourhood, your university, etc...which you feel could be improved. Try to think of problems which affect your own lives or the lives of your families.

To prepare your presentation, consider the following questions:
1. What are the characteristics of the problem? (Have some photos or webpages/news ready to show your partners.)

E.g. A problem that concerns the region of Castilla y León, where León is located, is air pollution. This problem consists of the presence of polluting elements in the air that are harmful to the natural environment and also to the health of living beings.

La población de León respira un aire perjudicial para la salud según la OMS
2. What are the causes and consequences of this problem?

E.g. Causes: Coal mining, factories, means of transport, pesticides, deforestation…

Consequences: Respiratory and dermatological diseases, smog, acid rain...
3. Are there any measures/ sustainable practices being implemented to improve the situation already?
E.g.Promotion of the circular economy, the use of renewable energies in industry, institutions, stores, companies and homes, etc…

When your partners have listened to your presentation, you should discuss together what practical pieces of action could be taken by you and other young people to try and deal with this problem.

When you have finished your videoconference, the Irish group should write a short report in Spanish about what they learned about the Spanish issue. The Spanish group should write a short report in English about what they learned about the Irish issue. **Both reports should be published in your task 2 working group forums.**

This is what you should include in your report:

Basic information about the problem - What does it consist of? What are its main causes and effects?

What possible solutions or pieces of action did you and your partners discuss?

What are the new sustainable practices which your partners are proposing?

Task 2 Stage 2: Instructions for Tourism/Business

You will now work together in a **videoconference** with your **international working group**.*Remember to **record** your videoconference. See the instructions **here**.

In your **videoconference** you are going to present to your partners a destination (town, village, area) of your country which you think could be further developed to promote sustainable tourism. It might be a town where some of you come from or a place near your university which you know and which you feel is not being fully exploited.

To prepare your presentation, consider the following questions:
1. What are the characteristics of the location? Where is it located? What sites or activities does it offer tourists? (Have some photos or webpages ready to show your partners.)
2. Why do you think this location has potential for sustainable tourism?
3. Are there any sustainable practices, services and products offered by the destination already?

When your partners have listened to your presentation, you should discuss together what new sustainable tourism business or activity could be introduced into this region.

When you have finished your videoconference, the Irish group should write a short report in Spanish about what they learned about the Spanish location. **The Spanish group should write a short report in English about what they learned about the Irish location.** Both reports should be published in your task 2 working group forums.

<table>
<tr><td>

This is what you should include in your report:
Basic information about the location - where it is located? Is it a town, village or rural area?
What current tourism activity and facilities does it have?
What are the new sustainable tourism practices which your partners are proposing?
</td></tr>
</table>

Task 3 Stage 1: Instructions for English Studies/Translation

During Tasks 1 and 2, you have shared the environmental problems that your countries and localities have to face, many of them being common enemies, not only for both countries but for the whole planet. You have also deepened in the way in which your societies in general, and yourselves in particular, act to contribute to a more sustainable world, finding similarities and differences.

At this point, it is time for you to use what you have learned and work together to design a **promotional video of sustainable practices** to help mitigate one or more of these **common problems**. To make your message as effective as possible, present the environmental issues by talking about their effects on people's daily lives so that the viewer can take notice and try to focus on realistic and applicable sustainable practices for ordinary people.

Once your videos are ready, you will vote to choose the ones you like the most, which will be published by both Universities in their social networks to contribute to the promotion of sustainable practices in both communities.

In a **videoconference**, brainstorm and try to decide:
- What environmental problem are you going to address?
Choose a problem that is current, common to both countries and for which you can propose feasible sustainable practices for students like you.
- What sustainable practices are you going to promote?
- How are you going to do it (e.g. are you going to record yourselves carrying out the sustainable practices? Are you going to appear giving testimonies? Are you going to interview people from your environment? Are you going to create an animated video of which you will be the narrator, etc)?
It is preferable that you choose to make videos that are simple on a technical level but that have a powerful message. In the following links you can see examples of videos that are simple to create in which there are people simply talking but that meet the objective of promoting sustainable practices:
        SOMOS LA GENTE - OBJETIVOS DE DESARROLLO SOSTENIBLE; Estudiantes.ELE B1 - Moda sostenible; Un concepto que hará volar tu mente: Emprendimiento Sostenible; Video Final Desarrollo Sostenible
- What audience is your video aimed at?
- How do you plan to promote your video?
- How will you include the use of both languages in your video?
Keep in mind that the video will be watched by people who may not be bilingual, so make sure you either do two versions (one in each language) or if you intercalate languages in the same video add subtitles or repeat the same thing in each language, etc.
- What tool will you use to create the video?
Maybe just your camera, but there are also thousands of applications to create videos of all kinds (animated, with photos, etc...) and also to carry out all kinds of editing (cutting, pasting, etc...). Perhaps you have a favorite and want to use it. If not, here are some suggestions: https://www.videoscribe.co/en/ ; https://www.animaker.com/ ; https://spark.adobe.com/ ; https://www.moovly.com/ ; https://www.powtoon.com/ ; https://www.movavi.com, etc…
Choose a **spokesperson** to publish in your Schoology workgroup forum a short paragraph with what you have decided to do for your telecollaborative product. (November 29th)
But how will your video serve its purpose of promoting sustainable practices if no one watches it? Once it's ready, **take action!** Share it with your friends and family and even on social networks.
What is the reaction of the audience? Has your video been effective? Do you think it will contribute to make your family/friends/acquaintances more sustainable citizens?
Meet again in what will be your last **videoconference** and share how your environment has reacted to your telecollaborative product.
Name a **spokesperson** who will publish in Schoology a short paragraph about how your video has worked in your environments and your final thoughts about the exchange.

