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Developing Intercultural Communication Skills in Virtual Communities:

The Case of Language and Communication Master EFL Students at Abdelhamid Ibn

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Declaration

I hereby declare that the substance of this thesis embodies the findings of my investigation, with due acknowledgement and references made to other researchers' work where necessary.

Aziza KORAN



DEDICATION

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

To my beloved parents, Mimi Khiti and Papa

May Allah have mercy on you. رحمكما الله واسكنكما الفردوس الأعلى

Though you are no longer with me to witness this moment, your presence is felt deeply in every page, every word, and every thought of this work. I dedicate this labour of love and learning to you, my guiding stars.

Your unwavering belief in me, your sacrifices, and your endless encouragement have shaped my academic journey and the person I am today. Your wisdom, love, and values continue to guide me in every decision and every endeavour.

This work is not just mine; it is a tribute to your legacy, a testament to your love, and a reflection of the values you instilled in me.

You are not here to see it, but your influence resonates in every aspect of this journey.

Forever in my heart,

I also dedicate this work to my sister Amel, who has always been by my side, and for whom I am eternally grateful; my husband Mohamed, my sisters Nassiba and Ismahane, my brothers Yamen, Faiz, Belkacem and Youcef; and my beloved nieces and nephews. This work is as much yours as mine. Thank you for your presence in my life and for your endless love and support.

Aziza KORAN عزيزة قرآن

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Abstract

This study investigates a curricular innovation using Virtual Exchange (VE) as an experiential, educational approach for internationalisation at home, aimed at providing English Language and Communication learners at Mostaganem University with international, intercultural online exchange experiences. The research involved 26 students (15 Algerian and 11 Turkish), using an explanatory sequential mixed methods design. Quantitative data were gathered through pre- and post-exchange surveys, while qualitative data were collected via project-based activities on Moodle and Padlet, online facilitated dialogues on Zoom, and E-portfolios, which allowed a thorough analysis and triangulation of the data by addressing key research questions and evaluating the initiative's effectiveness. Findings indicate that the "Intercultural Digital Community Building" (IDCB) VE successfully enhanced participants' skills in digital technology, language, communication, and teamwork, while fostering intercultural exchange. However, implementation challenges arose due to complex legal and policy contexts, compounded by the COVID-19 pandemic, highlighting the need for institutional support and clear resource distribution. The study underscores the potential of VE as a tool for international and intercultural engagement from home and calls for scalable frameworks to enhance its reach and impact in higher education settings.

Keywords: experiential learning, internationalisation at home, IC skills, virtual exchange, Web 2.0

ملخص

تستكشف هذه الدراسة ابتكاراً منهجياً يستخدم التبادل الافتراضي (VE) كنهج تعليمي تجريبي للتدويل المحلي، بهدف تزويد طلبة اللغة الإنجليزية والتواصل في جامعة مستغافم بتجارب تبادل دولية وعابرة للثقافات عبر الإنترنت. شملت الدراسة 26 طالباً (15 جزائرياً و11 تركيا)، باستخدام تصميم مختلط متتابع لتفسير النتائج. تم جمع البيانات الكمية من خلال استبيانات ما قبل وما بعد التبادل، بينما تم جمع البيانات النوعية من خلال أنشطة قائمة على المشاريع على منصتي Moodle و Padlet، وحوارات ميسرة عبر الإنترنت على Zoom، والمحافظ الإلكترونية e-portfolios، مما سمح بتحليل شامل وتقاطعياً البيانات من خلال معالجة الأسئلة البحثية الرئيسية وتقييم فعالية المبادرة. تشير النتائج إلى أن التبادل الافتراضي لبناء "المجتمع الرقمي العابر للثقافات" (IDCB VE) قد عزز بنجاح مهارات المشاركين في التكنولوجيا الرقمية، اللغة، التواصل، والعمل الجماعي، مع تعزيز التبادل الثقافي. ومع ذلك، ظهرت تحديات في التنفيذ بسبب السياقات القانونية والسياسية المعقدة، والتي زادت حدتها جائحة كوفيد-19، مما يبرز الحاجة إلى دعم مؤسسي وتوزيع واضح للموارد. تؤكد الدراسة على إمكانات التبادل الافتراضي كأداة للانخراط الدولي من المنزل وتطالب بإطار قابل للتوسع لتعزيز نطاقه وأثره في بيئات التعلم العالي.

الكلمات المفتاحية: التعلم التجريبي، التدويل في المكان، مهارات التواصل بين الثقافات، التبادل الافتراضي، الويب 2.0

Résumé

Cette étude examine une innovation pédagogique utilisant l'échange virtuel (VE) comme approche éducative expérientielle pour l'internationalisation à domicile, visant à offrir aux apprenants en Anglais, spécialité "Langue et Communication" de l'Université de Mostaganem des expériences d'échange international et interculturel en ligne. La recherche a impliqué 26 étudiants (15 Algériens et 11 Turcs), en utilisant une méthodologie mixte séquentielle explicative. Les données quantitatives ont été recueillies à travers des enquêtes avant et après l'échange, tandis que les données qualitatives ont été collectées via des activités basées sur des projets sur Moodle et Padlet, des dialogues facilités en ligne sur Zoom, et des e-portfolios, permettant une analyse approfondie et une triangulation des données en répondant aux questions clés de la recherche et en évaluant l'efficacité de l'initiative. Les résultats indiquent que l'échange virtuel "Intercultural Digital Community Building" (IDCB) EV a réussi à améliorer les compétences des participants en technologie numérique, en langue, en communication et en travail d'équipe, tout en favorisant l'échange interculturel. Cependant, des défis de mise en œuvre sont apparus en raison de contextes juridiques et politiques complexes, exacerbés par la pandémie de COVID-19, soulignant le besoin d'un soutien institutionnel et d'une distribution claire des ressources. L'étude souligne le potentiel de l'échange virtuel comme outil d'engagement international et interculturel depuis chez soi et appelle à des structures flexibles et durables pour améliorer sa portée et son impact dans les environnements d'enseignement supérieur.

Mots-clés : apprentissage expérientiel, internationalisation à domicile, compétences IC, échange virtuel, Web 2.0

List of Abbreviations and Acronyms

CDC - Competences for Democratic Culture

CI - Comprehensive Internationalisation

CoI - Community of Inquiry

DMIS - Developmental Model of Intercultural Sensitivity

EFL - English as a Foreign Language

EPALE - Electronic Platform for Adult Learning in Europe

ERASMUS - EuRoPean Community Action Scheme for the Mobility of University Students

GCE - Global Citizenship Education

GNG - Global Nomads Group

HE - Higher Education

IaH - Internationalisation at Home

ICC - Intercultural Communicative Competence

ICFLE - Internet-mediated Intercultural Foreign Language Education

IC - Intercultural Competence

ICM - Mobility of International Credit

IDCB - Intercultural Digital Community Building

INCA - Intercultural Competence Assessment

iEARN - international Education and Resource Network

ICT - Information and Communication Technology

MIT - Massachusetts Institute of Technology

MENA - Middle East and North Africa

MoU - Memorandum of Understanding

MOOC - Massive Open Online Courses

OIE - Online International Exchange

PTAM - Project of Telecollaboration Algeria-Moldova

QCA - Qualitative Content Analysis

SAE - Standard Average European

SPSS - Statistical Package for the Social Sciences

TEP - Transnational Erasmus+ Project

TNE - Transnational Education

UN - United Nations

UNESCO - United Nations Educational, Scientific and Cultural Organisation

VE - Virtual Exchange

VC - Virtual Communities

ZPD - Zone of Proximal Development

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Chapter One: Introduction

In recent years, technological advancements have revolutionised the landscape of higher education, mainly through the advent of virtual communities (VC) and virtual exchanges (VEs). These digital platforms are hubs for shared interests and bridges connecting students from diverse cultural backgrounds for collaborative, intercultural learning experiences. This shift has ushered in a new era of 'low-cost internationalisation' that is particularly significant in Internationalisation at Home (IaH).

Despite its growing popularity and proven success in enhancing IC skills, foreign language proficiency, and digital literacies, VE remains underused in Algerian higher education institutions. This gap is notable, especially considering the limitations on physical academic mobility imposed by financial constraints and global challenges like the COVID-19 pandemic. VE is a cost-effective, inclusive alternative, offering a virtual passport to global interaction and cultural exchange.

This thesis seeks to explore and evaluate the role of VE in developing Intercultural Communicative Competence (ICC) and its integration into university internationalisation strategies. It focuses on a collaborative initiative between Algeria and Turkey, aiming to provide empirical evidence of VE's impact. This study will contribute to understanding VE's potential in enhancing IaH and informing educational policy at both institutional and regional levels.

This chapter sets the stage by introducing the study's background, context, research problem, and rationale. It then outlines the research aims, objectives, questions, and significance, concluding with an overview of the study's limitations.

1.1 Background of the Study

The fusion of globalisation with information technologies has dramatically reshaped our world. Globalisation has revolutionised work organisation, the production of goods and services, international relations, and even local cultures. As Ikenberry (2005) highlighted, this new phase of globalisation is characterised by individuals, empowered by email, computers, and teleconferencing, becoming agents of change. Friedman's (2015) notion of a 'flat world' underscores the necessity for investment in education, technology, and training in this context.

Carnoy (2002) suggests that globalisation is fundamentally driven by knowledge, information intensity, and innovation and should profoundly impact education. Global educational systems are increasingly pressured to produce individuals equipped for global competition, a sentiment echoed by Daun (2002).

Knight and De Wit (1999) characterised the internationalisation of higher education as a strategic response to globalisation, infusing an international and intercultural dimension into institutions' teaching, research, and service functions. Building on this, De Wit et al. (2015) elaborated that this endeavour aims to improve the quality of education and research, ultimately contributing to society. Additionally, efforts to internationalise curricula (Leask, 2015) and pedagogy (Ryan, 2013) further enhance this process.

In this context, Algerian universities are adapting to internationalisation trends. Johnstone (2010) noted that this involves importing and exporting students, scholars, ideas, and practices underpinned by governmental policies. Algeria's integration into the European Area of Higher

Education and adoption of the LMD system exemplifies this shift. The LMD system standardises the duration of academic programs and facilitates student mobility across Europe.

Moreover, Algeria has seen significant growth in mobility programs and international collaborations. According to the European Commission's report (2018), over 10,000 international students from 61 countries study in Algeria, and programs like Erasmus offer substantial support.

In line with these developments, in 2014, the University of Abdelhamid Ibn Badis in Mostaganem launched a Master's program in applied linguistics and new technologies, which is now called Language and Communication, focusing on ICT and applied linguistics and intercultural interactions. This program aims to provide comprehensive training in critical areas like education, ICTs, and tourism, equipping students with essential 21st-century skills that go with globalization.

1.2 Statement of the Problem

Higher Education (HE) internationalisation has traditionally been associated with academic mobility, involving the geographical displacement of students, faculty, or researchers for academic pursuits in foreign institutions (Knight, 2011; Wang et al., 2014). However, this internationalisation model benefits only a tiny fraction of the academic community. For instance, while millions of students study abroad globally (Altbach et al., 2009), participation in such programs in Algeria remains limited, making academic mobility a distant reality for many.

The concept of Internationalisation at Home (IaH) has emerged to address this gap. It focuses on integrating international and intercultural dimensions into local educational

environments for all students (Beelen & Jones, 2015). This approach aims to impart global and intercultural competences to a broader student population beyond the limited percentage participating in study abroad programs.

The European Commission (2013) emphasises the need to integrate a global dimension into all curricula and teaching processes, recognising that international travel alone does not necessarily result in intercultural skills or a transnational identity, essential aims of internationalisation strategies (Papatsiba, 2005).

VE, or online intercultural exchange, presents a solution, allowing students to engage with foreign cultures without leaving their campuses (Custer & Tuominen, 2017; Choi & Khamalah, 2017). Knight (2004) highlights the role of campus culture in promoting international understanding through on-campus activities. However, a synthesis of five Algerian universities highlights organisational, pedagogical, and technological challenges to shift online (Koran & Sarnou, 2022). Beelen and Leask (2011) assert that IaH is a tool rather than a final goal to foster international and intercultural competences through diverse local activities.

In this regard, technologies such as Collaborative Online International Learning (COIL) and Erasmus+ Virtual Exchange are crucial in providing digital platforms that facilitate internationalisation (Finardi, 2019). Despite its effectiveness in language acquisition and intercultural communication (Lewis & O'Dowd, 2016; Thorne, 2016; Çiftçi & Savaş, 2018;), VE remains underused, often limited to a small group of practitioners (O'Dowd, 2011).

Given economic challenges and limited opportunities for physical student mobility, VE provides a cost-effective alternative for internationalisation. This project aims to leverage digital

tools and internet access to offer expansive opportunities for student engagement and learning, adapting internationalisation to the current realities and needs.

1.3 The Rationale of the Study

While there is a growing global interest in intercultural communication and the development of ICC through electronic tools (Ware & Kramersch, 2005; O'Dowd, 2007; Fratter & Helm, 2010), its integration as a critical component in education, particularly in Algeria, remains underexplored. The impact of virtual communities and VEs on the development of IC skills among Language and Communication Master's students in English as a Foreign Language (EFL) settings is yet to be thoroughly examined. Moreover, the use of VE in regions like Africa, South America, the Middle East, and Central Asia, including Algeria, is still marginal and underrepresented (Stevens Initiatives, 2021).

A bibliographic search conducted in December 2021 revealed a scarcity of research on VE's impact on ICC development in the above-stated regions, highlighting a gap in disseminated scholarly work. This absence is notable in studies exploring learners' perceptions, attitudes, and experiences with VE, particularly those that employ a combination of e-learning platforms like Moodle, WhatsApp, and Zoom for developing IC skills in Higher Education (HE). Nevertheless, further investigation is required into the educational applications of lesser-explored Web 2.0 technologies (Avgousti, 2018).

Furthermore, the literature on VE in HE often needs a comprehensive exploration of the necessary technology infrastructure and professional development for VE implementation. Studies that address VE are predominantly qualitative, focusing on specific case studies and lacking

generalisability (Akbaba& Başkan, 2017; Helm, 2018; Caluianu, 2019). Although there is growing geographic diversity in participation in VE programs, the practical details of designing and implementing these initiatives have been relatively overlooked. Practitioner-based resources provide valuable insights into program planning and design but often lack empirical evidence to substantiate these methodologies (Guth & Rubin, 2015; De Wit, 2016; Custer & Tuominen, 2016).

This study aims to bridge these gaps by examining VE as an innovative telecollaborative tool to develop various skills and enhance IaH teaching and learning practices. It focuses on understanding VE's impact on Algerian students' ICC development, testing innovations, and generating new insights relevant to the Algerian context. This research will contribute to the limited knowledge of IC skills development through VEs within the HE system, addressing the current research shortfall and providing insights to inform future practices.

1.4. Aims of the Study

Furthermore, in the context of rapidly evolving educational technology platforms, this study addresses a notable gap in research concerning the potential of virtual exchange (VE) projects to enhance intercultural communication skills in Algeria. Specifically, it examines how these initiatives align with university internationalisation strategies. The primary aim is to evaluate the role of virtual communities in fostering intercultural exchange and cooperation through implementing a multidisciplinary and multimodal virtual exchange project to develop intercultural communication skills among Language and Communication Master's students at Abdelhamid Ibn Badis University. It also aims to systematically identify the potential benefits and inherent

challenges of integrating VE into university internationalisation practices, exploring the barriers encountered at various classroom, institutional, and policy levels in adopting and integrating VE.

On the whole, the ultimate goal is to enhance international and intercultural learning opportunities, benefiting a broad spectrum of students, including mobile and non-mobile learners, thereby contributing to a more comprehensive and inclusive educational experience.

1.5. Research Objectives

The research objectives (ROs) that align with the research aims are:

RO1- To assess how virtual communities in VE projects contribute to intercultural communication and cooperation among EFL students,

RO2- To monitor and enhance the intercultural communication skills of Master's students in Language and Communication at Abdelhamid Ibn Badis University,

RO3- To explore the potential advantages and obstacles of integrating VE into university internationalisation practices,

RO4 - To formulate actionable recommendations to address classroom, institutional, and policy barriers for improving international and intercultural learning opportunities,

1.6. Research Questions

The research questions, derived from the previously mentioned objectives, are as follows:

RQ1 - How do virtual communities in VE projects impact intercultural communication and cooperation among EFL students?

RQ2 - What progress do EFL students at Abdelhamid Ibn Badis University make in their intercultural communication skills through participation in VE projects?

RQ3 - What are the perceived benefits and challenges of VE integration into university internationalisation strategies?

RQ4 - What recommendations can be made to overcome barriers to VE adoption at different levels and enhance learning opportunities?

1.7. Research Hypotheses

Considering the research questions, the following hypotheses are proposed:

H1- Participation in VE projects through virtual communities may significantly enhance EFL students' intercultural communication and cooperation skills.

H2- EFL students involved in multidisciplinary VE projects might show measurable improvement in intercultural communication abilities.

H3- The integration of VE into university internationalisation could face significant challenges, including resource allocation, technological infrastructure, and faculty training, despite its potential benefits.

H4- Implementing specific recommendations, such as policy revisions, technological upgrades, and faculty development programs, can effectively address the barriers to VE adoption and enhance international and intercultural learning experiences.

1.8. Methodology and Research Tools

This study adopted a mixed-methods research approach, often referred to as the "third path" (Gorard & Taylor, 2004, p. 4), "third research paradigm" (Johnson & Onwuegbuzie, 2004, p. 17), or "third methodological movement" (Teddlie & Tashakkori, 2009, p. 16). Specifically, it employed an explanatory sequential mixed-methods design (Creswell & Clark, 2011), which involves first collecting quantitative data followed by qualitative data.

The research was conducted with a diverse group of participants from Algeria and Turkey. They were 33 Language and Communication Master's students from Mostaganem University, Algeria, participated in the pre-exchange survey; however, only 15 consented to participate in the subsequent experiment, and only 11 multidisciplinary Turkish participants engaged in the pre-survey. From the combined group of 26 participants, only 19 completed the VE project and participated in the post-survey.

In the initial stage, a pre-exchange survey was administered to Master's students in Language and Communication EFL at Abdelhamid Ibn Badis University and their counterparts in Turkey. The survey aimed to capture broad trends by measuring students' baseline intercultural skills. Progress was then tracked after their participation in the IDCB VE program through a post-exchange survey.

The qualitative data collection phase spanned three months due to the Covid-19 pandemic. During this period, the study explored online project-based activities through the University's Moodle platform and facilitated dialogues via Zoom and E-portfolios. This stage was designed to reveal details that the surveys did not capture and to aid in the interpretation of quantitative data.

The qualitative analysis, gathered from the participants' online facilitated dialogues and E-portfolio reflections, concentrated on participants' experiences with VE, signs of critical thinking, and attitudes toward diversity.

In this research, the focus was on evaluating the impact of the IDCB VE on participants' IC skills. The study also looked at how VE can support university internationalisation. The TEP model of VE, which centred on problem-solving and cultural exchange, was the first of its kind locally and nationally. Additionally, the data gathered from surveys before and after the exchange, besides the online facilitated dialogues and the e-portfolio reflections, were analysed using both statistical methods and content analysis to ensure a comprehensive understanding of VE's effectiveness and explore personal experiences and intercultural growth.

In this study, the independent variable is the VE project, an innovative online platform designed to enhance ICC and collaboration among participants. The IDCB VE project, part of the Transnational Education Program (TEP), is the treatment or intervention the researchers manipulate to explore its impact on developing participants' IC skills. This virtual exchange, facilitated through structured activities and discussions, allows Algerian participants to engage with Turkish peers in a cross-cultural setting and promote mutual understanding and cultural exchange.

The dependent variable in this study is the development of IC skills among the participants. This variable reflects the potential benefits the researchers measure to evaluate the VE project. The researchers will ascertain whether the VE project significantly enhances the participants' IC skills by comparing the participants' IC skill levels before and after the intervention through pre- and post-exchange surveys.

1.9. Limitations of the Study

While acknowledging its limitations, the current research is significant as it focuses on a specific geographical scope. The study primarily involves students from Abdelhamid Ibn Badis University in Algeria and a partner group in Turkey. The research's specific focus on Algeria and Turkey may limit the findings' generalisability, yet it offers a valuable perspective on ICC in those countries.

While using mixed methods can offer more comprehensive insights, it also risks bias, especially when interpreting qualitative data. The COVID-19 pandemic adds additional challenges, such as interruptions in participation and its impact on participants' mental health. Moreover, the VE reliance on digital tools might reduce participants' engagement and limit the depth of the findings.

The varying access levels to technology and the Internet in Algeria and Turkey could exclude or be the reason behind the withdrawal of individuals due to lack of access to necessary technology or internet connectivity and overuse during the pandemic.

On the other hand, the study may face limitations due to the lack of skilled staff, access to the right technologies, and the ability to gather a larger, diverse group of participants. Additionally, without proper feedback methods, it could be difficult to fully understand participants' experiences and opinions during the process.

1.10. Ethical Considerations

This research, carried out during the COVID-19 pandemic, closely followed ethical guidelines. We adapted our plans to meet changing public health rules, reflecting our focus on the

effects of the pandemic on both physical and mental health. Informed consent took on added importance, especially regarding pandemic-related risks. Participants were fully informed about the study's aims, processes, risks, and benefits, and their participation was entirely voluntary. Special attention was given to vulnerable individuals, and adjustments in data collection were made to meet ethical standards and pandemic-related challenges.

This process aligns with Institutional Review Board (IRB) guidelines, including detailed explanations provided in a cover letter.

Complying with legal and ethical standards is critical, but navigating these requirements can be resource-intensive, especially in cross-border or interdisciplinary research. The Memorandum of Understanding (MoU) with Djilali Bounaama Khemis Miliana University is crucial to reinforce the study's ethics and formalise the partnership under the Erasmus+ Virtual Exchange. It provides a legal and administrative foundation to manage intellectual property, resolve disputes, and comply with laws and regulations. The agreement supports the internationalisation goals of the institutions, promoting cultural exchange and global learning opportunities for students and staff. However, the researcher could not sign it on behalf of her University; thus, the process took up to six months to formalise the partnership and allow the official start of the IDCB VE project.

More importantly, to ensure online confidentiality and anonymity where risks are greater, personal data is kept confidential by removing identifying information. In addition, the research's purpose is clearly explained, and ethical approval is secured before data collection to ensure participants' safety and respectful treatment and the focus remains on participants' dignity and

well-being, promoting respectful communication and valuing their contributions without increasing health risks.

In addition, efforts are made to minimise potential risks to participants, including psychological risks, such as discomfort from discussing certain topics and technical risks related to using specific online platforms.

Findings will be presented honestly, with provisions for post-research follow-up, emphasising our ongoing ethical commitment.

Finally, the study prioritises participants' safety, data accuracy, and social impact while staying adaptable to changes in health guidelines and addressing the pandemic's effect on mental well-being.

1.11. The Thesis' Structure

Chapter One sets the stage by introducing the study's context, identifying the research objectives and questions, and discussing its significance. It also addresses the study's limitations.

Chapter Two examines existing literature on developing intercultural communication skills through educational platforms, focusing primarily on virtual exchange. The literature review is structured around four central research questions and examines the influence of Virtual Exchange (VE) on intercultural communication skills among EFL students at Abdelhamid Ibn Badis University. It assesses VE's alignment with university internationalisation strategies, its role in promoting global awareness, and its potential to foster inclusive educational environments.

This comprehensive review thoroughly evaluates VE's effectiveness in enhancing intercultural understanding and communication skills. It draws on empirical studies and case examples to illustrate its impact on language proficiency and cultural empathy. Furthermore, it explores the wide-ranging benefits and challenges of integrating VE into university curricula. It discusses its advantages, such as improved engagement and learning outcomes, and obstacles, such as logistical and pedagogical hurdles.

Additionally, the review identifies barriers to VE adoption at classroom, institutional, and policy levels, particularly within the Algerian educational context, and offers practical recommendations for overcoming these challenges. By guiding educators, policymakers, and practitioners, the review aims to enhance the implementation of VE in EFL and international education, ultimately contributing to a better understanding of VE's role in developing intercultural communication skills.

Chapter Three provides a detailed overview of the methodology and research tools used in our IDCB VE project. Employing an explanatory sequential mixed-method approach integrates qualitative and quantitative methods to understand the program's impact and effectiveness comprehensively.

The chapter details the various stages of our research design, from the initial conceptualisation of the project to the selection of participants, and concludes with the implementation and analysis of data collection procedures. It emphasises the importance of using pre- and post-exchange surveys, in-depth participants' observation (e-portfolios), and online focus group interviews (online facilitated dialogues) and clarifies the rationale behind the sequencing of these methods. Additionally, the chapter examines the tools and software employed to facilitate

virtual exchange, data collection and data analysis, underscoring their relevance and reliability in ensuring the success of the research.

In Chapter Four, in this pivotal chapter, we present the results of our investigation using an explanatory sequential mixed method approach. We explore rich data from both quantitative and qualitative sources to address the 'what', 'why', and 'how' of our research topic. This dual-method approach enriches our analysis and helps us comprehensively understand the subject. We examine the core research questions, highlight the interplay between quantitative data and qualitative narratives, and illuminate vital patterns and themes. These insights contribute to the evolving academic discourse in the Virtual Exchange (VE) field.

The fifth chapter comprehensively analyses the study's findings, beginning with a brief overview and the chapter's objectives. It compares the results with existing literature to highlight alignment or contradictions and discusses the findings' theoretical and practical implications. Each research question is revisited and discussed to illustrate how the findings address these queries. The chapter also acknowledges methodological limitations and their potential impact on the results, suggesting ways future research can address these issues.

The sixth chapter is then dedicated to summarising and discussing research findings, explaining the study's limitations and giving suggestions for further research.

Summary

Chapter One thoroughly introduces the research, setting the context by outlining the study's background, aims, rationale, and limitations. It begins by situating the research within the broader field, highlighting its significance and relevance, and detailing the specific objectives and research questions. The rationale section justifies the research approach and methods, explaining their relevance to the aims. Additionally, the chapter discusses the study's potential limitations, acknowledging any factors that might affect the results or their applicability.

Overall, this chapter establishes the foundation for understanding the research scope and prepares the reader for a deep exploration in the subsequent chapters.

Chapter Two: Literature Review

The convergence of globalisation and information technology has radically transformed the world. This transformation is evident in shifts in the workplace, production of goods and services, free trade, worker mobility, international relations, and local cultures. HE has been greatly affected, with an increased emphasis on preparing individuals for global competition. These individuals are expected to compete globally and contribute to their nation's global standing (Whitaker, 2004; Daun, 2002). A key strategy in this context is the internationalisation of university campuses, achieved through partnerships and collaborations with regional and international institutions (Polak-Ergon, 2012). Over the past two decades, this approach has significantly expanded international university relations (De Meyer, 2012)

The research problem being addressed is the need to find effective ways to internationalise higher education at home (IaH) and provide global and intercultural competences to a broader student population beyond those who can participate in study abroad programs. The study specifically focuses on the underutilisation of VE to achieve IaH and its potential to offer cost-effective alternatives for internationalisation, especially in light of economic challenges and limited opportunities for physical student mobility. The critical issue being investigated is how to leverage digital tools and internet access through VE to expand opportunities for engagement and learning while adapting internationalisation to current realities. English Language and Communication Master students at Abdelhamid Ibn Badis University of Mostaganem need help developing intercultural communication skills.

The literature review for this research is structured to provide an in-depth understanding of the impact of VE on the development of intercultural communication skills among English as a Foreign Language (EFL) students at Abdelhamid Ibn Badis University. This review is organised around five key research questions, each targeting a distinct yet interrelated aspect of the overarching theme.

The first section of the review addresses the primary question and will focus on aligning VE initiatives with university internationalisation strategies. This section will assess how VE projects contribute to the broader goals of universities in promoting global awareness and cross-cultural competences among students. The literature on university internationalisation policies, particularly in the context of Algerian higher education, will be scrutinised to understand how VE integrates with and supports these strategies. This part will also discuss the potential of VE in bridging gaps between diverse student populations and fostering a more inclusive educational environment.

Subsequently, the review will define keywords such as intercultural communication and explore existing literature on the efficacy of VE in fostering intercultural understanding and communication proficiency. It will delve into studies that have examined the impact of virtual collaborative projects on language skills, cultural empathy, and the ability to navigate cross-cultural interactions. This exploration will examine case studies and empirical research where VE has been employed as a tool for intercultural skill development in EFL contexts.

The third segment will systematically identify the benefits and inherent challenges of integrating VE into university curricula, which will involve a critical analysis of studies and reports highlighting the advantages of VE, such as enhanced student engagement and improved learning

outcomes. Simultaneously, it will address the logistical, technical, and pedagogical obstacles institutions face in implementing VE. This balanced approach will offer a comprehensive view of the practical aspects of VE in university settings.

Furthermore, the review will explore the barriers encountered at various classroom, institutional, and policy levels in adopting and integrating VE. This exploration will draw upon studies identifying and analysing these challenges, providing insights into common hurdles such as resource constraints, technical issues, and resistance to change. The review will also consider how these barriers vary in different cultural and educational contexts, specifically focusing on the Algerian university system.

Finally, the review aims to compile and analyse recommendations for overcoming identified barriers to VE adoption and enhancing learning opportunities through VE by reviewing best practices, technological solutions, pedagogical approaches, and policy recommendations that could facilitate broader and more effective use of VE. By doing so, the review intends to offer practical guidance for educators, policymakers, and practitioners in the EFL and international higher education fields.

Overall, the literature review is structured to thoroughly synthesise existing research and theories related to VE and intercultural communication. It seeks to contextualise the current study within the existing body of knowledge, identify gaps for future research, and inform practical applications in educational settings. The review aims to contribute significantly to understanding VE's role in developing intercultural communication skills among EFL students through this comprehensive approach.

Section One: VE and University Internationalisation

Many higher education institutions worldwide pursue university internationalisation. This section defines and explores global trends in higher education internationalisation. Subsequently, it examines how VE initiatives contribute to these internationalisation strategies, offering insights into the broader context in which VE operates.

2.1. The Foundations of Internationalisation

Higher education institutions have increasingly emphasised internationalisation in the context of globalisation to equip students with international and intercultural competence, which is vital for the global labour market (Knight & De Wit, 2018). Once a marginal aspect, internationalisation has become a global, strategic factor in higher education, evolving into a multifaceted concept with diverse rationales and strategies in ever-changing contexts (Knight & De Wit, 2018).

While often equated with student mobility, internationalisation encompasses much more, including "internationalisation abroad" (IA) and "internationalisation at home" (IaH)— two interdependent pillars (Knight, 2012, p. 22). Jane Knight (2003) defines internationalisation as integrating an international, intercultural, or global dimension into postsecondary education (Knight, 2004). This shift in focus has led to the inclusion of international programs, MOOCs, and joint degrees in university strategies and policy statements, moving from a foundation of mutual cooperation to more competitive and commercial approaches (Knight & De Wit, 2018).

Concurrently, the rise of Internationalisation at Home (IaH) addresses the challenge of large-scale student exchanges by providing international learning opportunities within domestic environments (De Wit & Leak, 2015).

2.1.1. Internationalisation

Internationalisation is a broad term that is seen as a driver for quality and innovation (De Wit & Leak, 2015). Definitions vary, ranging from international academic mobility and collaborations to offering education internationally using various methods (Guo & Chase, 2011; Knight, 2004; De Wit et al., 2015). For many, it involves adding international elements to the curriculum to improve institutional rankings and attract top international students (Knight, 2012). Knight provides a comprehensive working definition, emphasising the integration of international dimensions into higher education at institutional and national levels (2004, 2012).

2.1.2. Comprehensive Internationalisation

Comprehensive internationalisation (CI) in higher education, as described by Beelen & Jones (2015), extends beyond the curriculum, encompassing a broader, strategic integration of international, intercultural, and global dimensions. Hudzik (2011) defines CI as a commitment to infuse these perspectives throughout the institution's teaching, research, and service missions, impacting campus life and external partnerships and relations. It requires engagement from all levels of the institution, including leadership, governance, faculty, students, and support units, and responds to the global reconfiguration of economies, trade, research, and communication.

Similarly, NAFSA (2014) defines CI as the strategic integration of international and intercultural dimensions into the ethos and outcomes of higher education. Whitsed and Green

(2013) argue that the internationalisation of the curriculum is a crucial element of CI, aligning with Knight's 2004 definition of internationalisation, suggesting that CI cannot exist without it. Thus, CI represents a comprehensive and institution-wide approach to integrating global perspectives in higher education.

The evolution of internationalisation in higher education has led to its bifurcation into two distinct yet interconnected pillars: 'internationalisation at home' and 'internationalisation at home or cross-border education'. These two aspects, while separate, are closely intertwined and mutually dependent. Cross-border education, which includes activities like student mobility, significantly influences campus-based internationalisation efforts and vice versa. Notably, aspects of cross-border education such as study abroad programs, internships, fieldwork, and research are integral to the internationalisation of student curricula and research experiences, demonstrating the profound interplay between these two facets of internationalisation.

According to De Wit (2020), both Internationalisation Abroad (IA) and Internationalisation at Home (IaH) are essential for acquiring intercultural competences.

2.1.3. Internationalisation Abroad

Internationalisation Abroad (IA) includes cross-border education involving students, staff, policies, knowledge, ideas, projects, and services across national boundaries (Knight, 2012; Rienties & Tempelaar, 2013; Paik et al., 2015; Waterval et al., 2015). While student mobility is a significant aspect of this movement, it is also increasingly linked to the mobility of programs and providers. This form of education can manifest in diverse arrangements like study abroad

programs, academic partnerships, development cooperation projects, and commercial trade, including models like twinning, franchising, and establishing branch campuses.

2.1.4. Internationalisation at Home

In contrast, IaH has emerged as a response to the increasing focus on international academic mobility and the disappointing small number of domestic students gaining such experiences. Its strategies focus on internationalising education for students remaining in their home country by incorporating intercultural and international elements into various aspects of campus life, including teaching, research, extracurricular activities, and engagement with local cultural and ethnic communities (Wächter, 2003; Beelen & Jones, 2015; Crowther et al., 2001; Knight, 2008 & 2012). They also involve integrating international students and scholars into campus activities (Rienties & Tempelaar, 2013; Paik et al., 2015; Waterval et al., 2015) to develop international and intercultural competencies for all students (Leask, 2011; Jones & de Wit, 2012).

This situation underscores the need for more emphasis on campus- and curriculum-based initiatives to prepare students for an increasingly interconnected and culturally diverse world. Universities are responsible for ensuring students, whether or not they travel abroad, understand global issues and develop intercultural skills, which involves physical mobility and leveraging virtual activities to enrich the student experience with international, intercultural, and comparative perspectives.

IaH is seen as a way to democratise internationalisation benefits, focusing on diversity as a resource, an internationalised curriculum, and a culturally sensitive pedagogy (Crowther et al., 2000). Integrating technology in higher education facilitates this approach through Online

Intercultural Exchange (OIE) and VE initiatives and other digital methods, providing authentic international experiences (De Wit & Leak, 2015; Heffernan et al., 2018).

The approach enables more university students to gain real-world international experience by facilitating virtual collaboration with peers from diverse cultures. It also enhances their intercultural communication skills and modern competencies, offering a user-friendly and affordable method.

2.2. Higher Education Internationalisation Theories

Internationalisation in Higher Education refers to integrating international perspectives and experiences into higher education curricula and programs to prepare students and institutions for a globally interconnected world. The following three key concepts are relevant to internationalisation in higher education:

2.2.1. Global Citizenship Education (GCE)

Global Citizenship Education is a pedagogical approach that the United Nations (UN) Commission on Environment and Development defined as 'sustainable development' in the 1980s (Cantón & Garcia, 2018). It has developed as a standard feature of school reforms in several countries, reflecting a shift from notions of citizenship focusing only on the national (Johnson, 2010).

GCE is a transformative pedagogy that can empower individuals in an increasingly interconnected and interdependent world that aims to equip learners with the knowledge, skills, attitudes, and values necessary to engage effectively in an interconnected, diverse world. The focus is on fostering an understanding of global issues, cultural diversity, and the interconnectedness of

local and global communities. It emphasises developing empathy, cultural understanding, critical thinking, and an awareness of global issues like sustainability, peace, and equity by integrating global citizenship concepts into education systems worldwide. UNESCO's efforts include developing curricular guidelines, providing teacher training resources, and researching best practices in GCE to prepare students to be responsible, active global citizens who can contribute to a more just, peaceful, tolerant, inclusive, secure, and sustainable world (UNESCO, 2014).

Integrating international, technology-enabled collaborations with multiple languages into teaching and learning initiatives can better prepare students for the complexities of life within the context of globalisation (Hildeblando et al., 2018), which aligns with the idea that universities are teaching students to become global citizens through an international approach to learning by developing an awareness of self (Rubin & Guth, 2015).

2.2.2. Transnational Education (TNE) Models

Transnational Education (TNE) is a growing area in higher education involving students studying at a foreign university while remaining in their home country (McBurnie & Ziguras, 2011). It is discussed under other similar concepts, including cross-border, offshore, and borderless higher education (CVCP, 2000); yet, there are significant differences between these terms that are often used interchangeably (Knight, 2005). Indeed, cross-border education refers to the mobility of students, scholars, and educational programs such as online courses and international campuses (UNESCO/OECD, 2005). Whereas, offshore education, focuses on delivering programs in countries where the students are based outside the country where the awarding institution is located. (UNESCO/COE, 2001); and Borderless Higher Education focuses more on international

academic mobility and global exchange programs with the view to offer a seamless, cross-border learning experience, without disrupting current academic session or experience (CVCP, 2000).

2.2.3. Transnational Education Typologies

Transnational Education (TNE) manifests in various arrangements, such as distance/virtual/online education, franchised or licensed programs, international branch campuses, joint or double degree programs, partnership arrangements, and study abroad options.

It can be classified into two primary typologies. The '4F framework' identifies four forms: distance learning, where students learn remotely through online platforms (Koran & Sarnou, 2022).; Franchising, where foreign partners deliver a university's degree program (Yorke, 1993). Validation, where a university recognizes a foreign institution's program as equivalent to its own (Knight, 2007); and International Branch Campus (IBC) that involves foreign campuses offering the university's degrees directly (Garrett, 2002).

The second typology, based on the General Agreement on Trade in Services (GATS), includes four modes (Knight, 2007): Mode 1 (Programme Mobility), is similar to distance learning and education services are provided across borders directly to international students (Healey & Michael, 2014).; Mode 2 (Student Mobility), where students travel abroad (Healey & Michael, 2014).; Mode 3 (Institutional Mobility) involves local providers offering degrees; and Mode 4 (Staff Mobility), also known as 'flying faculty' (Seah & Edwards, 2006), where faculty staff travel to deliver education abroad temporarily (Healey & Michael, 2014).

Both typologies provide a comprehensive view of how higher education services are delivered across borders in various forms, highlighting the diversity and complexity of TNE.

2.2.4. Internationalisation Trends

The current trends in university internationalisation are multifaceted. Cross-border educational partnerships for joint degree programs and collaborative research initiatives have become more common (Knight, 2004). Student and faculty mobility programs are increasingly popular, fostering an exchange of ideas and cultural understanding (Marginson, 2010). The rise of international campuses offers students global learning environments (McBurnie & Ziguras, 2007). Additionally, digital internationalisation, including MOOCs and virtual exchanges, has expanded the reach and impact of internationalisation efforts (Bates, 2015).

The motivations behind these trends are diverse. Global competitiveness is a primary goal, with universities striving to enhance their international standing (Altbach & Knight, 2007). A focus on fostering cultural understanding and preparing students for global citizenship is also evident (Deardorff, 2006). Collaborative international research addresses global challenges and promotes innovation (Marginson, 2010). Further, attracting international students has become a significant incentive for many institutions, particularly for economic benefits (Hudzik, 2011).

2.2.5. Internationalisation Challenges and Critiques

Despite its significant worldwide evolution and impact, internationalisation faces challenges and critiques. Concerns about cultural homogenisation and the dominance of Western educational models are prominent (Knight, 2004). The competition for international students and faculty exacerbates academic inequalities, favouring more affluent institutions (Altbach, 2015). Economic barriers, such as the high costs of studying abroad limit access and equity (De Wit, 2011). Additionally, the rapid expansion of international programs raises concerns about maintaining quality and educational standards (Egroun-Polak & Hudson, 2014).

In summary, while internationalisation in higher education offers numerous benefits for global understanding and collaboration, it also presents challenges that require careful consideration. Ensuring a balance between these benefits and challenges is crucial for internationalisation to contribute positively and equitably to the global educational environment (Marginson, 2010; Knight, 2004).

Section Two: Telecollaboration and Virtual Exchange

Telecollaboration or Virtual Exchange, a concept that has gained significant traction in recent years, redefines traditional education's boundaries. This section introduces VE, tracing its evolution from a novel idea to a crucial educational strategy. It sets the stage for understanding VE's role in modern education systems and its significance in fostering a globally connected learning environment.

2.3. A Historical Overview and Evolution

Telecollaboration in language education, as explored by various authors (Belz, 2003; O'Dowd, 2006; O'Dowd & Ritter, 2006; Dooly, 2008), includes terms like e-pals, keypals, e-tandem, and online intercultural exchange. Defined by Belz and O'Dowd, telecollaboration involves electronic intercultural communication guided by language and cultural experts for language learning and intercultural competence development (Belz, 2007; O'Dowd, 2013).

The pedagogical approach of telecollaboration is ethnographic, dialogic, and critical, conducted under expert supervision (Helm, 2018). O'Dowd expanded the concept to "online intercultural exchange" (2007), highlighting collaborative projects via online tools like email and videoconferencing to enhance communicative skills and intercultural sensitivity.

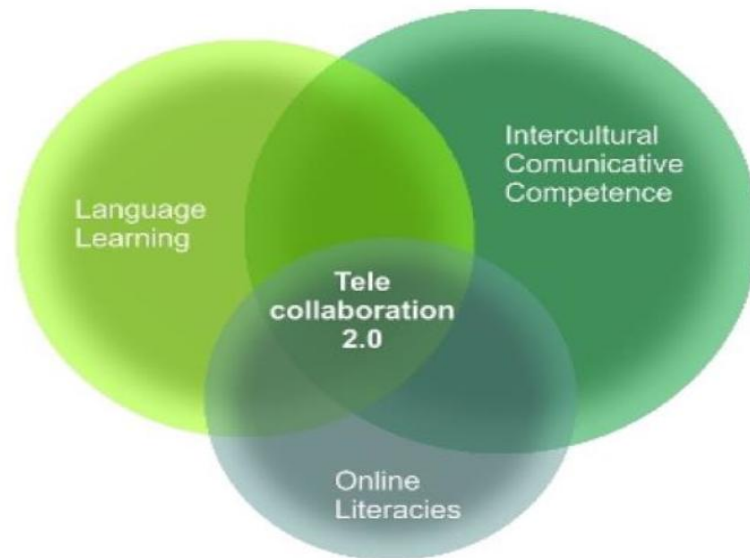
Telecollaboration develops competences such as language skills, intercultural communicative competence, critical cultural awareness (Byram, 1997), and digital literacy, including multimodal communicative competence (Hauck, 2007). It is broadly understood as an Internet-based intercultural exchange to develop language and intercultural skills through structured tasks (Guth & Helm, 2010).

The evolution of telecollaboration with Web 2.0, termed "Telecollaboration 2.0", reflects a shift towards interactive and collaborative online practices. Web 2.0 has transformed knowledge creation and sharing, introducing new tools like blogs, wikis, and video-sharing platforms, and promoting active content creation and sharing in online communities (Guth & Helm, 2010). This development has expanded traditional telecollaboration practices, facilitating diverse communications and activities.

Modern telecollaborative projects aim to produce near-native speakers and enhance linguistic competences, intercultural communicative competences, and online literacies (Guarda et al., 2014). Byram (1997) notes that the goal is to create "intercultural speakers" capable of navigating and understanding cultural beliefs, behaviours, and meanings, setting realistic and relevant goals for language learning.

Figure 2.1.

Telecollaboration 2.0 and the three macro-areas of competences.



Note. The image for “Telecollaboration 2.0 and the three macro-areas of competences” is from ResearchGate, by Guth & Helm, 2014, (p. 20). Copyright 2010 by ResearchGate. https://www.researchgate.net/figure/Figura-1-Telecollaboration-20-e-le-3-macro-aree-di-competenze-tratto-da-Guth-e-Helm_fig1_279751986

2.3.1. Telecollaboration Diverse Terminology

The concept of telecollaboration, also known as VE and online international exchange (OIE), has been present in education for over a century.

Various terms like telecollaboration (Belz, 2001; Warschauer, 1996), Collaborative Online International Learning (COIL) (Rubin, 2016; Schultheis et al., 2015), online intercultural exchange (O'Dowd, 2007; O'Dowd & Lewis, 2016), and internet-mediated intercultural foreign language education (Belz & Thorne, 2006) reflect its evolution and application in different contexts.

The term "virtual exchange"(VE), an innovative educational approach, utilises technology to connect students and educators across different geographical and cultural backgrounds. This

concept, evolving from initial formulations by pioneers like O'Dowd and Lewis (2016), emphasises digital collaboration and intercultural engagement. It is widely used in diverse contexts, including educational programs like Soliya and Sharing Perspectives, as well as by various organisations and agencies such as the Stevens Initiative, the US Bureau of Educational and Cultural Affairs, and the European Commission. Its frequent use across different platforms and by various foundations, governmental, and intergovernmental bodies has led to it becoming a broad umbrella concept in telecollaboration, particularly in teaching foreign languages (O'Dowd, 2018).

Its widespread adoption signifies the importance and relevance of virtual exchange in contemporary education and international collaboration.

Figure 2.2.

An overview of terminology used to refer to virtual exchange initiatives



Note. The image for “An overview of terminology used to refer to virtual exchange initiatives” is from Semantic Scholar, by O’Dowd, 2018, (p. 4). Copyright 2018 by Semantic Scholar. <https://www.semanticscholar.org/paper/From-telecollaboration-to-virtual-exchange%3A-and-the-O%E2%80%99Dowd/e1c3530ab3fcc16cbfb68f2cbe2e679071f5ca2f>

The diverse array of virtual exchange initiatives across various academic fields demonstrates the adaptability of this method to different educational goals and terminologies. However, spreading awareness and adoption among teachers and policymakers unfamiliar with virtual exchange presents a challenge.

Rubin (2016), a key figure in American Collaborative Online International Learning (COIL) initiatives, expresses concern that the multitude of names for this format creates confusion, hindering more comprehensive understanding and implementation.

2.3.2. Telecollaboration Initiatives

The roots of telecollaboration date back to the 1920s with the Modern School Movement in Europe, particularly through Célestin Freinet's innovative student collaboration projects (O’Dowd, 2007).

2.3.2.1. Pen Pal and Multimedia Exchanges.

Inspired by the Modern School Movement, these early telecollaboration forms involved European students exchanging letters and multimedia content in the 1920s. Célestin Freinet, a French educator, was pivotal in promoting these international collaborations, encouraging students to engage in research and projects with peers abroad and share their findings through classroom exchanges (O’Dowd, 2007).

2.3.2.2. Technological Advances and Early Telecollaboration.

Other exchanges have emerged due to improvements in the speed and accessibility of various communication tools.

2.3.2.2.1. Lodi Exchange and Global Village Concept.

Mario Lodi spearheaded exchanges in Italy that aligned with the era's growing global interconnectedness. Marshall McLuhan's "global village" concept resonated during this time, influencing perceptions of a unified world system (O'Dowd, 2013a).

2.3.2.2.2. PLATO System.

The 1970s PLATO early computer network system in the US enabled users to access primitive forms of email and chat rooms, enhancing communication capabilities across borders and pivotal for the evolution of telecollaboration (Dear, 2017).

2.3.2.2.3. iEARN's Inception.

In 1988, the International Education and Resource Network (iEARN) started connecting schools globally, fostering collaborative projects among students from various countries, and significantly expanding the reach and impact of telecollaboration (Helm, 2018).

2.3.2.2.4. The 1990s Pedagogical Pioneers.

The widespread availability of personal computers in the late 20th century led to innovative telecollaboration methods in language teaching, pioneered by educators like Kern (1996), Brammerts (1996), and Johnson (1996). All of these educators laid essential pedagogical foundations for subsequent research and practice in telecollaboration in language teaching and learning. Researchers and practitioners have built upon these foundations (Dooly, 2017).

2.3.2.2.5. G.W. Allport Contribution.

Another significant contribution was made by the social psychologist G.W. Allport's research on intercultural relations, which provided foundational insights for the rationale behind online intercultural exchange (O'Dowd, 2007). In his research on the intercultural relations of North American society, Allport examined a method known as "social travelling," which was practised in progressive schools in the United States at the time (O'Dowd, 2007, p. 5).

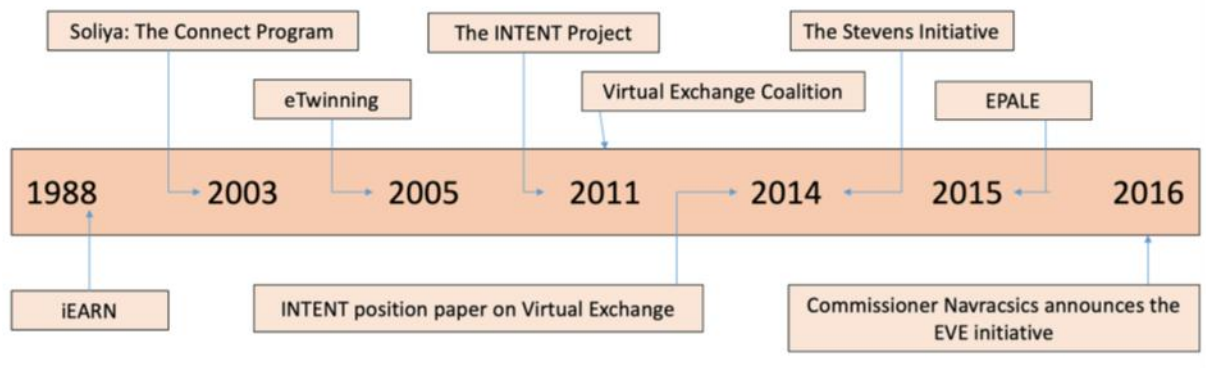
2.3.2.2.6. E-tandem Emergence.

The late 20th century witnessed the development of various telecollaboration models, such as e-tandem learning and intercultural telecollaboration, each focusing on aspects like language autonomy and cultural exchange (Chun, 2015; O'Rourke, 2007). Since the early 1990s, European foreign language teachers have engaged in these models as forms of virtual exchange (VE), often with partners in the United States (Tella, 1992; Warschauer, 1995). The latter practice was usually isolated within specific exchange relationships rather than being part of broader initiatives.

O'Dowd (2011) describes telecollaboration in higher education as a grassroots, bottom-up practice, often unnoticed at institutional, regional, or national levels. Virtual exchange projects date back to 1988, marking a significant evolution in the field (Helm, 2018).

Figure 2.3.

Virtual Exchanges Timeline



Note. The image for “*Virtual Exchanges Timeline*” is from ResearchGate by PPMI & Demokratie & Dialog Youth Policy Labs, 2017, (p. 26). The long and winding road... - Copyright 2017 by ResearchGate. https://www.researchgate.net/figure/A-timeline-of-virtual-exchanges-adapted-from-PPmI-Demokratie-Dialog-Youth-Policy_fig1_329971216

2.3.3. *Virtual Exchanges Timeline*

VEs, which began to take shape in the late 20th century, have evolved significantly with technological advancements. Over the years, they have facilitated cultural understanding and collaboration without the need for physical travel, providing a cost-effective and accessible means for cross-cultural education and internationalisation at home.

2.3.3.1. iEARN.

The International Education and Resource Network (iEARN) is a leading non-governmental organisation (NGO) established in 1988 to promote global educational collaboration. With a network in 140 countries, 30,000 projects, 50,000 educators, and 2 million youths, it encourages worldwide educational interaction in 30 languages.

iEARN's origins in virtual exchange are exemplified by its New York/Moscow Schools Telecommunications Projects during the Cold War, aiming to connect American and Soviet students and later expanding globally (Helm, 2018).

Initiatives like *Learning Circles* and *the Orillas project* (Cummins & Sayers, 1995) under iEARN have notably advanced global educator collaboration and intercultural communication, emphasising the importance of global networks in education.

2.3.3.2. E-tandem.

The e-tandem model, launched in 1994, focuses on student independence in language learning. It allows learners to continue their studies outside the traditional classroom setting (Chun, 2015).

It pairs two native speakers of different languages to converse online, synchronously or asynchronously, to learn each other's language. Participants aim for an equal split in language use, exchanging messages in both their native and target languages (O'Rourke, 2007). This approach facilitates mutual language exposure and provides opportunities for meaningful feedback.

In e-tandem, learners take on a more active role, providing constructive feedback on their partner's language use, choosing discussion topics, identifying errors, and maintaining a journal or portfolio of their learning. The model emphasises autonomy, reciprocity, and peer tutoring, with a reduced role for teachers or tutors compared to conventional language learning environments.

2.3.3.3. Cultura

Also known as the blended intercultural model, the Cultura project has been running since 1997. It is the most frequently used approach (Chun, 2015) developed at the Massachusetts

Institute of Technology (MIT). This approach necessitates careful planning and coordination among teachers and classes. It involves students engaging in activities like filling out cultural questionnaires, participating in discussion forums, and sharing personal experiences both in and out of class (Chun, 2014; Furstenberg & English, 2016).

2.3.3.4. Global Nomads Group

Founded in 1998 by four university friends inspired by the emergence of video conferencing technology, Global Nomads Group (GNG) was established to foster global dialogue and meaningful connections among young people (Global Nomads Group, 2022). GNG focuses on creating opportunities for youth engagement through a variety of programs. These include youth-led online courses, content creation internships, and various platforms for discussions and events.

These initiatives provide a safe and supportive environment for young individuals to express themselves and connect with peers globally, facilitating cross-cultural understanding and exchange.

2.3.3.5. Soliya

Founded in 2003, Soliya's Connect Program mitigates tensions between Western and predominantly Arab and Muslim societies, particularly post-9/11. The program is rooted in the principles of intergroup contact, fostering sustained interaction to reduce prejudice and enhance intercultural communication, as outlined by Paolini et al. (2018). It achieves this through small, diverse dialogue groups comprising students from various partner institutions, who engage in two-

hour online sessions across an eight-week period. These sessions are led by trained facilitators adept in guiding online intercultural dialogue.

Over the years, Soliya has collaborated with educational institutions globally, integrating the Connect Program into their curricula and engaging thousands of students in meaningful, cross-cultural communication and learning (Elliot-Gower & Hill, 2015; Helm, 2018).

2.3.3.6. eTwinning

eTwinning, established in 2005, represents a form of virtual exchange for educational institutions across Europe. It functions as a dynamic community, facilitating a collaborative platform for staff from schools in European member nations. As its website describes, eTwinning aims to create an engaging and interactive learning community in Europe. It encourages communication, collaboration, project development, and sharing of resources among educators and students (etwinning, 2022).

The key objectives of eTwinning include promoting the twinning of schools to enhance students' information and communication technology skills and to foster a sense of European identity and citizenship among participants. This initiative offers a unique opportunity for students to engage in cross-cultural exchanges and collaborative learning experiences without face-to-face communication.

2.3.3.7. The INTENT Project

The INTENT Project, launched in 2011 under the European Commission's Lifelong Learning Programme, was a 30-month initiative aimed at enhancing online intercultural exchange in university education. It addressed the fragmentation, practitioner difficulties, and lack of

institutional support in foreign language education at national and European levels. One of the project's significant achievement was its success in drawing attention from policymakers, thanks to its thorough data collection and mapping of telecollaboration practices across Europe, which highlighted the state and potential of telecollaboration in education (Guth, 2016; Guth et al., 2014; Helm, 2015).

Furthermore, the project's impact extended beyond its conclusion and led to the creation of a platform for virtual exchange, facilitating ongoing collaboration and knowledge sharing. This platform contributed to the founding of UNICollaboration, a network for practitioners and researchers, and the establishment of the Journal of Virtual Exchange, enhancing scholarly communication in the field (O'Dowd, 2018).

2.3.3.8. The Virtual Exchange Coalition

The VE Coalition was formed in 2011 by Soliya, iEARN, and the Global Nomads Group. Its mission is to foster a supportive and innovative environment for virtual exchange programs to grow and diversify, enhancing cross-cultural exposure and learning for youth globally. The coalition aims to broaden the demographic reach of virtual exchange, encompassing students from school age to university level and gain significant cross-cultural exposure as part of their education (Virtual Exchange Coalition, 2022). It emphasises the importance of virtual exchange in promoting public diplomacy, peacebuilding, and technological innovation, especially as a complementary or alternative opportunity to traditional study abroad programs, which have limited reach among American students (Himelfarb, 2014). The coalition's efforts highlight the importance of cross-cultural education in an increasingly interconnected world.

2.3.3.9. The Stevens Initiative

The Stevens Initiative, launched in 2014, is a significant U.S.-based virtual exchange initiative. Funded through Calls for Participation, it emerged largely from the efforts of a coalition advocating for its establishment. The initiative involves collaboration between the US Department of State, the Bezos Family Foundation, and governments from the Middle East and North Africa (MENA) region and is managed by the Aspen Institute. This collaboration aims to enhance public diplomacy, mainly to improve perceptions of the US in the MENA region, and is part of a broader effort to foster an integrated global market through educational and developmental programmes (Pennycook, 1994/2017).

Recognised for its potential to bridge geographical and cultural divides, the Stevens Initiative addresses practical concerns such as the high costs of international travel and safety issues, making it particularly appealing to US educators and policymakers in the K-12 and higher education sectors. Its focus on virtual exchange reflects an understanding of the unique position of the US in the global context and acknowledges the role of technology in facilitating international educational experiences (De Wit, 2013; Rubin & Guth, 2015; Starke-Meyerring & Wilson, 2008).

2.3.3.10. The INTENT position paper on Virtual Exchange

The INTENT position paper on Virtual Exchange, published by UNICollaboration in 2014, was a pioneering initiative in Europe. It aimed to synthesise two decades of research and practice in VE into actionable insights for policymakers and demonstrate its applicability in internationalising various curricula beyond just foreign languages.

The paper recommends standardising virtual exchanges in higher education by developing coordinated strategies across European, national, and institutional levels to facilitate efforts and

reduce fragmentation. It also suggests establishing funding mechanisms for these projects and integrating them as mandatory components in university curricula, ensuring proper credit and recognition. Additionally, it calls for more research to assess the effectiveness of these programs, as per UNICollaboration's 2014 findings.

The position paper has been influential and referenced in various policy documents, including a report for the European Parliament and a feasibility study. It has garnered support from international education scholars like De Wit (2016), virtual exchange organisations, and European universities, indicating its significant impact in the field of international education and virtual exchange (De Wit et al., 2015; PPMI et al., 2017).

2.3.3.11. EPALE.

Launched in 2015 by the European Commission's Directorate-General for Education, Youth, Sport, and Culture, EPALE (Electronic Platform for Adult Learning in Europe) is a community aimed at professionals involved in adult learning across Europe. It is a central hub for sharing materials, information, initiatives, resources, and events, facilitating collaboration and knowledge exchange among adult education professionals.

2.3.3.12. Erasmus Virtual Exchange.

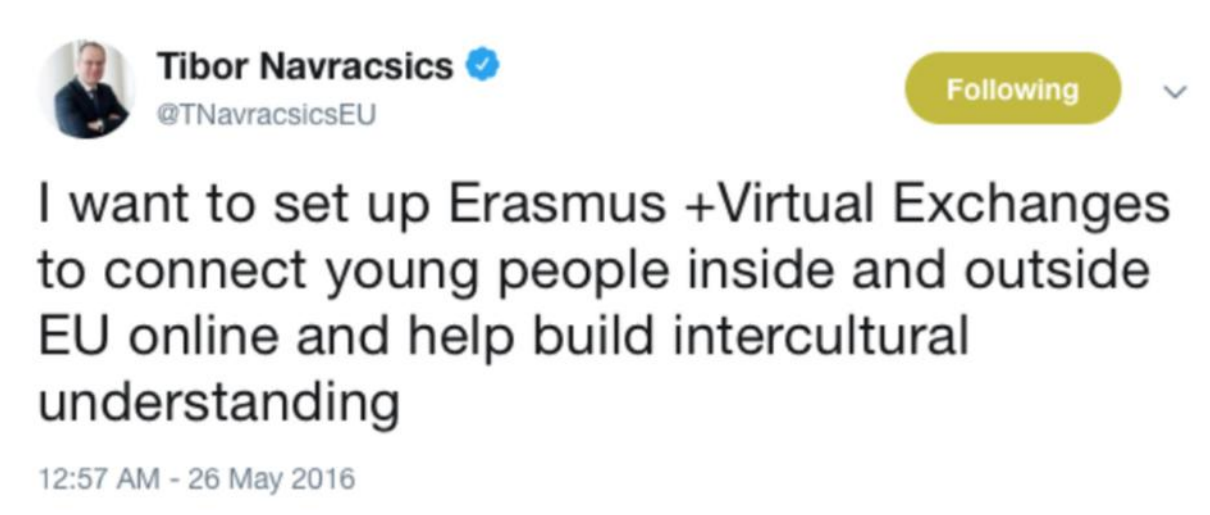
Erasmus VE represents a significant endeavour to unify stakeholders in the higher education and virtual exchange arenas by forming the Virtual Exchange Coalition and publishing the UNICollaboration (2014) position document, which aims to standardize terminology and bridge knowledge gaps in virtual interaction (O'Dowd, 2018).

The UNICollaboration position paper reaches beyond academia, targeting policymakers and advocating for a unified language across fields such as education and medicine to support effective policymaking (Kockaert & Steurs, 2014).

In 2016, Commissioner Navracsics announced the Erasmus+ Virtual Exchange, which led to a detailed feasibility study by PPMI, Demokratie, and Dialog Youth Policy Labs (2017), based on interviews with key stakeholders in VE. The study highlighted the need for additional resources to successfully implement the proposed Erasmus+ Virtual Exchange pilot project, marking a significant step in promoting and enhancing virtual exchange programs within the European education framework.

Figure 2.4.

Tweet by the european commissioner for education, culture, youth, and sport about erasmus+ Virtual exchange



Note. The image “*Tweet by the european commissioner for education, culture, youth, and sport about erasmus+ Virtual exchange*” is from ResearchGate by Helm, 2018, (p.12). The long and

winding road... - Copyright, 2018 by https://www.researchgate.net/figure/Tweet-by-the-european-commissioner-for-education-culture-youth-and-sport-about_fig2_329971216

2.3.4. ERASMUS Programme

Established in 1987, the Erasmus programme is the world's largest and most recognised university exchange program, involving around three million students from over 4,000 institutions across Europe (European Union, 2012). Originally named "EuRoPeAn Community Action Scheme for the Mobility of University Students," the acronym ERASMUS also honors the Dutch humanist Erasmus, as highlighted by one of its founders, Alan Smith (Feyen & Krzaklewska, 2013).

Starting with 3,200 students from 11 countries, Erasmus initially promoted study abroad experiences and laid the groundwork for the European Credit Transfer and Accumulation System (ECTS) which facilitated academic credit transfer across the EU (European Commission, 2017; Feyen, 2013).

Eventually, the programme has since evolved into Erasmus+, extending its reach to include vocational education and training, primary and secondary education, adult learning, youth and sports activities, with a focus on labor market integration and non-formal learning for youth civic engagement and workforce preparation.

2.3.5. European Union Initiatives and Agreements

Various European Union initiatives and agreements have progressively shaped the landscape of European education, enhancing mobility, cooperation, and quality assurance across Member States while fostering an integrated and internationalised higher education system. These include:

2.3.5.1. The Treaty of Maastricht (1993).

This treaty was pivotal in developing the European Union's policy, particularly in education. It focused on enhancing cooperation among EU Member States in education and supporting the mobility of students and instructors. Additionally, it established the concept of European citizenship, allowing EU nationals the right to live and work anywhere within the Union (European Commission, 2010).

2.3.5.2. The Socrates Programme (1995).

This programme aimed to foster European collaboration between universities and facilitate student mobility (Teichler, 2002). It integrated various educational programs to improve efficiency and cross-sectoral educational integration. The programme also incorporated the Erasmus initiative, leading to increased funding for student exchanges and educational collaboration in higher education (European Union, 2012).

2.3.5.3. The Bologna Process (1999).

The Bologna Process, an initiative to create a unified European Higher Education Area, sought to standardise and internationalise higher education across Europe (European Commission, 2010). It introduced systems like the European Credit Transfer and Accumulation System (ECTS) and emphasised values such as academic freedom, autonomy, and community involvement in higher education.

2.3.5.4. The Erasmus University Charter (2003).

This charter provided a framework for quality assurance in student and faculty exchanges and was a part of the broader Lifelong Learning Programme. It expanded its scope to include

internships abroad and training opportunities for faculty and staff, further enhancing the international experience in higher education (European Commission, 2012).

2.3.5.5. The Lisbon Treaty (2007).

This treaty emphasised the engagement of young people in democratic life in Europe, supporting learning opportunities beyond traditional classroom settings. It marked a new era in education and training policies, focusing on more ambitious targets, youth work, and international collaboration (European Commission, 2019).

2.3.6. Erasmus Mobility Programmes and Telecollaboration in Education

Since the 1980s, Erasmus mobility programs have provided skills and competencies, fostered a sense of community, and exposed individuals to Europe. They have been shown to improve employment prospects for students, with positive feedback from most participants (European Commission, 2017).

2.3.6.1. Erasmus + Programme (2014-2020).

An evolution of the Erasmus programme, Erasmus+ expanded its scope to include education, training, youth, and sport, focusing on addressing socio-economic changes in Europe (European Commission, 2019). It aimed to increase the international mobility of students and staff beyond Europe.

Compared to its predecessor, Erasmus+ expands chances for collaboration among higher education institutions and their stakeholders, emphasising quality, impact, and accessibility. Through transnational collaboration projects and networks, past and current Erasmus programs

have tried to increase students' and staff's international mobility while enabling higher education institutions to enhance their quality and relevance (European Commission, 2019).

It introduced three major innovations: Strategic Partnerships (SPs), Mobility of International Credit (ICM), and Accessibility and Support (European Union, 2019). Strategic Partnerships aim to enhance innovation and global efficiency in education and training sectors whereas Mobility of International Credit expands Erasmus mobility through short-term exchanges for students and staff between countries. Lastly, Erasmus+ has introduced measures to increase participation from diverse backgrounds via additional financial aid and Online Linguistic Support (OLS) to enhance language skills.

2.3.7. Telecollaboration Evolution

Initially used for language learning, telecollaboration has expanded into diverse fields such as media, communications, and teacher training.

Recognised as Internet-mediated Intercultural Foreign Language Education (ICFLE) (Belz & Thorne, 2006) and Online Intercultural Exchange (O'Dowd, 2007), these collaborations can involve multiple groups (Müller-Hartmann, 2006; Hauck, 2007) and vary from monolingual sessions using one participant's language (Lee, 2006; O'Dowd, 2006) to multilingual exchanges using a common lingua franca (Guth, 2008) or multiple languages (Fratter et al., 2005).

Most of these exchanges, often lasting over a semester (Helm, 2015), occur between North America and Europe, with English being the predominant language of instruction (Avgousti, 2018). The focus extends beyond language learning to business, engineering, and tourism. Initiatives like the Soliya project and the EU project on human rights demonstrate the versatility

of telecollaboration in facilitating multilateral cultural exchanges. They have contributed significantly to internationalising education, enhancing quality and accessibility, and fostering intercultural competences and global engagement among students and educators across various disciplines.

2.3.8. Telecollaboration and Virtual Exchange Typologies

Tandem Learning and Cultura Models facilitate linguistic and cultural exchanges among diverse language learners, including media and communications students, trainee teachers, and in-service teachers (O'Rourke, 2005; Bauer et al., 2006; Furstenberg & Levet, 2010; O'Dowd, 2006; Lee, 2006; Fuchs, 2007; Müller-Hartmann, 2006).

These models aim to expand learners' perspectives across various disciplines like business, engineering, and tourism (O'Dowd, 2016; Moore & Simon, 2015). Such interactions may take the form of bilateral exchanges. However, multilateral initiatives like the Soliya project also exist, in which Western and Middle Eastern participants engage in mutually beneficial cultural exchanges (Helm et al., 2012; Helm, 2016).

2.3.8.1. "Ready-made" Virtual Exchanges.

Unlike more flexible, educator-led grassroots initiatives, "Ready-made" VEs are pre-structured and standardised programmes designed by experienced organisations to provide a uniform and high-quality virtual intercultural education experience (Helm et al., 2020). These VEs feature a set curriculum and activities, requiring minimal preparation from educators, which makes them especially suitable for institutions with limited resources or experience. The structure of these programs ensures consistency in delivery and allows for easy integration into existing curricula.

Ready-made VEs support diverse participation, enhance the exchange with varied cultural perspectives. They include essential technological tools, facilitator training, and evaluation mechanisms to assess the impact on participants' skills and promote intercultural understanding, global citizenship, and multicultural awareness. These programs are adaptable across different academic disciplines and learning levels, making them versatile tools in educational settings (Helm et al., 2020).

2.3.8.1.1. Ready-made Virtual Exchanges Models.

VEs field is rich and varied, it offers several innovative programs designed to facilitate global intercultural dialogue and collaboration. The Soliya Connect Program is one such initiative that connects university students from Western and predominantly Muslim societies to discuss cultural and societal issues, enhancing mutual understanding (Soliya, 2021). Similarly, eTwinning allows European schools to connect for joint projects, improving intercultural learning (European Commission, 2021). The Erasmus+ Virtual Exchange offers structured online programs, including debates and project groups, for youth in Europe and the Southern Mediterranean.

Furthermore, the COIL (Collaborative Online International Learning) framework is widely adopted by universities globally for collaborative teaching and student projects, embedding international perspectives into curricula (SUNY COIL Center, 2021). iEARN provides a global platform for schools to participate in international projects, promoting collaborative learning across countries (iEARN, 2021). These programs highlight the dynamic and impactful nature of virtual exchanges in global education.

2.3.8.2. "Grassroots" Virtual Exchanges.

"Grassroots" VEs refer to initiatives typically conceived, developed, and implemented by individual educators, youth workers, or smaller groups rather than by large organisations or consortiums. These exchanges are often characterised by their bottom-up approach, where the individuals directly involved in the educational or cultural exchange develop the program's structure, objectives, and activities based on their specific context, needs, and resources (Helm et al., 2020).

Grassroots VEs, emerging from local levels such as individual classrooms, schools, or community organisations, are typically initiated by educators or youth leaders aiming to connect their students with peers from different cultural or geographical backgrounds. These highly adaptable exchanges allow customisation to meet specific learning objectives and cultural contexts (O'Dowd, 2016). They often attract diverse participant groups, fostering innovation through their flexibility and lack of rigid structure. Implementation relies on the creativity and resourcefulness of educators, using accessible technology to create meaningful interactions without extensive infrastructure or funding.

However, these grassroots initiatives may face challenges like limited access to technology and funding. Educators often seek professional development to enhance their skills in intercultural competence, technology use, and virtual exchange pedagogy. Despite these challenges, grassroots exchanges foster networks and communities of practice, sharing resources and support. Their impact is significant, promoting intercultural understanding, language skills, and global citizenship, especially for students who might not have access to such international experiences.

2.3.8.2.1. "Grassroots" Virtual Exchanges Models

Grassroots VEs are characterised by their diverse and innovative approaches to cross-cultural education, often initiated by individuals or small groups. These exchanges leverage digital tools to bridge cultural divides in various educational settings. One standard format is teacher-initiated classroom partnerships, where educators, such as a Spanish language teacher in the United States and an English teacher in Spain, collaborate using platforms like Skype or Zoom. This approach facilitates interactive language practice and cultural exchange among students, a method supported by the research of O'Dowd (2016), who highlights the effectiveness of technology in enhancing language learning and intercultural competence.

At the university level, grassroots exchanges can take the form of academic collaborations across borders. For instance, a political science professor in Canada might partner with a colleague in Japan, using platforms like Microsoft Teams or Google Classroom to engage students in comparative studies of their political systems. Helm et al. (2012) underscores this type of collaborative project, emphasising the value of virtual exchange in higher education for fostering global understanding and academic exchange.

Community organisations are also crucial players in grassroots virtual exchanges. For example, environmental education groups in Brazil and Kenya are partnering to facilitate sustainability and climate change discussions through social media tools like WhatsApp or Facebook Groups. Helm (2015) notes the importance of such collaborations in promoting global awareness and action on environmental issues.

Student-led initiatives represent another facet of grassroots virtual exchanges. University students from various countries might organise projects like online art exhibitions or virtual film festivals, showcasing their work on platforms like Instagram or custom websites. These initiatives reflect the findings by Bauer et al. (2006), who illustrate how student-driven projects can enhance learning outcomes and intercultural skills.

As demonstrated through these various examples, grassroots virtual exchanges provide flexible and creative avenues for cross-cultural education, utilising digital platforms to connect learners and educators globally. These initiatives align with contemporary educational research, emphasising the importance of technology and collaboration in fostering intercultural understanding and global engagement.

2.3.9. Virtual Exchange Modality and Mode

The modality and mode in VE are primarily determined by technological capabilities and practical considerations in different educational settings, affecting connectivity and interactivity levels. The chosen communication modes, whether asynchronous (like email and forums) or synchronous (like Zoom and Google Meet), significantly influence the dynamics of online interactions (Liaw & Master, 2010; Liaw & Ware, 2018).

2.3.9.1. Modality in Virtual Exchange.

It refers to how information and communication are represented or encoded in a VE environment. For example, is the interaction text-based or uses video, audio, or a combination? It is about the type of communication and interaction, whether synchronous or asynchronous and how the information is presented and perceived in the virtual environment.

Therefore, "modality" in virtual exchange focuses on the sensory (visual, auditory, tactile, olfactory, gustatory, kinesthetic) and perceptual aspects of communication and information representation (like text, audio, video) (Guo & Xu, 2023; Chen & Sevilla-Pavón, 2023)

2.3.9.2. Mode in Virtual Exchange.

Mode, on the other hand, refers to the specific method or approach used in VE that could encompass the tools or platforms used (like video conferencing software, chat applications, virtual worlds), the pedagogical methods applied (like collaborative projects, discussions, simulations), and the overall strategy for achieving the goals of the exchange. Thus, "mode" is more about the methods, tools, and approaches used in facilitating the exchange, such as writing, symbols, indexes, images, maps, graphs, diagrams, and more (Guo & Xu, 2023; Chen & Sevilla-Pavón, 2023).

The distinction between a mode and a modality should be noted. For example, text is a mode for presenting the modality of natural language; image can be both a mode and a modality; music is a modality for auditory media. Thus, modality refers to a specific type of information and/or the representation format, while the mode is how this information is delivered to the interpreter's senses.

2.3.9.3. Multimodalities in Virtual Exchange.

Multimodalities in VE refer to integrating and using multiple forms of communication and semiotic resources in online interactions. This concept is grounded in the understanding that communication is not limited to verbal or written language but also includes semiotic modes such as visual, aural, gestural, spatial, and physical resources. These multimodalities are crucial in

enhancing and facilitating rich, nuanced communication and learning experiences in virtual and intercultural exchanges(Guo & Xu, 2023).

2.3.9.3.1. Textual Modality.

It includes written language in emails, chat messages, discussion forums, and other text-based communication platforms.

2.3.9.3.2. Aural Modality.

It involves using sound, such as spoken language, in audio or video calls, voice messages, and other forms of auditory communication.

2.3.9.3.3. Visual Modality.

It encompasses images, videos, other visual materials, and visual cues like screen sharing or virtual whiteboards during video conferences.

2.3.9.3.4. Gestural Modality.

It refers to non-verbal cues such as gestures, facial expressions, and body language, especially in videoconferencing.

2.3.9.3.5. Spatial Modality.

It involves organising and arranging texts, images, and other elements in a virtual space, which influences how information is perceived and understood.

2.3.9.3.6. Physical Resources.

In a broader sense, this can include the technological tools themselves (computers, smartphones, software platforms) that facilitate different modes of communication.

2.3.9.4. VE Modalities and Modes Uses.

Most VE research focuses on written exchanges using asynchronous tools like emails, forums, and discussion boards, which are effective for cultural learning when well-managed (Fuchs et al., 2022; O'Dowd & Eberbach, 2004; Schenker, 2012). However, combining these tools with synchronous methods, like audioconferencing, has enhanced relationships and maintained real-time contact with native speakers (Hauck & Youngs, 2008; Lewis & Kan, 2021).

For instance, Angelova and Zhao (2016) found that Chinese students learning English and prospective EFL teachers in the US benefited from using discussion boards, emails, and Skype to improve language skills and cross-cultural awareness. Similarly, Liaw and Ware (2018) observed that native English trainee teachers and Chinese EFL students used a mix of text, video, and audio in their exchanges.

Synchronous communication is increasingly preferred for instant feedback and natural interaction, fostering better intercultural negotiation and cultural interest discussions (Angelova & Zhao, 2016; Avgousti, 2018). Chun (2011) noted greater engagement and development of ICC in synchronous chats compared to forums.

The growing interest in Computer-Mediated Communication (CMC) research has led to the exploration of multimodality in online interaction, involving textual, aural, visual, spatial, and physical resources (Lamy, 2009; Satar & Wigham, 2020). Multimodal competence involves effectively understanding and using these different semiotic modes (Hauck & Satar, 2018; Sindoni, 2013; Jewitt, 2016).

In videoconferencing, for example, facial expressions and gestures serve as essential semiotic tools (Wang, 2007; Satar, 2013). Wigham and Satar (2021) and Wigham and Guichon (2014) demonstrated how gestures and gazes contribute to meaning-making in teacher-student interactions.

Further, studies like Korkealehto (2022) and Helm and Dooly (2017) have shown that multimodal collaboration enhances digital literacy and ICC development, highlighting the importance of teacher support and the innovative use of technology in language learning.

In summary, the mode and modality in VE are influenced by the available technology and practical needs. There is a trend towards combining asynchronous and synchronous tools for more effective learning. The emphasis on multimodality highlights the significance of various semiotic resources in enhancing communication and understanding in VE.

2.3.9.5. Virtual Exchange Mode and Modalities Choices.

VE modes and modalities primarily depend on the technological affordances and practical considerations at various institutions catering to diverse learners. These factors shape how communication is conducted in VE, influencing the level of connectivity and interactivity experienced by participants.

2.3.9.5.1. Technological Affordances.

The available technology largely determines the choice of communication modes in VE. As Liaw and Master (2010) note, technological advancements have enabled a range of asynchronous (e.g., emails, forums) and synchronous (e.g., video conferencing like Zoom)

communication tools. These tools dictate the modalities (textual, aural, visual) that can be effectively used in VE.

2.3.9.5.2. Institutional Practicality.

According to Avgousti (2018) and others, the practical aspects of implementing VE in educational settings also play a significant role by considering the availability of resources, the digital literacy of participants, and institutional support for using specific platforms or tools.

2.3.9.5.3. Learner Needs and Contexts.

The design of VE experiences also depends on the needs of different learners, as highlighted by studies such as Fiori (2005), Fuchs et al. (2022), and Liaw (2007). For instance, asynchronous tools might be more suitable for learners who require flexibility in timing, while synchronous tools can be more effective for real-time interaction and language practice.

2.3.9.5.4. Pedagogical and Research Objectives.

The objectives of the VE program influence the choice of modes and modalities. Liaw and Ware (2018) and others have found that certain combinations of tools can lead to more effective learning outcomes, depending on the specific goals of the exchange, such as language learning, cultural understanding, or teacher training.

2.3.9.5.5. Cultural and Linguistic Factors.

As discussed by Angelova and Zhao (2016) and O'Dowd (2007), the intercultural and linguistic aspects of VE also determine the selection of appropriate modes and modalities. For example, programs focused on language learning might emphasise modalities that support

linguistic interaction, like text for written language practice or video for spoken language and non-verbal cues.

2.3.9.5.6. Multimodal Competences.

The concept of multimodality, as explored by Hauck and Youngs (2008) and Hauck and Satar (2018), suggests that effective communication in VE involves multiple semiotic modes that allow participants to develop linguistic communication skills and interpret using visual, aural, and gestural cues.

In summary, the choice of modes and modalities in VE is a complex decision-making process that involves balancing technological capabilities, institutional practicalities, learner needs, pedagogical goals, and the participants' cultural and linguistic context. This multifaceted approach ensures that VE is practical, engaging, and responsive to the diverse requirements of global learners.

Section Three: Theoretical Frameworks Underpinning VE

The theories that guide its application and effectiveness underpin any educational tool. This section delves into the key theoretical frameworks that support the concept of VE, including experiential learning and intercultural communication theories. These frameworks provide the academic foundation for understanding how VE facilitates learning and cultural exchange.

2.4. Online Learning Theories

Online learning integrates educational psychology, communication, and information technology by emphasising how learners engage with digital content and each other to build knowledge in virtual settings.

Educational theories address the challenges and opportunities of virtual learning and focus on engagement and community. As technology evolves, these theories guide the creation of effective online learning experiences.

Particularly, VE education uses these theories to ensure engaging and motivational learning tailored to digital platforms.

2.4.1. Connectivism Learning Theory and VE

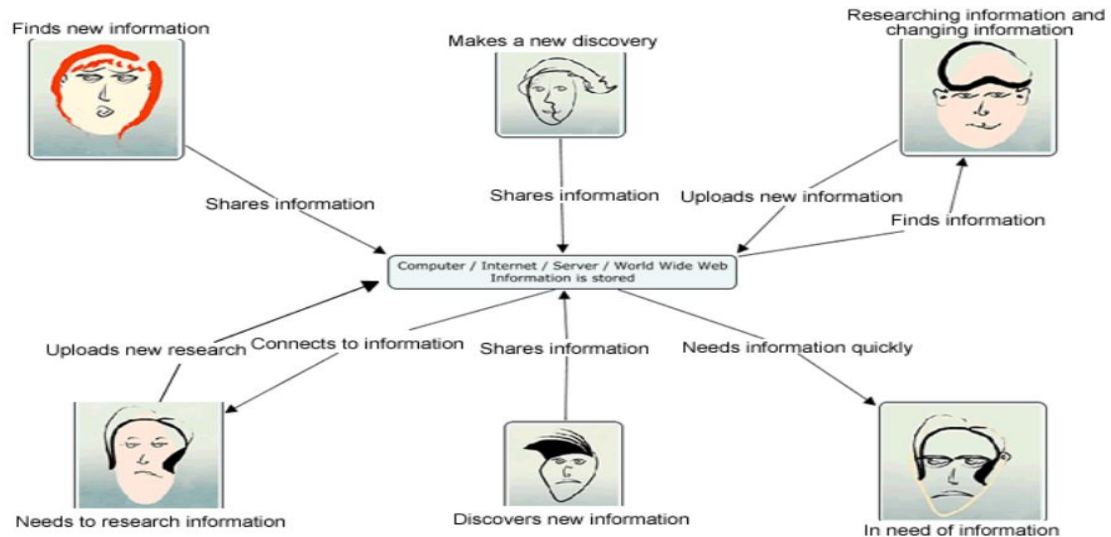
Connectivism, conceptualised by Siemens and Downes (2005), redefines learning in the digital age, impacting VEs significantly. Elliot and Martin (2011) and Downes (2012) highlight that connectivism views learning as a networked process influenced by social and cultural contexts rather than an individual activity. This is crucial in VEs, where technology helps create and navigate networks filled with information, ideas, and cultural insights.