Task 3 Stage 1: Instructions for Tourism/Business

It is time for you to use what you have learned and work together to design **a short promotional video for two sustainable tourism destinations**, one in Ireland and one in Spain.

Each international working group will produce a short video of approximately 2 minutes (1 minute per destination or so) following the guidelines below.

Since time is very limited, you must choose very well what you want to include in your presentation and do it in a concrete and clear way as in the example.

Once they are ready, the videos of all the groups will be gathered in a single video that will be published by the Universities of Limerick and León in their social networks in order to promote sustainable tourism in both countries.

WATCH OUT:

Please, ensure that the Spanish destination is the first one in your video and the Irish one the second.

Although all the members of the international group will prepare the video together, you must take into account the following:

The destination in Ireland should be presented in Spanish, since the main objective is to attract Spanish tourists. Therefore, the students of the University of Limerick will have to do the voice-over.

The destination in Spain should be presented in English, since the main objective is to attract Irish tourists. Therefore, the students of the University of León will have to do the voice-over.

STEPS

In a **videoconference with your international working group**, brainstorm and decide:

1. What two specific locations will you choose?

Remember that you have to choose a destination in Spain and one in Ireland.Using the destinations you presented to your colleagues in the video conference of task 2 will save you time, but it is up to you.

2. What will you include in your video?

As you may remember, sustainable tourism has three dimensions: socioeconomic sustainability, cultural sustainability, and environmental sustainability. Therefore, you should include the following in your video:

Location of the destination	Voice-over	Image(s)
	Example: Águilas is a small Spanish city located in the southeast of the country. It belongs to the region of Murcia and has about 35,000 inhabitants, although this figure triples in the summer months due to its 28 kilometers of Mediterranean coast.	Ubicación de Águilas en España.
Tangible cultural heritage (a monument, an object... and/or natural heritage (a beach, a lake, a mountain...)	Example: From the San Juan Castle, built in the 18th century, you can enjoy a beautiful panoramic view of Águilas. However, the beaches of this city deserve to be seen up close and experienced from within. The visitor can enjoy a swim in the Mediterranean Sea overlooking a "desert" island, the island of El Fraile, which was inhabited by the Romans.	
Intangible cultural heritage (a tradition, a celebration...)	Example: Among its traditions, its emblematic carnival, declared a festival of international tourist interest, stands out. It takes place in February but is repeated in summer so that its many international tourists can enjoy it.	

At least one sustainable tourism activity(a route,a cultural visit...)	Example: A wonderful and pleasant sustainable leisure activity that can be done is to take a sailing trip along the coast of the area, known as the "warm coast" for its hot summers and mild winters.	
At least one local product (food, drink, crafts, services...)	Example: This area of Spain is known as "el levante" and for this reason its typical beer is called "Estrella de Levante" which is usually accompanied by the typical tapa of the region: "la marinerica", which is composed of a salad on bread and topped with an anchovy.	

3. How are you going to make your video?

First, prepare the photos and text as in the table above for your two destinations. Once you have it ready, record an AdobeSpark video as you did in your presentations. (You can learn how to use AdobeSpark collaboratively here: https://www.youtube.com/watch?v=S6sMpYiZ0JM) Remember to turn off the background music on AdobeSpark.

Who will do the talking? You can take turns and say a sentence each, you can choose one or more narrators ... but **ATTENTION** remember:

The destination in Ireland must be presented in Spanish, as the main objective is to attract Spanish tourists. And the students of the University of Limerick must do the voice-over.

The destination in Spain should be presented in English, since the main objective is to attract Irish tourists. And the students of the University of Limerick must do the voice-over.