Central to connectivism is the idea that learning and knowledge are spread across various perspectives. Siemens (2004) notes that engaging with different viewpoints enhances understanding. The theory also acknowledges technology's role in learning, with knowledge extending beyond human sources (Bozhut & Keefer, 2017). Consequently, learners use digital tools to manage and interact with information, extending their cognitive capabilities across platforms (Siemens, 2005).

In VEs, connectivism is evident as students interact with peers from diverse backgrounds, using digital technologies to bridge cultural and geographical gaps. This networked approach fosters an engaging, collaborative learning environment where knowledge is co-constructed through dynamic exchanges.

Figure 2.5.

Diagram of Connectivism



Note. The image for “Diagram of Connectivism” is from ResearchGate by Simui et al., 2018).
 WhatsApp as a Learner Support tool for distance education: Implications for Policy and Practice
 at University of Zambia. Copyright 2018 by ResearchGate
https://www.researchgate.net/figure/Diagram-of-Connectivism_fig1_328964374

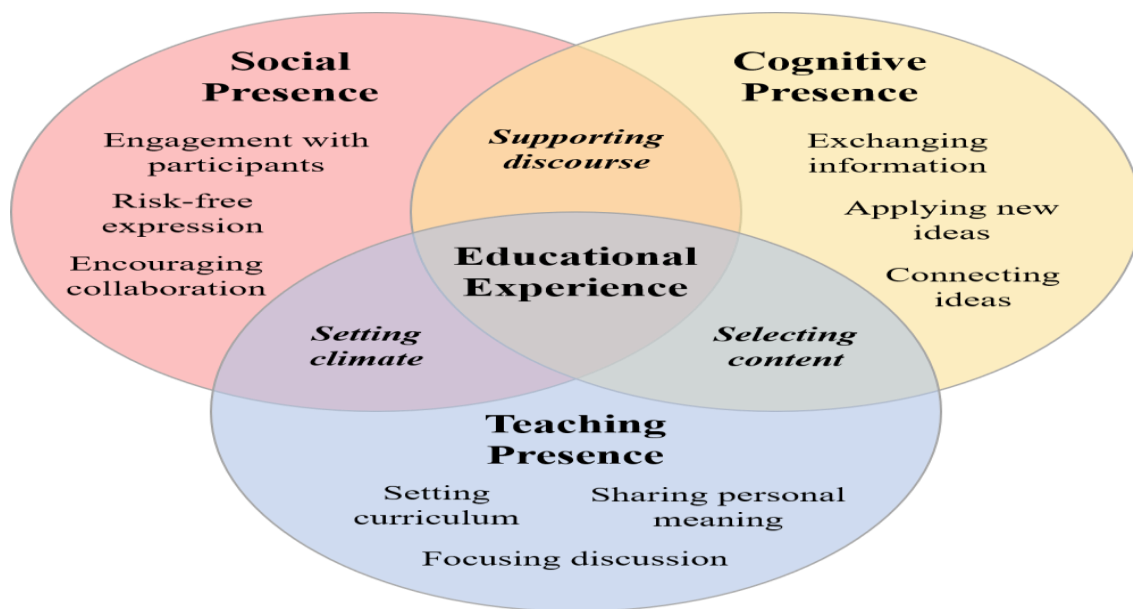
Connectivism highlights the need for building relationships and embracing diverse perspectives to expand skills and worldviews. By navigating digital networks, learners improve their ability to seek, analyse, and synthesise information from various sources (Khatibi & Fouladchang, 2015), enhancing global awareness and intercultural competence. It thus serves as a strong theoretical framework for learning in a digital world and offers practical guidance for creating effective virtual exchanges.

2.4.2. *The Community of Inquiry (CoI)*

The Community of Inquiry (CoI) Framework, developed by Garrison, Anderson, and Archer in 2000, is essential for online education, including VE. It focuses on three core elements: social presence, cognitive presence, and teaching presence (Swan et al., 2009).

Figure 2.6.

The Community of Inquiry model (CoI)



Note. The image for “*The Community of Inquiry model*” is from Model eLearning by Broda, 2018. Implementing the Community of Inquiry (CoI) Model into Your Online Course: Social Presence from <https://modelelearning.com/2018/07/10/implementing-the-community-of-inquiry-coi-model-into-your-online-course-social-presence/> Adopted from Garrison et al., 1999. Critical Inquiry in a Text-Based Environment: Computer Conferencing in Higher Education. Copyright by ResearchGate. https://www.researchgate.net/figure/Elements-of-an-Educational-Experience_fig1_222474115

2.4.2.1. Social Presence

Defined as the ability to connect and communicate authentically within an online community (Garrison et al., 2000), social presence helps students build relationships and trust despite physical distances. It fosters engagement and meaningful interactions in VE settings (Law, 2014).

2.4.2.2. Cognitive Presence

Cognitive presence refers to the ability to develop and validate understanding through reflection and discussion (Garrison et al., 2001). It involves critical thinking and engagement with content from multiple perspectives, vital for collaborative knowledge construction in VE environments (Çakıroğlu, 2019).

2.4.2.3. Teaching Presence

Teaching presence is pivotal in online learning environments. It involves planning, guiding, and managing cognitive and social activities to achieve learning outcomes that are both personally significant and academically valuable (Garrison et al., 2000). The components of teaching presence in the CoI framework include:

2.4.2.3.1. Instructional Design and Organisation

This element involves selecting suitable learning resources and digital tools and establishing assessment timelines. The objective is to create an orderly and conducive learning environment that supports the educational journey (Armah et al., 2023).

2.4.2.3.2. Facilitation of Discourse

Instructors are crucial in nurturing, guiding, and directing student discussions. This interaction allows students to delve into and engage with diverse ideas and viewpoints, enriching the learning experience (Armah et al., 2023).

2.4.2.3.3. Direct Instruction

Direct instruction involves consistent communication with students, regular feedback, and demonstrations of critical thinking and discourse. This approach guides students in tasks and encourages more profound engagement with the material (Armah et al., 2023).

2.4.2.3.4. Technical Aspect

This element recognises the importance of technological proficiency in online teaching. It encompasses the teacher's ability to adeptly utilise and integrate various digital tools and platforms, ensuring students can access necessary resources and navigate the online learning environment effectively (Berge, 1995; Anderson et al., 2001).

Teaching presence is a pivotal component of online education within the CoI framework, as it significantly influences learners' academic growth and success by creating an interactive, supportive environment (Poston, 2014; Bhatta, 2020). In VE, it extends to using digital tools to build information networks and cultural connections, enhancing engagement and cross-cultural collaboration. Garrison et al. (2000) stress the importance of integrating social, cognitive, and teaching presence for effective online learning, demonstrating the CoI framework's relevance in VE.

2.4.3. Constructivism Learning Theory

Constructivism in education shifts from traditional teaching to focusing on learners actively building their knowledge through experiences. Influential theorists like Piaget, who explored individual knowledge construction, and Vygotsky, who emphasised social learning aspects (Piaget, 1954; Vygotsky, 1978), have shaped this theory. Bruner (1966) added the importance of active engagement in learning.

Fundamental principles of constructivism include active learning, where students explore and discover concepts (Bonwell & Eison, 1991 in Khan et al., 2021), and scaffolding from Vygotsky's Zone of Proximal Development (Vygotsky, 1978). Scaffolding supports learners through tasks beyond their current abilities, a concept seen in VEs, where students collaborate to overcome challenges. Constructivism also highlights the impact of cultural and social contexts on learning (Rogoff & Angelillo, 2002) and values diverse perspectives (Brooks & Brooks, 1999).

In practice, constructivism involves learner-centered approaches, collaborative learning, and reflection (Weimer, 2002; Palincsar & Herrenkohl, 2002; Schön, 2017). It enhances critical thinking, adaptability, and motivation (Flavell, 1979 in Ekinci, 2017; Bransford et al., 2000; Stipek, 2002). However, challenges include the need for authentic assessment methods (Wiggins, 1998) and resource-intensive implementation (Duffy & Cunningham, 1996).

Constructivism, mainly through Vygotsky's ZPD, underscores experiential, social, and reflective learning central to VEs. These exchanges reflect constructivist principles, fostering active, collaborative, and culturally diverse learning environments.

2.4.4. Experiential Learning Theory

David Kolb's Experiential Learning Theory, introduced in 1984, has significantly influenced educational methods, particularly in VE. The theory posits that learning occurs through creating knowledge from experiences, achieved by grasping and transforming these experiences (Kolb, 1984). Kolb's Experiential Learning Cycle consists of four stages:

2.4.3.1. Concrete Experience (Learning by Experiencing).

Individuals learn by engaging in an activity or experience and recalling its associated feelings. This stage is foundational and often initiates the learning cycle.

2.4.3.2. Reflective Observation (Learning by Processing).

After the experience, learners reflect on it to gain more insights or deepen their understanding. This reflection can lead to a richer, more nuanced understanding of the experience.

2.4.3.3. Abstract Conceptualisation (Learning by Generalising).

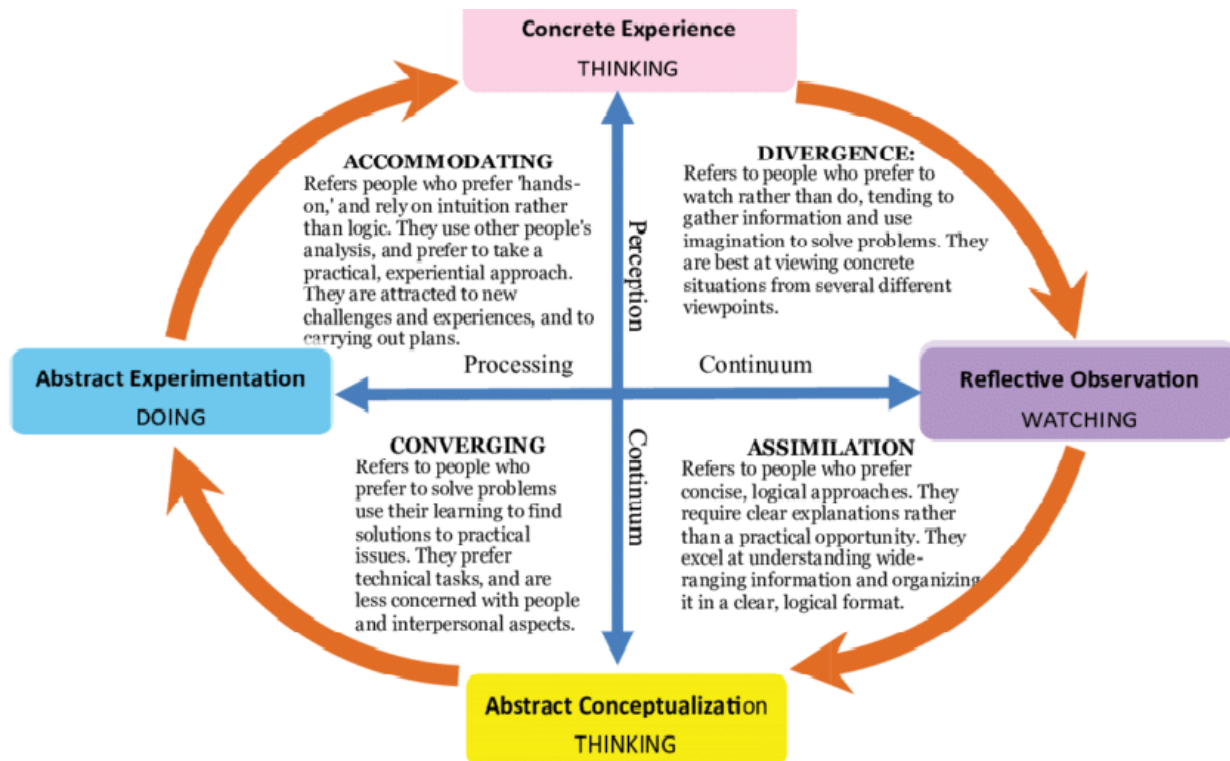
Learners theorise, classify, or generalise, developing new insights or models based on their reflections. This stage is crucial for organising knowledge, understanding broader principles, and facilitating the transfer of learning to new contexts.

2.4.3.4. Active Experimentation (Learning by Doing).

Armed with new insights, learners apply them in real-world settings or new situations. This application becomes a new concrete experience, which can then be reflected upon, leading to a continuous learning cycle.

Figure 2.7.

Kolb's Experiential Learning Cycle (1974)



Note. The image “Kolb's Experiential Learning Cycle (1974)” is from ResearchGate by Hampton-Garland and Thomas 2020. Mitigating White Invisibility through Intentional Reflective Practice. Copyright from ResearchGate 2020. https://www.researchgate.net/figure/Kolbs-Experiential-Learning-Cycle-1974_fig1_342799963

This cycle emphasises that effective learning requires engagement in all stages, fostering a comprehensive approach that blends emotional, behavioural, and cognitive elements (Kolb, 1984). The continuous process allows learners to derive insights that can be applied to real-life scenarios.

Kolb's theory is particularly relevant in VE, as it offers experiential learning opportunities through real-time interactions and collaboration in diverse cultural contexts (Grau & Turula, 2019). This approach, supported by scholars like Vygotsky (1980) and others, recognises learning as a socially constructed process deeply embedded in experiences.

An effective teaching presence in VE enhances experiential learning, focusing on engaging students in meaningful outcomes. Teaching presence is crucial in the Community of Inquiry framework, facilitating interaction and fostering a supportive environment. Legutke and Thomas (1991) suggest that project-based classrooms exemplify experiential learning by involving active creation, knowledge testing, and guided reflection, particularly in telecollaborative teacher education projects.

A substantial body of literature identifies the skills necessary for effective VE facilitation, including multimodality, intercultural competence, and task-design skills (Fuchs et al., 2012; Hauck, 2010; O'Dowd, 2007a). Teachers are encouraged to develop these skills through experiential learning in VE projects, peer mentoring, and reflective practices.

2.4.3.4.1. Salmon's Five-Stage Model.

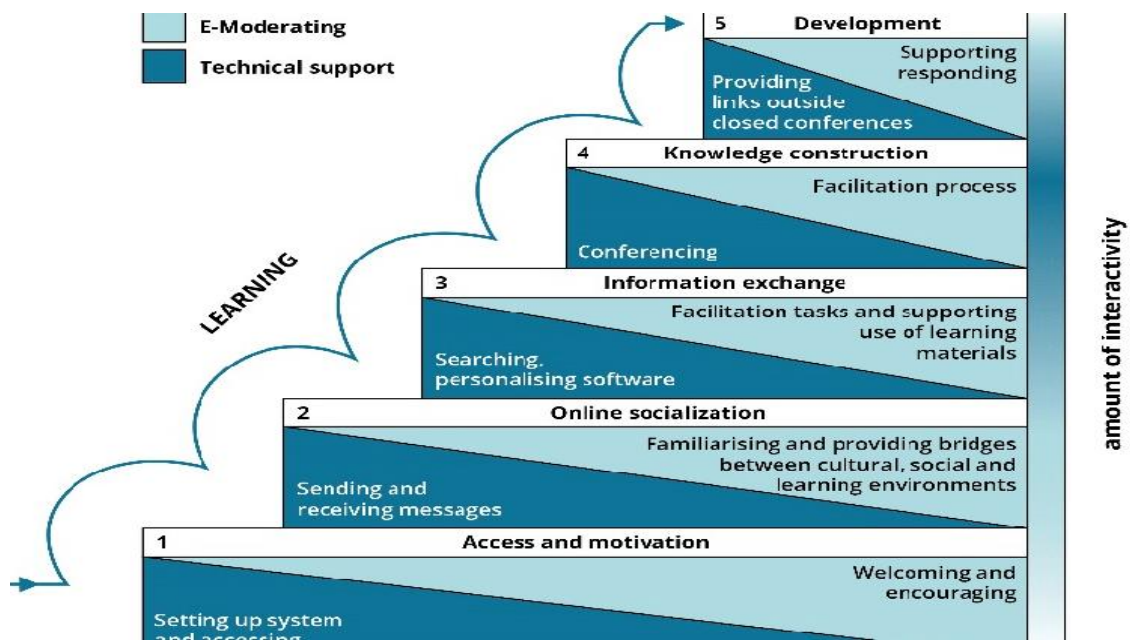
Salmon's (2002) five-stage model for integrating e-tivities into online learning aligns with the experiential learning approach and emphasises learning through reflection on doing by fostering an environment where learners actively engage, participate, reflect, and apply knowledge.

Gilly Salmon's five-stage model is essential for structuring effective, paced online learning. It provides a clear pathway that enhances learner engagement and supports progression from primary access to advanced application.

Starting with ensuring accessibility and motivation in stage one, the model builds a foundation for active participation and fosters a supportive community in stage two, crucial for combatting isolation in distance learning. As learners progress, they engage in collaborative information exchange (stage three) and knowledge construction (stage four), deepening understanding and developing critical thinking skills. The final stage, stage five, focuses on practical application, linking learning directly to real-world relevance and preparing learners for professional challenges. Continuous feedback fosters iterative learning throughout these stages, making the educational journey comprehensive and responsive to learner needs.

Figure 2.8.

The Five Stage Model (Salmon, 2011)



Note. The image “The Five Stage Model (Salmon, 2011)” is from ResearchGate by Salmon, 2011. Can asynchronous discussions enhance supervision quality of nursing students in clinical

placements? Copyright 2011 from ResearchGate https://www.researchgate.net/figure/Five-stage-model-Salmon-2011_fig2_319669179

However, despite the value of experiential learning in developing telecollaborative competencies, research on its direct impact on teacher trainees' abilities to implement virtual exchanges (VEs) remains limited. Studies by Fierros and Foley (2014) and Waldman et al. (2016) suggest experiential learning can enhance self-efficacy and perceived competence in VEs. Nevertheless, more empirical evidence is needed in classroom contexts.

In summary, Kolb's Experiential Learning Theory is a dynamic, learner-centred approach that involves a cycle of engaging in real-world experiences, reflecting on them, conceptualising ideas, and applying them through active experimentation. This approach is particularly relevant in VEs, offering students opportunities to engage deeply with the subject through experiential learning.

2.4.5. Transformative Learning Theory

Transformative learning theory, proposed by Jack Mezirow in 1991, explains how individuals change their perspectives through critical reflection and discourse when confronted with disorienting dilemmas that challenge existing beliefs and lead to a more inclusive view (Mezirow, 1991).

In VEs, this theory is applicable as students encounter new cultural perspectives that disrupt their existing views (Mezirow, 2000; Fleming, 2022). The process begins with Encountering Disorienting Dilemmas, where interactions with diverse cultures challenge existing views. The exposure to conflicting cultural viewpoints leads to Critical Reflection, where students examine their own beliefs and biases. Discourse with international peers helps refine these

perspectives through dialogue. As a result, students Revise Perspectives, adopting more inclusive views. Finally, Action involves applying these new perspectives to change behaviour and attitudes.

The transformative learning theory thus offers valuable insights into how VE can promote personal and intellectual growth, fostering intercultural competence and global citizenship (Taylor, 1994).

Section Four: VE and Intercultural Communication Skills

In the dynamic and interconnected realm of global education, the importance of VE in developing IC skills cannot be overstated, especially in the context of EFL learning.

This section delves into the intricate relationship between VE IC, beginning with a detailed exploration of key concepts, models, and theories that underpin ICC, and its development necessitates a clear understanding of intercultural communication. It then transitions to examining empirical studies that have scrutinised the impact of VE on the enhancement of IC skills. Emphasising the role of VE in fostering effective telecollaboration among EFL students, this section further elucidates how these virtual interactions transcend geographical and cultural boundaries, fostering language proficiency and cultural competence.

Finally, through a series of case studies and real-world examples, the section illustrates the practical application and success stories of VE in EFL settings, offering insights into the factors that contribute to successful intercultural exchanges and the significant benefits they bring to learners in an increasingly globalised educational landscape.

2.5. Intercultural Communication

Intercultural communication is paramount in our interconnected world, especially for university students. It is a discipline that studies communication across different cultures and social

groups or how culture affects communication (Lauring, 2011). It describes the wide range of communication processes and problems naturally occurring within social, ethnic, and educational backgrounds. In this sense, it seeks to understand how people from different countries and cultures act, communicate, and perceive the world around them (Bennett, 2013).

2.5.1. Communication

The concept of communication is multifaceted and has evolved over time. Rooted in the Latin "communicare" and the French "communis," it emphasises the communal aspect of sharing meanings (Alcalugo, 2003). Building on this, Seema (2013) characterises communication as the conveyance of information, ideas, emotions, skills, and knowledge utilising a variety of symbols and mediums. However, Hassan's approach suggests a more unidirectional flow of communication.

Contrastingly, others stress effective communication's interactive and participatory nature (Seema (2013)). Modern studies often highlight the interactive and participatory aspect, emphasising that communication is an exchange of meaning where each individual contributes their experiences (Solomon et al., 2012).

Furthermore, communication is a complex, symbolic process in which individuals or entities exchange, perceive, and interpret messages in various forms. It involves a spectrum of behaviours and modalities – verbal, non-verbal, and digital – all contributing to the complicated process of shaping and understanding meanings in diverse contexts.

2.5.2. Culture

Culture is a complex concept encompassing a group's lifestyle, values, norms, and behaviours, extending beyond biological traits to include learned aspects within society. The

anthropologist, Tylor (1871), defined culture as the collective knowledge, beliefs, arts, and customs acquired by members of society (Logan, n.d.). Geertz (1973) viewed it as a system of symbolic forms essential for communication and maintaining collective knowledge. Hofstede (2011) described culture as the collective mental programming that distinguishes groups based on shared cognitive patterns, supported by the Teaching and Learning Unit at the University of Melbourne (2010). Samovar et al. (2016) characterised culture as the accumulation of knowledge, beliefs, and values over generations, a view echoed by Hofstede (2011). Barrett et al. (2013) further defined culture as comprising material, social, and subjective components influenced by various factors. Pedagogically, Borrelli (1991) and Atamna (2008) see culture as a dynamic, historically shaped cognitive process.

Definitions of culture cover its broad aspects, from shared beliefs to symbolic systems and behaviours, reflecting its complexity. This complexity is explored through deep and surface culture concepts, which reveal visible and invisible cultural norms and values. Scholars distinguish between Big-C-Culture and Small-c-culture (Chastain, 1988; Thanasoulas, 2001; Matic, 2015) to differentiate between explicit and implicit cultural elements. Models such as the iceberg (Hall, 1976), tree (Hammond, 2015), and onion (Trompenaars & Hampden-Turner, 1997; Hofstede, 2001) further illustrate the contrast between surface-level and deeper cultural layers.

2.5.2.1. Big-C-Culture.

At the forefront are the Big-C-Culture or Surface Culture components (Chastain, 1988), akin to the visible part of an iceberg, the branches and leaves of a tree, or the outer layers of an onion. This layer includes a culture's explicit, tangible, observable aspects and practices, such as literature, art, music, language, dress, and social customs. These elements are immediately visible

and accessible and often form a culture's initial, superficial understanding, and stereotypes are the most readily communicated and perceived aspects.

2.5.2.2. Small-c-Culture.

In contrast, Small-c-culture or Deep Culture, like the submerged part of an iceberg, the roots of a tree, or the inner core of an onion, consists of the implicit, unobservable, and intangible aspects of culture. These include the collective beliefs, norms, attitudes, and values deeply embedded within a cultural group, who may not be fully aware of these elements or find them difficult to articulate. These are the subjective elements of culture that constitute deep culture. Deep culture encompasses the less visible but profoundly influences behaviours, practices, and interactions, shaping the core of cultural identity aspects, such as concepts of self and space, communication styles beyond just language, notions of time, and deeply held beliefs about education, health, wellness, and social roles. Deep culture is ingrained, often taken for granted by those within the culture, and forms the underlying foundation of the more visible expressions of surface culture.

Distinguishing between Surface Culture (Big-C) and Deep Culture (Small-c) is crucial for comprehensively understanding a culture. While Surface Culture offers a preliminary and sometimes stereotypical view, Deep Culture requires a more immersive, reflective approach, often necessitating guidance from cultural insiders for a genuine appreciation. Understanding this layered complexity is essential to grasp the nuanced tapestry that constitutes a culture, transcending beyond the observable to the profound, ingrained elements that define the essence of a cultural group.

2.5.3. Culture and Communication

Culture and communication are intricately linked, with culture functioning as a communicative phenomenon formed through conversation. The ethnography of communication in the 1960s, evolving into interactional sociolinguistics, emphasised the organisation of speech exchanges (Gumperz & Cook-Gumperz, 2007). Culture arises as individuals seek to maximise cognitive relevance, achieving high cognitive effects with minimal processing effort (Žegarac, 2007). According to Sperber and Wilson's Relevance Theory (1986), communication involves inferential processes where listeners prioritise information that yields the greatest contextual effect with the least cognitive effort. This principle informs communicators' strategies, aiming for minimal effort from receivers and focusing on necessary interpretations. Cultural differences significantly influence how conclusiveness is perceived, as demonstrated by varying interpretations of non-verbal cues (Žegarac, 2007). Relevance Theory explains these differences by showing how individuals from different cultural backgrounds may assign varying levels of relevance to the same communicative cues, often leading to misunderstandings rooted in deeper cultural aspects that individuals may not consciously recognise (Meierkord, 2007).

Intercultural communication, introduced by Hall (1959), becomes complicated when the cultural contexts of sender and receiver differ, often leading to misunderstandings. The relationship between culture and communication is circular, as Novinger (2001) asserted, who observed that while communication shapes and reinforces culture, it also requires a shared understanding of meanings, highlighting the interdependence of culture, communication, and language. Sperber and Wilson's framework underscores this interdependence by demonstrating

how shared cultural knowledge reduces cognitive effort, enabling more efficient communication within culturally homogeneous groups.

2.5.4. Culture and Language

The relationship between language and culture is complex and interwoven, as noted by various scholars. Kramsch (1998) states that language expresses and symbolises cultural reality, while Alptekin (1993) defines culture as socially acquired knowledge that shapes cognition and worldview alongside formal language properties. Buttjes (1991) emphasises that language acquisition varies by culture, making language essential for societal participation and influencing children's utterances. He highlights the importance of transmitting sociocultural knowledge, noting that native speakers learn language and culture simultaneously. From a cognitive perspective, Sperber and Wilson's Relevance Theory (1986) explains how individuals use language to convey culturally specific meanings that align with shared cognitive frameworks. This ensures that communication is both efficient and effective within culturally homogeneous groups.

Krech (1962, cited in Xiao, 2010) identifies three language functions: a communication vehicle, a reflection of personality and culture, and a means for cultural transmission. Cakir (2006) asserts that language is a component of culture, as both represent patterned behaviour. Liddicoat et al. (2003, cited in Ho, 2009) demonstrate that culture is embedded in all language levels and structures. The Sapir-Whorf hypothesis supports this relationship, suggesting that language shapes our cultural experiences and perceptions. Relevance Theory further elaborates on this connection by showing how individuals interpret linguistic and cultural cues based on their cognitive environments, which are shaped by their cultural background.

2.5.5. The Sapir-Whorf hypothesis

The Sapir-Whorf hypothesis, or Linguistic Relativity, suggests that language and culture influence each other. Sapir (2002, cited in Xiao, 2010) and Byram (1991) note that language is a symbolic system integral to culture, shaping how individuals think and perceive the world.

There are two versions of the hypothesis: strong (Linguistic Determinism) and weak (Linguistic Influence). The strong version, which claims language limits cognitive categories, has been criticized. The weak version, supported by Kramsch (1998), posits that language influences thought through linguistic codes.

Whorf's study of the Hopi language compared to Standard Average European (SAE) languages showed that linguistic habits shape thought. He found that Hopi lacks grammatical forms over time, influencing how its speakers perceive it (Whorf, 1956).

Nisbett's (2003) research supports the weak version, showing that cognitive processes are shaped by society and socialization, where children learn their first language along with its cultural context (Buttjes, 1991). His comparison of Eastern and Western languages reveals that Easterners emphasize context, while Westerners focus on individual objects, highlighting the deep connection between culture and cognition (Cited in Shaules, 2007).

2.5.6. Communicative Genres

Communicative genres are communication forms shaped by cultural and historical contexts (Gunthner, 2007). These include spoken and written types, each with specific rules guiding composition and interpretation within cultural settings. This concept highlights how cultural frameworks influence communication. Genres reflect patterns familiar to a culture, shaped by

collective experiences (Bakhtin, 1979/1986, cited in Gunthner, 2007). Examples include conversations, storytelling, speeches, lectures, meetings, legal discourse, sermons, and various written forms like letters, emails, and social media posts, each with distinct features (Gunthner, 2007).

Understanding genres is key in intercultural communication, where differences may cause misunderstandings. Recognising and adapting to other cultures' conventions fosters more precise communication (Gunthner, 2007), showing the connection between language and culture.

2.6. Intercultural Related Concepts

This subsection clarifies and distinguishes closely related terms from intercultural communication (IC) to provide a clearer understanding and prevent confusion among readers. While IC focuses on the interaction between individuals from different ethnic or cultural groups, it is essential to differentiate it from similar concepts:

2.6.1. Intracultural Communication

Intracultural communication is the interaction between individuals who share many cultural representations, including beliefs, values, and social norms. This shared cultural background typically leads to a smooth communication process, as the participants inherently understand the interaction's contextual nuances and implicit meanings. Žegarac (2007) notes that these shared cultural representations are deeply embedded in various aspects of social life and are naturally processed with little cognitive effort. As such, communicative success in intracultural settings is generally achieved without substantial misunderstandings or the need for explicit explanations.

2.6.2. Intercultural Communication

Conversely, intercultural communication (IC) is about sharing messages between people from different cultural backgrounds. As researchers like Gudykunst (1983) and Spencer-Oatey (2012) describe, it involves interactions where participants may not share many cultural symbols or common experiences. This can make communication problematic, as cultural differences shape how messages are understood, often leading to confusion or misinterpretation. To communicate effectively, both sides need to make an active effort to overcome these differences. Spencer-Oatey (2012) points out that this often requires extra mental work to ensure clarity and mutual understanding.

2.6.3. Cross-Cultural Communication

Cross-cultural communication examines how individuals from different cultural backgrounds interact and behave. According to Spencer-Oatey and Kotthoff (2007), this field studies behaviours within one cultural group and compares them with others, aiming to understand cultural differences that promote personal growth and learning. However, it does not typically focus on societal transformations.

In cross-cultural communication, an implicit understanding of a dominant culture is often considered the norm against which other cultures are evaluated. This field fundamentally concerns comparing, understanding, and respecting how people from diverse cultures interact, communicate, and perceive the world.

Cross-cultural communication involves exchanging meaningful and transparent information across cultural boundaries while maintaining mutual respect and reducing potential conflict and misunderstanding.

2.6.4. Multicultural Communication

Multicultural communication refers to the coexistence of multiple cultural or ethnic groups within a society (Jackson, 2014). In a multicultural setting, diverse cultural communities live close to each other, yet their interactions might not extend beyond superficial or transactional encounters. However, these interactions do not necessarily imply deep or meaningful engagement among the members of the different groups.

Multiculturalism, therefore, characterises a society's structural and demographic diversity but does not inherently guarantee in-depth intercultural communication or integration among the various cultural groups.

2.6.5. Barriers to Intercultural Communication

While IC offers rich opportunities for mutual learning and understanding, it also presents challenges that can lead to miscommunication and conflict. Scholars like Gibson (2000) and Jackson (2014) have identified various barriers that can impede successful IC. Barna (1994) initially identified these obstacles, and they continue to be relevant in current research, as noted by authors like Ilie (2019) and Zhu (2020). Bennet (2013) praised Barna's early work for its insightful observations on what impedes successful IC and relationships.

These barriers indicate that mere communication is not always sufficient to overcome intercultural challenges, mainly when there are stark differences in cultural backgrounds and worldviews. Miscommunication can occur when individuals fail to recognise and adapt to these differences. Barna's list of intercultural barriers remains a foundational reference in understanding and navigating the complexities of intercultural interactions.

2.6.5.1. Anxiety.

Anxiety in IC plays a complex role (Barna, 1994 & Selye, 1978). It arises from uncertainties in cross-cultural interactions, especially in non-native language contexts. This anxiety can lead to discomfort, defensiveness, and avoidance of interaction, impacting cultural and workplace adjustment (Froese et al., 2012). While a certain level of anxiety might stimulate engagement, excessive anxiety hinders effective communication. Individuals who perceive uncertainty as stimulating may experience less negative impact (Barna, 1994). However, even positive stress, over time, can be draining (Selye, 1978). Effectively managing anxiety is thus crucial for enhancing intercultural communication and navigating the challenges of diverse interactions and language differences (Barna, 1994).

2.6.5.2. Assumption of Similarities than Differences.

Assuming similarities between cultures can be a significant barrier to effective IC. Barna (1997) highlighted this issue, which arises when one overlooks or underestimates the unique traits and characteristics of different cultures, potentially leading to misunderstandings and misinterpretations. Ilie (2019) emphasises the importance of recognising and valuing the distinctiveness of each culture rather than presuming uniformity.

Approaching intercultural communication with openness and acknowledging and respecting cultural differences is crucial for fostering understanding and positive connections across diverse cultural backgrounds.

2.6.5.3. Language.

Jandt (2010) describes language as a shared set of symbols a community uses for communication. In intercultural contexts, language acts as both a tool and a barrier. Variations in

vocabulary and syntax, influenced by cultural backgrounds, can complicate understanding and lead to misunderstandings (Barna, 1994; Ilie, 2019). In international business, proficiency in the local language is essential for effective communication and cultural integration, while language anxiety can impede intercultural interactions (Chitakornkijasil, 2010; Jayaswal, 2009). Hence, mastering language nuances is crucial for navigating and succeeding in multicultural environments.

2.6.5.4. Non-Verbal Misinterpretations.

Nonverbal communication is a critical aspect of intercultural interactions, often more complex than verbal communication. Barna (1994) emphasises that understanding a language does not guarantee comprehension of nonverbal cues, which vary significantly across cultures. Some cultures express emotions openly, while others may suppress them, leading to misunderstandings. Jayaswal (2009) notes that nonverbal cues are crucial, especially when verbal messages are unclear. Cultures differ in their emphasis on verbal and nonverbal communication, with high-context cultures relying more on nonverbal cues and low-context cultures emphasising verbal messages. Misinterpretations of nonverbal signs, such as gestures or expressions, can hinder effective communication, necessitating a deeper understanding of cultural contexts and nuances (Barna, 1994).

2.6.5.5. Ethnocentrism.

As Barna (1994) and Zhu (2020) outlined, ethnocentrism refers to evaluating other cultures based on the standards and norms of one's own culture. This mindset, often rooted in the belief that one's own culture is superior, can lead to a limited and biased understanding of other cultures. Such an attitude, prevalent during culture shock and intercultural interactions, can obstruct

effective communication and restrict the appreciation of diverse customs and traditions (Jayaswal, 2009; Ilie, 2019). While an individual's innate sense of right and wrong is not necessarily harmful, overcoming ethnocentric views requires openness to different cultural perspectives.

2.6.5.6. Stereotyping.

Ethnocentrism often leads to stereotyping, where individuals from different cultural backgrounds are unfairly grouped and characterised, typically in a negative light (Jackson, 2014). Stereotypes are preconceived notions that unfairly attribute specific traits to all group members (Holliday, 2010). In contrast, generalisations identify common trends within a group but recognise the need for more information to understand individual or situational applicability (Galanti, 2000). While stereotypes are oversimplified and can be positive and negative, generalisations are seen as initial viewpoints, requiring further investigation to confirm their relevance to specific individuals or groups (Galanti, 2000).

2.6.5.7. Bias and Prejudice.

Bias and prejudice are common phenomena that can negatively impact intercultural relations worldwide. Bias refers to personal preferences, likes or dislikes, which can interfere with our ability to be objective, impartial, and without prejudice (Kaouache, 2008; Ilie, 2019). Prejudice refers to dislike, hatred or suspicion towards a person or group formed without reason based on race, religion, or gender (Ilie, 2019). It is culturally conditioned since it is rooted in a person's early socialisation (Maude, 2011). Prejudiced attitudes include irrational feelings of dislike and even hatred for certain groups, biased perceptions and beliefs about the group members that are not based on direct experiences and firsthand knowledge, and a readiness to behave in harmful and

unjust ways toward group members (Lustig & Koester, 2010). Prejudice is destructive and very harmful to intercultural relations.

Recognising and addressing these biases and prejudices is crucial for fostering respectful and constructive intercultural interactions.

2.6.5.8 Cultural Shock

Culture shock, as initially defined by Oberg (1960) and later discussed by various scholars, involves a series of emotional stages experienced by individuals when exposed to a new culture (cited in Gibson, 2000). It begins with the 'honeymoon' phase, marked by initial excitement and positive reactions to the new environment. This phase is followed by frustration and anxiety due to the realisation of significant cultural differences. The following stages involve gradual adjustment and recovery, leading to eventual acceptance and deeper appreciation of the new culture. These stages, commonly identified as honeymoon, frustration, adjustment, and acceptance, reflect the transition from initial wonderment to a more nuanced and mature understanding of the new cultural setting (Gibson, 2000).

2.6.6. Intercultural Communication Importance

The field of IC emerged post-World War II, initially to address the needs of American diplomacy and international business. Europe's development was influenced by the influx of immigrants into industrialised countries (Kramsch, 2001). Gibson (2000) highlights that the increasing significance of IC in contemporary times is fueled by factors like advanced technology facilitating rapid travel and global internet connectivity, a more mobile international labour force, increased global movements of businesspeople and refugees, and diversifying workforces. Even without travelling, international influences affect our daily lives in the modern globalised world,

making IC skills essential for navigating and understanding our increasingly interconnected world (Kramsch, 2001).

2.7. Intercultural Communicative Competence

The growing significance of IC has drawn research interest, particularly in ICC. This section aims to explore and clarify this concept by defining it, differentiating it from related concepts, and presenting an overview of some prominent models in the field.

2.7.1. Intercultural Communicative Competence Definition

The concept of 'competence' has evolved from focusing on skills and behaviours in vocational training to a broader scope encompassing knowledge, attitudes, and values in educational settings (Guilherme et al., 2009). Though lacking a universal definition, ICC, described by Sadokhin (2007), is a blend of knowledge, skills, and abilities for effective communication and interaction with individuals from diverse cultural backgrounds. ICC involves interacting effectively and appropriately with people from different cultural backgrounds. It is a multifaceted ability crucial in fields like social psychology, management, and language education, involving understanding and sharing one's culture and acquiring mediation skills for cross-cultural engagement (Ho, 2009; Meyer, 1991). Key to ICC are attributes like respect, curiosity, and adeptness in observation and analysis, which are valuable for virtual and real-world interactions (Koran & Sarnou, 2022), cultural sensitivity, conflict resolution, and stereotype overcoming (Prechtel & Lund, 2007). Modern university education, as per the European Commission (2020), prioritises these competences, including adaptability, critical thinking, and teamwork, alongside content delivery.

Byram's model outlines five "savoirs" and competences essential for ICC, highlighting the significance of linguistic, sociolinguistic, and discourse competences and the importance of non-verbal communication (Byram, 1997, p. 34). Developing ICC fosters a deeper understanding of oneself and others without necessitating cultural assimilation, distinguishing it from related concepts like communicative and sociolinguistic competence (Byram, 2009).

2.7.1.1. Communicative Competence.

Communicative competence is the ability to use language in a culturally appropriate manner to effectively and fluently communicate and accomplish social tasks through extended interactions (Gibson, 2000). This concept originated from Chomsky's distinction between "competence" and "performance" in language use and Hymes' reaction against Chomsky's definition, emphasising the sociocultural significance of language use (Hymes, 1972).

Hymes' theory introduced the four lenses necessary for communicative competence: possibility, feasibility, appropriateness, and occurrence (Hymes, 1972). This framework addresses language use's grammatical, psycholinguistic, and sociocultural aspects. The concept of communicative competence has been further developed in second language acquisition, providing a comprehensive understanding of language use in diverse cultural contexts.

The concept of "communicative competence," introduced by Hymes in 1972, emphasised the need for language use to be contextually appropriate, extending Chomsky's notion of linguistic competence. Halliday (1970) and Canale and Swain (1980) further developed this idea, including grammatical, sociolinguistic, discourse, and strategic competences. Despite these theoretical frameworks, language teaching often prioritises fluency and accuracy, with a marginal focus on

cultural aspects. This approach, critiqued for overlooking the sociocultural dimension, led to a shift in the 1990s towards intercultural communicative competence (ICC).

As Clouet (2006) defined, ICC involves the ability to interact in culturally complex contexts, underscoring the intercultural speaker's role as a mediator. This shift marks a move from communicative competence's language focus to ICC's emphasis on integrating language and culture.

2.7.1.2. IC vs ICC

Byram (1997) differentiates between IC and ICC. IC is the ability to interact with others across cultural differences using one's own language, focusing on understanding and relating to otherness, which does not necessarily require foreign language skills. On the other hand, ICC extends to interacting appropriately with people from different cultures in a foreign language, enabling handling a broader range of situations than IC. This distinction highlights the additional language dimension in ICC compared to IC.

2.7.1.3. Pragmatic Competence.

Pragmatics in linguistics, as defined by Yule (1996), explores how more is communicated than what is explicitly said. Pragmatic competence, as Taguchi (2009) and Kasper and Roever (2005) describe, involves using language appropriately in social contexts. This competence comprises pragmalinguistic and sociopragmatic aspects, the former concerns linguistic forms for specific functions and the latter about the the social forms appropriateness.