Once the video is ready, publish it on the forum of your working group for task 3.

But how will your video serve to promote sustainable tourism if no one watches it? Once it's ready, **take action!** Share it with your friends and family and even on social networks.

What is the public's reaction? Has your video been effective? Do you think it will help your family/friends/acquaintances become more aware of sustainable tourism? Do they want to visit the destination in your colleagues' country now?

If you have time, meet again in what will be your last video conference and share how your environment has reacted to your telecollaboration product.

Finally, in your portfolio be sure to write your reflections on the video-making process and the reactions to the video.

Appendix E: Scripts for task 1.2 Action Research Cycle 1

Script for Task 1.2 (English Studies/Translation)

TASK 1: STAGE 2:
GROUP PRESENTATION ABOUT HABITS AND VIEWS REGARDING ECOLOGICAL CITIZENSHIP

In your local group, taking into account what you have just learned about ecological citizenship, work with the other members of your group to create a presentation about your customs and views on sustainability using text and multimedia materials (photos, video, etc.) and put a link to the presentation in Schoology. Try to mention aspects of your life and environment that you think may be different from those of the students in the other country.

When you write about sustainability, tell about your habits and views, the ways you act in relation to the environment and your opinions. Since you will be designing and implementing an action plan together, it is important that you understand each other's ecological approaches. To make the presentation follow the script with the points to be included. To make the presentation, be inspired by the following suggestions. Remember to be honest so that your partners can know your true reality.

1. For example, you can tell your colleagues :

   What are your consumption habits;
   You can talk to them about whether you usually carry your own bag when you go shopping or not, whether you try to buy from local businesses or prefer department stores, whether you look at the fact that the brands you buy are eco-friendly or not, if you buy what you want or try to reduce your consumption to what you really need, etc...
   You can also talk to them about your day-to-day life:
   Whether you usually move around on foot or by public transport or whether you use your own car or other means to get around, if at home you try to reduce water and energy consumption in any way or not it is something you usually look at, if you try to recycle or not, etc...

2. Tell your colleagues about sustainability in your area:
   Can you identify negative effects of environmental issues in your area?
   Is your community, in general, respectful with the environment?Can you mention any initiative that is carried out in your community to contribute to the protection of the environment?
   What sustainable services, products, places, activities... are available in your area?

When your partner class shares their presentations, view the presentations. Now you can respond with questions and comments and respond to the comments and questions which they send to you.

Script for Task 1.2 (Tourism/Business)

TASK 1: STAGE 2:
GROUP PRESENTATION ABOUT HABITS AND VIEWS REGARDING SUSTAINABLE TOURISM

In your local group, taking into account what you have just learned about sustainable tourism, work with the other members of your group to create a presentation about your customs and views on sustainable tourism using text and multimedia materials (photos, video, etc.) and put a link to the presentation in Schoology. Try to mention aspects of your life and environment that you think may be different from those of the students in the other country.

When you write about sustainability and tourism, tell about your habits and views, the ways you act in relation to the environment, the way you travel and your opinions. Since you will be designing and implementing an action plan together, it is important that you understand each other's ecological and touristic approaches.To make the presentation, be inspired by the following suggestions.

1. For example, you can tell your colleagues :
   Where you went on your last trip;
   The type of accommodation you stayed in (if they had any water-saving, energy-saving or plastic measures, for example: in many hotels they have removed the plastic items they used to offer such as combs or shower caps, etc...)
   The means of transport you used to get there as well as the way you used to move around once you got there. For example: maybe you rented bicycles or maybe you moved around in a cab or on foot…
   You can also tell them about the kind of activities you did: if you consumed local products and services, if you had personal contact with the locals, if you participated in any kind of cultural practice or celebration…

2. Tell your colleagues about tourism in your area:
   What services, products, places, activities... usually attract tourists to your area?
   Is the type of tourism in your area respectful with the environment and with your culture and way of life? Can you identify positive and negative effects of tourism in your area? Do you think that tourism in your area benefits the local economy or large international companies?

3. When choosing a destination for a trip, which of the following aspects do you take into account? You can talk about these and other aspects that come to your mind:
   The interest of the local culture, the impact to the environment, the climate, the season, the presence of tourist attractions, to visit as many places in the shortest time as possible, to control the number of visitors to protect the area and improve the experience, the management of waste and resources, others…

When your partner class shares their presentations, view the presentations. Now you can respond with questions and comments and respond to the comments and questions which they send to you.