While Thompson (1997) views pragmatic competence as part of communicative competence, Hymes (1972) sees it as a component. Pragmatic competence aligns with ICC as part

of a broader skill set, encompassing Byram's (1997-2006) five *savoirs* and various capacities. Kramersch (1993) emphasises that a pragmatic focus in education should enable appropriate verbal exchanges and foster an understanding of different worldviews, which is crucial for intercultural education.

2.7.2. Intercultural Communication Models

Numerous researchers across various disciplines have endeavoured to develop ICC models to encapsulate its various aspects. This section provides an overview of some of the most renowned models related to foreign language education.

2.7.2.1. Kramersch Model (1993).

Kramersch (1993) underscores a paradigm shift in language and cultural education, moving from merely transmitting cultural facts (Big C) to understanding language and culture as dynamic, socially constructed entities (Small C). Four main approaches characterise this shift:

2.7.2.1.1. Creating a 'Sphere of Interculturality'.

Rather than mere cultural information exchange, the emphasis is on mutual reflection about one's own culture and the culture being learned.

2.7.2.1.2. Culture as an Interpersonal Process.

Culture is taught through social interaction, focusing on how learners and teachers construct meaning and comprehend different perspectives.

2.7.2.1.3. Culture as Diversity.

It connotes acknowledging and addressing cultures' inherent multiethnicity and multiculturalism.

2.7.2.1.4. Interdisciplinary Insights.

It draws from ethnography, anthropology, sociology, and sociolinguistics to deepen understanding of various cultures. To foster intercultural competence, Kramersch proposes a four-step approach:

2.7.2.1.5. Reconstructing Cultural Contexts.

Understand the context of text production and reception within the foreign culture.

2.7.2.1.6. Building Personal Reception Contexts.

It engages learners in finding cultural parallels in their own culture, constructing meanings within their own cultural frameworks.

2.7.2.1.7. Examining Cross-Cultural Perspectives.

It investigates how different cultures perceive each other.

2.7.2.1.8. Facilitating Intercultural Dialogue.

This approach creates opportunities for conversations that can lead to transformative learning as emphasised by Kramersch, who highlights the value of comparing different cultures and developing a "third place," which captures a learner's changing cultural identity (Kramersch, 1993, p. 210). This space offers both insider and outsider perspectives on one's own culture and the new culture. Byram (1997) agrees by suggesting that our social identities are shaped by our upbringing, expanded through cultural comparison. Thus, the "third place" becomes a transformative learning space where reflection and interaction shape a distinct cultural understanding.

2.7.2.2. Bennett's Model (1993).

Bennett's Developmental Model of Intercultural Sensitivity (DMIS, 1993) emphasises intercultural sensitivity as a key objective in cultural learning. Unlike behaviour-focused models,

DMIS is cognitive and phenomenological, distinguishing between ethnocentrism (judging using one's cultural viewpoint) and ethnorelativism (judging through various cultural perspectives). Bennett identifies three ethnocentric stages (denial, defence, minimisation) and three ethnorelative stages (acceptance, adaptation, integration) in this model:

2.7.2.2.1. Denial.

This initial stage is marked by a failure to acknowledge significant cultural differences, often leading to stereotyping or viewing other cultures through an oversimplified lens, with an assumption of one's culture being central.

2.7.2.2.2. Defence.

At this stage, cultural differences are acknowledged but seen negatively or as threats that include denigration (negative evaluation), superiority (viewing one's culture as better), and reversal (seeing the other culture as superior), which can lead to defensive behaviours when faced with cultural diversity.

2.7.2.2.3. Minimisation.

People in this stage may recognise cultural differences but downplay their significance, assuming that all cultures share similar core values, hindering genuine cross-cultural understanding.

2.7.2.2.4. Acceptance.

This stage involves acknowledging and respecting the differences in cultural practices and worldviews without necessarily agreeing with or adopting them.

2.7.2.2.5. Adaptation.

Individuals can empathetically see the world from other cultural perspectives, effectively enhancing their ability and develop skills to communicate and interact across cultural boundaries.

2.7.2.2.6. Integration.

The last stage in Bennett's model highlights the ability to understand and adapt to different cultural backgrounds without compromising one's own identity. It emphasizes the shift from seeing one's own culture as central (ethnocentrism) to recognizing all cultures as equally valid (ethnorelativism). This shift requires avoiding cultural differences to engaging with them, which is a key step in developing IC. Bennett, Hammer, and Wiseman (2003) suggest that intercultural sensitivity is tied to competence, and cultural learning should match the learner's stage. However, some critique the final "integrated marginality" stage as overly simplistic (Shaules, 2007).

2.7.2.3. Byram's Model (1997).

Byram (1997) stated that ICC comprises IC and Communicative Competence (CC), which denotes one's capacity to communicate effectively with foreign speakers of a different culture. Moreover, he outlined five grouped "saviors" of ICC: attitude, knowledge, skills of interpreting, skills of discovering, and critical awareness.

Among the five "saviors," critical awareness is a significant foundation in the relationship between teaching practices and learning strategies in both social and psychological aspects. The social aspect involves involving the learners in an "open learning environment" to strengthen their knowledge about spatial and social relations and expand their learning horizons.

Therefore, this helps the learners discover networks and establish relationships to refine their sense of belonging. Anyone can only effectively communicate in a foreign language if he/she

has developed his/her ICC following the "savants" that Byram (1997) had postulated for effective intercultural interaction:

2.7.2.3.1. *Savoir (Knowledge).*

It involves understanding the cultural practices, values, and beliefs of self, the target culture, and the dynamics of interaction.

2.7.2.3.2. *Savoir Comprendre (Skills of interpreting and relating).*

It interprets and relates verbal and nonverbal communication in intercultural contexts.

2.7.2.3.3. *Savoir S'engager (Critical cultural awareness).*

It involves the ability to reflect on one's cultural assumptions and biases and critically engage with other cultures.

2.7.2.3.4. *Savoir Apprendre/Faire (Skills of discovery and interaction).*

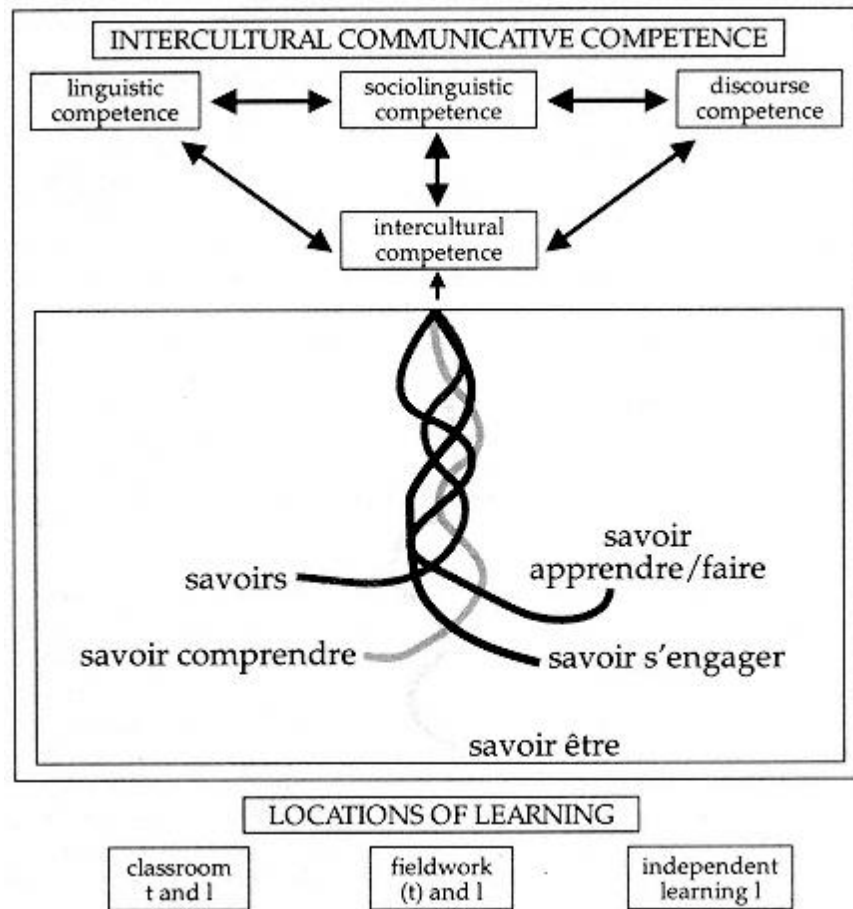
It deals with the ability to interact effectively with people from different cultures.

2.7.2.3.5. *Savoir Être (Attitudes).*

It connotes cultivating appropriate attitudes about the learner's openness and curiosity towards other cultures. The model is additionally represented in the subsequent figure, demonstrating the interrelationship and complementary nature of various behaviours and sub-competences.

Figure 2.9.

Byram's model of intercultural communicative competence (Byram, 1997)



Note. The image “Byram's model of intercultural communicative competence (Byram, 1997, p. 73) 17is from ResearchGate by Boye, 2016. Intercultural communicative competence and short stays abroad: Perceptions of development. Copyright from ResearchGate: https://www.researchgate.net/figure/Byrams-model-of-intercultural-communicative-competence-Byram-1997-73-17_fig1_309425740

2.8. Intercultural Competence Assessment Models

IC assessment models offer frameworks for understanding and evaluating how individuals effectively communicate and interact across cultural differences. These models are critical for

educators, organisations, and researchers aiming to measure and improve intercultural competences. Below are the key models:

2.8.1. Intercultural Competence Assessment (INCA) Model (2007)

The IC assessment model developed by Prechtel and Davidson Lund in 2007 through the INCA project aims to evaluate intercultural competence in a detailed way. The project ran from 2001 to 2004 to create a system for assessing these skills (European Union, 2004). It built on previous theories by experts like Byram (1997), Kohlmann and Stahl (1998), Ward (2001), and Gudykunst (1988), refining these ideas to better fit European collaboration (European Union, 2004). The model categorises intercultural competence into six main areas and three aspects—motivation, skills/knowledge, and behaviour—resulting in 18 specific competencies. Here is an overview of how these components and elements might be conceptualised:

2.8.1.1. Motivation.

Motivation pushes people to explore and connect with different cultures, involving curiosity about other ways of life, a readiness to question their own beliefs, and the determination to overcome challenges in communication. Motivation is important to build meaningful connections with people from various cultural backgrounds.

2.8.1.2. Skill/Knowledge.

Skill and knowledge are crucial for navigating intercultural interactions effectively. They encompass:

2.8.1.2.1. Cognitive Skills.

They connote the ability to understand and interpret cultural differences.

2.8.1.2.2. Affective Skills.

They mean emotional intelligence that allows for empathy and managing one's own emotions in cross-cultural situations.

2.8.1.2.3. Behavioural Skills.

They are about applying knowledge and emotional insights to appropriate actions.

2.8.1.3. Behaviour.

Behaviour reflects how people act based on their motivation and the skills they have developed, like adapting communication to different cultural situations, building relationships across cultures, and showing respect in diverse environments. The model breaks down 18 skills needed for IC, from the desire to engage with other cultures to using knowledge and skills effectively. It emphasises both internal traits (motivation, knowledge) and external behaviours that offer a detailed way to assess and improve intercultural skills for better communication and understanding across cultural boundaries.

Table 2.1.*INCA Theory*

Component	Element	Description (Inferred)
1. Openness	Motivation	Willingness to engage with and be open to other cultures, seeking to understand and appreciate cultural differences.
	Skill/Knowledge	It is the ability to recognise and suspend judgment based on one's own cultural norms and understand cultural practices and contexts different from one's own.
	Behaviour	It demonstrates openness through actions, such as adapting communication styles and respecting cultural norms.
2. Flexibility	Motivation	Interest and adaptability in changing one's behaviour and attitudes in response to new cultural insights and circumstances.

	Skill/Knowledge	Skills in adjusting strategies to navigate complex cultural situations; knowledge of when and how to adapt behaviours appropriately.
	Behaviour	It is the flexibility in actions and interactions, showing versatility in various cultural contexts and situations.
3. Communication Ability	Motivation	Drive to effectively communicate across cultural boundaries, aiming for clarity and mutual understanding.
	Skill/Knowledge	It connotes competence in linguistic and non-verbal communication and understanding of sociolinguistic nuances across cultures.
	Behaviour	It is about effectively and appropriately using language and non-verbal cues in diverse cultural settings, facilitating understanding and connection.
4. Emotional Intelligence	Motivation	It is the willingness to engage with emotions, both one's own and others, in intercultural contexts.
	Skill/Knowledge	Ability to identify, understand, and manage emotions in oneself and others, recognising the influence of cultural context on emotional expressions.
	Behaviour	Demonstrating empathy and emotional regulation in interactions, showing sensitivity to cultural differences in emotional expression and response.
5. Knowledge Discovery	Motivation	Curiosity and drive to learn about other cultures, seeking information and experiences that broaden one's cultural understanding.
	Skill/Knowledge	Skills in researching, analysing, and synthesising cultural information; knowledge gained from diverse sources about various cultures.
	Behaviour	It is about actively seeking and integrating new cultural knowledge into interactions and decision-making processes.
6. Respect for Diversity	Motivation	It is valuing and respecting cultural diversity and individual differences, recognising the positive contributions of diverse cultural perspectives.
	Skill/Knowledge	Understanding the principles of cultural diversity and inclusion and how cultural backgrounds influence behaviours and interactions.
	Behaviour	It shows respect and inclusivity in actions and communications, promoting an environment that values diversity.

Note. The table “INCA Theory” is adopted from European Union by Leonardo da Vinci European

Training in the UK, 2004. Intercultural competence Assessment (INCA). Copyright from © INCA,

LdVII, 2004: https://migrant-integration.ec.europa.eu/sites/default/files/2009-08/doc1_9372_399031269.pdf

2.8.2. Deardorff's Model (2009)

ICC encompasses one's skills, behaviour, and understanding, which are vital in suitable communication "across differences" at a cultural level (Deardorff, 2019). Darla Deardorff's IC model, as outlined in 2009, presents the development of ICC as a continuous process that aims for both inward and outward outcomes. The highest goal of ICC, according to Deardorff, is to achieve effective and appropriate behaviours and communication in diverse cultural situations. The model stresses the importance of attitudes, knowledge, skills, and the eventual internal and external outcomes as crucial components of IC, specifically:

2.8.2.1. Attitudes.

The model begins with the foundational attitudes of respect, openness, curiosity, and a willingness to explore and understand perspectives different from one's own.

2.8.2.1.1. Respect.

It acknowledges the value and validity of other cultures and perspectives and recognises the inherent worth of individuals from diverse backgrounds.

2.8.2.1.2. Openness.

It involves being receptive to new and different ideas, behaviours, and cultures, which can challenge and expand one's viewpoints.

2.8.2.1.3. Curiosity.

It drives the desire to learn more about others, moving beyond superficial understandings to a deeper appreciation of cultural complexities.

These attitudes are essential prerequisites for developing the knowledge and skills necessary for IC. Without these attitudes, efforts to acquire intercultural knowledge and skills may be less effective or counterproductive.

2.8.2.2. Knowledge.

It involves understanding one's cultural identity and its influence on perceptions and interactions (cultural-self awareness) and gaining insights into other cultures' worldviews (culture-specific knowledge).

2.8.2.2.1. Cultural Self-Awareness.

It means recognising one's own cultural biases, beliefs, and values.

2.8.2.2.2. Culture-Specific Knowledge.

It is about understanding specific cultures' customs, behaviours, and norms.

2.8.2.2.3. Deep Cultural Knowledge.

It concerns Grasping the underlying cultural worldviews, including historical, political, and social contexts.

2.8.2.2.4. Sociolinguistic Awareness.

It connotes the awareness of the nuances of language use in different cultural contexts, including nonverbal communication, which allows individuals to understand the "what" of cultural differences and the "why" behind these differences.

2.8.2.3. Skills.

The skills necessary for intercultural competence refer to critical thinking abilities such as observing, listening, evaluating, analysing, interpreting, and relating with others. These skills enable individuals to:

2.8.2.3.1. *Observe.*

It deals with observing cultural interactions and behaviours without immediate judgment.

2.8.2.3.2. *Listen.*

Listen actively to understand meanings and perspectives.

2.8.2.3.3. *Evaluate and Analyse.*

Evaluate and analyse situations or statements from a cultural standpoint.

2.8.2.3.4. *Interpret.*

Interpret the intentions and communications of others within their cultural context.

2.8.2.3.5. *Relate.*

It is the ability to relate by connecting one's culture with another, finding common ground and appreciating differences. Acquiring these attitudes, knowledge, and skills leads to:

2.8.3. *Internal Outcomes*

The internal outcomes include flexibility, adaptability, an ethnorelative perspective, and empathy:

2.8.3.1. *Flexibility and Adaptability.*

They are about adjusting one's behaviour and expectations in various cultural contexts.

2.8.3.2. *Empathy.*

It involves understanding and sharing the feelings of others, which is crucial for effective intercultural interactions. These internal outcomes indicate an individual's ability to navigate and engage with cultural differences profoundly and authentically.

2.8.4. External Outcomes

Finally, the external outcomes are characterised by the effectiveness and appropriateness of one's behaviours and communication skills that others observe. These outcomes are evidence of intercultural competence and include:

2.8.4.1. Effective Communication.

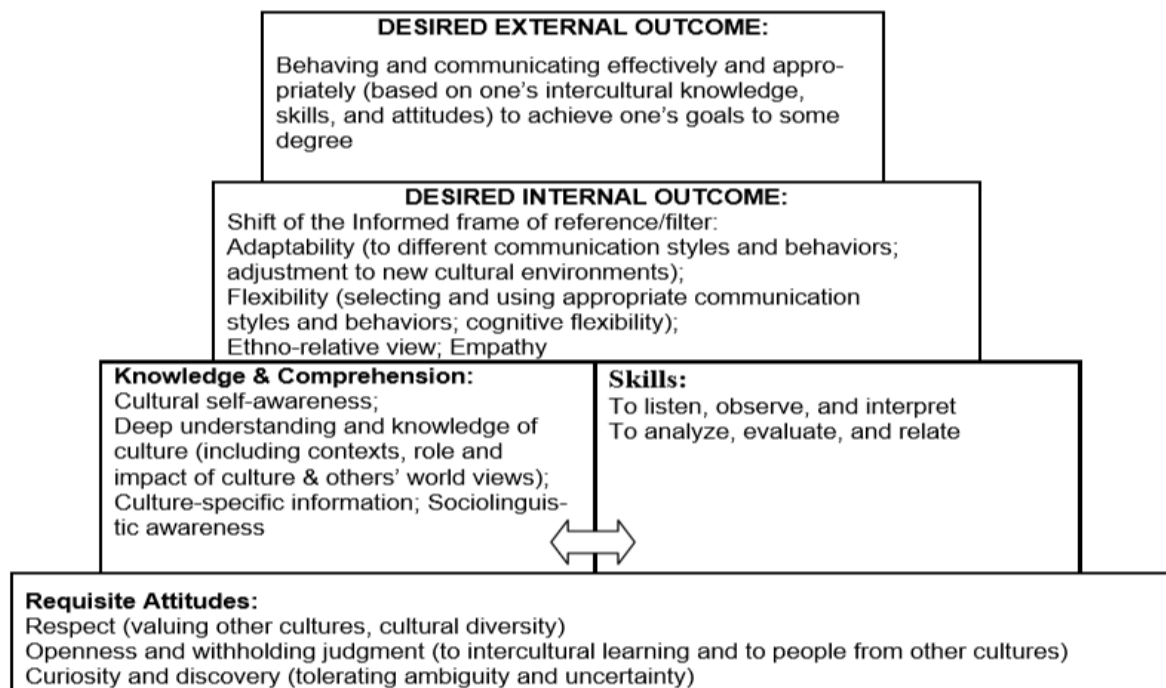
It concerns conveying messages clearly and appropriately in a cross-cultural context.

2.8.4.2. Appropriate Behaviour.

It is about understanding what is considered polite and appropriate in different cultures. This understanding is key for effective cross-cultural interactions, as it shows that a person can apply their knowledge, skills, and attitudes in real-life situations. Deardorff's model highlights that intercultural competence is more than just theory; it's about building practical skills for engaging with others from diverse backgrounds (Deardorff, 2006, 2009). Her approach is useful for teachers, trainers, and anyone looking to improve their ability to interact in our multicultural world. The model is shown through the pyramid model:

Figure 2.10.

Pyramid Model of Intercultural Competence (Deardorff, 2006, 2009)



Note. The image “Pyramid Model of Intercultural Competence (Deardorff, 2006, 2009)” is from ResearchGate by O’Toole, 2018. Technology Enhanced Learning (TEL) Intercultural Competence: A Phenomenological Exploration of Trainees’ Experiences within Global Virtual Training Environments. Copyright from ResearchGate: https://www.researchgate.net/figure/Pyramid-Model-of-Intercultural-Competence-Deardorff-2006-2009_fig1_323158045

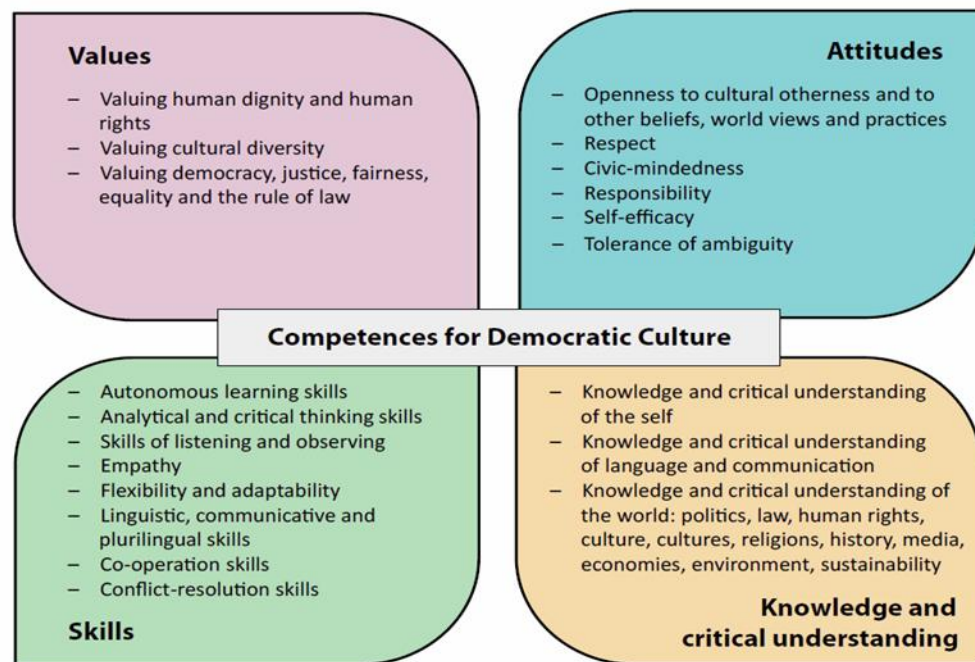
2.8.5. Competences for Democratic Culture (2018)

In 2018, the Council of Europe introduced the Reference Framework of Competences for Democratic Culture (CDC) to help people develop the skills needed for living in a democracy. It covers essential areas like responsibility, empathy, communication, conflict resolution, and critical thinking. The framework aims to guide teachers in creating educational programs that foster these

democratic skills. It has been widely adopted in education that supports teaching democratic and IC across various educational and policy settings (Council of Europe, 2018).

Figure 2.11.

Reference Framework of Competences for Democratic Culture.



Reference Framework of Competences for Democratic Culture

Note. The image “Reference Framework of Competences for Democratic Culture.” is from Council of Europe, 2016. COMPETENCES FOR DEMOCRATIC CULTURE Living together as equals in culturally diverse democratic societies. © Council of Europe, March 2016 Printed at the Council of Europe: <https://www.coe.int/en/web/reference-framework-of-competences-for-democratic-culture/model>

2.8.6. E-moderation

Gilly Salmon describes e-moderation as guiding and supporting online learning to create better learning experiences, focusing on the moderator's role in keeping students engaged and on track (Salmon, 2000). This role is crucial for building a strong learning community where everyone actively participates in discussions and activities (Miranda-Pinto, 2009). According to Dias (2008), e-moderation involves managing group dynamics and learning processes. Indeed, the e-moderator role is essential to boost learner engagement, provide feedback, solve technical problems, adapt methods to individual needs, and help learners apply their knowledge effectively (Salmon, 2013-2000).

Cloke and Sharif (2001) have highlighted the distinction between learning about ICT and learning with or through ICT, emphasising the transformative potential of integrating technology into educational experiences.

Indeed, e-moderating skills cannot be acquired by simply observing other online teachers or looking at exemplary Web sites (Salmon, 2011). Salmon (2002) states that an excellent method for adopting new technology involves initially having educators use it as learners within their professional communities. The teaching staff needs to be immersed in the experience of working with others online while focusing on the utility and relevance of online learning.

However, few universities and colleges currently offer much training for e-moderating skills. The best methods are yet to be identified (Kearsley, 2000). No staff development programme engages and supports teachers on their journeys to becoming e-moderators has been built by the Ministry of Scientific Research and Higher Education (MERS) even during or after

the pandemic, except for some videos showing how to log in to the platform and upload or download files (PDF, Doc) or videos for both teachers and students (Koran & Sarnou, 2022).

2.8.7. E-moderating and ICC Assessment

E-moderating and ICC assessment models work well together to improve online learning. E-moderating uses ICC frameworks to help students interact meaningfully and develop intercultural skills. ICC assessment models give e-moderators a clear way to identify areas where students might need extra support, making moderation more effective (Byram, 1997; Deardorff, 2006).

Feedback based on ICC assessment models helps students see their progress and areas for its development (Fantini, 2000; Hammer, 2012). E-moderators can also adjust the learning environment to address different cultural needs to create a more inclusive and flexible space to develop ICs (Spitzberg & Changnon, 2009).

VE and Intercultural Communication Skills Development

VE has emerged as a significant tool in HE, particularly in developing IC skills. This introductory section aims to explore the role of VE in fostering these skills, based on relevant academic research and findings.

2.9. Intercultural Communication Skills Importance

Communicating across cultures is indispensable in today's interconnected world. Indeed, university students, who possess these skills flourish in diverse learning environments and succeed in their future careers.

Highlighting IC prepares students for a global job market by encouraging adaptability and cultural awareness. Universities can support this by tailoring their programs to meet the needs of a diverse student body and keeping up with the changing global landscape.

2.9.1. VE and Internationalisation

VE plays a pivotal role in the internationalisation of HE, promoting cross-cultural understanding, global competences, and equitable access to international experiences (Lee & Cai, 2019; Morris et al., 2018; Caluinau, 2019; Bassani & Bachem, 2019; Toner, 2018; Custer & Tuominen, 2017; de Wit, 2016; Elliott-Gower et al., 2015; Soliya, 2020). In response to the COVID-19 pandemic disruptions, universities have increasingly adopted VE and virtual mobility to achieve IaH for students who remain on campus, offering an inclusive approach to global education (Cairns & França, 2022).

The shift to digital platforms has not only facilitated continued international engagement during travel restrictions but has also proven effective in building digital competencies and fostering interactions that bridge linguistic and cultural divides (Dooly, 2019; O'Dowd & Lewis, 2016; Helm & Van Der Velden, 2019; Sadler & Dooley, 2016).

VE helps improve critical digital literacy that an important skill for students as they prepare for today's digital world (Hauck, 2019). The focus on VE and virtual mobility is part of a larger shift in higher education towards more flexible, tech-friendly learning. This shift matches the goals of the Erasmus+ program for 2021-2027, which promotes new teaching methods like blended learning and VE to make higher education more global (European Commission, 2021). This has allowed many universities to offer international experiences without requiring students to travel.

2.9.2. VE's Role in EFL Telecollaboration

VE is considered a transformative approach in EFL education, it facilitates telecollaboration and allows students from diverse linguistic and cultural backgrounds to engage in collaborative and communication tasks through online platforms.

Liu et al. (2023), Emir and Yangın-Ekşi (2024) underscore VE's impact and effectiveness on telecollaboration to foster meaningful interactions for language acquisition and cultural understanding among EFL students.

2.9.2.1. Authentic Language Use Promotion.

VEs give EFL learners the chance to use the language in real-life situations. They help students move beyond the classroom setting to engage in more natural conversations (O'Dowd & Lewis, 2016). This real-world language practice is essential to grammar and vocabulary use in meaningful ways, which boosts their ability communicative competence.

2.9.2.2. Cultural Exchange and Intercultural Competence Development.

VE plays a significant role in developing intercultural competence among EFL students. By engaging in telecollaborative projects with peers from different cultural backgrounds, students are exposed to diverse perspectives and cultural norms. Helm and Guth (2010) argue that such interactions encourage students to develop critical cultural awareness and sensitivity, key components of intercultural competence. The exposure to different cultures enriches the students' understanding of the world and prepares them for effective communication in a globalised society. Thus, it enhances their global communication and IC skills (Hagley, 2020; Ismailov & Tang, 2021).

2.9.2.3. Digital Literacy Skills Enhancement

In addition to promoting language learning and IC, VE supports the development of digital literacy skills. As students navigate various online platforms and tools during their telecollaborative projects, they become adept at using technology for communication and collaboration. Godwin-Jones (2018) highlights the importance of digital literacy in the 21st century, noting that VE equips students with the skills necessary to participate fully in the digital world.

2.19.2.4. Bridging Geographical and Financial Barriers

The transformative potential of VE in addressing geographical and financial constraints in English as a Foreign Language (EFL) education is significant. VE leverages the internet and digital technologies to provide international learning experiences, democratising education for EFL students, especially those in remote areas. Scholars like O'Dowd (2013), Wang (2016), and Bax (2003) emphasise the role of digital technologies in bridging educational divides and expanding access to global learning opportunities.

Virtual exchanges empower learners by offering authentic linguistic input and situations, enhancing motivation for second-language conversations.

2.9.2.5. Fostering Collaborative Learning.

VE supports collaborative learning environments where EFL students work together on tasks despite geographical distances. This collaboration enhances language learning through peer feedback and shared knowledge construction. Dooly (2019) provides evidence of how collaborative tasks in VE settings promote language development and teamwork skills.

2.9.2.6. Motivation and Engagement.

Participating in VE can significantly increase EFL students' motivation and engagement with the language learning process. By interacting with international peers, learners find more relevance and excitement in learning English, as suggested by the work of Lee and Markey (2014), who found that VE projects lead to higher levels of student motivation and engagement.

2.9.2.7. Fostering Cultural Sensitivity and Pedagogical Skills.

VE provides a dynamic environment for EFL students to develop essential pedagogical skills and heighten their cultural sensitivity. Through telecollaboration, students engage in activities that sharpen their teaching abilities and deepen their understanding of cultural nuances (Emir & Yangın-Ekşi, 2024).

2.9.2.8. CMC Tools Diverse Use for Effective Telecollaboration.

Telecollaboration in EFL education leverages various Computer-Mediated Communication (CMC) tools, from synchronous platforms like Zoom and Skype to asynchronous tools like Padlet and social media. These technologies facilitate rich, varied online interactions, supporting learning (Emir & Yangın-Ekşi, 2024).

2.9.2.9. Broadening Cultural Knowledge and Interactional Confidence.

Participation in structured VE projects, such as the International Virtual Exchange Project (IVEProject), significantly enhances EFL students' cultural knowledge, boosts their confidence in interaction, and increases intercultural sensitivity. These outcomes are crucial for cultivating a comprehensive intercultural competence (Roarty & Hagley, 2021).

2.9.2.10. The Critical Role of Teacher Involvement in VE Success.

Teacher engagement is a critical factor in the successful implementation of VE programs. Educators' active participation and guidance are essential for maximising the benefits of telecollaboration and ensuring meaningful learning experiences for students (Roarty & Hagley, 2021).

In essence, Virtual Exchange significantly enriches telecollaboration among EFL students by advancing intercultural communication skills, cultural awareness, and educational strategies through the strategic use of technology and active teacher involvement.

2.9.2.11. Technological Competences Importance in Teacher Education.

Integrating technological competences in teacher education is crucial for meeting the educational challenges of the 21st century. It emphasises the need for pre-service and in-service teachers to expand beyond traditional subject knowledge to include effective technology integration in teaching. Scholars like O'Dowd (2013), Tondeur et al. (2016), Niess (2011), and Rienties et al. (2013) have highlighted the significance of embedding digital literacy and technological skills in teacher training programs to enhance teaching practices.

2.9.2.12. Telecollaboration as a Strategy for Developing Digital Competences.

Telecollaboration is a pivotal strategy in developing these digital competences, providing teachers with hands-on experience with digital tools within a reflective, collaborative learning environment. According to Ernest et al. (2013), Guichon & Hauck (2011), and O'Dowd (2018), such experiences not only boost digital literacy but also facilitate the seamless integration of Information and Communication Technology (ICT) tools into teaching methodologies. This approach is supported by Antoniadou (2011) and Dooly & Sadler (2013), who advocate for

incorporating telecollaboration in teacher education to promote active engagement with technology.

2.9.2.13. Addressing Gaps in Traditional Teacher Training.

Telecollaboration also addresses significant gaps in traditional teacher training programs, such as the need for more comprehensive design and instructional planning and overcoming the limited use of technology in the classroom. Bilki et al. (2023), Bueno-Alastuey & García Esteban (2016), and McKenney et al. (2015) have noted the effectiveness of telecollaboration in enhancing digital literacy, advancing Technological Pedagogical Content Knowledge (TPACK), and improving pedagogical skills through the creation and evaluation of electronic materials, as outlined by Kleban & Bueno-Alastuey (2016).

2.9.2.14. Telecollaboration's Evolving Role in Teacher Education

The role of telecollaboration in teacher education has evolved significantly, fostering a community of learning that supports ongoing professional development by adopting innovative teaching methods and enhancing traditional pedagogical skills. Lee (2009) and Sadler & Dooly (2016) have underscored the value of blending technological and pedagogical skills to prepare teachers for the demands of the digital age, a sentiment echoed by O'Dowd (2021) and O'Dowd & Dooly (2022) in their advocacy for telecollaboration as an essential component of modern teacher education. This evolution solidifies telecollaboration's role in equipping educators with the skills necessary to navigate and contribute to the digital contemporary education landscape.

This approach aligns with the broader goal of VE to promote intercultural awareness, collaborative engagement, and equitable access to education, making it a pivotal strategy for fostering inclusive learning environments.

2.9.3. VE Projects at Algerian Universities

In the landscape of Algerian higher education, VE programs are burgeoning; they are emerging as innovative tools that bridge the digital and intercultural communication gaps and bring international experiences directly to students and faculty on campus.

The following essay delves into how such programs, underscored by studies from Koran and Sarnou (2022) and others, have transformed the educational environment in Algeria. It will discuss the few universities that have effectively implemented VE to enhance linguistic skills, cultural understanding and maintain educational continuity, allowing participants to engage globally from their local settings.

VE Projects in Algeria

In Algeria, VE programs are becoming valuable tools for IaH, they give students global exposure without the need to travel. Koran and Sarnou (2022) showed that online learning helps to bridge gaps in digital literacy, IC skills and prepare students for a globalised education.

Initiatives like the University of Tlemcen's asynchronous "Global Understanding" project and Setif 2 University's synchronous participation in "Newcomers and Nationalism 2019" show how VE facilitates international experiences, enhances linguistic competences and cultural understanding.

Moreover, programs such as PTAM (Project of Telecollaboration Algeria-Moldova), Ibunka 2019, and others (Sadouni, 2021; Dendenne, 2021) contribute to continuous education and intercultural experiences, improving students' writing and communication skills in English. Although VE initiatives are still limited in Algeria, they are crucial for expanding international

educational opportunities, particularly during challenging times like the COVID-19 pandemic (Benmahammed, 2020). These efforts are paving the way for a more globally competent generation capable of thriving in international environments (Meziane & Sari-Mitchel, 2014; Mouhadjer, 2018).

2.9.4. Benefits of VE in University Internationalisation

Using VE and digital technology in education brings many advantages. Johnson et al. (2016) and Hernández-Nanclares et al. (2019) point out that it makes learning more interactive and personalised. It also expands access to education and connects different learning communities worldwide (Meziane & Sari-Mitchel, 2014; Mouhadjer, 2018; Sadouni, 2021; Yeh & Tsai, 2022). This was especially useful during crises like the COVID-19 pandemic (Benmahammed, 2020).

VE programs promote international collaboration, help develop intercultural skills, and improve communication across diverse groups (Meziane & Sari-Mitchel, 2014; Mouhadjer, 2018; Sadouni, 2021; Fedj, 2019). They also give educators global competences and provide students with valuable skills for a connected world, including diverse viewpoints, language practice, and increased motivation (O'Dowd, 2007; Vinagre, 2016; Dendenne, 2021).

The benefits extend to boosting self-esteem and intercultural sensitivity, helping learners engage globally while overcoming international collaboration challenges (Helm & Beaven, 2020; O'Dowd & Dooly, 2020; Satar, 2021).

2.9.5. VE Barriers in University Internationalisation

VE offers significant opportunities for enhancing internationalisation in university settings, providing students and faculty access to global interactions and learning experiences. However,

its integration also presents substantial barriers that can hinder its adoption and effectiveness across educational institutions.

These barriers manifest at various levels, including the classroom, institutional, and policy spheres, and can be broadly categorised into four main areas.

2.9.5.1. Student-Level Barriers.

Students taking part in VE programs often face obstacles that affect their participation and performance leading to cultural misunderstandings that can make communication tough, especially during discussions on sensitive topics. For instance, Ware and Kramsch (2005) observed tensions between American and German students when talking about post-war German history due to limited intercultural skills.

Furthermore, challenges like different academic schedules and language proficiency levels often result in brief and irregular interactions that may be perceived as disinterest or lack of engagement (O'Dowd & Ritter, 2006; O'Dowd & Waire, 2009).

Additionally, while technological access issues can limit participation (Koran & Sarnou, 2022), cultural and language barriers further complicate interactions (Peiser, 2016). Thus, targeted support is required to address these issues, improve intercultural skills, and ensure fair access to technology (Koran & Sarnou, 2022).

2.9.5.2. Faculty-Level Barriers.

Faculty members often struggle with VE implementation as they may not possess the necessary online teaching skills or tech know-how. A gap in skills that makes it harder to properly

integrate VE into their teaching, which can impact learning quality. Morrison-Smith and Ruiz (2020) point out that without the right skills, VE projects may not work as intended.

Moreover, the focus on logistical issues instead of teaching methods, as O'Dowd and Waire (2009) note, can undermine the success of telecollaboration projects. Additionally, the lack of proper training in managing these online intercultural projects, fitting them into existing courses, and engaging students online adds to the difficulties faculty face (O'Dowd & Ritter, 2006; O'Dowd & Waire, 2009; O'Dowd, 2013), which emphasises the need for better training and support to make VE efforts successful.

2.9.5.3. Institutional-Level Barriers.

Many educational organisations struggle to add VE and telecollaborative projects to their programs, mainly because they lack support and recognition from the institution. Without policies or incentives, it's hard to get teachers and students fully interested in online learning (Olson & Olson, 2000).

On top of that is the difficulty to align VE with the organisation's learning goals, especially when resources are limited, which makes it hard to manage changes such as synchronising student learning platforms and support systems (Olson & Olson, 2016).

Additional, resistance to change also comes from not understanding the benefits or dealing with complex logistics, and poor tech infrastructure adds to the problem (O'Dowd, 2013).

2.9.5.4. Policy-Level Barriers.

The lack of supportive national and institutional policies significantly hampers the adoption and effective integration of VE, affecting the accreditation and recognition of online diplomas and

degrees (Starke-Meyerring & Wilson, 2008). This deficiency hinders the expansion and formal integration of VE into educational systems and diminishes its legitimacy and value. The absence of formal recognition and credit allocation for telecollaborative activities within university curricula can further demotivate students and faculty, reducing participation and the perceived value of these educational exchanges (Starke-Meyerring & Wilson, 2008).

Additionally, legal and ethical issues, like following international data protection rules and dealing with the complexities of sharing student data across countries, create major challenges. These problems highlight the importance of strong legal guidelines and clear policies to ensure VE programs are officially approved and accepted to adopt VE initiatives effectively in education (O'Dowd, 2013).

2.9.6. Strategies for Overcoming VE Barriers

VE needs combined efforts to tackle its challenges, such as improving technology, offering ongoing training, and setting supportive policies. Indeed, as Peiser (2016) and Koran and Sarnou (2022) noted, ensuring reliable internet and access to tech tools helps everyone to stay connected. Training teachers in online teaching builds a stronger learning environment (Morrison-Smith & Ruiz, 2020; Koran & Sarnou, 2022); setting up policies that recognise VE for academic credit makes it more valuable and integrated (O'Dowd, 2013).

Similarly, in today's digital age, micro-credentials and digital badges have become popular tools for recognising and sharing people's skills and achievements online (Anderson & Staub, 2015). They help learners stay motivated, gain recognition, and act as proof of specific skills (Gibson et al., 2013). Unlike traditional paper certificates, these badges are secure and easily

shared online (MacKinnon, 2021). They also make learning more engaging and fun, like a game, by allowing students to track and show their progress (MacKinnon, 2021).

Starting VE projects with activities like sharing personal stories helps build cultural understanding (O'Dowd & Eberbach, 2004). Teachers play a crucial role in guiding discussions by helping students tackle cultural topics, and refining their communication skills (O'Dowd, 2006). Encouraging feedback on shared posts and having class discussions on sensitive topics can also reduce miscommunication (Ware & Kramsch, 2005).

Additionally, universities should build strong partnerships between institutions to support the sustainability of VE projects. Promoting these initiatives by integrating them into their curricula and aligning them with internationalisation goals (O'Dowd, 2013) helps better prepare students for a globalised world.

2.10. Limitations

The literature review in Chapter Two highlights several research gaps in the implementation and effects of VE on IC skills, especially in the Algerian HE context.