Instructions: Write down the first three words or phrases which come to your mind when you see the following terms. Don't read what others have written. Just write your own ideas. There are various terms and situations which you have to react to. **The Spanish students should write in Spanish and the Irish group in English.**

Cultura-like questionnaire English studies/Translation VE

Los mayores problemas ambientales que existen en mi país/área local son...(nombra 2):	**The biggest environmental issues that exist in my country/ local area are...(name 2):**
Respuestas de los estudiantes en España	Responses by students in the Ireland
Las acciones más importantes que mi país está tomando para enfrentar el cambio climático (nombra 3):	**The most important actions that my country is taking to deal with climate change (name 3):**
Respuestas de los estudiantes en España	Responses by students in the Ireland
Las cosas que hago para proteger el medio ambiente (nombrar un máximo de 3):	**Things that I do to protect the environment (name a maximum of 3):**
Respuestas de los estudiantes en España	Responses by students in the Ireland
Completa la frase: "Para afrontar el cambio climático de manera más efectiva, mi gobierno debería..." :	**Complete the sentence: "In order to deal with climate change more effectively, my government should..." :**
Respuestas de los estudiantes en España	Responses by students in the Ireland

Cultura-like questionnaire Tourism/Business VE

Los mayores beneficios que el turismo trae a mi área local son... (nombra 3)	**The major benefits that tourism brings to my local area are…(name 3)**
Respuestas de los estudiantes en España	Responses by students in the Ireland
Los mayores riesgos/amenazas ambientales que implica el turismo en mi área son... (nombra 3)	**The biggest environmental risks/threats that tourism in my area implies are...(name 3)**
Respuestas de los estudiantes en España	Responses by students in the Ireland
Completa la frase: "Para afrontar el cambio climático de manera más efectiva, mi gobierno debería..." :	**Complete the sentence: "In order to deal with climate change more effectively, my government should..." :**
Respuestas de los estudiantes en España	Responses by students in the Ireland

Appendix G: Initial Survey and Final Oral Presentation Action Research Cycle 2

Initial Survey ARC2

What group are you working in?

○ 1

○ 2

○ 3

○ 4

○ 5

○ 6

○ 8

○ 9

1. So far, how do you feel about your interactions with your peers in Germany? What have you found easy/difficult so far in communicating with them? *

Tu respuesta

2. How did you feel about communicating with them before and after the videoconference? *

Tu respuesta

3. What impact has this first task had on your point of view/your opinion regarding your colleagues' culture/ecological habits? *

Tu respuesta

4. Has this first task made you reflect in any way on your own culture/ecological habits? *

Tu respuesta

5. Even though we are just starting out, do you think that it will change the way you act or think in any way after participating in this exchange? *

Tu respuesta

6. What do you hope to gain/learn from the Virtual Exchange? *

Tu respuesta

1. WORK ORGANISATION

Briefly explain the process that you followed to organise your work when you had to inform yourselves about an issue and then had to explain it to your international partners:

how you looked for information

(e.g. contrast of different and reliable sources of information, consultation of local/national government actions/initiatives,etc).

and then **how you explained this information to your partners** so that they could understand it

(e.g. summarising, simplifying, using concrete examples to present the topic,etc).

2. MULTIPLE PERSPECTIVES

There have been occasions when you have found that both countries have to deal with the same problem, **a problem of global relevance**, and yet in each context **different specific measures** are taken.

From your experience in the exchange, could you explain one of these cases and what are your thoughts on it?

The **different responses** to the same problems probably have to do with the **different cultures** in each of your contexts.

Can you think of a case where one of your partners had a different perspective from yours that struck you and how you reacted or what it made you think?

3. COMMUNICATION AND COLLABORATION

Share your experience in your international working group in terms of communication and collaboration:

Have you noticed any differences in the way you communicate? Give examples.

(e.g. verbal or body language in your videoconferences; the use of emoticons, register, etc. in your written communications...).

How did your collaboration work? If there were misunderstandings: how did you handle them? what could you have done better? what would you do differently in the future?

4. TAKING ACTION FOR SUSTAINABLE DEVELOPMENT

Talk about the kind of action you have taken in the project and how you feel on a personal level after this experience:

What impact it will have on your future actions?

Do you think you will change the way you act or think in any way after participating in this programme?

Appendix H: Full Instructions Tasks Action Research Cycle 2

Task 1.1 ARC2

Go to your team's Mahara-Group. In the section, "Pages and Collections", you'll see that we have created a collection called "Team [1 to 10 respectively] project" for you. In this collection, we have already created two pages for you: One for this week and another one for the next week (after that we'll hand that responsibility over to you...).

On the page for week 1 (task 1.1) you'll find a Padlet.

- → Directly in Padlet, record a short video (3-5 minutes) in which you introduce yourself to your partners, by talking about your background, interests/hobbies, university studies and anything you would like to share.
- → Add an image to your column of the Padlet to tell the others more about yourself and relate it to one or more SDGs.
- → Set yourself 3-5 SMART learning goals for this Virtual Exchange.
- → Generate your own meme(s) about your expectations or worries approaching this experience.