Indeed, there is a lack of empirical data on the long-term impacts of VE on students' ICCs, indicating a need for more longitudinal studies to assess these effects over time. Additionally, most research focuses on student outcomes, leaving out faculty experiences. More insight into teachers' challenges could reveal obstacles to VE's success. There's also limited research on overcoming technological barriers in under-resourced universities and on adapting VE programs to different cultural settings. Finally, specific ways to integrate VE into courses remain underexplored.

Summary

The literature review chapter explores how VE impacts the development of intercultural communication skills among university students globally. It focuses on four main research questions that examine VE's role in supporting university internationalisation, its effectiveness in enhancing cultural understanding and communication skills, and the benefits and challenges of including VE in the curriculum. The chapter also addresses barriers like resource limitations and suggests practical solutions for improving VE's success in fostering IC skills.

Chapter Three: Methodology and Research Tools

In the context of rapid technological advancements and increasing global interdependence, mastering IC skills and the ability to engage with diverse cultural backgrounds have become indispensable for fostering collaboration and innovation. In the context of HE, the integration of ICC training into EFL classrooms allows building language and digital skills and fosters inclusivity and global competence.

Nevertheless, traditional teaching methods often fail to give students the hands-on experiences they need to handle real intercultural situations. VE programs help fill this gap by using technology to connect people who are far apart, making global education more accessible. This approach is especially helpful for students who cannot travel, as it allows them to experience "internationalization at home" through well-structured online platforms that mimic real-world cross-cultural interactions.

One example of a VE program is the Intercultural Digital Community Building (IDCB) course that uses Salmon's five-stage learning model and focuses on practical experiences and reflection through e-portfolios to boost IC skills. However, even though experiential learning improves student engagement and critical thinking, its application remains limited in HE settings.

Hereafter, the present research is meant to understand how such programs affect the development of IC skills and examine the impact of the IDCB VE program on IC skills. It assesses the use VE as a telecollaborative tool to facilitate the development of IC skills to provide insights for designing and implementing VE programs.

This chapter begins by revisiting the research objectives and their corresponding questions and details the methodology, research design, and strategy employed. The chapter concludes by examining the research approach's limitations.

3.1. Research Objectives

The research objectives (ROs) that align with the research aims are:

RO1 - To assess how virtual communities in VE projects contribute to intercultural communication and cooperation among EFL students,

RO2 - To monitor and enhance the intercultural communication skills of Master's students in Language and Communication at Abdelhamid Ibn Badis University,

RO3 - To explore the potential advantages and obstacles of integrating VE into university internationalisation practices,

RO4 - To formulate actionable recommendations to address classroom, institutional, and policy barriers for improving international and intercultural learning opportunities,

3.2. Research Questions

The research questions, derived from the previously mentioned objectives, are as follows:

RQ1 - How do virtual communities in VE projects impact intercultural communication and cooperation among EFL students?

RQ2 - What progress do EFL students at Abdelhamid Ibn Badis University make in their intercultural communication skills through participation in VE projects?

RQ3 - What are the perceived benefits and challenges of VE integration into university internationalisation strategies?

RQ4 - What recommendations can be made to overcome barriers to VE adoption at different levels and enhance learning opportunities?

3.3. Research Hypotheses

Considering the research questions, the following hypotheses are proposed:

H1- Participation in VE projects through virtual communities may significantly enhance EFL students' intercultural communication and cooperation skills.

H2- EFL students involved in multidisciplinary VE projects might show measurable improvement in intercultural communication abilities.

H3- The integration of VE into university internationalisation could face significant challenges, including resource allocation, technological infrastructure, and faculty training, despite its potential benefits.

H4- Implementing specific recommendations, such as policy revisions, technological upgrades, and faculty development programs, can effectively address the barriers to VE adoption and enhance international and intercultural learning experiences.

3.4. Research Setting

It is essential to consider the geographical location and the time period of the present study to adequately address the contextual framework

This study explores "internationalisation at home" through VE, offering students at Abdelhamid Ibn Badis University a virtual intercultural exchange experience. Implemented via Moodle at Djilali Bounaama Khemis-Miliana University where the researcher is employed, the project facilitated synchronous, asynchronous, and collaborative learning experiences using the Internet as a connecting tool.

The study followed a longitudinal design by collecting data at several points between 2019 and 2021, a period influenced by the COVID-19 pandemic. It started with a pre-exchange survey in November 2019, followed by the IDCB VE project launch in February 2020 after the signing of the MoU between Djilali Bounaama Khemis Miliana University and Erasmus+ Virtual Exchange-UNICollaboration. A post-exchange survey in January 2021 assessed the project's outcomes.

This timeline structure allowed a detailed analysis of the research project's progression and its impact on the participants.

3.5. Research Sample Techniques

There were 33 Master One Language and Communication students from Abdelhamid Ibn Badis University and 11 participants from Istanbul, Turkey, along with a teacher-facilitator (researcher) from Djilali Bounaama Khemis Miliana University. The participants were selected because they were from diverse cultural backgrounds, and Master One Language and Communication students represent the community being studied from which the data is collected

as it links the study with its natural ground. Hence, the diverse cultural backgrounds of the participants made them a representative unit of the studied community, and the results can then be generalised to the whole community. They were also part of the same classroom environment studying ICC and E-learning modules, which suited the focus of the study that aimed to explore and assess the impact of the IDCB VE project implementation on developing their IC skills.

The following sub-sections detail the sampling strategy, explaining how participants were chosen and outlines the participants' demographics, which are essential to replicate the study and enhance its generalisability (Mills & Gay, 2019).

3.5.1. Complete Enumeration Survey Method.

This approach is also known as a census; it involves collecting data from every individual in a population rather than just a sample. It is commonly used in quantitative research and works well for small groups, like the 33 students in our study as it avoids mistakes linked to sampling (Sutherland, 2006). In addition, advances in technology have improved the efficiency and cost-effectiveness of census data collection through digital tools and online surveys.

3.5.2. Purposive Sampling

Purposive sampling, sometimes called "judgmental" sampling, is a non-random method where participants are picked based on specific factors that fit the study's needs, such as availability, language skills, and access to technology and the internet (Rai & Thapa, 2015). While this approach can limit how broadly the results apply, it was used here to choose students for the Virtual Exchange project's experimental phase based on those factors. Despite limitations, it still provided useful insights into how VE affects intercultural communication skills and university internationalization within the selected group.

3.5.3. Snowball Sampling

Snowball sampling is a good way to reach groups that are hard to find. It starts with a few known participants who then refer others and then create a network of connections (Naderifar et al., 2017). This method was crucial for the IDCB VE project since finding suitable partners was challenging due to language, technology, and time zone barriers. After joining various online VE fairs and programs like Unicollaboration-Erasmus+ Virtual Exchange, the SUNY/COIL Center, and the Global Partner Network, the researcher faced challenges in finding partners. In April 2019, she began with a colleague from Turkey, who referred others, eventually recruiting 11 Turkish participants. Even though there can be biases with this method, it was necessary to achieve a sufficient number of participants.

3.6. Research Methodology

Research Methodology refers to the systematic approach and strategies used to collect, analyze, and interpret data in research. It involves the appropriate selection of methods and tools, such as surveys, questionnaires, sampling techniques and data analysis procedures, to ensure the reliability and validity of the research findings.

According to Creswell (2003) and Thurloway (2015), it is important to consider several factors to determine the research method appropriate for any particular study, including the research question, access to data, the approach that fits the audience, and the background training and experience of the researcher. In this respect and since this study investigates VEs influence on IC skills development among Master's students in Language and Communication at Abdelhamid Ibn Badis University using a mixed-methods explanatory sequential design (O'Cathain et al., 2007) seems more suitable for individual researchers as it breaks the research into manageable tasks

mainly when unexpected quantitative results arise (Morse, 1991), which offers a deeper understanding of VE's impact in the Algerian context.

In light of the above, the researcher adopted a mixed methods approach for its data richness and accuracy. Moreover, this research was grounded in pragmatism, which supports the use of mixed methods in a sequential design (Creswell & Creswell, 2018). It solves the gap between quantitative and qualitative methods by emphasizing practical outcomes over strict methodological boundaries imposed by mono methods (Feilzer, 2010). Pragmatism is characterised by its practical orientation, which focuses on actions, and outcomes to determine 'what works' in practice (Creswell & Clark (2011, p. 41), and allows researchers to employ different data collection and analysis techniques (Patton, 1990).

The use of mixed methods applies both deductive and inductive reasoning within the inductive-deductive research cycle, also known as the chain of reasoning (Krathwohl, 2004), the cycle of scientific methodology (Tashakkori & Teddlie, 1998), and research wheel (Johnson & Christensen, 2004). Grounded observations lead to generalisations (inductive), which then guide hypotheses tested deductively.

3.7. Mixed Method Research

Mixed methods (MM) research integrates qualitative and quantitative data in a single study to provide insights neither method can achieve alone (Tashakkori & Creswell, 2007) and commonly in fields like education and sociology (Bryman, 2006; Creswell, 2015).

The main reason for employing mixed methods is to leverage the strengths of both data types and gain a complete understanding of complex research problems by using the strengths of both data types (Green & Caracelli, 1997; Tashakkori & Teddlie, 1998).

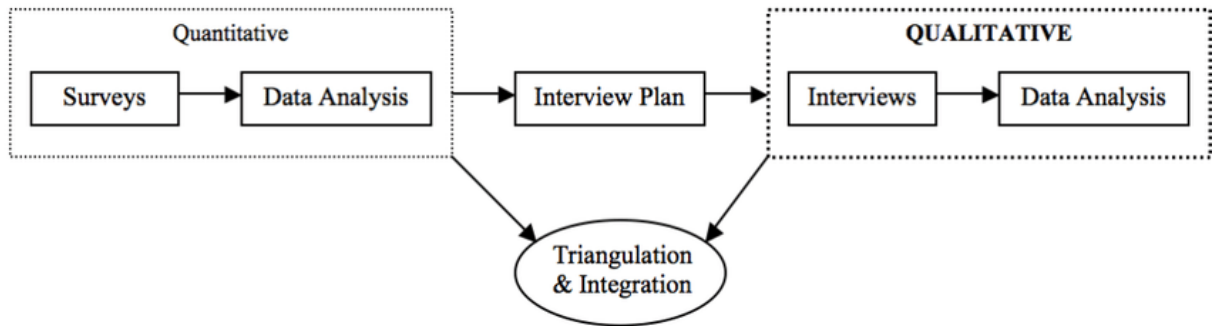
Additionally, the current research used mixed-methods sequential explanatory design, which consists of two phases, where quantitative data is collected first and then analysed, followed by qualitative data to clarify and deepen the initial findings (Creswell et al., 2003; Tashakkori & Teddlie, 1998). Thus, pre- and post-surveys will examine the impact of the IDCB VE on IC skills development, followed by qualitative interviews and e-portfolio reflections to explore patterns and enrich understanding of the data and provide a thorough analysis across the research cycle.

However, while this approach integrates both methods to enhance understanding of unexpected quantitative results (Morse, 1991), its primary challenges lie in the time and resources required for data collection and analysis (Creswell, 2003, 2005).

The subsequent visual model demonstrates the design's characteristics, from data collection sequence, method prioritisation, and integration of both data types or triangulation, until the interpretation of the results obtained.

Figure 3.1.

Sequential Explanatory Mixed Methods Design (Emphasis on the Qualitative Phase)



Note. The figure “*Sequential Explanatory Mixed Methods Design (Emphasis on the Qualitative Phase)*” is from ResearchGate by Wu, 2011. *A Mixed Methods Approach to Technology Acceptance Research.* Copyright 2011 by ResearchGate. https://www.researchgate.net/figure/Sequential-Explanatory-Mixed-Methods-Design-Emphasis-on-the-Qualitative-Phase_fig5_228130899

3.8. Data Collection Procedures

Data collection processes are structured methods used to gather information for research. They outline the tools and steps needed to collect reliable, valid data, ensuring consistency, transparency, and ethical adherence, which enhances the quality and credibility of research outcomes.

3.8.1. E-Moderating and E-project Design Trainings

In 2020, before launching the IDCB virtual collaboration project, the researcher and permanent teacher at Djilali Bounaama Khemis-Miliana University immersed herself in mastering the Moodle LMS platform and collaborated with technical staff to fully use its features for the upcoming virtual tasks.

Practical experience is crucial when adopting new technology in education. Certainly, Fullan (1982) emphasises that educational change is complex and closely linked to what teachers do and believe, while Salmon (2011) suggests that developing skills for moderating online learning requires more than just observation; it involves active engagement and participation.

Despite the benefits of such training, there were limited opportunities for teachers to build these skills. According to Koran and Sarnou (2022), even during the pandemic, the Ministry of Scientific Research and Higher Education offered only basic training on how to use online platforms. To fill this gap, the teacher pursued additional professional development on her own. She joined UniCollaboration.org, an organisation that provides free training for educators in virtual exchange.

Between December 29, 2018, and January 15, 2019, she completed two important programs: a basic course on virtual exchange, which helped improve her digital and collaboration skills, and an advanced course that focused on designing and leading a transnational virtual exchange project. By the end of these programs, she could design her own project and felt prepared to implement it, supported by the new skills she had gained and the recognition she received through Open Badges.

3.8.2. Finding Partnership

The researcher partnered during the Advanced training with two teacher participants, Alaa (Egypt) and KP (Turkey), but the project was postponed due to the misalignment of academic calendars.

Therefore, the researcher regularly participated in many "Partnering fairs" arranged to provide educators seeking collaborators a chance to connect. The online platform (www.unicollaboration.eu) is specifically designed to host VE partnering events and fairs. (O "Dowd, 2015). However, it was still difficult to find a partner. The researcher participated in other virtual partnering fairs such as SUNY and Global Partner Network, where global partner professors having varying levels of experience teaching with COIL, coming from a wide variety of disciplines and different continents like the USA, Mexico, Brazil, South Africa, and Europe were all seeking COIL teaching partners to implement their VE project. Nevertheless, because of time zones, misalignment of academic calendars, "differing assessment procedures and divergent attitudes towards online technologies" (Guth et al., 2012, p. 4), the researcher could not pair, and her VE project was postponed till Winter 2020.

3.8.3. The Rationale of Choosing the University Moodle Platform

The researcher chose her University's (Djilali Bounaama Khemis Miliana) Moodle platform over UNICollaboration to design and launch her VE project because of her familiarity with and the support available from the University's IT staff, who can help with potential technical issues, which eases the IDCB VE's implementation.

Besides, the University's platform allows seamless integration with the local curriculum and learning objectives of the VE project.

More importantly, the researcher wanted to uncover any institutional-specific policies that require the use of the University's Moodle platform for international projects that ensure compliance with any regulations or guidelines set by the University.

3.8.4. Moodle Login Access and Designer Authorisation

Each University uses a different login method for its online services. Nevertheless, teachers and students at Djilali Bounaama Khemis Miliana University log on to Moodle with the Uni-ID for course access. Teachers must obtain permission from technical staff to create Moodle courses. Those with permission can design courses, manage activities, and grade students (Koran & Sarnou, 2022). Student roles are assigned automatically, and permissions for enrolling additional users, especially non-University members, are controlled, often requiring higher authorisation, such as from the Rector.

Whether national or international, partners in joint projects may be granted editing rights, as was the case in the IDCB VE program. In this instance, Erasmus+ coordinators, Dr Hauck, Dr McKinnon, and Dr Helm (Unicollaboration.org, 2020), were given such access due to security concerns that restricted easy access to the Moodle platform.

However, the University's Rector and his Vice-Rector in charge of international relations had a significant role in setting up this project. Their willingness and approval to bring new practices to the University allowed them to give internationals access to the Moodle project space.

3.8.5. Account Creation and Login Instructions

After creating the accounts, the researcher guided participants through the, e-learning.univ-dbkm.dz, Moodle login process and registration on the e-learning platform. Participants followed instructions on the login page to complete registration. The researcher also provided directions for accessing course materials and activities. Login issues were resolved in collaboration with Khemis Miliana University technical staff to ensure a smooth user experience to allow participants focus on the VE project and its pedagogical goals.

navigate the platform and focus on the pedagogical aspects of the project.

3.8.6. Memorandum of Understanding (MoU)

To establish a formal partnership with Unicollaboration-Erasmus+ and allow IDCB participants to obtain an Erasmus badge and adhere to ethical considerations, VE partners must sign a Memorandum of Understanding (MoU) with the European Commission. This MoU, Erasmus+ Virtual Exchange –UNICollaboration, outlines cooperation in implementing a Transnational Erasmus+ Virtual Exchange Project (TEP). On June 10, 2019, Unicollaboration sent an MoU to Djilali Bounaama Khemis-Miliana University. Though not legally binding, it detailed roles, responsibilities, project scope, and other key terms.

Due to policy restrictions, the researcher could not sign it on behalf of her University, so she contacted the Rector and Vice-Rector in charge of international relations in Autumn to request approval. They asked for more details before contacting the Ministry of Higher Education. The University later requested a paper version, as the Algerian administration did not recognise electronic signatures like SignRequest despite its international compliance and security. After six months of discussions, the University Rector finally signed the MoU on February 22, 2020, officially launching the IDCB VE project (see Appendix A).

3.9. Pedagogical Design and Tools

The practical implementation of this online internationalisation at home project has been hosted on six Web 2.0 separate platforms:

- An institutional one (Moodle), as a learning management system (LMS) for asynchronous communication

- An informal one (WhatsApp),
- A video-conferencing platform (Zoom): (<https://zoom.us/meeting>);

A collaborative working space for sharing documents and information (Padlet), (<https://padlet.com/>)

SurveyMonkey and Google Forms as survey tools and an

E-portfolio tool.

Participants must enrol on all platforms to contribute to the e-community.

The tools were selected on the following basis:

3.9.1. Moodle Learning Platform

Moodle is a popular learning management system (LMS) widely used for online and blended learning. It is valued for its user-friendliness, flexibility, security, and features that support personalised learning (Henrick & Holland, 2015; Benta et al., 2014). Moodle enhances collaborative learning with tools like discussion forums and adaptive components (Wang et al., 2004). Educational institutions prefer Moodle for its strong community support and ability to foster student interaction and skill development (Machado & Tao, 2007; Bremer et al., 2005; Li, 2009). Additionally, its simplicity and communication tools make it popular among students, especially in language learning (O'Dowd, 2007).

3.9.2. WhatsApp Group

WhatsApp, a group messaging platform transcending time and place limitations (Sundgren, 2017), is an integral IDCB online intercultural exchange tool. It enables seamless communication

between the facilitator (researcher) and participants, allowing immediate discussions, questions, and task updates. Additionally, the App supports sharing text, voice messages, and videos (Tikno, 2017), which enhances collaboration and cultural interaction among students, particularly during the data collection phase of their final projects.

3.9.3. Padlet

Padlet, known initially as Wallwisher, is a universal Web 2.0 application designed for collaborative work and document sharing. It allows users to create a virtual wall facilitating interaction and is a dynamic platform for placing multimedia files and documents. These features can be effortlessly saved, copied, and pasted into other applications. Padlet is user-friendly, suitable for beginners and experts, and does not require specialised training. It has been effectively employed in various stages of educational projects, including the initial welcome and the final celebrations of participants' achievements in training programs like the IDCB (Weller, 2013; Padlet Blog, 2013).

3.9.4. E-portfolio

An e-portfolio, described as a digital tool for showcasing learning evidence (Challis, 1999), serves both as a learning enhancement method and an assessment mechanism that fosters self-reflection and independent learning (Pitts, 2007).

This study employed an e-portfolio with dual purposes: a reflective tool to support ongoing learning and a research tool for data collection. Structured in eight sections, the e-portfolio allowed students to document their progress offline and reflect on their learning. Available under a Creative Commons license, it facilitated the collection, organisation, and presentation of digital artefacts,

fostering the development of digital skills essential for the modern era (Meyer et al., 2010; Farrell, 2020).

E-portfolios also promote innovative evaluation practices, support creativity, and enhance pedagogical objectives, offering a dynamic platform for both reflection and course effectiveness evaluation (Scully et al., 2018; Cordeiro & Terezinha, 2020; Bates, 2010).

3.9.5. Zoom

Zoom is an easy-to-use cloud-based virtual conferencing platform for video conferencing, audio conferencing, webinars, meeting recordings, and live chat. Zoom meetings are the platform's foundation; they allow the facilitator to interact remotely with the participants while also providing an atmosphere for collaboration. Participants do not need an account to attend a Zoom meeting (Baron, 2020).

Zoom hosts a Zoom meeting, which participants can join in person via webcam, video conferencing camera, or phone. It allows screen sharing, annotation, whiteboards, breakout rooms, chat, and cloud recording. Moreover, the instructor can interact with participants while also providing a collaborative atmosphere (Colombo Publishing Company, 2020).

3.9.6. Online Surveys via Google Forms

Web surveys are increasingly popular due to their cost-efficiency, flexibility, and ability to reach diverse populations quickly (Reips, 2012).

They are useful for targeting specific demographics, such as Language and Communication Master students, facilitating expert-level data collection and improving participant engagement (Swoboda et al., 1997).

Additionally, anonymity in online surveys encourages participation, and younger audiences tend to favour digital interfaces compared to paper-and-pencil methods, which enhances response rates (Beebe et al., 1997).

Despite challenges like low response rates, tools like Google Forms enable large-scale surveys. For example, the IDCB project surveyed 44 participants, consisting of both Algerian (n=33) and Turkish students (n=11), to assess their intercultural communication skills via eleven (11) questions. Next, a follow-up survey was administered to nineteen (n=19) participants to evaluate changes post-exchange by answering fourteen (14) questions.

3.10. Data Collection Tools

The research conducted in this study employed a multifaceted approach centred around the concept of triangulation. This powerful approach involves using multiple methods and sources to gather data, thereby enhancing the credibility and reliability of the findings. In this particular investigation, the following diverse set of tools were utilised to gather valuable insights:

3.10.1. Pre- and Post-Exchange Surveys (Quantitative Data)

The study began by administering a pre-exchange survey to gather baseline data on participants' IC skills. This survey helped establish a reference point for evaluating changes after the VE. A validated tool from the Erasmus+ evaluation toolkit (European Union & EACEA, 2021) was used to ensure reliability and validity.

The pre-exchange survey was administered at the beginning of the project with a group of (n=15) in Mostaganem and the partner group (n=11) in Turkey. It included Likert-scale questions,

feelings thermometers to gauge attitudes towards diverse groups, and open-ended questions on expectations and prior experience.

Post-exchange surveys, planned to be conducted one to two weeks after the virtual exchange program's completion, yet, due to the Covid-19 pandemic, it was postponed more than three months later. In addition to the 16 questions in the pre-exchange survey, it added 14 questions that assessed participants' satisfaction, global attitudes, activation, and perceived improvements in 21st-century skills. The post-survey added questions that focused on engagement and media misrepresentation to analyse the IDCB VE's effectiveness and informing future program improvements.

3.10.2. Participants' Observation (Qualitative Data)

Participant observation is mainly used in qualitative research, especially in social sciences and anthropology, for understanding human behaviours in natural settings, where researchers immerse themselves in a community as active participants or observers to gather nuanced data (Scribbr, 2023). This approach is critical to build trust and elicit authentic responses crucial for reliable qualitative data collection. For instance, in the IDCB VE project, the researcher openly acknowledged her research role while engaging in platforms like Moodle, Zoom and WhatsApp by ensuring minimal disruption to social interactions (QuestionPro, 2021).

The method provides deep insights into social dynamics (Mudford et al., 2009), yet, it faces challenges such as potential bias and maintaining objectivity. Ethical considerations around privacy and consent are also significant (European Commission, 2023).

In VEs, researchers may choose either a fully integrated or minimal participation role, depending on the study's aims (Virtual Exchanges in Higher Education and Youth, 2023).

3.10.2.1. Observer as Participant.

In the IDCB VE project, the researcher openly assumed the role of a participant-observer to ensure transparency by disclosing her role while engaging in group activities on platforms like Moodle, Zoom and WhatsApp. This approach aimed to test the effectiveness of VE in fostering IC skills in the Algerian context. In addition, she assured the participants would obtain informed consent to ensure they understood the study's purpose, data use, and confidentiality.

Data was collected by observing participants' interactions on Moodle through activity logs and feedback. The observation process was guided by Gilly Salmon's Five Stage Model, which assessed engagement and ICC skill development across stages, from initial platform access to autonomous application of intercultural skills (Appendix F). Digital tools like e-portfolios allowed formative assessment, while bi-weekly Zoom meetings facilitated interviews and further engagement.

This structured methodology captured the complexity of VEs in developing IC skills in an online setting.

3.10.3. Online Focus Groups (Qualitative Data)

Online focus groups gather in-depth insights from 6 to 12 participants who share relevant characteristics for research discussions, typically lasting around 90 minutes, though durations vary (Sweet, 2001). Known as "Real-Time Online Groups" or "Internet-Based Focus Groups," these sessions can be adapted for video recording and both quantitative and qualitative analyses (Harmsen, 2013; Darlington & Scott, 2002). Moderated by a trained facilitator who uses open-ended questions, these groups ensure equitable participation while maintaining focus on the research objectives (Stancanelli, 2010).

These focus groups are valuable for exploring deeper insights into participants' attitudes and beliefs. They are often used with other methods, such as surveys and observations, to provide a well-rounded understanding (Cohen et al., 2005; Gundumogula, 2020). They are utilised across various applications, including program development and assessing customer satisfaction (Krueger & Casey, 2000).

3.10.3.1. IDCB VE Online Facilitated Dialogues.

The moderator gave participants instructions on how to conduct the Zoom-based focus group discussions, including the meeting link and guidelines. In addition, they were asked to familiarise themselves with Zoom and reach out with questions. The moderator emphasised session guidelines like respect and confidentiality, and participants were advised to find a quiet space. Moreover, ethical considerations were addressed by obtaining consent to record sessions for analysis.

The session followed the Erasmus + Online Facilitated Dialogue format for structured communication. On March 10, 2020, Philipp Möcklinghoff from UNICollaboration scheduled and led an Erasmus+ Virtual Exchange session focused on intercultural topics such as identity, global challenges, stereotypes and media. The facilitator remained neutral, encouraging participants to engage deeply. The session aimed to offer participants a rich intercultural experience and was also a requirement for participants to earn the Erasmus virtual exchange badge.

Additionally, the online facilitated sessions insights, along with qualitative data from focus groups, provided an understanding of participants' development in critical thinking and attitudes toward diversity, enriching the overall research findings.

3.11. Project Design

The IDCB VE project used a blended learning approach, combining online activities with traditional face-to-face interaction (O'Dowd, 2007), while the evaluation covered both formats. The project offered formal recognition through academic credits and informal accreditation via Erasmus open badges. Students engaged with Algerian and Turkish partners through live chats using Moodle asynchronously, Zoom for synchronous meetings, and WhatsApp to send automatic messages for specific inquiries, such as schedule changes or synchronous meeting reminders (Online-Tesis, 2020), to keep participants informed and engaged in the virtual exchange project.

The project, which spanned nearly a term, followed the VE framework, fostering meaningful interaction and collaboration. It was shaped by experiential learning, where the most important learning outcomes occur when students learn through real-world actions, i.e., they learn by doing not so much by listening (Kay & Dyson, 2008; Dai, 2011). Indeed, Byram (1997) emphasises three key settings: classroom learning, fieldwork, and independent activities, while GudyKunst (1998) adds experiential and didactic training (Rost-Roth, 2007).

The researcher selected a grassroots Transnational Exchange Projects (TEPs) model to meet specific needs. The training program included asynchronous and synchronous tasks through Moodle, WhatsApp, and Zoom, with dialogue sessions one of them led by Erasmus VE facilitators to allow participants get their Erasmus badges

3.11.1. Pilot Study

Pilot studies are undertaken on a small scale to evaluate and determine whether the research design, methodology, and procedures are feasible to identify potential challenges or constraints that may arise during the implementation stage.

The pilot study was conducted over two months using the design described previously for the VE project, with some modifications.

The pilot study at the University of Abdelhamid Ibn Badis in Mostaganem aimed to facilitate telecollaboration among Master One students and their counterparts from various countries (Egypt and Turkey). Initiated in the summer of 2019 following a six-month planning phase, the project began with a collaboration between Algerian participants and their international partners. This phase tested the IDCB VE's design and checked how the content aligned with Solomon's Silly Salmon's Five Stage Model. It also covered logistical details like preparing documents such as consent forms and netiquette guidelines. In addition to testing the data gathering tools, like the pre/post-surveys, Zoom facilitated dialogues and e-portfolios.

The pilot revealed challenges with aligning course content due to different curricula, schedules, and assessment methods. In Autumn 2019, adjustments were made for a smaller group of seven participants from Algeria and Turkey, allowing the solo facilitator (researcher) to test engagement, data collection, platform efficiency, and overall project design.

We mainly used Moodle integrated with tools like Padlet and Wiki for collaboration and Zoom for virtual sessions.

The pilot study identified several critical areas for improvement in the project, leading to enhanced guidelines and strategies to boost participant engagement and communication efficiency.

Technical challenges with Moodle and Zoom were significant from the start. In response, the researcher provided clear, step-by-step instructions to make the platforms easier to use and improve the experience for participants. Early on, simpler, more engaging activities were

introduced to familiarize participants with the technology and give them personalized feedback. Communication improved when a WhatsApp group was set up, as it helped with timely updates (EVOLVE, 2020). Some tasks in week 3, especially those about stereotypes that were too complex and led to confusion. They were simplified, and more time was added to allow participants engage comfortably, which created a more supportive learning environment.

3.11.2. IDCB Group and Project E-tivities

The virtual intercultural exchange group, named "*Intercultural Digital Community Building*" (IDCB), is a closed group (Moodle and WhatsApp), i.e. only project participants can join it, and the researcher adds them. This group aims to promote an online cultural exchange between EFL learners from Algeria and multi-disciplinary Turkish students. They share their views and comments on topics ranging from culture to education to national holidays and global issues, and in the process, hone their digital literacy, language and IC skills. Additionally, they should act respectfully and avoid posting improper or inappropriate content. If someone misbehaves after being warned three times, the facilitator might remove them. Every week, there will be tasks or topics where participants post comments or share photos. The VE between Algeria and Turkey ran for about three and a half months, starting in early March and ending by mid-June 2020.

All tasks and participants' deliverables, such as assignments or other types of documentation, were posted on the Djilali Bounaama Khemis Miliana University Moodle platform and shared with the participants.

The researcher chose the experiential 'learning by doing' approach using Gilly Salmon's (2002) *five-stage model* as a scaffold for a structured and paced online activity sequence that

gradually builds on participants' previous experience. Indeed, the model emphasises the need for easy access of students to the VE platform, a range of well-chosen team-building activities, collaborative tasks that strongly focus on the learning outcomes, team-orientated knowledge construction, and review and reflection (Salmon, 2002). The values that the researcher of the present project selected to serve as the pillars of VE were trust, communication, and clarity. Students were expected to accomplish five stages of tasks.

Nevertheless, the course that was scheduled for eight weeks runs for fourteen weeks because of the Covid-19 pandemic. Each stage took two to three weeks online, allowing participants to get to know one another, contribute and become more familiar with the platform in a relatively safe and entertaining manner. Within each stage, the participants have several 'Tasks' to complete, and they can practise e-moderating in groups.

The following is a description of the asynchronous and synchronous tasks.

3.11.3. Session One: Stage One: Access and Motivation.

At this stage, participants were introduced to the online learning environment. The emphasis was on familiarising students with the platform, boosting their self-assurance, and cultivating a sense of community. Motivation was essential to ensure participants were at ease and enthusiastic about the forthcoming learning voyage.

3.11.3.1. Week 1: From 23rd, Feb to 8th Mar, 2020.

The spark for the IDCB VE project was drawn from Steven Covey's seven habits of influential people and principle-centred leadership ideas (Covey, 1999). The researcher chose "Think Win: Win" to drive participants' interest, engagement, and connection in learning.

3.11.3.1.1. Think Win: Win

"Think Win-Win" is the fourth habit of highly productive individuals. It encourages human interaction and collaboration and consistently seeks mutual gain.

Welcome, Dear Participants!

Figure 3.2.

Virtual Exchange



Note. The figure “Virtual Exchange” is from Teaching matters blog, by Seran, J. 2018. Copyright
Credit: pixabay, geralt, CC0.<https://www.teaching-matters-blog.ed.ac.uk/developing-virtual-exchange-at-the-university-of-edinburgh/>

This training course is on Intercultural Communication, Virtual Exchange and Community Building.

In order to get us started, please post a photo, link to a photo, picture, piece of music, painting, sculpture, poem, etc. (any artefact) that says something about you.

Post it to the Coffee Shop Forum using your name as the post's subject, and briefly post a message saying why you chose that particular artefact with other participants.

Then, respond to at least three different contributions by your colleagues.

Look and briefly comment on what others have posted

Deadline: Thursday, 5th March 2020 at 11.59 pm

Best regards,

Aziza Koran (course facilitator).

3.11.3.1.2. Announcements (A news Forum Module)

This is a forum for course announcements. Whenever the facilitator has something important to announce, she will post it here. The subscription to this Forum is forced, which means you will get the announcement directly delivered to your email account.

3.11.3.1.3. Forum Module.

The forum activity module was used as a social space for students to get to know each other and enable participants to have asynchronous discussions.

The researcher opted for a standard forum where participants can start a new discussion anytime more than a given number of posts by attaching files, images or any artefact that could be displayed in the forum post.

Following Salmon's Five-Sage Model, the researcher offered easy e-tivities that are quickly achieved while giving practice in the use of technology and started the discussion by posting the following contribution :

Flowers are a gift of nature and are considered a symbol of love and beauty. They emotionally impact humans; they can colour people's moods, make them happy and cheerful, mend broken relationships, and brighten any colourful occasion. Without flowers, plants would be green, and the world would be duller.

As a flower lover or anthophilous who cares about nature and water, I shared this photo to provoke feelings of love and happiness in you and transform our first meeting into a colourful and memorable event.

Figure 3.3.

Flower

Garden

Wallpapers.



Note. The figure “*Flower Garden Wallpapers*” is from Themes.com by Wallpapers, 2016.

Copyright 2016 by Wallpapers. <http://7-themes.com/collections/hdq-flower-garden-wallpapers/>

Enjoy :-)

Aziza Koran

3.11.3.1.4. Page Module: Synchronous Meetings.

The researcher used the page module, which let the researcher display a web link and embedded code. It is also more accessible to participants with mobile devices and easier to update.

Information about our synchronous meetings

Synchronous (real-time) communication is one of the essential characteristics of Erasmus+ Virtual Exchange and virtual exchange in general, as it allows participants to see one another face-to-face, which helps establish relationships and allows them to discuss issues/resolve problems together.

This video explains how to install/ join a Zoom meeting:

<https://youtu.be/vFhAEoCF7jg>

This is another video that describes how to join a meeting on your iPhone and Android Device: <https://youtu.be/vFhAEoCF7jg>

Thus, as part of this IDCB Training, we will meet together each week as follows:

You will have a session that lasts approximately one hour and thirty minutes each week. All meetings are expressed in Greenwich Mean Time (GMT) (i.e. +1 Algeria, +3 Turkey). Since we are all in different time zones, please check what time that means for you.

The meeting will be held when most participants are available.

*All meetings will be held via Zoom video conferencing. We highly recommend Zoom for your TEP, as the free version is quite robust, easy to use, and reliable. This will allow you to become familiar with this system from the participant's point of view. To access each meeting, you only have to click a link, **which is in the synchronous meeting pages for corresponding weeks.***

If you have a webcam and are comfortable with sharing your video, please plan to use your camera during these meetings. We will have our cameras on! :)

Please put these meetings in your calendar and plan to attend one weekly meeting. If you are unfamiliar with Zoom, please plan to join the first meeting a few minutes early to allow your computer to load the software. That way, we can begin promptly.

*Please click just above this to read about our group meetings. The first one is coming soon, on **March 6th or 8th** (your choice).*

Each week, we offer you a choice of two-time slots for synchronous meetings: a morning and an evening one. Please check [the schedule](#) for exact times.

We are looking forward to meeting you "in person"!

Aziza Koran (course facilitator) :-)

Synchronous Facilitated Meeting (Topic One): Set up your Exchange Identity

Introduce yourself using seven descriptive words or adjectives that describe your identity.

Then, delete the two least important words.

What are the most popular given names in your culture? Each participant was asked to explain the origin of his/her name, the reason it was chosen and any special cultural significance.

3.11.3.1.5. Page Module: The Requirements to Get Your Badge

Dear Participants,

You will be awarded a digital badge once you have completed this course and met the requirements. The concept of a badge is similar to badges that scouts receive for skills they acquire or activities they have taken part in and display on the sleeve of their uniform or their backpacks.

Each of the Erasmus+ Virtual Exchange activities has one or more badges you can earn for completing the activities. Your badge will certify your VE competences.

This badge is awarded to participants who have:

- *Attended at least one synchronous facilitated dialogue session*
- *Participated in 75% of the weekly forum discussions*
- *Completed the assignments and end-of-course evaluation*

Here is a link to the portal page with additional information about badges:

[*VE Training Winter 2019- The requirements- How to get your badge.MP4*](#)

The badge you will earn will certify that:

You have completed an online course which covered the following topics: digital literacy, institutional support for virtual exchange, the challenges of virtual exchange, tools for virtual exchange, and successful partnerships in virtual exchange.

Another helpful resource is this set of [FAQs](#):

*Please contact us if you have any questions or doubts. You can also use *The Coffee Shop* forum to discuss the badge concept and requirements.*

3.13.3.2. Week Two: Pre-Training Activity: IDCB Profile From 9th to 14th Mar 2020.

Course Description

The course description module was used to add a short description of the VE training project. Text and multimedia were inserted into the course page between links to other resources and activities to help improve the course's appearance.

Figure 3.4.

Welcome Phrase in Different Languages



Note. The figure “Welcome Phrase in Different Languages” is from shutterstock.com by Rosli, 2012. Copyright 2012 by Shutterstock. <https://www.shutterstock.com/fr/image-illustration/welcome-phrase-different-languages-words-cloud-118412092>

Welcome!

Dear Participants,

*Welcome to the course on **Intercultural Digital Community Building.***

This course is a six-week journey in which you will be introduced to key topics of Intercultural digital communication development in the light of virtual exchange and community building.

After having taken part in this VE training, you will be able to:

1- define keywords such as intercultural communication, VE as a learning method, besides how to build a community,

2- feel what it’s like to be a participant in an online learning environment

3- learn and develop digital literacy by exploring and using new online tools (Padlet, Google Doc, Zoom,...) to communicate and complete tasks in VE,

4- Collaborate with a partner from the other group to design a collage or a tourist/ travel brochure about an aspect of their traditions and customs.

To start, please complete the task: [Cosy Cafe forum](#)

Then, please complete the task: [Set up your profile in this system](#). Then, peruse the items directly below that. The modules for the remaining weeks will become available to you as we progress through the training. For now, they are not visible.

Deadline: Thursday, 12th March, 2020 at 11:59 pm

I am looking forward to learning with you :-)

Course facilitator: Aziza Koran

3.11.3.2.1. Cosy Cafe Forum - A place for conversations and discussions :-)

Welcome to the IDCB Training!

Please come in! Here, we have conversation spaces to introduce ourselves to one another, ask questions, and report difficulties. Please start by introducing yourself and acknowledging the presence of your colleagues.

Post it to the [Cosy Cafe forum](#).

Look and briefly comment on what others have posted **by the end of Thursday, 12th March 2020, at 11h59 p.m**

Course facilitator: Aziza Koran

3.11.3.2.2. Page Module.

Set up your Profile in this System. For those who are new to this system, here are the steps:

Step 1: At the screen's upper right-hand corner, you should see your name and a circle with/for your picture. Click on " View profile".

Step 2: Once on "User details", look for " Edit profile" and click on it. From there, you can add all the information you want. Then, look for the image below, which says "User picture". When you find "New picture"; click "Add file" to download your photo.

Step 3: Then look again below for the image where it says " Faculté": write the name of your University.

Post by the end of Saturday, 14th March, 2020 at 11h59 p.m

Course facilitator: Aziza Koran

3.11.3.2.3. The File Module: Building Your Reflective E-Portfolio: A Step-by-Step Guide.

The researcher used it to provide an e-portfolio as a course resource; participants will be prompted to download, edit and submit it for assessment.

Dear all,

Welcome to the online training course! As you progress through this course, you will build an e-portfolio to showcase your learning journey, achievements, and projects.

Please click on the attached file and follow the instructions to fill in your e-portfolio effectively.

Remember, your e-portfolio is a representation of your learning journey and accomplishments. Take pride in documenting your progress and achievements throughout the course. Please contact your facilitator if you have any questions or need assistance.

Good luck, and enjoy building your e-portfolio!

Course facilitator: Aziza Koran

3.11.3.3. Week Three: Let's Know Each Other Better (From 15th to 21st Mar, 2020).

Figure 3.5.

Getting to Know you



Note. The figure “Getting to Know you” is from What I have learned, (n.d.). Copyright by What I have learned. <https://whathavelearnedteaching.com/product/getting-to-know-you-small-group-craftivity/>

In today's digital, global, and constantly changing world, getting to know each other is a key self-reflection step that allows people/participants to build a positive group spirit, work as a team, get more comfortable communicating and working with each other, and so contribute more effectively to a successful outcome.

Deadline: Thursday, 19th, Mar 2020 at 11:59 pm

Enjoy :-)

Course facilitator: Aziza Koran

To protect your privacy, the information you provide will not be available beyond the duration of the course.

3.11.3.3.1. Forum Module: Getting to know each other

Dear All,

Even if you have already introduced yourself briefly, it is time to present yourself in more detail and engage with others. Please use this Forum to post a message in which you will:

- *Present your background, context, and expectations for this training. What would you like to learn?*
- *Present your hopes and fears in the context of Virtual Exchange (a people-to-people online training course like the one you're doing now). Do you already have some experience?*
- *Present any other information that can be important in this context.*
- *Then, tell what you would be doing now if you were not working online.*

Deadline: Thursday, 19th, Mar 2020 at 11:59 pm

Now, respond to at least three different contributions by your colleagues. Can you suggest solutions to their concerns?