You have many options to design your introduction page, but please try to present aspects of your life which your partners might find interesting and that will help them to get to know you.

Once you have introduced yourself on Padlet, look at your partners' columns and respond to their introductions.

In the next week you will be having your first ZOOM meeting. To give you more flexibility but also allow you to take ownership of your group project, you should schedule your weekly meeting by yourselves. This means that you should also schedule your first videoconference together. To coordinate this, you could start a forum in your group.

Task 1.2 ARC2

Meet your transnational team in a videoconference. Please use the ZOOM Link that we've provided to each of the teams. (*Important: Remember to record the videoconferences). Since now you will be working together in your international working groups, create a group name, some general group rules (at least 5) that you consider essential for successful online intercultural telecollaboration and a provisional schedule for all your videoconferences (e.g. agree on a day of the week and a time that would suit all of you to have your video calls together for the months that the VE lasts). Create a new page in your Mahara group, add it to your project collection and fill it in during your ZOOM-Meeting. Then, choose a spokesperson to take care of your video recording (i.e. download of ZOOM recording, upload and share link on your Mahara page). Please use these bulletin-points to structure your meeting and as headlines in your group's documentation in Mahara:

- → Name of the group
- → Reasons behind the name (e.g. things in common)
- → Essential rules of the group for successful online intercultural interaction
- → Schedule for videoconferences

Task 1.3 ARC2

Now that you know each other and have laid the foundations of success for your work together, it is time for your second videoconference.

This week you will discuss the Sustainable Development Goals together. While they are all very important, there may be some that particularly affect or concern you or that you simply feel you can contribute positively to. The goal is that as a group of young global citizens you will agree on a specific issue/situation related to one of these goals that you feel you can take action and make a difference. Please make sure that you are all in agreement and satisfied with your choice, because you'll collaboratively develop your project based on this in the following weeks.

Since you are talking about topics and issues that may be hard to deal with, there is no reason why you should be experts on the field of sustainability. Look up information instead of relying only on what you think. Involuntarily, you may provide information to your partners which is not accurate and therefore lead them to misleading conceptions. To this end, try to add reliable news/articles/sources that support your claims.

Follow the same procedure as in the previous videoconference. Also for this week, you should create a new page in your team's project portfolio. Please edit this page collaboratively during your videoconference. Remember to appoint one team member to upload your ZOOM recording, too.

Task 2.1 ARC2

With your local partners, select and weigh appropriate evidence to reason about the issue/situation regarding this SDG that you have chosen in the local community. Critically evaluate the information you find, formulate your own arguments and get ready to explain complex situations to your international partners in an accessible and comprehensive way.

Get together with your team for your third videoconference and compare the situation in your contexts regarding the issue/situation related to the SDG you chose in your previous meeting. Be willing to consider and engage with multiple perspectives and world views and reflect on your own. You are not expected to prepare "presentations" or "powerpoints" and you should not read what you explain to your partners. Just get ready to have a conversation about this topic and engage in online dialogue with your partners. However, you prepare a bibliography to make it very transparent to your team members, what are the articles, websites, books, book chapters, etc....that you're talking about. We also encourage everyone to take notes beforehand.

Critically reflect together on how this global issue affects lives locally and around the world by finding similarities and differences between your contexts and share your conclusions on your Mahara page for this week. This includes, that you also list the resources that you're basing your arguments on in a joint reference list. And when you're quoting from or talking about a specific reference (a website, an article, etc.), you should follow the citation rules.

Task 2.2 ARC2

Where do we want to be? How do we get there? Create opportunities to take informed reflective action and have your voices heard.
Respond to the global issue/situation you've been discussing together by identifying and evaluating different courses of action to positively address this issue/situation in your local communities.
Weigh these actions against one another, for example by assessing the conditions that may make actions possible and agree on the design of an action plan to engage to improve the situation.

This phase will last two weeks:
→ During the first week's videoconference you can discuss possible actions you can take until you agree on the one you like best as a group.
→ Once you have agreed on the action to take, in the second week's videoconference you can develop the action plan. (The second week's videoconference is optional; students can agree on working asynchronously during this week too).
→ Collaborate together in Mahara during and after your videoconferences and respond to the following aspects:
  ✔ Possible actions discussed
  ✔ Reasons for the action chosen
  ✔ Design of the action plan (see template on appendix I)

Task 3.1 ARC2

Now that as a team you have designed a joint action plan, it is time to put it into practice. Depending on the type of action you have chosen you will need to organise yourselves in different ways, but in any case it is important that as a group you organise your time and workload as efficiently as possible.

Implementation of the action: taking action can range from the group members themselves carrying out certain sustainable actions during these two weeks to contribute to the chosen issue/situation to the creation and dissemination of awareness raising materials or any other type of action that comes to their mind. Whatever the chosen action is, **it is important that the group documents the whole process in Mahara**. Photos, videos, links, etc. can be included to report this experience.

Template:

Action report

The challenge:
[Briefly state the specific challenge you are going to positively contribute to with your action].
Our contribution:
[Briefly state what is your contribution to improving the situation in realistic terms].
Implementation:
[Detail your action taking process: you can include photos, videos or any resources you like. Include here links and/or screenshots of your publications, materials, etc...and explain what they are aimed for. Remember to use copyright free resources (e.g. https://thenounproject.com/)].
Results achieved:
[Detail the results of the action taken. To this end, ask yourselves and others (your family, friends or anyone 'affected' by your actions) what impact the action has had (e.g. raising awareness, improving the situation in your community, etc…). This will help you to be ready for task 3.2 when you will be asked to reflect on the impact of your actions and the relevance of taking active part for a sustainable world].
Our action in the classroom:
[Detail how you would connect your action to your teaching. Explain how you could integrate your project meaningfully into teaching and learning in the classroom. For example, propose tasks/lessons that include the materials you've created or the actions you've implemented in some way].

Task 3.2 ARC2

Once you have taken the action it is important that as a group you **have a dialogue to reflect** on the consequences it has had via videoconference.

To guide your reflection you can ask yourselves the following questions and discuss them together:
- What have been the immediate consequences or implications of our action?
- Has our action had indirect consequences or implications?
- Can we identify short- and long-term consequences?
- Can we think of any unintended consequences as a result of the action?

Finally, think about the future:
- How will this experience of active global and ecological citizenship affect the way we think and act in the future?

As a group, come up with **a short reflective text** reflecting on the consequences of your action and the implications that this experience may have for you in the future and include your reflection on your Mahara-page.

Materials provided to the students to be prepared for task 1.3 in ARC2:

Task 1.3

1. Watch the following video for a brief introduction and overview of the SDGs (2'): https://www.youtube.com/watch?v=M-iJM02m_Hg
2. Watch the following video: https://www.youtube.com/watch?v=qfOgdj4Okdw
   → The SGD 'wedding cake' (3'): What are the three pillars of sustainability? What SDGs are you more interested in taking action for according to these 3 categories?
3. **Now focus on one SDG. To learn more about it go to the following URL https://www.un.org/sustainabledevelopment/student-resources/ where you will find on the right hand side the 17 SDGs. Click on one you are interested in and read 'why it matters', the 'infographic', 'facts and figures' and 'the targets'. You can repeat this process with as many SDGs as you want after class to get ready for your videoconference. Based on what you have read can you think of any specific issue(s) or situation(s) in your community that you could positively contribute to?**
4. **Prepare for your videoconference. Look at the instructions for this week's task and prepare your agenda. Remember to take some notes about the information you would like to share with your international partners regarding the SDGs you are interested in and the specific problems/situations that you could take action for:**

Agenda:

→
→ **…**

Materials provided to the students to be prepared for task 2.1 in ARC2:

Task 2.1

1. Before we move on to the second task:
   1.1. Take some time to reflect on your experience during the first one and answer the following survey: https://forms.gle/qbGo2smttWmhtfae6
   1.2. Answer the following questions to proactively engage in unveiling both effective and ineffective online intercultural communicative strategies.
2. This week you will be responsible for creating your own agenda. These are the instructions for Task 2 Stage 1 which focuses on comparing and contrasting:
   → *With your local partners, **select and weigh appropriate evidence** to reason about the issue/situation regarding this SDG that you have chosen in your local community and future potential teaching context.*
   → *Critically evaluate the information you find, formulate your own arguments and **get ready to explain it** to your international partners in an accessible and comprehensive way.*
   → *Get together with your transnational team for your **third videoconference** and **compare the situation in your contexts** regarding the issue/situation related to the SDG you chose in your previous meeting.*
   → *Be willing to consider and engage with multiple perspectives and world views and reflect on your own. **You are not expected to prepare "presentations" or "powerpoints" and you should not read** what you explain to your partners. Just **get ready to have a conversation** about this topic and **engage in dialogue** with your partners.*
   → ***Critically reflect together** on how this global issue affects lives locally and around the world **by finding similarities and differences** between your contexts and **share your conclusions** on your Mahara page for this week.*
   → *"Global issues are also local issues: they are global in their reach but local communities experience them in very diverse ways" (OECD, 2018, p.13).*