Enjoy :-)

Aziza Koran (course facilitator)

3.11.3.3.2. Forum: Synchronous Facilitated Meeting via Zoom

We will have two synchronous online facilitated meetings this week to help us get to know each other better. Philipp Möcklinghoff, one of the UNICollaboration for Erasmus+ Virtual Exchange dialogue facilitators, will monitor the sessions.

Participating in the facilitated session is one of the requirements to get the Erasmus virtual exchange badge.

Since we are all in different time zones, the time for our meeting is listed as Central European Time (CET).

(Alert! If you are not currently in the same time zone where you will be on the day of the meeting, please adjust the meeting start time in your calendar accordingly!)

*Please plan to attend **one** of these. We would be very grateful if you could fill out the form by clicking [HERE](#) (if you have not done so yet) and let us know when you will attend. Registration to Zoom is not required in order to attend the meeting; you can join by clicking the link associated with the day you have chosen:*

- *Thursday, 19th March, at 6:00 pm Central European Time (CET) at*
<https://zoom.us/j/205755178>
- *Saturday, 21st March, at 10:00 am Central European Time (CET) at*
<https://zoom.us/j/734306969>

Check your local time here: https://www.worldtimeserver.com/convert_time_in.UTC.aspx?y=2018&mo=5&d=23&h=18&mn=0

Synchronous Facilitated Meeting (Topic Two): (Gender and Race Issues, Global Issues and Stereotypes and Media Misrepresentation)

Q1: In our community/town/country, what specific gender-related issues and inequalities do you believe still exist today, and how can we work together to address and mitigate these challenges for a more equitable society?

Q2: How can we, as a global community, collaboratively address pressing global issues such as climate change, poverty, and conflict to ensure a sustainable and prosperous future for all?

Q3: How do stereotypes and media misrepresentation influence our perceptions and attitudes towards different ethnic, cultural, or gender groups, and what steps can we take to address and challenge these harmful narratives in media and society?

3.11.3.3.3.URL Page: Padlet Welcome Wall

The URL module lets the researcher copy and paste a Padlet wall, an online collaborative platform included in the program, to facilitate introducing students and instructors. She has created this link as a course resource.

Dear all,

Please click on the link: https://padlet.com/a_koran/4d29vm6geh36 to open the wall.

To publish on a Padlet wall, follow these steps:

- 1. Double-tap or click the add (+) button on the Padlet wall.*
- 2. Add a title, text, and an attachment.*
- 3. To add media files to your post, click on the attachment options, which include images, documents, links, videos, and drawings.*
- 4. You can even use your webcam or microphone to record a video or sound file.*
- 5. Drag and drop files into the Padlet wall to post multiple items at once.*

If you encounter any issues or have questions, contact this Padlet wall owner.

Deadline: Saturday, 21th, Mar 2020at 11:59 pm

Padlet Welcome message

Please use this wall to pin up a personal welcome message with either a picture or a video. You can add comments or heart the posts. Even if you think you are repeating information, the purpose of this activity is to

- 1. Make you experience another form of introduction*
- 2. Introduce you to Padlet - an excellent tool for displaying participants' contributions. Feel free to play with its functionalities.*

3.11.4. Stage Two: Online Socialisation

This stage involves familiarising and bridging cultural, social, and learning contexts. Participants began ice-breaking activities, shared personal introductions, formed a group, and comprehended the group's or online community's approach. The focus is developing engaging, friendly, and collaborative learning settings for students to communicate and form relationships.

Among the innovative ways to enable participants to get to know each other and to be able to form effective learning teams, the following task has been suggested

3.11.4.1. Week Four: Costume/ Fancy Dress Party From 22nd to 28th Mar, 2020. (COVID-19 Pandemic Lockdown)

Figure 3.6.

Fancy Dress Party



Note. The figure “*Costume Party*” is from What I have learned, (n.d.). Copyright by What I have learned. <https://>

In this week of the course, a costume party or fancy dress party is organised to allow you to discover one another's culture. You will be asked to choose from a wide range of traditional/ historical, glamorous, and colourful outfits that belong to your culture/ history to let us discover how you'll look, why you have chosen those clothes, and what part of your country you represent.

Please post your contribution and then reply to at least 2 of your colleagues.

Deadline: Thursday, 26th, Mar 2020 at 11:59 pm

Can't wait to see you :-)

Course facilitator: Aziza Koran

3.11.4.1.1. Forum: Fancy Dress Party

Dear all,

If we were to host a fancy dress party, I would like to know which traditional garments from your country or town you would choose to wear. Options could include a burnous, djellaba, Hayek, kaftan, karakou, şalvar, gömlek or bluz, çarık, kuşak, mendil, and yelek, among others. What unique outfit would you put together?

Additionally, which period of history, literature, or a specific region of your country does your chosen outfit represent? Feel free to draw pictures of the garments or download them online to share with the group.

Respond to at least two different contributions by your colleagues.

Deadline: Thursday, 26th, Mar, 2020 at 11:59 pm

Enjoy :-)

Course facilitator: Aziza Koran

3.11.4.2. Week Five: Fancy Dress Party From 29th, Mar to 4th April, 2020. (COVID-19 Pandemic Lockdown):

To help establish the group and lead to more in-depth knowledge sharing and learning later on, the researcher tried to tap into the traditional clothes chosen for the ‘‘Fancy Dress Party’’ to explore the similarities and differences across cultures.

Figure 3.7.

Traditional Algerian Outfits



Note. The figure ‘‘Traditional Algerian Outfits’’ is from Printest (n.d.) From <https://www.pinterest.com/pin/374995106472800774/>

Figure 3.8.

Traditional Turkish Weddings



Note. The figure “*Traditional Turkish Weddings*” is from North America Ten by Bloyd, 2019. Copyright 2019 by NorthAmerica Ten. <https://northamericaten.com/traditional-turkish-weddings-d30/>

3.11.4.2.1. Forum: Discussion on the Similarities and/or Differences.

Have you all chosen similar or different clothes/colours? Discuss the similarities and/ or differences between your peers.

Then, respond to at least two different contributions by your colleagues.

Deadline: Saturday, 4th April, 2020, at 11:59 pm

Enjoy :-)

Course facilitator: Aziza Koran

3.11.4.3. Week Six: Synchronous Meetings from 5th, Mar to 11th Apr, 2020. (COVID-19 Pandemic Lockdown).

3.16.2. 3. 1. Page Module: Links to Synchronous Meetings.

Dear all,

I hope you are in good health and safe. Please click on the link to join our group meetings.

*The first one is coming soon, on **April 9th or 11th** (your choice).*

Each week, we offer you a choice of two-time slots for synchronous meetings: a morning and an evening one. Please check [the schedule](#) for exact times.

We are looking forward to meeting you "in person"!

Stay safe.

Aziza Koran (course facilitator) :-)

Synchronous Facilitated Meeting (Topic Three): The Covid-19 Pandemic

What has been done to fight the Covid-19 pandemic in your countries and worldwide?

Compare and contrast the different safety measures taken to combat the pandemic.

What would you like to see changed and why?

3.11.5. Stage Three: Information Exchange (Time for Skill Development)

During this stage, participants are encouraged to take greater personal responsibility for their online learning and engagement. They engage in structured, content-focused activities, sharing and discussing course-relevant materials to foster knowledge exchange. The facilitator guides these discussions and ensures active participation and online collaboration.

3.11.5.1. Week Seven: From "Otherness" to "Togetherness" From 12th, Mar to 18th April, 2020. (COVID-19 Pandemic Lockdown).

Figure 3.9.

Synonyms of Otherness

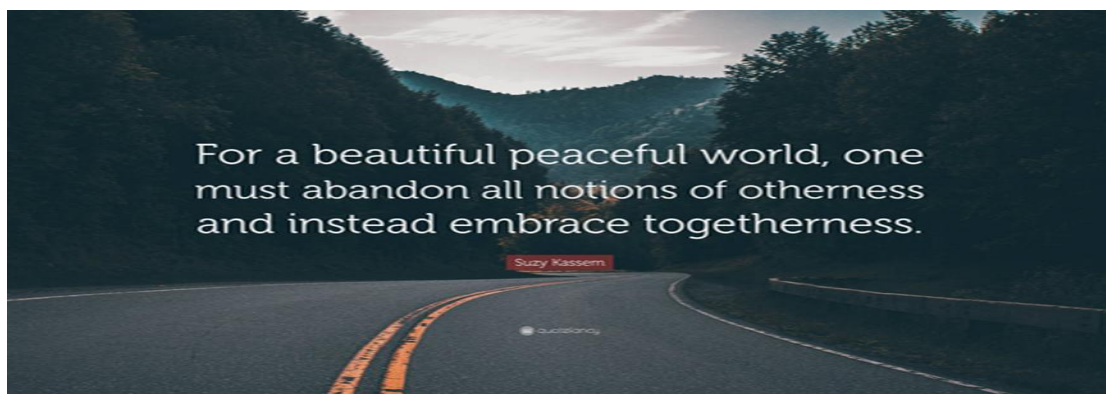
Course Description



Note. The figure “Synonyms of Otherness” is from Thesaurus.Plus, 2016. Copyright byThesaurus.Plus. <https://thesaurus.plus/synonyms/otherness>

Figure 3.10.

For a Beautiful Peaceful World



Note. The figure “For a Beautiful Peaceful World” is from QuoteFancy by Kassem, (n.d.) Copyright byQuoteFancy. <https://quotefancy.com/quote/2686890/Suzy-Kassem-For-a-beautiful-peaceful-world-one-must-abandon-all-notions-of-otherness-and>

From "Otherness" to "Togetherness"

"Othering" is the process of treating or perceiving oneself as different from others, and it can result in alienation and exclusion.

This week's course part explores the concept of othering that supports and worsens issues such as tribal and religious violence, military conflicts, the spread of diseases, hunger, food insecurity, and even climate change. You will learn strategies for coexisting in culturally diverse societies and effective communication across various cultural divisions, equipping you with the skills to bridge these gaps and foster understanding.

Please watch Tara Wison-Jones's TEDx Talks video, posted in the Forum below, and then report back to the group by commenting.

In Activity 2. Prepare yourselves; we are going to have some fun with the round-robin story

Deadline Thursday, 16th April, 2020 at 11:59 pm

3.11.5.1.1. Forum: Reflecting on "Otherness" and "Togetherness".

Dear All,

In this week of the course, you will learn and explore the skills necessary to coexist in culturally diverse societies and effectively communicate across various cultural divisions.

Please watch the Tara Wison-Jones TEDx Talks video posted in the Forum below and then report back to the group by posting a comment.

Video link: <https://youtu.be/Q8kI6bMPaCc>

Please use the Forum to post a message in which you will use the following guiding questions:

- *What is the video about?*

- *Where are Tara's parents from?*
- *Which question has she always found complicated to answer? Why?*
- *Why did Tara grow up with otherness? Why is she privileged?*
- *What is her insight into otherness?*
- *Why are Americans, more than ever, growing apart?*
- *What helped Tara's parents to unite?*
- *Then, tell us what's the importance of sharing moments with others.*

Deadline Thursday, 16th April, 2020 at 11:59 pm

Now, respond to at least two different contributions by your colleagues.

Enjoy :-)

Aziza Koran (course facilitator)

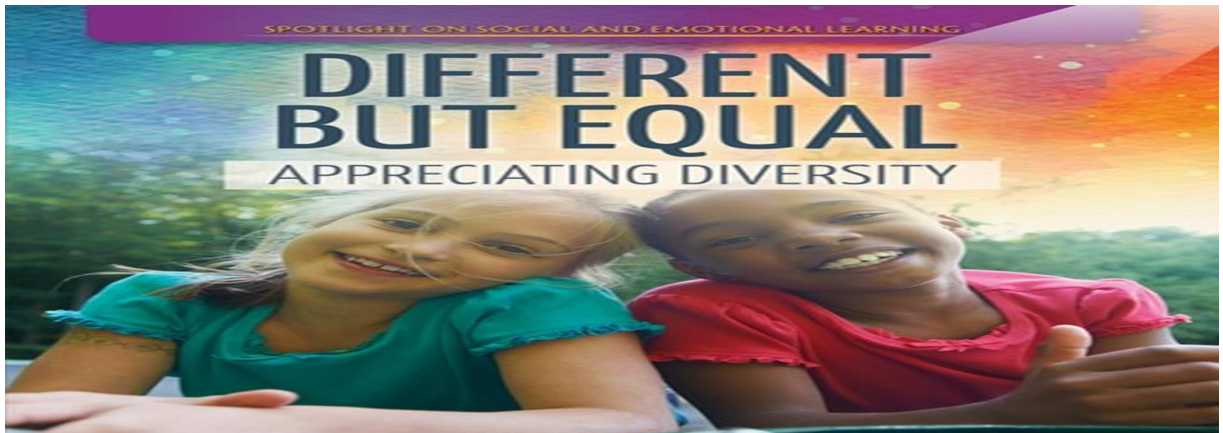
3.11.5.2. Week Eight: From " Different yet Equal" From 19th, Mar to 25th Apr, 2020. (COVID-19 Pandemic Lockdown).

Course Description

Prepare yourselves; we will have some fun with the round-robin story.

Figure 3.11.

Different but Equal: Appreciating Diversity



Note. The figure “*Different but Equal: Appreciating Diversity*” is from The Rosen Publishing Group, (n.d.). Copyright by The Rosen Publishing Group. <https://rosenpublishing.com/title/Different-but-Equal-Appreciating-Diversity>

Hello all,

This week, you will discover a novel online tool called "WIKI". This technological tool will allow you to collaborate in rounds and write a short article about "Different yet Equal". You will be offered an introductory paragraph relevant to the topic. Each participant adds a short paragraph of about five sentences maximum, considering coherence and cohesion. (The following concepts may help: diversity, distinction, stereotypes and clichés, racism, we and others, compassion, empathy, dignity, respect, justice, rights, equality, equity, and global citizen ...)

Click on "Edit", write your name and paragraph, and then post it. Feel free to comment on your colleagues' contributions and post pictures, images or video links about the theme.

Deadline: Thursday, 23rd April, 2020, at 11:59 pm

Enjoy :-)

Aziza Koran (course facilitator)

3.11.5.2.1. Wiki Module: *Different yet Equal*.

The "wiki" activity module allows participants to work together to create and edit documents, contributing to a shared document and fostering collaborative learning, knowledge sharing, and content creation. Participants can review and edit each other's work, providing constructive feedback to improve the quality of the content.

The "round-robin story" is a fun and engaging way that involves a group of participants collaboratively creating a story by taking turns adding sections or sentences.

3.11.5.2.2. Wiki: *Let us Get Creative: I start- You finish...*

Hello dear all,

This week, we will start a round-robin story and discover a novel online tool called "WIKI". This technological tool will allow you to collaborate in rounds and write a short article about "Different yet Equal", where we will discover how embracing diversity and accepting differences makes a global citizen.

I set the scene by offering a short paragraph relevant to the "Different yet Equal" course. Each participant takes turns adding a section, paragraph, or sentence to the story based on previous contributions, considering coherence and cohesion. (The following concepts may help: diversity, distinction, stereotypes and clichés, racism, we and others, compassion, empathy, dignity, respect, and global citizenship.)

Click on "Edit", write your name and paragraph, and then post it. Feel free to comment on your colleagues' contributions and post pictures, images or video links about the theme.

Deadline: Thursday, 23rd April, 2020 at 11:59 pm

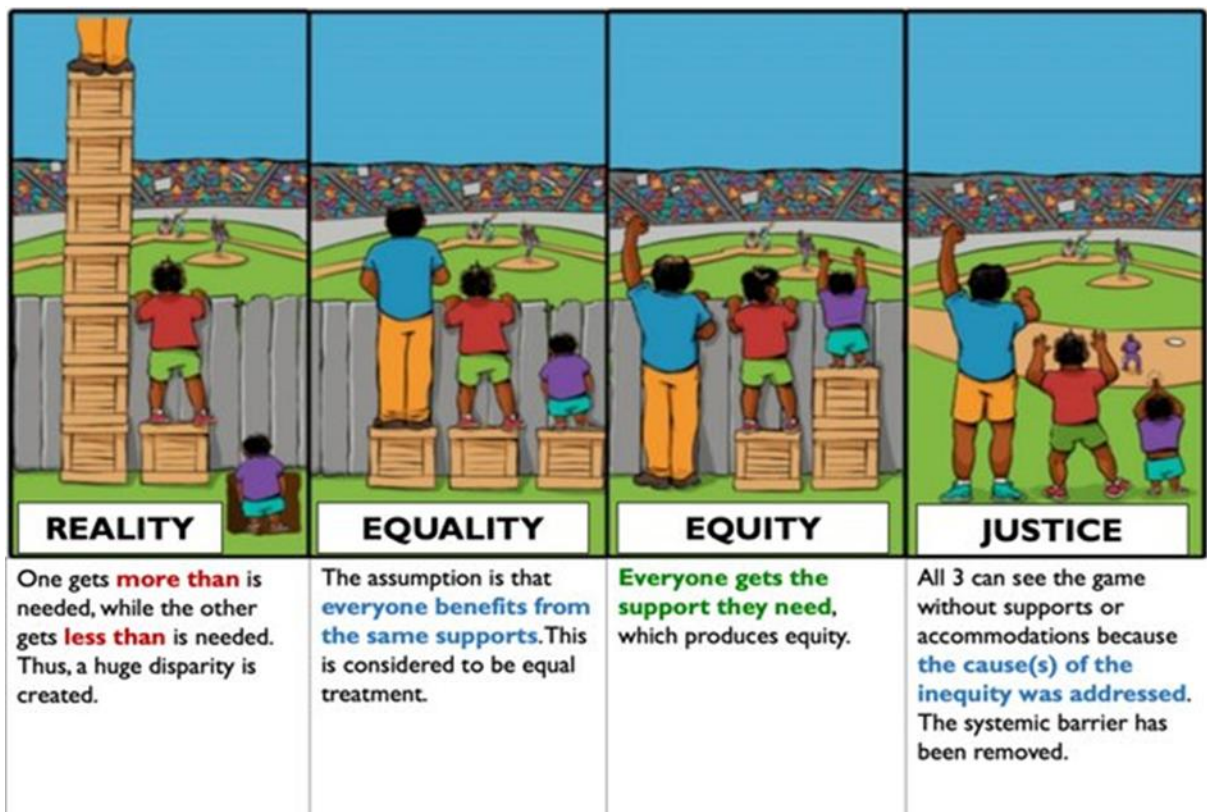
Enjoy :-)

Aziza Koran (course facilitator)

Aziza Koran: All human beings, though different in gender, race, skin colour, and religion, are all born equal in the human sense. We breathe the same way, even if we speak different languages, and we feel the same hunger, even if we sate it with different foods. However, we are all equal. Human differences exist within the same gender, culture, religion, skin colour, and identical twins with the same DNA. They use it differently, making our lives much more colourful and exciting.

Figure 3.12.

Striving for Equality, Equity, and Justice



Note. The figure “*Striving for Equality, Equity, and Justice*” is from LinkedIn by Agbotte, 2023.

Copyright by LinkedIn. <https://www.linkedin.com/pulse/striving-equality-equity-justice-reality-application-support-agbotta/>

3.11.5.3. Week Nine: Synchronous Sessions From 26th, Apr to 2nd May, 2020. (COVID-19 Pandemic Lockdown).

3.16.3.3.1. Page Module: Links to Synchronous Meetings.

Dear all,

I hope you are in good health and safe. Please click on the link to join our group meetings.

*The first one is coming soon, on **29th April or 2nd May** (your choice).*

Each week, we offer you a choice of two-time slots for synchronous meetings: a morning and an evening one. Please check [the schedule](#) for exact times.

We are looking forward to meeting you "in person"!

Stay safe.

Aziza Koran (course facilitator) :-)

Synchronous Facilitated Meeting: (Topic Four)"Challenges and Aspirations in Youth Education"

State the challenges and aspirations young people face in Algerian and Turkish educational systems.

What are the common challenges and potential solutions or ways to enhance educational opportunities for youth in your country?

3.11.6. Stage Four: Knowledge Construction (Participants are expected to collaborate effectively by this stage)

Participants were encouraged to delve deeper into the course content, critically analyse concepts, and collaborate on projects or assignments. This stage fosters higher-order thinking skills, including analysis, synthesis, and evaluation. It involves learners in discussions that promote meaningful learning and application of knowledge.

3.11.6.1. Week Ten: From 3rd to 9th May, 2020. (COVID-19 Pandemic Lockdown).

Figure 3.12.

“What is Culture?”



Note. The figure “What is Culture?” is from Team Sigma-Social Studies powered by Weebly.com.

(n.d.). Copyright by Team Sigma-Social Studies.

http://teamsigmasocialstudies.weebly.com/uploads/2/2/7/0/22708616/culture_orig.jpg

Dear all,

Culture is a broad term that captures a group of people's customs, traditions, and everyday practices. It includes various aspects of life, such as religion, cuisine, and garments, including how they are worn, language, marriage customs, music, and moral beliefs. Additionally, culture dictates social etiquette, such as table manners, ways of greeting visitors, and behaviours toward loved ones.

What is unique about your country? Literature, music, history, monuments, tourist sites, climate, cooking, eating habits, clothing,...

- *Choose and investigate two (02) cultural aspects of your culture, then post them to the Forum.*
- *Comment on at least two (02) within the same cultural aspect in the other country.*

Deadline: Thursday, 7th May 2020, at 11:59 pm

Warm wishes :-)

Course facilitator: Aziza Koran

3.11.6.1.1. Forum: Creating a Cultural Trait Group.

Dear all,

You are asked to watch the video below about "different cultures worldwide":

<https://www.youtube.com/watch?v=Ed384pPK5V4>

Choose two cultural aspects/ traits from your culture and research it. Then, report back to the group by posting your findings in the Forum.

Participants from Turkey and Algeria are asked to work on the same cultural aspects: e.g, (food & traditions), (Government & institutions), (language & housing), (economy & technology)

What is unique about your country? Literature, music, history, monuments, tourist sites, climate, cooking, eating habits, clothing,...

- *Comment on at least two within the same cultural aspect in the other country.*

Deadline of Thursday, 7th May, 2020 at 11:59 pm

Warm wishes

Aziza (course facilitator)

3.11.6.2. Week Eleven: Synchronous Sessions from 10th to 16th May, 2020. (COVID-19 Pandemic Lockdown).

3.11.6.2.1. Page Module: Links to Synchronous Meetings.

Dear all,

I hope you are in good health and safe. Please click on the link to join our group meetings.

*The first one is coming soon, on **14th or 16th** May (your choice).*

Each week, we offer you a choice of two-time slots for synchronous meetings: a morning and an evening one. Please check [the schedule](#) for exact times.

We are looking forward to meeting you "in person"!

Stay safe.

Aziza Koran (course facilitator) :-)

3.11.6.2.2. Synchronous Facilitated Meeting: (Topic Five) Creating a Welcoming, Culturally Inclusive Learning Environment.

Imagine the scenario that involves the arrival of multinational students to your class.

Determine:

Which functional positions would you adopt to address this situation to create a more inclusive, culturally aware, and harmonious learning environment that supports the needs of multinational students and enhances their educational experience?

3.11.7. Stage Five: Development

At this stage, participants develop reflection skills, focusing more on accountability and responsibility than "content." The final phase centers on personal and professional growth, encouraging learners to reflect on their learning journey, consolidate understanding, and consider applying their new skills and knowledge practically. Participants were also asked to create various options for their tourist videos, using summaries and archives from the previous knowledge construction phase as valuable resources.

3.11.7.1. Week Twelve: "Collaborative Tourist Poster/Video Creation" From 17th to 23rd May, 2020. (COVID-19 Pandemic Lockdown).

Assignment Description

Figure 3.14.

ALGERIA



Note. The figure “ALGERIA ”is from Facebook by Algeria Tourisme, 2018. Copyright byAlgeria Tourisme. <https://www.facebook.com/AlgeriaTourisme/posts/d41d8cd9/1629193930450773/>

Figure 3.15.

Istanbul-Turkey Travel Tourist Site



Note. The figure “Istanbul-Turkey Travel Tourist Site ”is from Poster Foundry.com by Proframes (n.d.). Copyright byPoster Foundry401B Parker Drive, Austin, TX78728<https://posterfoundry.com/istanbul-turkey-travel-tourist-site-art-print-framed-poster-by-proframes-14x20-inch/>

Dear all,

This week, you are tasked with creating a captivating tourist resource for your countries (Algeria and Turkey). You aim to effectively summarise, combine, and organise your previously collected data to create a visually appealing end product resembling a tourist poster or a video to build interest to visit one another country and promote tourism between the two countries.

A tourist video is the perfect way to promote a destination. It is much more effective than photographs at conveying emotions such as happiness, wanderlust, and curiosity. It captivates viewers through compelling storytelling, immersive visuals, and engaging soundtracks, maintaining their interest and often making them eager for more.

You are asked to feature everything unique about your country. These things make travelling to the partner country exciting: the cuisine, eating habits, clothing, people, culture, traditions, the location, climate, literature, music, history, monuments, tourist sites, ...

I am eager to see how you will showcase your creativity and teamwork skills in crafting a compelling tourist resource.

Deadline of Friday, 29th May, 2020, at 11:59 pm

Warm wishes :-)

Course facilitator: Aziza Koran

3.11.7.1.1. Forum: Tourist Poster/Video Creation.

Dear all,

This week, you are asked to review the previously collected data and individually summarise the key attractions, historical significance, cultural aspects, and other relevant information. Then, as a team, discuss and share your summaries. Identify common themes, unique points, and areas where information can be complemented.

Collaboratively weave together the summarised data to create a cohesive narrative. Ensure a logical flow, avoiding redundancies and inconsistencies. Discuss the layout, design elements, and imagery that would best represent Algeria and Turkey if creating a poster.

If making a video, decide on the scenes, transitions, and visuals that will enhance the story. If creating a poster, assign team members to work on different sections (e.g., landmarks, activities, local cuisine).

Combine text and images creatively for an eye-catching and informative design. In making a video, outline the script that aligns with the data summaries. Create a storyboard to visualise the sequence of scenes and transitions. Integrate the summarised data and relevant visuals into your chosen format (poster or video). Ensure the information is concise, engaging, and representative of the destinations' (Algeria & Turkey) appeal.

Do not overlook the music! A significant portion of your video's allure will be auditory. Consider using a local genre for your video; this can add authenticity. Consider the story you are attempting to convey, and do your best to modify the music to suit it. Review the tourist poster or video draft as a team and make necessary revisions to refine the content.

Below are some examples of how your final project should appear.

Egyptian Culture : <https://youtu.be/FT3T-iEY2gI>

Chinese Culture : <https://youtu.be/2zBnPzHpugs>

Deadline of Friday, 29th May, 2020, at 11:59 pm

Warm wishes :-)

Course facilitator: Aziza Koran

3.11.7.2. Week Thirteen: "Collaborative Tourist Poster/Video Creation" From 24th to 30th May, 2020. (COVID-19 Pandemic Lockdown).

3.11.7.2.1. Page Module: Links to Synchronous Meetings.

Dear all,

Hoping you are in good health and safe. Please click just on the link to join our synchronous online meeting coming soon, on 29th May 5 mp (GMT) (i.e. +1 Algeria, +3 Turkey).

We are looking forward to meeting you "in person"!

Stay safe.

Aziza Koran (course facilitator) :-)

Synchronous Facilitated Meeting (Topic Six): Reflection on VE Experience.

As our Virtual Exchange winds down, I invite you to reflect on our journey together. Please share your thoughts on the VE content, the video you've produced, and the collaborative work you've done.

What have been the most valuable lessons or insights you've gained?

How has working with peers from different backgrounds impacted your learning experience? Please share your reflections and observations.

3.11.7.3. Week Fourteen: Holidays, holidays! " Collaborative Tourist Poster/Video Creation" From 31st May to 6th June, 2020. (COVID-19 Pandemic Lockdown).

Figure 3.16.

Sebiba, Festival Touareg dans l'Oasis de Djanet en Algérie



Note. The figure “*Sebiba, Festival Touareg dans l’Oasis de Djanet en Algérie*” is 4acg.org by AFP 2023. Copyright2023 by 4acg.org

<https://www.4acg.org/Algerie-danses-et-chants-ancestraux-pour-le-festival-touareg-de-Sebeiba>

Figure 3.17.

Turkey... the Launch of the Traditional Games Festival



Note. The figure “*Turkey...the Launch of the Traditional Games Festival*” is from Move2turkey (n.d.). Copyright by Move2turkey.com <https://move2turkey.com/turkey-the-launch-of-the-traditional-games-festival/>

3.11.7.3.1. Assignment Description.

Dear Participants,

Canva is a highly effective tool that offers a wide range of user-friendly features and functionalities. It enables individuals to generate diverse and captivating material, which can be easily shared.

As such, you are asked to collaborate all together in order to design a video about your cultural and historical heritage.

Watch this video tutorial to help you create your video using Canva easily:

<https://youtu.be/JFRZA2Hr85g>

Then, click on the link below to create your video.
https://www.canva.com/fr_fr/login/?redirect=%2Fdesign%2FDAD7wZ3Eo3g%2Fshare%2Fpreview%3Ftoken%3DrduCMQIEDinFa4EtDLGk-w%26role%3DEDITOR%26utm_content%3DDAD7wZ3Eo3g%26utm_campaign%3Ddesignshare%26utm_medium%3Dlink%26utm_source%3Dsharebutton

Deadline : Saturday, 6th June, 2020 at 11:59 pm.

Warm wishes,

Aziza Koran (course facilitator)

3.11.7.4. Week Fourteen: Celebrations! " Collaborative Tourist Poster/Video Creation" From 7th to 13th June, 2020. (COVID-19 Pandemic Lockdown).

Figure 3.18.

Leadership, Celebrate Success and Create Community



Note. The figure “Leadership, Celebrate Success and Create Community” is from Break the Frame.com by Potin, 2013. Copyright bybreaktheframe.com
<https://breaktheframe.com/leadership-celebrate-success-and-create-community/>

Dear all,

Congratulations on successfully completing the IDCB Training! If you have completed all of the requirements outlined in the Week 5 section, you will receive an email within two weeks. Below, you find instructions for collecting and displaying your digital badge.

To allow you and your colleagues say goodbye to each other, a Padlet wall has been created for that purpose. Write a farewell message to your colleagues showing respect and appreciation for their support and encouragement over the last three months. Indeed, it is hard to bid farewell, but I hope we can remain in touch.

Warm wishes to you all :-)

Aziza Koran (course facilitator)

3.11.7.4.1. Page Module: Collecting and Displaying Your Badge File.

Dear all,

You will receive a UNICollaborate badge for participating in Erasmus+ Virtual Exchange. This badge is evidence of your active participation in the program.

Display your badge in any open badge system. Set up a profile on Open Badge Passport to share and find additional badges. Just remember to include your badge-claiming email address in your profile.

Warm wishes :-)

Aziza Koran (course facilitator)

3.11.7.4.2. URL Module: Good Bye & Good Luck!

Dear all,

Our goodbyes

Please use this wall to post your final goodbye messages :-)

https://padlet.com/a_koran/uhtpbt9ogzc0r9rd

The researchers's farewell message:

Dear all,

As our virtual exchange programme ends, thank you for your active participation, thought-provoking talks, and commitment to learning, even during the COVID-19 pandemic.

Being on this journey with all of you has been a pleasure. Your different ideas and efforts have made our virtual school more exciting and a place where people can learn and grow.

I am amazed by how much you want to learn about other cultures and how open you are to new things.

As we say goodbye for now, I want to encourage you to use the skills you learned and the relationships you made during our time together.

Remember, this is not the end but a continuation of your personal and academic growth.

Stay curious, stay open-minded, and keep fostering global connections.

Thank you for making this virtual exchange program an unforgettable experience.

Wishing you all the best in your future endeavours.

Warm wishes :-)

Aziza Koran (course facilitator)

3.11.7.4.3. Page Module: Links to Synchronous Meetings.

Dear all,

Hoping you are in good health and safe. Please click on the link to join our synchronous online meeting coming soon, on 29th May 5 mp (GMT) (i.e. +1 Algeria, +3 Turkey).

We are looking forward to meeting you "in person"!

Stay safe.

Aziza Koran (course facilitator) :-)

Synchronous Facilitated Meeting (Topic Seven): Goodbyes

"As we bid farewell to this virtual experience, what memorable moments from our time together in this VE have left a lasting impression on you, and how do you plan to apply the lessons learned in your future endeavours or interactions? Suggest ways to stay in touch from now on."

3.12. Limitations

Chapter Three identified several limitations that could impact the study's results, such as the small and non-diverse sample size, which may make it difficult to replicate the findings in a broader population. Moreover, combining qualitative and quantitative data took time, which could lead to misinterpretations. Further, technical issues with weak Internet and online learning

platforms disrupted participants' engagement and data collection, which could affect the validity and reliability of the study's outcomes.

Furthermore, external factors, such as the COVID-19 pandemic, also affected participant engagement and the IDCB VE progress.

Despite these challenges, the study provided valuable insights into the role of VE in enhancing participants' IC skills, underscoring the need for careful consideration of these limitations in future research.

Future studies should address these issues to enhance the research findings' validity, reliability, and applicability to contribute effectively to educational technology and IC efforts.

Summary

To sum up, this chapter offered a detailed overview of the methodology and research tools used in our IDCB VE project. It used an explanatory sequential mixed-method approach, which combined quantitative and qualitative methods that gave us the flexibility and depth necessary to explore the multifaceted nature of VE and its impact on participants' IC skills. Indeed, this approach allowed us to quantify the outcomes and delve into the underlying reasons and experiences contributing to them.

This chapter outlined the various stages of our research design, from the initial conceptualisation of the project to the selection of participants and data collection methods. We discussed the importance of employing pre- and post-exchange surveys, in-depth participant e-portfolio reflections, online facilitated dialogues, and the rationale behind the sequence in which these methods were implemented. Additionally, we explored the various tools and software used

to facilitate the virtual exchange and data collection processes, highlighting their relevance and reliability in ensuring the success of our research.

As our virtual exchange project progresses, this chapter is a foundational guide for the research methodologies and tools that have shaped our investigations.

In the upcoming chapters, we will delve deeper into the findings and insights generated from our research, shedding light on the outcomes, challenges, and opportunities that emerged from the project. Through a combination of quantitative data analysis and qualitative narratives, we aim to provide a comprehensive understanding of the factors influencing the success of VE programs. We invite the reader to join us on this journey as we uncover the richness of experiences and the potential for transformative learning in the digital age.

Chapter Four: Data Analysis and Findings

In this pivotal chapter, we unveil the results of our comprehensive investigation, employing an explanatory sequential mixed method approach. As we embark on this journey through our findings, we delve into the rich data collected from quantitative and qualitative sources. Our study sought to uncover the 'what', 'why' and 'how' behind the intricate dynamics of the phenomenon under examination. Through this dual-method approach, we aimed to bring depth and nuance to our analysis, providing a holistic understanding of the subject matter. These results address the core research questions that have guided our inquiry and explore the interplay between numbers and narratives, shedding light on the intricate patterns, themes, and insights that emerged from our research to gain a deeper appreciation that could contribute to the ever-evolving discourse in VE academic domain.

The research aims to assess how virtual communities in VE projects impact intercultural communication among EFL students, improve their skills, explore the benefits and challenges of VE in university internationalisation, and propose solutions to institutional barriers. The research questions examine the effects of VE on student communication skills, the progress made, challenges in VE integration, and recommendations to enhance learning. Hypotheses suggest VE improves intercultural skills but faces challenges like resources and technology, which can be addressed through policy and faculty development.

4.1. Data Analysis

In this research project, the researcher tested IDCB VE's overall impact on participants' IC skills results, as well as the challenges and potentials of VE implementation in university internationalisation practices for the researcher and participants and how to overcome them.

This was important because the TEP model of VE was the first time initiative implemented at the local and national level. While VE models share common goals and foundational values, they vary significantly regarding pedagogical design, administrative structures, and scale. Focusing the study on the broader impact provides valuable insights for those interested in the advantages and challenges of the TEP VE approach.

The impact of the IDCB VE was assessed regarding changes in participants' self-esteem, intercultural communication skills, curiosity, and attitudes towards individuals from diverse ethnic and religious backgrounds. This assessment was conducted using pre- and post-exchange surveys. Additionally, the initiative's effectiveness was evaluated based on participants' self-reported growth in 21st-century skills, ability to operate effectively in culturally diverse environments, and global competences. The initiative also examined participants' increased interest in pursuing further intercultural experiences through additional VE programs or study-abroad opportunities.

4.1.1. Quantitative Data Analysis

The mean differences between pre-and post-exchange survey responses for all attitude-related items were calculated and analysed using SPSS to examine participant attitude changes. This analysis assessed frequencies and statistical significance, providing insights into research questions 1–3. Participants used a unique user ID provided via email to maintain anonymity and link pre- and post-survey responses.

The post-exchange survey items assessed perceived enhancements in various competence areas. A factor analysis was conducted to simplify the data and identify variable clusters. The results of this analysis were particularly significant as they revealed three distinct groupings that

align remarkably well with the competence areas highlighted in the literature review: 21st-century skills, global skills, and activation, an integral component of global competence or global citizenship.

The factor analysis delineated groups that matched well with competence clusters identified in previous research:

- **21st Century Skills:** This group includes five elements: active listening, critical thinking, English and/or foreign language proficiency, teamwork and collaborative problem-solving, and digital competences, all relevant to modern workplace demands, as detailed in the literature review.
- **Global Skills:** This category encompasses three items: awareness and interest in global events, understanding of inter-societal relationships, and proficiency in functioning within diverse environments.
- **Activation (Global Citizenship):** This factor comprises five items and covers aspects of personal and communal activation, such as fostering significant relationships, engaging with new opportunities for Virtual Exchange or travel/study abroad, sharing experiences with community members, and challenging media misrepresentations.

The data analysis across these factors addressed research questions 4–6. Content analysis was conducted to answer research question 7 for participant satisfaction items not included in the factor analysis.

Before collecting any data, participants were provided with information on the aim of the data collection procedure. They were required to complete consent forms on the specific data being obtained

4.1.2. Qualitative Analysis and Data Triangulation

E-portfolio reflections and online facilitated dialogues were conducted to reveal aspects that the pre-and post-exchange surveys did not address, enhancing the interpretation of quantitative data. This additional qualitative data provided a deeper insight into participants' experiences with the Virtual Exchange, identifying evidence of intercultural communication and 21st-century skills development and assessing participant engagement.

The qualitative data, defined here as verbal data, sourced from pre- and post-exchange surveys, synchronous online focus groups, and e-portfolios, were analysed using Qualitative Content Analysis (QCA). This established method interprets textual data by identifying themes and categorising them into codes based on a literature review, previous studies, and successive phases of analysis from the EVOLVE Project Team (2020) and O'Dowd (2021). Initial coding involved identifying categories relevant to the research question.

In this context, a category, or "code," is a conceptual construct that captures and assigns interpreted meaning to each participant's response, facilitating pattern detection, categorisation, theory development, and other analytical processes (Saldaña, 2013, p. 4). The code guiding list from the pilot study's qualitative analysis was applied and further developed as new themes emerged from participants' open-ended responses, e-portfolio reflections, and online facilitated dialogues. The code list descriptors were influenced by the "Competences for Democratic Culture" (CDC) framework as illustrated in the table below.

Table 4.1.*Competences for Democratic Culture (CDC) Descriptors*

Guiding questions & related areas	Structural codes
- Who were your Virtual Exchange partners? What do you know about their background? How would you describe them?	knowledge of the partner's culture
- Has the VE helped you to develop online tools– email, skype, twitter? Which ones worked best for your exchange with your partner? Why?	Digital competence
- Can you add any examples of your online interactions or creations which show how you are developing these attitudes during your exchange?	Intercultural beliefs, feelings and Attitudes
- Has the VE stimulated students' curiosity and respect for their partners' beliefs, worldviews, and practices?	Openness to cultural otherness
- Did the VE effectively assist students in enhancing their EFL linguistic and communicative abilities, enabling them to communicate proficiently and mediate between speakers of diverse languages?	EFL competence
- Did the VE contribute to developing students' teamwork, collaboration and communication skills so they could work well with others?	Soft skills
- Did you develop your ability to collaborate successfully with others on joint tasks and activities and also to manage and resolve conflicts peacefully ?	21st century skills
- Did you develop your interest in global events while being aware of cultural diversity?	Global skills
- Did you build meaningful relationships with your partners and interest in further opportunities for Virtual Exchange or study abroad?	Activation Global citizenship

Note. The table “*Competences for Democratic Culture (CDC) Descriptors*” is from The Reference Framework of Competences for Democratic Culture by the Council of Europe, 2016, (p.p. 12-14). Copyright by Council of Europe.

By triangulating these qualitative findings with quantitative data, we were able to provide comprehensive explanations and responses to our research questions.

This approach shed light on how participants perceived changes in their attitudes, highlighted specific challenges they encountered, and elucidated the contributions of different

components of the Virtual Exchange (VE) e-tivities to their learning. In our presentation of the study's findings, we integrated quantitative and qualitative data to offer explanations and real-life examples of VE's impact.

Additionally, the qualitative data was also triangulated, drawing on multiple perspectives from observed phenomena involving different tools. This multifaceted approach enhanced our understanding of VE by providing a comprehensive and nuanced view. Notably, addressing the TEP model's strengths, weaknesses, and diverse participants' experiences was crucial. Furthermore, this approach sheds light on the specific needs and challenges the researcher faced in her respective context while engaging with VE.

Throughout the project, the researcher engaged in ongoing discussions and presentations of her research findings and analyses of each e-tivity. This process allowed us to test our hypotheses and interpretations while actively seeking alternative explanations, ensuring the robustness and credibility of our research outcomes.

4.2. Data Analysis and Results Findings

The subsequent sections present and analyse the findings collected through various research instruments, encompassing quantitative and qualitative data sources. The quantitative data emanates from pre- and post-exchange online surveys, while the qualitative data derives from participant observations, online focus groups, and e-portfolios. Each data collection method serves a distinct purpose in drawing generalised conclusions from the entire study population.

The researcher used mixed methods for this comparative investigation. Pre- and post-exchange surveys collected quantitative data on participant effect. E-portfolio reflections and

online focus groups (Online facilitated dialogues) were used to study participant change processes, variables influencing change, and perceived improvement, if any.

For quantitative data, SPSS was used to compare closed questions (mainly Likert-scale items) from 7 pre- and 16 post-surveys in a single file.

For qualitative analysis, 19 E-portfolios and seven online focus groups (online facilitated dialogues) were coupled with survey open-ended questions. This additional qualitative data revealed survey gaps and helped understand quantitative data, comprehend how participants experienced VE, identify indications of attitudes towards difference and critical thinking, and investigate how Virtual Exchange activated participants and helped develop their IC skills.

The data was linked to student ID codes to establish unique cases with complete participant data. The researcher used this file to choose coding categories, code them, and analyse the data.

4.2.1. Quantitative Analysis

For statistical analysis, the participant's answers to the closed questions (mainly Likert-scale items) gathered from pre- and post-survey data were extracted from Google Forms and merged into one data file for post-comparison. Only participants who completed the pre- and post-exchange surveys, e-portfolios and participated in the online facilitated dialogues were included for analysis. The students' answers were associated with the correct ID-code and the participants' consent for using the data.

The analysis included assessing the questionnaire's reliability and validity and descriptive statistics using metrics like the mean and frequencies. The researcher used normality tests to determine the appropriate statistical methods for analysing the collected data through paired t-tests

or the Wilcoxon Signed Ranks Test to facilitate comparison between the pre-survey and post-survey responses of those involved in the project.

Our analysis of participants' competence development compared their self-reported intercultural communicative competences (ICC) using a 5-point Likert scale. This comparison was made before and after their virtual exchange, using both pre- and post-exchange surveys.

4.2.1.1. Validity.

A questionnaire's validity refers to how accurately it measures what it is designed to measure. According to Dörnyei (2003), construct validity, a vital aspect of a questionnaire's validity, assesses the degree to which the items in the questionnaire are interrelated.

Griffiths et al. (2016) analysed the internal structure of several tools for assessing Intercultural Communicative Competence (ICC). They found that the "Assessment of Intercultural Competence" (AIC) developed by Fantini and Tirmizi (2006) displayed a multidimensional structure, which means the questionnaire items effectively mapped onto the three components of attitudes, skills, and awareness, showing they align well with a single factor.

In this research study, the pre-and post-exchange survey questions were adopted from reputable sources, such as the EU and EACEA (2020), renowned for their rigorous methodologies and standardised formats. This approach guarantees the surveys' reliability and accuracy and boosts the research's overall credibility. Ensuring the pertinence of these standardised questions to the specific study context is critical, emphasising the need to reference these sources in the research documentation to reinforce validity.

The adopted pre and post-surveys were analysed using SPSS, with 44 completed pre and 19 post-survey responses.

4.2.1.2. Reliability.

Reliability in research signifies the extent to which the outcomes derived from a measurement process are stable and can be consistently replicated over time (Zano, 2015). A questionnaire's internal consistency, often assessed by Cronbach's Alpha Coefficient, is a crucial indicator of its reliability. Cronbach's Alpha values range from 0 to 1, with values closer to 1 indicating higher reliability (Crunk, 2017). For a questionnaire to be considered reliable, its Alpha should ideally not fall below 0.60. This study achieved a value of 0.801, indicating a high level of reliability.

Table 4.2.

Reliability Statistics

Cronbach's Alpha	N of Items
0.801	9

Note. Cronbach's Alpha = statistics of reliability; N = number.

The researcher used normality tests to determine the appropriate statistical methods for analysing the collected data. Analysis showed that the data was not normally distributed, so paired t-tests could not be employed; instead, non-parametric methods were used (Buchtova, 2020).

Non-parametric tests are statistical methods used when the assumptions for parametric tests, such as normal distribution, cannot be met. They are also well-suited for handling small

sample sizes and data that are not normally distributed, including those with outliers or skewed distributions (McCrinkle, 2013).

The Wilcoxon Signed-Rank Test, a robust alternative to the paired t-test, is a non-parametric test specifically designed for comparing two related samples, matched samples, or repeated measurements on a single subject group. In the case of the IDCB VE project, it was used to determine whether there was a significant difference in participants' survey responses before and after the intervention.

The process involves ranking each pair of observations based on their absolute differences. These ranks are then assigned signs depending on whether the observation from the second sample is larger or smaller than the first. The sum of the positive ranks and the sum of the negative ranks are calculated. The test statistic is derived from the smaller of these two sums, which is then used to calculate the p-value and assess the significance of the difference between the pairs (McCrinkle, 2013).

The test is typically employed when comparing before-and-after measurements in the same subjects, such as in pre-test and post-test studies. It is also suitable when dealing with ordinal or interval/ratio data that are not normally distributed, mainly when the sample sizes are small, and the central limit theorem cannot be relied upon to assume a normal distribution of sample means.

4.3. Descriptive Statistics of the Pre-Exchange Survey

These statistics provide a concise summary of the numerical data, facilitating efficiency in research by conserving time and effort. In this study, descriptive statistics encompass the

calculation of frequencies, mean, range, and standard deviation, offering a comprehensive overview of the data.

Table 4.3.

Frequencies, Mean, Range, and Standard Deviation Statistics for Descriptive Study Variables

The descriptive analysis of the pre-exchange survey data, based on responses from 44 participants

	N		Mean	Std. Deviation
	Valid	Missing		
Write the name of your institution	44	0	1.3	0.509
What is your gender?	44	0	0.27	0.451
What is your nationality?	44	0	1.25	0.438
In which country are you currently living?	44	0	1.25	0.438
How old are you?	44	0	23.8	4.021
Indicate how strongly you agree or disagree with the following statements. [I have high self-esteem]	44	0	6	3.55
Indicate how strongly you agree or disagree with the following statements	44	0	4.32	0.926
Indicate how strongly you agree or disagree with the following statements	44	0	3.91	1.006
Indicate how strongly you agree or disagree with the following statements	44	0	3.34	1.178
Indicate how strongly you agree or disagree with the following statements	44	0	3.18	1.077
Indicate how strongly you agree or disagree with the following statements	44	0	3.41	0.971
Indicate how strongly you agree or disagree with the following statements. [I feel confident communicating in English.]	44	0	3.41	1.019
Indicate how “Cold-” or “Warm+” you feel towards [People who have a different ethnic background from your own (from 0 to 10)]	44	0	3.59	1.106
Indicate how “Cold-” or “Warm+” you feel towards [people who have a different religious background from your own (from 0 to 10)]	44	0	3.7	1.133
Indicate how “Cold-” or “Warm+” you feel towards [people who have a different religious background from your own (from 0 to 10)]	44	0	3.14	1.305
Have you ever spent an extended period of time (3+ months) abroad or participated in a physical exchange programme?	44	0	0.07	0.255

with no missing data, presents an insightful overview. The average age of respondents is around 23.86

Note. N = number; St = standard.

years, showcasing some variability with a standard deviation of 4.021. Self-esteem levels among the participants averaged 3.55 on a Likert scale, with a standard deviation of 0.926, indicating a generally positive self-view. The survey covered various attitudes and perceptions, yielding mean scores between

3.18 and 4.32, reflecting a spectrum of opinions and experiences. The participants' confidence in English communication is moderately high, with an average score of 3.59 and a standard deviation of 1.106.

Regarding social attitudes, participants have shown a positive inclination towards people of different ethnic backgrounds, with an average score of 3.7 out of 10. This is compared to a slightly lower average of 3.14 for those of different religious backgrounds, which showed more variability. Interestingly, a small fraction (mean of 0.07) of the respondents reported significant experience abroad or participation in an exchange program, as reflected by the low standard deviation of 0.255. This suggests a potential for growth and learning in their exposure to international environments.

The collected data suggests a young cohort with varied personal and social perspectives exhibiting a general openness to diversity, albeit with less exposure to international environments.

4.3.1. Frequencies Analysis

This analysis method was used for the initial four (4) items in the questionnaire, which include the participants' institutions names, gender, their nationalities, and countries of residence.

4.3.1.1. Participants' Institutions Names.

Table 4.4.

Participants' Institutions Names

<i>Institutions Names</i>		Frequency	Per cent	Valid Percent	Cumulative Percent
valid	Abdelhamid Ibn Badis University, Mostaganem	32	72.7	72.7	72.7
	Istanbul University	11	25.0	25.0	97.7
	Mostaganem University	1	2.3	2.3	100.0
	Total	44	100.0	100.0	

The survey dataset indicates that 33 respondents, or 75.0%, are affiliated with Abdelhamid Ibn Badis University Mostaganem. Istanbul University follows with 11 respondents, accounting for 25% of the total.

The survey comprised 44 participants, with the cumulative percentages totaling 100%. This distribution underscores the dominant representation of Abdelhamid Ibn Badis University Mostaganem in the survey, alongside a notable contribution from Istanbul University.

4.3.1.2. Gender.

Table 4.5.

Gender

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Female	32	72.7	72.7	72.7
	Male	12	27.3	27.3	100.0
	Total	44	100.0	100.0	

The data regarding the gender distribution of the survey respondents shows that out of 44 participants, 32, or 72.7%, are female. In contrast, 12, or 27.3%, are male, indicating a predominant representation of females in the survey population, comprising nearly three-quarters of the total respondents.

The cumulative percentage tallies to 100%, affirming that all participants were accounted for in the gender categorisation. This significant majority of female respondents suggests a gender disparity among the survey participants, with females being the more represented group.

4.3.1.3. Participants' Nationalities.

Table 4.6.

Nationalities

Nationalities		Frequency	Per cent	Valid Percent	Cumulative Percent
valid	Algerian	33	75.0	75.0	75.0
	Turkish	11	25.0	25.0	100.0
	Total	44	100.0	100.0	

The survey data concerning the nationality of the participants reveals that out of 44 respondents, 33 individuals, accounting for 75%, identified as Algerian, while 11 respondents, or 25%, reported being Turkish. This distribution highlights a clear majority of Algerian nationals within the surveyed group, comprising three-quarters of the total participants. The data also shows a complete representation of the surveyed population, with the cumulative percentage reaching 100%. The presence of a significant Algerian majority alongside a smaller Turkish group characterises the nationality composition of the survey respondents.

4.3.1.4. Participants' Countries of Residence.

Table 4.7.

Countries of Residence

Country of residence		Frequency	Per cent	Valid Percent	Cumulative Percent
valid	Algerian	33	75.0	75.0	75.0
	Turkish	11	25.0	25.0	100.0
	Total	44	100.0	100.0	

The data regarding the current living country of survey participants shows that out of 44 respondents, 33 (or 75%) live in Algeria, and the remaining 11 (or 25%) reside in Turkey, which indicates that most respondents are based in Algeria, making up three-quarters of the total surveyed group. The cumulative percentage of 100% confirms that all participants were accounted for in this demographic category. The distribution reflects a significant Algerian majority within the survey population, alongside a smaller proportion of individuals living in Turkey.

4.4. Comparative Statistics between the Pre-and Post-Exchange Survey

Assessing program effectiveness or intervention impact often relies on comparing data collected at multiple time points. Understanding the changes in participants' perceptions and behaviours is crucial to evaluating the effectiveness of the IDCB VE new initiative. This analysis is often conducted through pre- and post-surveys, which provide valuable insights into the impact of the studied intervention. This report compares pre- and post-survey findings to assess the specific outcomes and measure the extent of change throughout the intervention.

The pre-survey is a baseline measurement, capturing participants' attitudes, beliefs, and competences before the intervention. Following the intervention, a post-survey re-evaluates the same parameters, allowing for a direct comparison that highlights any shifts in participants' responses. By examining these changes, we can not only determine the effectiveness of the intervention but also identify areas where it succeeded and aspects that may require further enhancement.

This study uses comparative statistics, including the calculation of means, ranking of data, and various statistical tests, to provide a detailed overview of the data. These methods help us

identify average outcomes, understand data distributions, and evaluate the significance of observed changes. This comprehensive approach enhances the credibility of our findings and supports robust conclusions about the program's effectiveness.

4.4.1. The Mean

The mean, also called the average, is a fundamental statistical measure central to our study. It represents a data set's typical or central value, offering a concise data summary. All values in the dataset are summed and then divided by the number of values to calculate the mean. This measure of central tendency is one of the most frequently used in statistical analysis (IGNOU, 2023).

Table 4.8.

The Mean

			Mean	Std. Deviation	Minimum	Maximum	Percentiles		
							5th	50th (Median)	95th
PRE	I have high self-esteem	9	3.79	.713		5	3.00	4.00	4.00
	looking for new opportunities to grow as a person	9	4.21	1.084		5	4.00	5.00	5.00
	Everywhere I go, I am out looking for new things or experiences	9	3.84	1.214		5	3.00	4.00	5.00
	I find it is easy to talk with people from different cultures	9	3.32	1.057		5	3.00	3.00	4.00
	I am able to express my ideas clearly when interacting with people from different cultures	9	3.11	.937		5	3.00	3.00	4.00

	strong relationships between youth in Europe and Southern Mediterranean countries are possible	9	3.42	1.121		5	3.00	3.00	4.00
	I feel confident communicating in English	9	3.53	.964		5	3.00	4.00	4.00
	People who have a different ethnic background from your own	9	3.74	1.147		5	4.00	4.00	4.00
	People who have a different religious background from your own	9	3.53	1.124		5	2.00	4.00	4.00
POST	I have high self-esteem	9	4.53	.513		5	4.00	5.00	5.00
	looking for new opportunities to grow as a person	9	4.89	.315		5	5.00	5.00	5.00
	Everywhere I go, I am out looking for new things or experiences	9	4.63	.955		5	5.00	5.00	5.00
	I find it is easy to talk with people from different cultures	9	4.74	.562		5	5.00	5.00	5.00
	I am able to express my ideas clearly when interacting with people from different cultures	9	4.63	.597		5	4.00	5.00	5.00
	strong relationships between youth in Europe and Southern Mediterranean countries are possible	9	4.58	.507		5	4.00	5.00	5.00
	I feel confident communicating in English	9	4.68	.946		5	5.00	5.00	5.00
	People who have a different ethnic background from your own	9	4.53	.513		5	4.00	5.00	5.00
	People who have a different religious background from your own	9	4.42	.507		5	4.00	4.00	5.00

Note. St = standard.

The comparison of pre-and post-exchange survey findings reveals remarkable improvements across various measures. Self-esteem scores, for instance, saw a substantial increase

from an average of 3.79 to 4.53, indicating a significant boost in participants' self-perception. The mean score for seeking new opportunities for personal growth rose significantly from 4.21 to 4.89, while enthusiasm for seeking new experiences improved notably from 3.84 to 4.63. There was also a substantial increase in participants' comfort and ability to interact with people from different cultural backgrounds, with the mean score rising remarkably from 3.32 to 4.74. Participants reported feeling more competent in expressing their ideas across cultural lines, with the average score jumping from 3.11 to 4.63.

The perceived potential for strong intercultural relationships increased enormously, with mean scores moving from 3.42 to 4.58. Confidence in English communication showed a marked improvement, escalating significantly from 3.53 to 4.68. Furthermore, comfort in interacting with individuals of different ethnic backgrounds improved particularly from 3.74 to 4.53, and ease in interacting with people of different religious backgrounds rose significantly from 3.53 to 4.42. These results reflect significant positive shifts in participants' attitudes and perceptions following the intervention, suggesting significant, impactful outcomes on their intercultural competence and confidence.

4.4.2. Wilcoxon Signed Ranks Test

Table 4.9.

Wilcoxon Signed Ranks Test

		N	Mean Rank	Sum of Ranks
I have high self-esteem	Negative Ranks	2^a	5.50	11.00
	Positive Ranks	12^b	7.83	94.00
	Ties	5^c		

	Total	19		
looking for new opportunities to grow as a person	Negative Ranks	2^d	4.00	8.00
	Positive Ranks	9^e	6.44	58.00
	Ties	8^f		
	Total	19		
Everywhere I go, I am out looking for new things or experiences	Negative Ranks	2^g	5.75	11.50
	Positive Ranks	9^h	6.06	54.50
	Ties	8ⁱ		
	Total	19		
I find it is easy to talk with people from different cultures	Negative Ranks	1^j	5.00	5.00
	Positive Ranks	16^k	9.25	148.00
	Ties	2^l		
	Total	19		
I am able to express my ideas clearly when interacting with people from different cultures	Negative Ranks	0^m	.00	.00
	Positive Ranks	16ⁿ	8.50	136.00
	Ties	3^o		
	Total	19		
strong relationships between youth in Europe and Southern Mediterranean countries are possible	Negative Ranks	0^p	.00	.00
	Positive Ranks	14^q	7.50	105.00
	Ties	5^r		
	Total	19		
I feel confident communicating in English	Negative Ranks	2^s	6.50	13.00
	Positive Ranks	16^t	9.88	158.00
	Ties	1^u		
	Total	19		
People who have a different ethnic background from your own	Negative Ranks	2^v	4.50	9.00
	Positive Ranks	10^w	6.90	69.00
	Ties	7^x		
	Total	19		
people who have a different religious background from your own	Negative Ranks	3^y	4.50	13.50
	Positive Ranks	11^z	8.32	91.50

Ties	5^{aa}		
Total	19		

The results of the Wilcoxon Signed Ranks Test from the study highlight significant improvements across various measures post-intervention. The majority showed improvements in self-esteem, with 12 cases having higher post-test scores, indicated by a mean rank of 7.83, compared to only 2 cases showing a decline. Similarly, in seeking new opportunities and experiences, most cases also demonstrated improvements, with mean ranks of 6.44 and 6.06, respectively.

The most pronounced improvements were observed in the ease of talking with people from different cultures and expressing ideas across cultures, where 16 cases improved, with high mean ranks of 9.25 and 8.50. Strong relationships between diverse youths and confidence in communicating in English also saw significant positive changes, with most participants showing improved scores and mean ranks of 7.50 and 9.88.

Lastly, interactions with people of different ethnic and religious backgrounds showed improvement in most cases, with mean ranks of 6.90 and 8.32. These results collectively underscore the effectiveness of the intervention in enhancing intercultural competence and communication skills among participants.

4.4.3. Test Statistics

Table 4.10.

Test Statistics

	I have high self-esteem	my self looking for new opportunities to grow as a person	Everywhere I go, I am out looking for new things or experiences	I find it is easy to talk with people from different cultures	I am able to express my ideas clearly when interacting with people from different
Z	-2.725 ^b	-2.292 ^b	-1.936 ^b	-3.454 ^b	-3.572 ^b
Asymp. Sig. (2-tailed)	.006	.022	.053	.001	.000
	strong relationships between youth in Europe and Southern Mediterranean countries are possible		I feel confident communicating in English	People who have a different ethnic background from your own	people who have a different religious background from your own
Z	-3.402 ^b		-3.279 ^b	-2.437 ^b	-2.506 ^b
Asymp. Sig. (2-tailed)	.001		.001	.015	.012

Note. Z = Standard Score; Asymp.Sig = Asymptotic Significance, or p- value

The analysis of the Wilcoxon Signed Ranks Test results reveals statistically significant improvements across various measures in a pre- and post-intervention comparison. Self-esteem, opportunities for personal growth, and seeking new experiences all showed notable enhancements, with self-esteem and communication skills seeing particularly robust improvements, indicated by highly significant p-values (self-esteem: $p = .006$; communication: $p < .001$).

The ease of interacting with people from different cultures and expressing ideas clearly across cultural divides also demonstrated significant progress, with p-values of .001 and .000, respectively, suggesting substantial gains in cultural adaptability. Additionally, perceptions about forming strong relationships across diverse groups and confidence in English communication improved significantly ($p = .001$ for both). Similarly, comfort with individuals from different

ethnic and religious backgrounds showed significant enhancements ($p = .015$ and $.012$, respectively).

Overall, the negative Z-values across these metrics highlight the positive shift in post-test scores compared to pre-test, underlining the intervention's effectiveness in fostering intercultural competence and confidence among participants.

4.5. Qualitative Analysis

The qualitative data derived from open-ended questions in pre-and post-surveys, online facilitated dialogues, and reflections captured in e-portfolios were analysed using qualitative content analysis techniques, as Zhang and Wildemuth (2009) outlined. Initially, preliminary coding categories, or "codes," were identified following the methodology proposed by Saldana (2013).

The development of these categories involved a dual approach as they were grounded in both a literature review of previous studies and iterative analysis phases of the dataset, which allowed for adjustments based on emerging findings. A code is thus a construct created by the researcher that assigns interpreted meaning to each participant's data, which facilitates pattern detection, categorisation of data relative to the research questions, and alignment with the competences defined in the "Competences of Democratic Culture" framework by the Council of Europe (2016), leading to the formulation of a comprehensive set of codes.

The themes from semi-structured interviews (online facilitated dialogues) and e-portfolio reflections were examined to explain quantitative findings.

The code list produced during the qualitative analysis of the pilot project was applied to this study and expanded when new topics emerged from participants' e-portfolio reflections and OFD. Table 3.1. shows code list descriptors.

4.5.1. Procedures

Assessing ICC presents a significant challenge, as there is no clear consensus on the assessment methods or their necessity (O'Dowd & Dooly, 2020; Schulz, 2007; Sercu, 2004). The complexity of ICC makes it difficult to evaluate using traditional testing methods (Schulz, 2007; Dervin, 2010). As a result, alternative evaluation methods like surveys and e-portfolios are often preferred (Byram, 1997; Fantini, 2009; Dervin, 2010).

Given this complexity, assessing specific elements of intercultural competence, such as openness to other cultures and the ability to compare cultures, is more practical than the entire construct (Deardorff, 2009). Common elements across significant intercultural competence theories and models were initially identified to facilitate this study (Bennett, 1993; Kramsch, 1993; Byram, 1997; Deardorff, 2006, 2009, Competences for Democratic Culture, 2018), aiming to pinpoint the specific aspects that should be assessed.

4.5.1.1. Pre- and Post-Exchange Surveys.

Surveys were crafted to gather both quantitative and qualitative data. Participants rated their self-assessed competence on Likert scales across various items related to specific skills or topics for quantitative insights. Many of these items were used in pre- and post-exchange surveys to track the evolution of students' perceived competences from the beginning to the end of their VE.

The post-survey introduced additional questions and items not present in the pre-test to capture more detailed feedback on students' experiences and perceptions following the VE. The surveys were conducted online using Google Forms, and copies of the pre and post-survey questions are available in the Appendices.

4.5.1.2. Focus Group Interviews (Online Facilitated Dialogues).

Focus group (online facilitated) meetings were related to online discussions to get to know one another better, explore their own and each other's identities, and exchange perspectives on global issues, essential to building positive relations and seeking mutual understanding. These online discussions aimed to help learners develop ICC verbal interactions since the Moodle group focused more on ICC non-verbal communication.

Synchronous meetings allowed the automatic and accurate storing of discussion data; thus, the researcher needed to manage and moderate the groups by ensuring a safe environment for exploring perspectives on timely and potentially polemic topics. However, for better organisation and to avoid any possible confusion between the different online focus group meetings, the researcher developed the stored data and organised them as soon as the synchronous meetings had finished.

At the end of each session, participants were asked to complete a mini-web survey to rate the quality of their session, the technology, and their performance and to make any comments. The responses to the survey were analysed, and a short report was written on the facilitated sessions.

In total, seven online facilitated dialogues (OFD) were scheduled during the IDCB VE project. The topics addressed four areas of competence: intercultural competence, 21st-century

skills, global skills, and activation or global citizenship, alongside students' overall impressions, expectations, perceived outcomes, and feedback on the VE's design. Only one or two questions were posed for each topic to maintain focus. The objective of the OFD was to gain deeper insights into the participants' experiences with the VE, thereby helping the researcher more effectively interpret the other qualitative and quantitative data.

4.5.1.3. Reflective E-portfolios' Findings.

The participants' observations were conducted throughout the IDCB VE project, employing various methods to monitor both asynchronous and synchronous discussions. Observation grids, developed based on Gilly Salmon's Five Stage Model were used to assess participant engagement at each of the model's five stages separately (see Appendix). These grids helped evaluate participant participation and development across the project on the Moodle platform.

Participants were required to demonstrate active participation by completing an e-portfolio, adopted from the UNICollaboration for Erasmus+ Virtual Exchange, and sharing their learning outcomes with the project facilitator(researcher) to meet the objectives of the IDCB VE project. This approach facilitated the tracking of participant development throughout the project. Participants were assigned user IDs for confidentiality, ensuring anonymity when linking their pre- and post-survey responses.

Online observations were systematically conducted, noting weekly contributions through observation grids and analysing participants' reflective e-portfolios. These e-portfolios, typically 20 to 30 pages long, were submitted one to two month post-exchange. They included examples of materials, quotes, and interactions from the virtual exchanges alongside discussions reflecting on

these experiences, which allowed for a detailed assessment of participants' learning, progress, and efforts as documented in their portfolios.

The analysis excluded participants who withdrew early from the project, focusing on 19 e-portfolios from Algerian and Turkish participants who fulfilled all activity requirements and dialogue attendance over three months. These portfolios were analysed using a qualitative content analysis framework (Zhang & Wildemuth, 2009) to capture the depth of intercultural communication and collaboration online.

The structural coding method (Namey et al., 2008) categorised data based on research questions and competencies from the Democratic Culture framework by the Council of Europe (2016). This initial coding phase generated broad categories like "Cultural knowledge," "Future career," and "Global citizenship," which were refined in subsequent coding rounds to identify sub-categories such as "Intercultural awareness" and "Openness to cultural differences."

The qualitative data gathered, including open-ended responses and e-portfolio reflections, supported a comprehensive understanding of participants' experiences. A subsequent coding iteration detailed the frequency of themes, aiding in identifying prevalent and infrequent concepts (see Table 4.11.).

Regarding intercoder reliability, the study could not have a second coder independently assess the data, representing a notable limitation of the research. Nonetheless, the researcher adhered to Saldana's (2013) approach, and extensive portions of the coding were reviewed by Prof. Sarnou, specialising in this research area, who provided feedback on the coding process and served as rigorous examiner and auditor of the analysis (Saldana, 2013). The researcher conducted

multiple rounds of intra-rater reliability testing, re-coding some of the data later to ensure consistency.

Table 4.11.

Areas of ICC and their Structural Codes for the First Round of Coding

Guiding questions & related areas of the Competences for Democratic Culture (CDC) framework	Structural codes
- Who were your Virtual Exchange partners? What do you know about their background? How would you describe them?	knowledge of the partner's culture
- Has the VE helped you develop online tools like email, Skype, and Twitter? Which ones worked best for your exchange with your partner? Why?	Digital competence
- Can you add any examples of your online interactions or creations which show how you are developing these attitudes during your exchange?	Intercultural beliefs, feelings and Attitudes
- Has the VE stimulated students' curiosity and respect for their partners' beliefs, worldviews, and practices?	Openness to cultural otherness
- Did the VE effectively assist students in enhancing their EFL linguistic and communicative abilities, enabling them to communicate proficiently and mediate between speakers of diverse languages?	EFL competence
- Did the VE contribute to developing students' teamwork, collaboration and communication skills so they could work well with others?	Soft skills
- Did you develop your ability to collaborate successfully with others on shared activities and tasks and also to manage and resolve conflicts in a peaceful way	21st-century skills
- Did you develop your interest in global events while being aware of cultural diversity?	Global skills
- Did you build meaningful relationships with your partners? Would you like to have further opportunities to engage in Virtual Exchange or study abroad?	Activation

Note. The Table ‘‘Areas of ICC and their Structural Codes for the First Round of Coding’’ have been adopted from the Competences for Democratic Culture (CDC) framework, Dredoff’s Model and INCA.

Table 4.12.

Areas of ICC Skills and their Structural Codes for the Final Coding Round (Codes, Quotes and Frequencies)

Codes &Sub-codes	Representative Quotes	E-portfolios N displaying the code
<i>Knowledge about the partner's culture</i>	“My virtual exchange partners are Algerians, all of whom have excellent backgrounds. I've learned a lot from their rich cultural heritage, including Algerian music and dance styles like "chaabi," and "rai". Additionally, I've discovered their traditions of dressing for celebrations and ceremonies, as well as their diverse cuisine, such as "Chorba" and "Couscous" with a wide range of flavours and colours, not to mention their delicious pastries.”	19
- Cultural exchange	“I learned about the rich history of Turkish cuisine, traditions such as Turkish tea ceremonies, and the significance of hospitality in Turkish culture.” “I was introduced to Algerian specialties like couscous, tagines, or pastries like makroudh and discovered the role of these dishes in Algerian daily life and celebrations such as Ramadan and weddings.”	19
- Cultural awareness	“I learned about preparing popular Turkish dishes such as kebabs, baklava, or Turkish delight from Nur Ozlem.” “I understood the significance of family gatherings and unity in weekends or during religious holidays such as Ramadan in Algeria.”	18
- Cultural sensitivity	“I learned how to avoid offending each other due to cultural differences and develop cross-cultural communication skills by listening carefully and use clear language.” “We have communicated more politely when discussing our meetings and how to organise the dates, mainly because of time zone/ weekend differences to avoid problems with other group members and not to disturb each other.”	15
<i>Intercultural beliefs, feelings and attitudes</i>		
-Beliefs	“I believe that the richness of our world lies in its diversity of cultures, languages, and traditions. Respecting each other's cultures and points of views creates a peaceful world.”	10
-Feelings	“I was excited and happy to meet new people from different cultures without the need to travel. I remember the first time we tried to get to know each other; that was a moment of joy for me to know about where they come from, their cultural backgrounds, age and hobbies.” “I never forget when we finished our first Zoom meeting with Philip: Me: I wish it never ends Abdelmalik: There are a lot of brilliant minds here Betul: It was so nice to see you all	17

	Aliaa: "OMG" I am so happy. I was scared, but after the meeting, I'm so happy to learn about my colleagues and their culture. It is really the first and the best experience. These interactions were so important for me because they were the best way for me to know more about my colleagues."	
- Self-esteem	"I was afraid at the beginning and uncertain to continue the training, but after a few weeks, I succeeded to overcome many challenges. I discovered myself better, and I'm confident. Now, I am proud of my achievements and try to find opportunities to success."	17
-Curiosity,	"I find learning about different cultures and their unique traditions fascinating. Recently, Emel was talking about the whirling <i>dervish</i> , I was really curious about its significance and discovered that <i>is not a dance</i> but a ritual part of a Sufi religious ceremony."	13
<i>Intercultural dialogue</i>		
-Intercultural awareness	"I believe that this intercultural exchange is essential in today's connected world. It's not just about appreciating and respecting different cultures but also about understanding and learning from our partners to promote diversity and collaboration and improve our world."	15
-Intercultural interpretation	"When we engaged in a virtual discussion about our respective cultures and traditions, we discovered that the traditional practice of 'Henna Night' is essential to wedding ceremonies in Algeria. It involves the application of henna paste to the bride's hands and feet, symbolising blessings, beauty, and protection. Turkey also has a similar tradition called 'Kına Gecesi.' It's traditional for the bride to have henna applied to her hands and for her friends and family to celebrate with music and dancing the night before the wedding. It symbolises good luck and joy."	13
-Attitudes towards people from different ethnic and religious groups	"The first time we met on Zoom, I was more surprised because I got to hear and see them, and I loved how we treated each other regardless of our different cultures; that was a lesson I learned: to treat people with respect and accept them without judgment."	17
- Openness to cultural otherness	"I have learned not only to get to know many people from different countries and how they think, what their traditions are, and what they believe, but also I got more familiar with how to interact with them even though we practically didn't know each other at first. I did. After all, I wasn't very comfortable before with new people, especially from different places, because I didn't know how to talk to them or what to talk about. This virtual exchange did it, it opened me to learning about others' cultures thanks to technology I could see and talk to them, they are real." "New also, I get to express my thoughts without feeling embarrassed, I found out that I share so many things with my partners. It wasn't that difficult for me to fit in because I'm an open-minded person and love to discover new things and take challenges, and yes, it was a great experience being different from others or the opposite has taught me a lot; respecting the others and accepting the way they think and believe,	17

	understanding them more and appreciating what they do in life, etc..."	
21st Century skills		
-Active listening,	"Working in groups is a key lesson I got from this VE. I've learnt to listen to others' opinions, assess what's significant, and then combine them into a single thought."	13
-Critical thinking skills,	"While preparing the final project video, I had to search for pictures of Algerian food. It was hard because I found many pictures and only had to choose the perfect ones for the video. After a long search and selection, I sent them the photos, and it was hard to agree on the perfect pictures. Finally, we agreed that the photos that received the most significant number of votes would be selected; my partners agreed."	10
-Confidence in English and/or foreign language skills	"This VE helped me practise speaking English and expand my vocabulary; it gave me confidence while speaking to foreigners and in public." "I learned a lot from this training; I practised my English and improved my speaking skills with others virtually, which I never did before."	16
-Teamwork and collaborative problem-solving skills	"Since I began the VE training, we had many meetings where we shared our ideas and thoughts. I learned that every problem can be solved with good communication and by respecting other people's opinions and views, even if we don't agree with them."	18
-Digital competences	"The use of Padlet wall, Moodle and Canva raise my confidence to use digital technology to communicate with my partners or study. I learnt how to use and solve the problems they might raise." "WhatsApp exchanging was helpful, it's quick, all can participate in the video design."	17
Global Skills		
- knowledge and interest in global events	"I had the chance to explore how our nations can work together to deal with global events, such as climate change and the efforts to combat the COVID-19 pandemic; they remind us of the importance of cooperation and solidarity among nations."	14
- knowledge of the relationship between different societies	"This exchange was something I ignored, and I had never heard of it before. When the facilitator introduced it to me, at first, I was anxious about it and hesitated to participate. I said, "Come on, give it a shot," so I accepted to participate, and here I am now, enjoying every second of this project! I learned so much stuff and am still learning; I get to meet new people from different cultures and backgrounds, which is so exciting for me. New also, I get to express my thoughts without feeling embarrassed, I found out that I share so many things with my partners."	13
- Ability to work in diverse settings.	"When we disagreed, we solved them by letting each of us give his/her opinion first, then concluding and trying to find an arrangement that would satisfy us all."	15

	“I learned not to be afraid or shy whilst getting to know new people from different backgrounds.”	
Activation-Global Citizenship		
- Building meaningful relationships	<p>“We interacted with each other mostly with video conferencing, which I think is the most useful as we see and hear each other from two different continents.”</p> <p>“Rafik is one of the partners with whom I was communicating the most, and now we are friends; we always talk about the differences and similarities between our two countries, and sometimes we get to discuss our future dreams and world views.”</p>	16
- Becoming interested in new opportunities for Virtual Exchange or travel/study abroad.	“I would 100% try it again if I get the chance to, but in a different way, like meeting face-to-face in real life; who wouldn't enjoy such an experience? It's wonderful to travel and interact with people from different areas.”	17
- Challenging media misrepresentation	“In the digital age we live in now, media distortion has become a big problem that affects how we see the world. With the fast spread of information through many channels, it's common to see news stories, pictures, and videos that have been changed or taken out of context. This can have big effects on public opinion and society, so we must think carefully about the sources and material we see daily.”	09
- Impact on future career	Thanks to this online experience, I'm seriously developing myself to prepare for a professional career.”	17
- Focus on linguistic form	“Another thing to mention about this VE is that the group I belonged to was polite, and they all used nice expressions such as "It's nice working together!" at the end of the conversations.”	08
- Community building	“We've been more polite when we talk about setting up our meetings, especially because we're in different time zones and have different weekends. By being polite, we make sure we don't cause any problems or disturb other group members.”	17
- Gaining confidence	“I discovered new technologies for the first time, like Padlet and Canva, and I learned how to use them. More than that, I use them with confidence now.”	15
- Empathy	<p>“I can imagine how frustrating it must have been for Lina to experience PC problems during the pandemic when we've all become so reliant on technology for staying connected with loved ones. We all felt sad about her and offered to help. We're all navigating this together, and we wanted her to keep on till the end of the training.”</p> <p>“When I got the virus during the pandemic, it was nice to hear how my virtual peers' encouragement messages on WhatsApp helped me through these hard times.”</p>	11
- Difference Minimising	“We are all almost the same age; so, our thoughts and ideas are similar. So, we didn't find obstacles in communicating together.”	11

-Problem solving – help	“During the Zoom meeting, my partner had problems with her phone, her micro didn't work. So, I helped her sending her instructions on WhatsApp group, and that worked. I was happy to hear her voice during the meeting.”	10
-Inclusivity	“Despite the differences in the language, traditions, and many others, no one was marginalised, and every voice is heard and respected. We listen to and respect our peers' ideas and opinions, and all contribute to making our final project.”	12
-Equality & Equity	“Despite Covid-19, all participants have the chance to develop themselves and participate in the final project.”	12
-Sustainability	“This VE training helped me meet new students from another country without travelling, we discussed and studied together from our countries.”	11
-Flexibility	“when courses started online, it was difficult for me to continue the training, but sometimes I attended two meetings at the same time, one with my University and the other with my virtual partners.”	10
-Covid-19	“I lived difficult moment because of Covid-19, I didn't know what to do, many got the virus, no places in hospitals, death everywhere. the facilitator and my partners support help me carry on my participation.”	19

Note.N = Number.

4.6. Qualitative Findings

The non-numerical data, qualitative data collected via open-ended pre-and post-exchange surveys' responses, online facilitated dialogues, and e-portfolios were analysed through content analysis to gain insights into data not captured by quantitative methods. This type of data often includes text, audio, and video content. Here are key aspects of qualitative data:

4.6.1. Open-Ended Pre- and Post-Exchange Surveys Questions

To interpret the quantitative results using predefined items, we have conduct a qualitative analysis of the open-ended responses of the pre-exchange survey. (Q12: "What do you expect to learn from this VE?") revealed a wide range of themes and expectations for participating in the IDCB virtual exchange program, where (n=44) participants in total (n=33) Algerian and (n=11) Turkish have taken part in the pre-survey. In contrast, only (n=15) Algerians and (n=11) Turkish participated in the VE project. Here is an analysis of the common themes and key insights:

Table 4.13.*Open-Ended Pre-Exchange Survey Question 12*

Codes	Examples	N° of Q12 answers displaying the code
Cultural Knowledge and Awareness:	"I learn about different cultures, traditions, and ways of life, which will help me appreciate and understand the cultural differences in the world."	27
Personal Growth	"My goal is to grow as a person, become more open-minded, and learn how to accept others' differences."	20
Communication Skills and EFL Confidence	"I hope to improve my communication skills by interacting with people from different backgrounds, and I believe this experience will boost my confidence in expressing myself."	19
Global Perspective	"Through this VE, I want to see the world from different angles and discover a lot of things, from lifestyle to education, politics,..."	18
Networking and Relationships	"I look forward to building new relationships with people from different cultures, as I believe these relations can lead to important opportunities."	10
Academic and Intellectual Development	"I'm excited to explore topics related to my field of study and expand my intellectual horizons through discussions with peers from diverse backgrounds."	6
Digital Literacy and Critical Thinking	"I expect to improve my critical thinking and media literacy skills, especially in the age of the internet and social media."	5
Development and Future Career	"I believe in this program can broaden the horizons of students, making them more open to diverse opportunities beyond their country's boundaries."	4
Practical skills	"I aim to enhance my foreign language speaking and communicate well online."	3
Preference for Real-Life Exchange	"While I love this virtual exchange, but I prefer real-life intercultural interactions as they are more real."	1

Note. N° = Number; Q = Question.

In the responses to the post-exchange survey open Q16, "What was the best thing about this Virtual Exchange?", the (n=19) Algerian and Turkish participants reported various reasons for

considering their VE program the best thing they had experienced so far. Here are some of their responses:

Table 4.14.

Open-Ended Post-Exchange Surveys Question 16

Codes	Examples	N° of Q16 answers displaying the code
Cultural Exchange and Awareness:	"The best thing about this VE is the opportunity to learn about the rich cultural heritage of Algeria and Turkey. Through our interactions, I've better understood their traditions, customs, and way of life, and it's been eye-opening to see the similarities and differences between our cultures."	17
Communication Skills and EFL Confidence	"For me, the best part is improving my English language skills. It's been a fantastic language-learning experience, and I've improved my language skills significantly. Now, I feel confident speaking English, and even if I make mistakes, it's OK."	16
Global Connection	"This VE has allowed us to make friends from another part of the world. The friendships we've built are lasting and go beyond the boundaries of our countries. It's amazing to have such a diverse group of friends now."	14
Global Perspective	"This experience has been eye-opening, I've been exposed to viewpoints I wouldn't have done otherwise. It's expanded my horizons and made me more tolerant and accepting of diverse perspectives."	12
Personal Growth	"The best thing about this VE is the personal growth it has brought. It isn't easy to step out of my comfort zone, be more open-minded, and embrace different perspectives. I feel like I've grown as an individual."	10
Academic knowledge Development & Future Career	"I'm thrilled that this VE has enriched my academic knowledge. We've discussed various topics related to our studies, and I've gained insights and earned a digital badge that will undoubtedly benefit my education and future career."	9

Conflict Resolution Skills		"This VE has helped us develop conflict resolution skills. We've had our share of disagreements, but learning to resolve them respectfully has been invaluable."	9
Friendships Across Borders		"The friendships I've formed with Algerian students have been the highlight of my virtual experience. We are miles apart, but we've created strong ties, and I now have friends in Algeria that I'm still in touch through WhatsApp."	7
Fun & Cheap Learning		"The best part is that we've had fun while learning about each other's cultures and history and even cooking recipes. It's been an enjoyable educational experience. More importantly, it doesn't require expensive travel, making it accessible for students like me, who can't pay to go abroad."	2

Note. N° = Number; Q = Question.