---

3. **Look for specific information (i.e. news, initiatives, etc.) in order to get ready to talk about the issue(s)/situation(s) related to one or more SDGs in your country,region or local community that you have agreed on with your international partners. Resources:**
    - → More info. about each SDG, news and resources
    - → Examples of specific situations related to the SDGs
    - → Agenda 2030 Estrategia Española
    - → Agenda 2030 JCYL
    - → Acciones Desarrollo Sostenible Ayuntamiento de León
4. Get ready to compare your contexts: Which countries are more sustainable? (2'): Look at how Spain and Germany are doing for the SDGs you are more interested in here: https://dashboards.sdgindex.org/map

Materials provided to the students to be prepared for task 2.2 in ARC2:

Task 2.2

1. It is time for you to use what you have learned and work together to design an action plan to help mitigate one or more of the common problem(s) or challenge(s) that you have been discussing. To make your action as effective as possible, consider the effects of this/these on people's daily lives and try to focus on realistic actions to contribute to improving the situation in your contexts. Bear the motto of ecological citizenship in mind during these weeks: "Think global, act local".

2. When designing you action plan bear the following **key elements** in mind (fin out more here https://slidemodel.com/how-to-present-an-action-plan/):
   Set the specific **objective(s)** you are trying to achieve with your action.
   Break down your objective(s) into **tasks**: the steps that need to be taken in order to achieve your objective(s).
   Assign roles: Specify **who** will be in charge of performing each of the tasks/steps. Establish **deadlines** for each of the specific tasks.
3. Copy this template into you Mahara page for the design of your action plan and complete it:

> - ✔ **The problem** we are going to address is…
>   [Remember to tackle a problem that is current, common to both countries and to which you can contribute in any way].
> - ✔ **The action** we are going to take is…
>   [Be realistic and specific. Agree on an action with which you can contribute to sustainability and make sure it is feasible for you].
> - ✔ Our **objective(s)** by taking this action is/are…
> - ✔ This is **how** we are going to do it: The **steps** we are going to take to implement the action and achieve the objective(s) are…
> - ✔ Our **roles** and **deadlines** are...
>   [Indicate **who** is going to carry out each of the specific steps/tasks and by **when.** Bear in mind that these dates refer to the implementation stage that will last from the 29 November until the 12 December].

4. Be the change: This Virtual Exchange has been designed for you to collaborate together in your international working groups and to take action for a better world. Watch the following video: https://www.youtube.com/watch?v=Qx0AVjtdq_Q (5') and start reflecting: What kind of action could you take? What could you be? Inventors, innovators or campaigners?

Appendix J: Full Instructions Tasks Final Model

Task 1.1 in the Final Model

Go to your team's VLE-Group and post:
→ A short video (3-5 minutes) in which you introduce yourself to your partners, by talking about your background, interests, hobbies, university studies and anything you would like to share. Suggested tool to create your introduction: AdobeSpark.
→ An image taken by you that tells the others how [the theme of the VE] relates to your life.
→ Generate your own meme(s) about your expectations or worries approaching this experience.
You have many options to design your introduction page, but please try to present aspects of your life which your partners might find interesting and that will help them to get to know you.
Once you have introduced yourself, look at your partners' introductions and respond to them.
In the next week you will be having your first synchronous meeting. To give you more flexibility but also allow you to take ownership of your group project, you should schedule your weekly meeting by yourselves. This means that you should also schedule your first videoconference together. To coordinate this, you could start a forum in your group.

Task 1.2 in the Final Model

Meet your team in a videoconference. Since now you will be working together in your international working groups, create a group name, some general group rules (at least 5) that you consider essential for successful online intercultural telecollaboration and a provisional schedule for all your videoconferences (e.g. agree on a day of the week and a time that would suit all of you to have your video calls together for the months that the VE lasts). Publish your results in your VLE group.
Please use these bulletin-points to structure your meeting and as headlines in your group's documentation:
→ Name of the group
→ Reasons behind the name (e.g. things in common)
→ Essential rules of the group for successful online intercultural interaction
→ Schedule for videoconferences

Task 1.3 in the Final Model

Now that you know each other and have laid the foundations of success for your work together, it is time for your second videoconference.

This week you will discuss [the theme of the VE together]. There may be some particular aspect related to it that particularly affects or concerns you or that you simply feel you can contribute positively to. The goal is that as a group of young global citizens you will agree on a specific issue/situation that you feel you can take action and make a difference. Please make sure that you are all in agreement and satisfied with your choice, because you will collaboratively develop your project based on this in the following weeks.

Since you are talking about topics and issues that may be hard to deal with, there is no reason why you should be experts on the field of sustainability. Look up information instead of relying only on what you think. Involuntarily, you may provide information to your partners which is not accurate and therefore lead them to misleading conceptions. To this end, try to add reliable news/articles/sources that support your claims.

Publish your results in your team's VLE space for this week.

Task 2.1 in the Final Model

With your local partners, select and weigh appropriate evidence to reason about the issue/situation that you have chosen in the local community. Critically evaluate the information you find, formulate your own arguments and get ready to explain complex situations to your international partners in an accessible and comprehensive way.

Get together with your transnational team for your third videoconference and compare the situation in your contexts regarding the issue/situation you chose in your previous meeting. Be willing to consider and engage with multiple perspectives and world views and reflect on your own. You are not expected to prepare

"presentations" or "powerpoints" and you should not read what you explain to your partners. Just get ready to have a conversation about this topic and engage in online dialogue with your partners. However, prepare a bibliography to make it very transparent to your team members, what are the articles, websites, books, book chapters, etc....that you're talking about. We also encourage everyone to take notes beforehand.

Critically reflect together on how this global issue affects lives locally and around the world by finding similarities and differences between your contexts and share your conclusions on your VLE page for this week. This includes, that you also list the resources that you're basing your arguments on in a joint reference list. And when you are quoting from or talking about a specific reference (a website, an article, etc.), you should follow the citation rules.

Task 2.2 in the Final Model

Where do we want to be? How do we get there? Create opportunities to take informed reflective action and have your voices heard.
Respond to the global issue/situation you have been discussing together by identifying and evaluating different courses of action to positively address this issue/situation in your local communities.
Weigh these actions against one another, for example by assessing the conditions that may make actions possible and agree on the design of an action plan to engage to improve the situation.
This phase will last two weeks:
→ During the first week's videoconference you can discuss possible actions you can take until you agree on the one you like best as a group.
→ Once you have agreed on the action to take, in the second week's videoconference you can develop the action plan.
→ Collaborate together and respond to the following aspects (fill in the template):
  ✔ Possible actions discussed
  ✔ Reasons for the action chosen
  ✔ Design of the action plan
Template:

  ✔ **The problem** we are going to address is…
    [Remember to tackle a problem that is current, common to both countries and to which you can contribute in any way].
  ✔ **The action** we are going to take is…
    [Be realistic and specific. Agree on an action with which you can contribute to sustainability and make sure it is feasible for you].
  ✔ Our **objective(s)** by taking this action is/are…
  ✔ This is **how** we are going to do it: The **steps** we are going to take to implement the action and achieve the objective(s) are…
  ✔ Our **roles** and **deadlines** are...
    [Indicate **who** is going to carry out each of the specific steps/tasks and by **when.** Bear in mind that these dates refer to the implementation stage that will last from - until -].

Task 3.1 in the Final Model

Now that as a team you have designed a joint action plan, it is time to put it into practice. Depending on the type of action you have chosen you will need to organise yourselves in different ways, but in any case it is important that as a group you organise your time and workload as efficiently as possible.

Implementation of the action: taking action can range from the group members themselves carrying out certain sustainable actions during these two weeks to contribute to the chosen issue/situation to the creation and dissemination of awareness raising materials or any other type of action that comes to their mind. Whatever the chosen action is, **it is important that the group documents the whole process in the VLE**. Photos, videos, links, etc. can be included to report this experience. Template:

Action report

The challenge:
[<u>Briefly</u> state the specific challenge you are going to positively contribute to with your action].

Our contribution:
[<u>Briefly</u> state what is your contribution to improving the situation in realistic terms].

Implementation:
[<u>Detail</u> your action taking process: you can include photos, videos or any resources you like. Include here links and/or screenshots of your publications, materials, etc...and explain what they are aimed for. Remember to use copyright free resources (e.g. https://thenounproject.com/)].

Results achieved:
[<u>Detail</u> the results of the action taken. To this end, ask yourselves and others (your family, friends or anyone 'affected' by your actions) what impact the action has had (e.g. raising awareness, improving the situation in your community, etc…). This will help you to be ready for task 3.2 when you will be asked to reflect on the impact of your actions and the relevance of taking active part for a sustainable world].

Task 3.2 in the Final Model

Once you have taken the action it is important that as a group you **have a dialogue to reflect** on the consequences it has had via videoconference.

To guide your reflection you can ask yourselves the following questions and discuss them together:
- What have been the immediate consequences or implications of our action?
- Has our action had indirect consequences or implications?
- Can we identify short- and long-term consequences?
- Can we think of any unintended consequences as a result of the action?

Finally, think about the future:
- How will this experience of active global and ecological citizenship affect the way we think and act in the future?

As a group, come up with **a short text** reflecting on the consequences of your action and the implications that this experience may have for you in the future and include your reflection on your VLE-page.