In their responses to the open-ended post-exchange survey Q17, "How could this Virtual Exchange be improved?" the participants' suggestions provided valuable insights into five potential areas of enhancement. Here is the analysis of each of these suggestions:

Table 4.15.

Open-Ended Post-Exchange Surveys Question 17

Codes	Examples	N° of Q17 answers displaying the code
Increasing Diversity among Participants	"VE organisers should aim for greater diversity in participants by allowing students from various countries, cultures, and academic backgrounds to take part in the VE to enrich the experience."	16
VE Integration in the Curriculum	"To integrate VE into academic program, where VE participation is obligatory. This allows students to travel virtually while engaging in cultural exchange."	13
Technology and Internet Connectivity	"VE platforms should be user-friendly and accessible across devices. Ensuring stable connectivity to simplify the online interaction."	11
Language Training And communication confidence	"To support language learning, VE programs could offer language courses to help participants,	9

	who have a low level attend language classes to gain language confidence."	
Structured Curriculum and Activities	"I suggest to include monthly/ semester cultural exchange sessions to ensure all students have a cross-cultural learning participation."	7

Note. N° = Number; Q = Question.

Participants in the IDCB VE project gave some common responses when asked about the most important thing(s) they have learned in Q18: "What is the most important thing(s) that you learned through your participation in this Virtual Exchange?" Participants' responses varied widely based on the program's goals and their individual experiences, but here are some potential responses:

Table 4.16.

Open-Ended Post-Exchange Surveys Question 18

Codes	Examples	N° of Q18 answers displaying the code
Cultural Awareness and Empathy	"Becoming more culturally aware and empathetic is my biggest takeaway from this VE. Meeting people from different backgrounds has shown me the world's diversity and the value of cultural diversity."	16
Confidence and Effective Communication Across Cultures	"I'm more comfortable talking to varied folks. I was nervous at first, but now I feel comfortable talking to people from different cultures. Learning to communicate and listen across languages and cultures was invaluable."	13
Global Perspective and Open-mindedness	"This VE has helped me see the world differently. Now I know that there are many ways to live, think, and solve problems. It has made me more open-minded."	11
Language Improvement And communication confidence	"Being able to speak English is one of the most important benefits of this VE. It makes it easier for me to talk to English-speaking people without being shy or afraid of making mistakes."	9
Personal Growth and Self-Discovery	"This training was a trip that changed me. It has forced me to leave my comfort zone, be more	7

		flexible, and accept change. I feel stronger and willing to try new things."	
Digital Literacy		"I discovered technological tools (Moodle, Padlet, Zoom,) learned to use and collaborate online When we shifted to online education during the pandemic, I felt confident I also learnt to speak in front of a camera, which is great !"	7
Collaboration and Global Problem-solving		"Through designing our tourism video, I learned how to work with different people and as a team despite the challenges like the pandemic, internet issues and diverse points of view."	7
Appreciation for Similarities and Differences:	for and	"I now see both how we are alike and different. It's amazing how, despite coming from different places, we all share so many ideals and goals."	5
Global Citizenship		"I've come to like the thought of being a member of the world. It's not just about where I come from, but also about what I can do to make the world a better place for all."	3

Note. N° = Number; Q = Question.

Question 19 requested Algerian and Turkish VE participants to name and explain the topics they enjoyed discussing with their group. Here is a list of the topics that participants from both countries have mentioned:

Table 4.17.

Open-Ended Post-Exchange Surveys Question 19

Codes	Examples	N° of Q19 answers displaying the code
Traditions and Celebrations	"We delved into how major holidays like Eid in Algeria and Republic Day in Turkey are celebrated, exploring traditional activities, public festivities, and family gatherings that characterise these important national holidays."	16
Cuisine and Food Culture	"We shared recipes and culinary traditions from our countries. I talked about dishes like Couscous and Harira from Algeria. At the same time, my Turkish peers described the preparation and cultural significance of foods like Baklava and Kebab, discussing regional variations and historical contexts."	13

Educational Systems and Learning Experiences	“ We compared the structure of the educational systems in our countries, such as discussing the Baccalauréat exam in Algeria and the university entrance exams in Turkey. We also shared personal stories about campus life, academic pressures, and extracurricular activities.”	11
Music and Art	“I shared my favourite music genres and artists, such as discussing the influence of Classical Turkish music in Turkey. Our discussions also focused on famous Algerian painters like Mohammed Issiakhem and Turkish architecture seen in landmarks like the Hagia Sophia.”	9
Religious Practices	“I explained how we observe religious practices like Ramadan fasting in Algeria and discovered the significance of the Mevlid Kandili in Turkey. I discussed how religion influences daily life and celebrations in predominantly Muslim countries.”	7
Current Affairs and Global Issues	“ I focussed on Turkey's political role in the region and discussed how my country is affected by and responding to global issues such as climate change and the recent COVID-19 pandemic,”	
Travel and Tourism	“ I exchanged information about must-visit places in Algeria, like the Sahara Desert and the Casbah. I also shared travel tips, cultural etiquette, and the best times to visit certain attractions.	

Note. N° = Number; Q = Question.

4.6.2. Focus Groups (Online Facilitated Dialogues)

In total, we held seven (07) focus groups (online facilitated dialogues) with all the participants who took part in the IDCBC VE training (n = 19) with *two-time slots*. Of the 14 OFD, four main themes (i.e., topics) emerged; they were divided into sub-themes and are summarised below with relevant quotes from the participants.

4.6.2.1. Topic One: Set up your Exchange Identity

The first online facilitated dialogue in the IDCB VE programme began with participants joining in individually. They had never met, and this was their first virtual meeting. They only knew about the participants' names displayed when they logged in. The facilitator welcomed participants and set the tone for the conversation. She introduced the meeting agenda, suggested conversation ideas, and encouraged participation. An ice-breaker activity was initiated to break the ice and foster interaction, allowing participants to share ideas, anecdotes and fun facts. Ground rules were established, emphasising respectful communication and creating a safe space for sharing diverse perspectives. Participants started timidly to take turns introducing themselves briefly and following the task's requirements. Encouraged by the facilitator, the participants actively expressed their opinions and experiences throughout the debate. The facilitator finished the workshop by summarising significant points, thanking participants, and announcing future sessions. This initial discussion established rapport and prepared participants for meaningful cross-cultural dialogues following VE-facilitated dialogues.

Indeed, here is a summary table that organises the findings related to the question of identity in the online facilitated dialogue, along with relevant quotes from the community of participants.

Table 4.18.

Identity

Themes	Sub-themes	Findings	Participants' Quotes
Identity Description	Self-introduction	Participants timidly shared seven self-descriptive words to introduce themselves. In addition to national, religious, and language identities, some	"I'd describe myself as friendly, curious, ambitious, creative, curious, and empathetic."

		common words were "friendly," "open-minded," "caring," "helpful," and "ambitious."	
	Self-reflection and self-awareness.	Participants followed instructions by choosing and deleting two of the least essential words from their self-introductions Commonly deleted words included "organised" and "patient."	"Choosing these words made me think about who I truly am." "After careful thought, I decided to delete 'organised' and 'patient' from my list."
Cultural Insights	Naming Traditions	Participants discussed cultural naming practices and the significance of names.	"In our culture, names often reflect our values and heritage."
	Ancestral Honouring	Names were chosen to honour ancestors and carry forward family legacies.	"I was named after my grandmother, a symbol of strength in our family." "In Turkish culture, we often name our children after relatives, preserving our family heritage."
Objectives	Cultural Awareness	The dialogue promoted cultural awareness and understanding among participants.	"I've learned so much about naming practices in different cultures."
	Self-Understanding	Participants expressed a deeper understanding of their own identities.	"Talking about my name made me appreciate its significance."
Participant Interaction & Respect	Respectful Engagement	Participants engaged respectfully, appreciating each other's names and cultures.	"I loved hearing everyone's stories and names. It's so diverse and beautiful."
	Supportive Feedback	Positive feedback and compliments were exchanged during the discussion.	"Your name has a wonderful history behind it. Thank you for sharing."

This table summarised the key themes and sub-themes related to identity that emerged from the online facilitated dialogue, supported by relevant participant quotes. It showcases how the dialogue encouraged self-reflection, cultural awareness, and respectful engagement among participants, aligning with the objectives of breaking the ice and building the community.

4.6.2.2. Topic Two: Gender, Race Issues and Global Challenges

Philipp Möcklinghoff, a UNICollaboration for Erasmus+ Virtual Exchange dialogue facilitator, monitored the second online dialogue for two hours. Three questions were asked, starting with "*gender and race issues*." Participants were asked to list gender-related concerns and disadvantages they feel currently exist. Can we work together to solve and minimise these

obstacles for a fairer society? This table analysis of an online facilitated debate on gender-related challenges and inequities includes topics, sub-themes, and participant quotes:

Table 4.19.

Gender and Race Issues

Themes	Sub-themes	Findings	Participants' Quotes
Gender-Related Issues	Wage Gap	Participants discussed the persistent gender wage gap and its impact on inequality.	"In some countries, women continue to earn less for the same work, which is not fair."
	Violence & Insecurity	The dialogue addressed issues of gender-based violence, including domestic violence, insecurity and harassment.	"Violence and insecurity against women remain pressing issues globally."
	Underrepresentation	Participants acknowledged the underrepresentation of women in leadership and decision-making roles.	"We need more women in positions of power to drive change."
Inequalities and Challenges	Education Inequity.	Educational disparities were highlighted, with some participants noting limited access to education for girls.	"Girls in some regions still face barriers to go to school or sometimes universities."
	Culture's norms and Stereotypes	It looked at how gender roles are affected by national norms and stereotypes.	"Social expectations can make it harder to get ahead and keep people from being equal."
Collaborative Solutions	Raising Awareness	Participants talked a lot about how support and information efforts can help solve problems with gender inequality.	"Raising awareness is very important if you want to change norms and stereotypes."
	Policy Changes	It was pointed out how important it is to change policies and laws to support female equality.	"We need laws that protect women's rights and ensure they have the same chances as men."
	Education	Education for girls and women was seen as essential for long-term change.	"Empowering women through education is an investment in our future."
	International Collaboration	Collaborative efforts at the international level were discussed, focusing on global initiatives and conventions.	"International collaboration can bring about positive change on a larger scale."

This table summarised the main themes and sub-themes that came up in the online facilitated conversation about problems and differences between men and women. It shows that problems like the pay gap between men and women, abuse based on gender, and

underrepresentation are still a problem. It also calls for collaborative solutions like policy changes, foreign collaboration, and education and empowerment programmes. Quotes from participants give valuable insights and different points of view on these critical issues. They also show how important it is for everyone to work together to end gender inequality and make society more fair.

Q2: Concerning question two, participants were asked to find out how to address **global challenges such as climate change**, poverty, and conflict to secure a sustainable and prosperous future for all. The participants' answers are examined here; themes, sub-themes, and quotes are listed below:

Table 4.20.

Global Challenges

Themes	Sub-themes	Findings	Participants' Quotes
Global Issues	Climate Change	Participants recognised climate change as a pressing global issue, demanding immediate attention.	"Climate change is an existential threat that affects us all."
	Poverty Alleviation	Poverty was identified as a cause and consequence of various global challenges.	"Addressing poverty is central to tackling multiple global issues."
	Conflict Resolution	The significance of resolving conflicts and promoting peace was emphasised.	"Conflict resolution is vital for stability and development."
Collaborative Approaches	Global Agreements and Treaties.	Participants discussed the role of international agreements and treaties in tackling climate change and conflict.	"Global agreements provide a framework for collective action."
	Humanitarian Aid	Humanitarian aid and support for impoverished and conflict-affected regions were considered vital.	"Providing aid to those in need is a moral obligation."
	International Collaboration	International collaboration was essential for effectively addressing global challenges.	"We need international collaboration globally."
Local and Global Responsibility	Governmental Responsibility	The role of governments in enacting policies and regulations for global issues was emphasised.	"Governments must take the lead in addressing these challenges."

This table outlined the primary themes and sub-themes of the online facilitated dialogue on global collaboration issues. It shows that participants see climate change, poverty, and conflict as interrelated issues requiring a collective response. The debate stressed the significance of multilateral collaboration, global agreements, and humanitarian relief for a sustainable and prosperous future. Participant quotes illuminate their views on these critical issues and global and local partnerships.

Q3: In question three, participants were asked how **stereotypes and media** portrayal affect ethnic, cultural, and gender perspectives. They were also asked to propose ways to combat these negative media and social myths. Here is an explanation of how stereotypes and media misrepresentation affect views and attitudes towards ethnic, cultural, and gender groups, as well as ways to fight these narratives in media and society. Tables show themes, sub-themes, and participant quotes:

Table 4.21.

Stereotypes and Media

Themes	Sub-themes	Findings	Participants' Quotes
Influence of Stereotypes	Stereotype in Media	Participants discussed how media stereotypes ethnic, cultural, and gender groups.	"Media often portrays certain groups in narrow ways."
	Shaping Perceptions	The impact of media in shaping perceptions and attitudes was highlighted.	"Media strongly influences and shapes how we see others."
	Stereotyping's Consequences	Participants examined the harmful consequences of stereotypes, including prejudice and discrimination.	"Stereotypes can lead to bias and discriminatory behaviour."
Challenge Harmful Narratives	Media Responsibility.	The dialogue emphasised the media's responsibility to challenge and correct harmful narratives.	"Media must prioritise accuracy and fairness."
	Media Education	The significance of media education in empowering	"Teaching media is essential for navigating today's information."

			individuals to evaluate media critically was discussed.	
Social and Global Response	Dialogue between communities		Intercommunity interaction should challenge preconceptions and foster understanding, the discussion stressed.	"Dialogue bridges divides and breaks stereotypes."
	Government Laws		The government's role in regulating media content and promoting diversity was explored.	"Government can ensure fair representation and diversity in media."

This table summarised the main themes and sub-themes on stereotypes and media misrepresentation's effects on perceptions and attitudes and how to mitigate their narratives. The participants recognised the media's influence on attitudes, the necessity of media responsibility, and global stereotype prevention. Participant quotes highlight their views on these critical challenges and the role of stakeholders in addressing them.

4.6.2.3. Topic Three: The Covid-19 Pandemic.

Analysing the topic discussed in the online facilitated dialogue about how different countries are fighting the COVID-19 pandemic, including comparing safety measures and wanted changes, requires a thorough look at the content, how involved the participants were, the comparisons that were made, and the reasoning behind the suggested changes. Here is a step-by-step plan for analysing this conversation:

Table 4.22.

The Covid-19 Pandemic

Themes	Sub-themes	Findings	Participants' Quotes
Global Response	Measures Implemented	Participants discussed measures taken in their countries to combat COVID-19.	"Algeria and Turkey put in place strict lockdowns, China and other countries focused on testing and tracing.
	Success Stories	Success stories from various countries were highlighted, emphasising effective strategies.	"New Zealand's quick and strict actions seemed very effective."

	Challenges and Failures	Challenges and failures in pandemic response, such as overwhelmed healthcare systems, were acknowledged.	"In some places, the healthcare infrastructure just couldn't keep up." "In remote regions, internet is very weak."
International Collaboration	Collaboration Efforts	The importance of international collaboration and information sharing was emphasised.	"Countries that cooperated and shared data seemed to fare better."
	Distribution of vaccines	Global vaccination distribution issues and equal access were highlighted.	"Vaccines must reach all nations, not just the wealthy."
	Rationale for International Collaboration	The rationale for international collaboration was examined, including the connection between health and economies.	"A virus knows no borders, and our economies are linked, so we must collaborate."

This table outlined the online-facilitated dialogue's COVID-19 pandemic themes and sub-themes. It discussed worldwide pandemic reactions, success stories, problems, and international collaboration. Participant quotations illustrated these themes and emphasised the need for global collaboration and equal resource access in pandemic prevention.

4.6.2.4. Topic Four: Challenges and Aspirations in Youth Education

The analysis of the OFD regarding young people's education challenges and aspirations in Algeria and Turkey, including common challenges and potential solutions, is organised in a table format with themes, sub-themes, and relevant participant quotes:

Table 4.23.

Youth Education

Themes	Sub-themes	Findings	Participants' Quotes
Educational Challenges	Quality Education	Participants agreed that getting a good education was a problem, especially in rural areas.	"Getting a good education is a big problem for many people."
	Disparities in Education	Education disparities, including gender and socioeconomic inequality, were examined.	"Inequalities must be addressed to ensure equal education chances to all."
	Educational Infrastructure	Overcrowded classrooms, outdated infrastructure, and insufficient resources were noted.	"Our colleges need significant infrastructure improvements."

Educational Aspirations	Skills and Job Prospects	Participants wanted to learn skills that would make them more employable and help them grow as people.	"We want an education that prepares us to get jobs that are important to us."
	Access to Global Education	There were hopes for global education and diverse learning experiences.	"Global exposure is essential for expanding our horizons."
Potential Solutions	Quality Education Reform	Participants talked about how education needs to be changed to make it better and more useful.	"Reforming our curriculum can help us deal with a lot of problems."
	Integration of Technology	Participants thought that the use of technology could make learning better.	"Digital education can help close the gaps and opens new opportunities."
	Awards and Financial Aid	To help students in need, it was suggested that there should be more awards and financial aid choices.	"Getting help with money can make a big difference."
Collaborative Opportunities	International Partnerships	Partnerships with foreign schools uni, universities, and VEs were suggested.	"It can be helpful to learn from each other's experiences."
	Sharing Best Practises	Sharing good education practices between Algeria and Turkey will benefit both.	"Learning from others' experiences can lead to educational and personal growth."

The table above summarises the main themes and sub-themes that came up in the online guided conversation about the challenges and hopes of young people in education in Algeria and Turkey, as well as possible answers and ways to work together. Access to quality education, differences in education, and problems with facilities were all named as problems by the participants. Their goals included getting skills and learning about the world. Possible answers went from changing how schools teach and use technology to giving students financial aid. International relationships and sharing best practices were two ways to work together to improve education in both countries. Quotes from participants showed how they felt about these critical issues and the role of teamwork in improving educational chances for young people.

4.6.2.5. Topic Five: Creating a Welcoming, Culturally Inclusive Learning Environment.

Regarding the topic of creating an inclusive and culturally aware learning environment for multinational students discussed in the online facilitated dialogue, the analysis of the discussion is organised in a table format with themes, sub-themes, and relevant participant quotes:

Table 4.24.

Multinational Inclusive Learning Environment

Themes	Sub-themes	Findings	Participants' Quotes
Inclusivity and Cultural Awareness	Welcome and Integration	Participants stressed accepting and integrating global students.	"Making others feel welcome is the first step to inclusion."
	Cultural sensitivity	The discussion stressed cultural sensitivity as a key to peaceful relationships.	"An inclusive environment needs respecting different cultures."
	Language and Interaction	Participants acknowledged the importance of effective communication, including language assistance for non-native speakers.	"Language barriers can be solved with patience and help."
Cultural and Educational Support	Academic Assistance	Multinational students needed academic help and resources to succeed.	"Offering tutoring or study groups can be effective."
	Culture Education	Cultural education programmes and workshops should help all students learn about other cultures.	"We should share experiences to learn about other cultures."
Community Building	Building Relationships and Friendships	Students from different countries were urged to get to know each other and make friends.	"Friendships go beyond borders and make learning more enjoyable."
	Awareness and Appreciation	It was stressed that students as a whole should learn about and appreciate different cultures.	"Let's enjoy how different we are and learn from each other."

This table summarised the main themes and sub-themes of online facilitated dialogue on developing an inclusive and culturally sensitive learning environment for global students. It

showed that participants value cultural sensitivity, linguistic help, academic support, and community-building in improving all students' education. Participant quotations revealed their views on these critical issues and how inclusive practices foster a harmonious and helpful learning environment.

4.6.2.6. Topic Six: Reflect on your Journey Together.

Table 4.25.

Reflect on your Journey Together

Themes	Sub-themes	Findings	Participants' Quotes
Reflection on the Journey	Personal Growth	VE participants talked about learning new skills and discovering themselves.	"I've gained confidence and discovered myself."
	Cultural Knowledge	Participants gained cultural awareness and respect.	"Interacting with diverse peers increased my cultural awareness."
Thoughts on VE Content	Relevance and Engagement	Participants discussed VE content relevancy and engagement.	"The content was thought-provoking and engaging."
	Learning Outcomes	Participants assessed their learning and understanding.	"I've learned about global issues and intercultural communication."
Challenges	Technological and Technical Issues	They highlighted the challenges faced during the VE program	<p>“Access to good internet and a problem with my PC that I couldn't fix because of the pandemic lockdown make it difficult for me to engage fully in VE.”</p> <p>“Technical issues like the loss of my password were more than difficult to recover.”</p>
Collaborative Work	Teamwork and Communication	The role of teamwork and communication in joint initiatives was stressed.	"We learnt a lot through working together and improved our communication and problem-solving skills."
	Creativity and Innovation	The dialogue highlighted the role of creativity and innovation in producing the video.	"We were able to generate innovative ideas that shaped the video's design."
Valuable Lessons and Insights	Global Perspectives	Understanding other cultures and global viewpoints was a valuable lesson.	"I've learned to view global issues from different angles and appreciate cultural diversity."
	Interconnected World	Participants recognised the interconnectedness of global	"Our work together has shown me how interdependent our world is."

			challenges and the need for collaborative solutions.
Working with Peers Impact	Intercultural Collaboration		Participants discussed how working with peers from diverse backgrounds enriched their learning experience.
	Tolerance and Empathy		The experience fostered tolerance and empathy, enhancing participants' understanding of differing perspectives.
			"Interacting with peers from different cultures has broadened my horizons."
			"I've become more empathetic and understanding of others' viewpoints."

This table summarised the key themes and sub-themes related to participants' reflections on their VE journey, the content, collaborative work, lessons, insights, and the impact of working with peers from diverse backgrounds. The dialogue revealed personal growth, cultural understanding, engagement with VE content, the importance of teamwork and innovation, and the valuable lessons gained from global perspectives. Participant quotes provided firsthand insights into their experiences and the transformative impact of intercultural collaboration within the VE program.

4.6.2.7. Topic Seven: Goodbyes

The topic dealt with in the last OFD was about the memorable moments, lessons learned, and plans for the future; the outcomes are organised in a table format with themes, sub-themes, and relevant participant quotes:

Table 4.26.

Goodbyes

Themes	Sub-themes	Findings	Participants' Quotes
Memorable Moments	Cultural Exchange	People talked about interesting cultural exchanges and relationships that made their VE experience more meaningful.	"My favourite part was learning about different cultures." "I connect this training with Covid-19. Thanks to it, I didn't feel alone, there was support from all, asking

			about our partners on WhatsApp,..."
	Cross-Cultural Friendships	The lasting friendships formed during the VE were highlighted as significant and memorable.	"The friendships we made across borders are amazing."
	Personal Growth	Participants talked about how meaningful personal growth and learning experiences were.	"This VE has taught me so much about myself and how diverse the world is."
Learned Lessons	Intercultural Communication	Lessons on how to communicate and understand across cultures were stressed.	"It's important to listen to and understand different points of view."
	Global Perspectives	Participants said they had learned to see the world and appreciate differences in a new way.	"I now have a wider opinion of the world."
	Collaboration and Cooperation	Participants talked about what they had learned about working together and the power of group efforts.	"When people work together, they can make important changes."
Future Ambitions	Applying Lessons	Participants talked about how they wanted to use their knowledge in future projects and relationships.	"I'll use these skills in my future career and in my life."
	Advocacy and Social Impact	Some participants wanted to speak about world problems and do good things for society.	"I want to share what I've learned with people and help make my community a better place."
	Lifelong Learning	A frequent theme was a promise to keep learning and sharing cultures for the rest of their lives.	"I'll keep looking for ways to learn to become better."
Staying in Touch	Online Platforms	Suggestions for staying in touch include using WhatsApp, social media, and email.	"Let's exchange email addresses and stay connected on our WhatsApp group to keep collaborating in the future."

This table summed up the main themes and sub-themes that came up in the online facilitated conversation. These included memorable moments, lessons learned, plans for the future, and keeping in touch. It showed how much the members valued cultural exchange, personal growth, and the skills they learned for communicating with people from other cultures during the VE. Participants also talked about how they planned to use these lessons in the future and how important it is to stay in touch through online platforms, virtual talks, and group projects. Quotes from participants showed how they thought about and planned to deal with these crucial issues.

4.7. Analysis of the Results

Overall, the dataset showed that integrating the IDCB VE project into the classroom allowed participants to learn about their partners' countries' cultural knowledge, beliefs, and attitudes, develop greater openness to cultural differences, increase EFL/foreign language confidence, and develop digital, IC and collaboration skills, which supports other large-scale research (EVALUATE group, 2019; EVOLVE Project Team, 2020; Helm & Van Der Velden, 2020; O'Dowd, 2021). Under this comprehensive conclusion, the two coding rounds on the dataset also produced themes that give a more detailed view of participants' learning in this VE training. Braun and Clarke (2006) employ themes to capture a typical, recurrent pattern throughout a dataset centred around a critical topic.

The analysis of participants' e-portfolios and OFD and the responses to the open questions revealed several recurring themes that underscore the program's transformative impact. Participants often mentioned more than one outcome when reporting on their experience. In doing so, they highlighted the potential of VE to develop a combination of skills, which reflect the transformative power and valuable aspects of VE experiences as claimed by (Mezirow, 2000; Fleming, 2022).

One of the primary themes explored in this study is the influence of the personalised form of virtual communication on students' learning outcomes. According to Belz (2002) and Kinginger (2003), online interactions facilitated significant knowledge acquisition among participants, as they could get valuable insights from their distant peers. These peers, frequently seen as 'people who matter' (Belz & Kinginger, 2002, 2003), provided personal perspectives and first-hand exposure to real-life instances contributing to the participants' learning experience, which can also

prompt individuals to distance themselves from stereotypes and avoid making overgeneralisations. Students saw the virtual exchange as a valuable means of acquiring knowledge about their partner cultures (Byram, 1997).

The participants perceived that engaging in online exchanges allowed them to acquire contextualised and personalised understandings of the social, educational and political concerns prominent in their respective partner nations during that period. *“I realised through Zoom discussions that our partners were understanding and open-minded, not like what was seen in the media. I learned not to believe all what is said in the media”*. A Turkish participant said, *“I learned in Zoom meetings that our partners were very understanding and open-minded, not like what was seen in the media like Algerians become nervous quickly. So, I learnt to doubt the media.”* Similarly, a participant from Algeria remarked that: *“Coming to know my Turkish partner's interests, hobbies, and experiences allowed us to connect on a deeper level. When we discussed our favourite novels, I realised we liked the same author. This helped break down cultural barriers.”* More importantly, they succeeded to build relationships and friendships by stating that: *“Friendships go beyond borders and make learning more enjoyable,”* thereby building communities.

Second, there was strong evidence that VE gave students ample opportunities to learn about their partners' cultures and to realise that their cultural perspective was not always the sole one. In an e-portfolio reflection, a participant mentioned: *“I have learned that in some countries, women continue to earn less for the same work, which is not fair. Luckily, it's not the case in Algeria. The gender discussion opened my senses to how various cultures continue to treat women unjustly.”*

Likewise, a Turkish participant who collaborated with her Algerian peers also said that encountering alternative cultural practices and beliefs in their VE had made her aware of cultural perspectives that may differ from her own, which she thought to be comparable:

"... I learned that respecting each other's unique backgrounds and perspectives creates a harmonious world. Even if there are some commonalities between the two groups, there are still some differences that may lead to misunderstandings. So being flexible and open-minded is the key to avoiding conflicts and building good relationships because, after all, we are different, and we think differently even within the same group."

Based on the reflections mentioned earlier, VE allows participants to engage with cultural ideas and practices that diverge from their own, which might foster a greater tendency towards open-mindedness and adaptability in individuals when encountering diversity. Flexibility and adaptability are seen as essential competences within the framework of Democratic Culture. These competences encompass the capacity to respond to new and changing circumstances effectively and to navigate and accommodate diverse social and cultural norms and behaviours, critical skills in the Competences for Democratic Culture framework (Council of Europe, 2018).

A third theme that comes up when looking at how the IDCB VE changed people's views on cultural differences is that the personalised nature of intercultural collaboration is essential for making students more open and curious about the partner culture and cultural differences in general, as well as for getting rid of stereotypes. Participants shared their changing views and recognised their misperceptions about others. Several said they had a deeper understanding of both other countries and their own:

"I had the stereotype that women's rights are not respected in Africa, but I was astonished to discover that education in Algeria is obligatory for both girls and boys and that women have the right to work, to vote and have the same salary as men. This has completely changed my view, because women in Western countries still suffer from violence, gap in wages, and more."

A final example illustrates how students developed empathy due to the experience: *"When I got the virus during the pandemic, it was kind that my virtual peers' sent messages on WhatsApp of support helped me through those challenging times."*

However, a fourth theme emerged from the data where participants concluded their reflections with a superficial interpretation of cultural knowledge, thereby minimising cultural differences (Bennett, 1993). The minimisation of difference involves recognising superficial cultural differences in, for example, language, weather, traditions, etc., while also emphasising human similarity and adhering to universal values. For example, a participant concluded from her transnational exchange with Turkish partners: *"We are all almost the same age; therefore, our thoughts and ideas are similar. So, we didn't find obstacles in communicating together."* Another student concluded: *"I wasn't very comfortable before with new people, especially from different places, because I didn't know how to talk to them or what to talk about. This virtual exchange did it, it opened me to learning about others' cultures and I discovered that we're not so different, only language and the weather since we don't belong to the same continent."*

The tendency of participants to minimise differences in culture in virtual contact or to simplify them to superficial elements like language and weather presents an evident obstacle to the educational efficacy of this method as claimed by Bennett (1993). The phenomenon often also known as "the illusion of commonality" (Ware & Kramsch, 2005, p.200) has been seen in several

contexts of international education, including study abroad experiences (Kinging, 2009). In virtual interaction, the necessity of consistent pedagogical guidance (O'Dowd et al., 2019) is emphasised during online interaction to enhance students' understanding of cultural differences that may drive shared everyday routines in both cultures.

Another issue from the data analysis was that virtual exchange helped participants rethink EFL learning. Many participants' online interactions and connections with their partners transformed EFL from an abstract, text-based academic activity to a communicative, social activity with individuals who cared about what they said. The event also gave many attendees their first opportunity to communicate in English outside of class. Their apparent success in communicating with overseas partners gave them confidence and motivation to study the foreign language.

One participant reflected: "*This VE is an opportunity to help me practise speaking English and expand my vocabulary. This will give me greater confidence while speaking to foreigners and in public and now I am ready to travel abroad because I know that people from other countries can understand my English.*" The quotation illustrates the impact of online collaborative learning on participants in a system where second/ foreign language education is still commonly taught with a strong emphasis on grammar. Another wrote: "*I learned a lot from this training; I practised my English and improved my speaking skills with others virtually, which I never did before*", reflecting that these participants study in a country with a limited international population and where English is rarely used as a common language.

The sixth issue uncovered within the dataset is the potential of VE in fostering participants' knowledge of the impact of interactional norms and communicative style on their effectiveness in

IC and collaborative settings. Frequently, this can be attributed to instances of communication failure and misinterpretations. Perceived breakdowns in communication or conflicts frequently drove students to reflect on their communicative and collaborative strategies and contemplate potential avenues for improvement in subsequent attempts. As an illustration, a participant reflected:

"When preparing the final project video, I had to search for pictures of Algerian food. It was hard because I found many pictures and only had to choose the perfect ones for the video. After a long search and selection, I sent them the photos, and it was hard to agree on the perfect pictures. To avoid conflicts and misunderstanding, we agreed that the photos that received the most significant number of votes would be selected and my partners agreed."

Another concluded: *"When there were disagreements, we solved them by letting each of us give his/her opinion first, then conclude and try to find an arrangement that would satisfy us all."*

Finally, one participant involved in creating an inclusive and welcoming learning environment for multinational students with his partners identified cultural differences in communicative style: *"The most important thing I have learned from participating in one of the online meetings is that I learned how to avoid offending each other due to cultural differences because each culture is specific with different beliefs and practices, as in Algeria, we don't have multinationals in English speciality and even at the university level, there's a minority, maybe in Turkey there are a lot. I developed how to communicate with people from diverse cultures by listening carefully and using clear and polite language to make myself clear."* Thus, this interaction

and telecollaboration allowed him/ her to develop his/ her critical thinking and cross-cultural communication skills.

The IDCB VE project explored a new emerging theme, the COVID-19 pandemic, which profoundly impacted the participants and the project. The study explored that the sudden outbreak of the virus had psychological effects on the participants, including increased stress and anxiety due to isolation and uncertainty about their health, lives, families, and studies. One claimed: *"I lived a difficult moment because of Covid-19, I didn't know what to do, many got the virus, no places in hospitals, death everywhere."* It also uncovered the challenges that arose from the sudden outbreak of the virus shift to online education, such as access to technology and reliable Internet. Participants' engagement in weekly activities and online meetings was altered and diminished compared to the start of the project. Another one reflected: *"My mobile phone was having a problem, I couldn't fix it because of the lockdown. I couldn't log from another one because I forgot my username and password, I logged automatic,"* reflecting the need for universities to apply more straightforward and accessible methods to solve participants' forgotten password resetting issues (Koran & Sarnou, 2022). Likewise, others suffered from the lack of sufficient Internet bandwidth, as reported by a participant: *"I don't have good Internet at home, taking part in Zoom meetings was impossible. I had to walk a long distance to connect from my relative home."* Consequently, impacting their ability to engage in an online environment (Zhong, 2020).

However, the study advanced internationalisation strategies and proved the role of VEs in fostering international collaboration and cultural exchange at a time when physical mobility was restricted. Indeed, all participants reported having never left their respective countries and never connected virtually with internationals. The IDCB VE opportunity has brought IaH at almost no

cost. It instead fostered a caring and collaborative climate where participants expressed empathy towards their peers; one reported, *"I can imagine how frustrating it must have been for Lina to experience PC problems during the pandemic when we've all become so reliant on technology for staying connected with loved ones. We all felt sad about her and offered to help. We're all navigating this together, and we wanted her to keep on till the end of the training."* Another shared this mood and reported his/ her experience: *"When I got the virus, it was nice to hear how my virtual peers' encouragement and messages on WhatsApp helped me through these hard times,"* which helped maintain the virtual connection and supported intercultural learning during times of global uncertainty that could have led to the postponement or cancellation of the VE project.

The fundamental factor in achieving desired learning outcomes is via providing tasks that foster negotiation and help attain predetermined objectives. According to participants' reflections, these tasks 'forced' them to collaborate rather than 'share knowledge'. Indeed, the course focus on Salmon's model, which is based on learning through experience, proved more effective than traditional lectures. Similarly, as Navaitienė et al. (2013) noted, participants engage better through all Salmon's five stages, which allow them to commit to the VE, fully participate in the intercultural experience, and learn through personal experience.

Hence, partakers became sensitive to the tone of speech, directness, and clarity when their partners reacted negatively, or they failed to communicate. The dataset contains multiple examples of successful communication, such as the proper use of emojis and the formulation of indirect questions that showed respect and politeness. The successful interaction was possible because of the netiquette rules the facilitator shared with all participants at the outset of the VE

project to ensure all communications adhered to a standard of effective communication, fostering a collaborative and respectful virtual environment as stressed by Koran and Sarnou (2022).

4.8. Quantitative Analysis Summary

In the IDCB VE project, 26 participants initially engaged, but only 19 completed both pre- and post-surveys, and all required tasks were included in the final analysis. Seven participants were excluded due to incomplete participation in various project activities.

Data collection occurred from March to September 2020, with an initial survey of 44 participants providing comprehensive demographic and baseline data. The participants' average age was 23.86, and they were predominantly from Abdelhamid Ibn Badis University Mostaganem and Istanbul University. The majority were female and Algerian.

The post-survey results of the IDCB VE project revealed significant improvements across various areas. The final sample, predominantly Algerian with a noticeable representation from Istanbul University, had an average age of approximately 22.05 years. Notable improvements were observed in self-esteem, enthusiasm for new opportunities, and engagement in new experiences. Moreover, there was a marked increase in comfort with intercultural interaction and confidence in English communication, demonstrating the project's positive impact on the participants' skills and attitudes.

Statistical analysis, specifically the Wilcoxon Signed Ranks Test, validated the effectiveness of the intervention. The test showed significant enhancements in self-esteem, intercultural communication, and comfort with diverse groups. These results highlight the project's success in boosting intercultural competence and communication skills among participants.

4.9. Qualitative Analysis Summary

The qualitative analysis of the IDCB VE project, derived from pre- and post-exchange surveys, online dialogues, and E-portfolios, revealed significant enhancements in participants' cultural understanding and English language skills through virtual exchanges. These exchanges enabled participants to gain a deeper insight into diverse cultures, challenging stereotypes and media misrepresentations. For example, a Turkish participant recognised the open-mindedness of Algerian partners, countering common negative stereotypes.

The VE broadened participants' perspectives, emphasising the importance of respecting cultural differences to promote global harmony. Discussions on gender roles deepened awareness of global issues and fostered empathy through shared interests and personal experiences, especially during the pandemic.

However, a challenge noted was the tendency among some participants to overlook more profound cultural distinctions, focusing instead on superficial similarities, which could reduce the educational effectiveness of the exchanges.

The project made EFL learning more communicative and dynamic, boosting participants' confidence in using English in real-world interactions. This shift improved their language skills and prepared them for effective communication in diverse settings.

Furthermore, the project enhanced participants' ability to handle intercultural communication challenges, improving their conflict resolution and critical thinking skills, thereby boosting their IC.

Overall, the IDCB VE project demonstrated the power of VEs to enrich cultural understanding and language proficiency while highlighting the need for more targeted strategies to maximise educational benefits and minimise cultural differences.

Summary

Chapter Four delved into a comprehensive analysis of the VE program's outcomes, drawing on a multifaceted approach that combined quantitative data from pre- and post-exchange surveys with qualitative insights derived from VE participants' e-portfolio reflections and the online facilitated dialogues.

The chapter presented the quantitative data obtained from the pre- and post-exchange surveys. These surveys were instrumental in assessing participants' pre-existing attitudes, knowledge, and skills before engaging in the VE program and measuring their transformative progress after the end of training. Quantitative findings revealed the program's significant impact on various dimensions, such as participants' cultural awareness, digital competences, communication skills, and global perspectives. Statistical analysis and data visualisation techniques illuminated the extent of these changes and offered a clear and objective view of the program's quantitative outcomes.

Complementing the quantitative findings, the chapter delved into the qualitative data derived from participants' e-portfolio reflections and the online facilitated dialogues. These qualitative sources provided rich narratives that offer nuanced insights into participants' intercultural experiences, personal growth, and evolving perspectives. Analysis of e-portfolios demonstrated how participants actively engaged with their experiences, charting their journey of

self-discovery, cultural awareness, and the development of critical competences, which demonstrate Salmon's e-tivities success in online intercultural exchanges. This aligns with Hockly (2014), who claims that the pedagogical approach and task design are more important in online environments than the specific technology used. The facilitated dialogues, on the other hand, unveiled the depth of intercultural interactions, showcasing the program's ability to foster meaningful cross-cultural exchanges and collaborative problem-solving skills.

Chapter Four comprehensively illustrated the VE program's impact by integrating quantitative and qualitative data. It offered a nuanced understanding of how participants' knowledge, skills, attitudes, and personal growth evolved throughout their participation.

This chapter highlights the key findings and lays the foundation for the discussion chapter, where the meaning of these findings will be interpreted and discussed.

Chapter Five: Discussion of Findings

In this pivotal chapter, we provide a comprehensive analysis of the study's findings, beginning with a brief overview and the objectives of the chapter. This chapter compares the results with existing literature to highlight alignment or contradictions and discusses the findings' theoretical and practical implications. Each research question is revisited and discussed to illustrate how the findings address these queries.

The chapter also acknowledges methodological limitations and their potential impact on the results, suggesting ways future research can address these issues. It concludes with recommendations for future studies, pinpointing areas that require further investigation and proposing methods for exploring these. Finally, the chapter wraps up with a summary of key discussion points and conclusive remarks on the significance of the research.

The research aims to evaluate the impact of virtual communities on intercultural communication and cooperation skills among EFL Master's students, and examine the benefits and challenges of integrating VE into university internationalisation. It also seeks to develop recommendations to overcome barriers to VE adoption. The research hypothesises that VE participation enhances intercultural skills but faces challenges like resources and faculty training and that implementing recommendations will address these issues and improve international learning experiences.

5.1. Methodology and Research Tools

By adopting the mixed methods approach, the researcher used data triangulation to enhance the robustness of the research findings. The data collected used various tools, including surveys, online facilitated dialogues and E-portfolios. It was also collected at different points in time,

specifically through pre-exchange and post-exchange surveys. This data varied in nature, encompassing both quantitative and qualitative elements. Combining and comparing these diverse data sources allows the researcher to cross-validate the results and better understand the IDCB VE impact.

The collected data was analysed using the SPSS to compare closed questions (mainly Likert-scale items) post-surveys in a single file. Each component was analysed to determine the impacts of VE, if any, on the participants' IC skills. Frequencies, mean, range, and standard deviation were calculated for the pre-survey scores with no missing data from the 44 participants, which provided baseline data.

Then, pre- and post-exchange survey scores were compared using the Wilcoxon Signed Ranks Test, a non-parametric test designed for comparing two related samples, matched samples, or repeated measurements on a single subject group. In the case of the IDCB VE project, it was used to determine whether there is a significant difference in participants' survey responses before and after the intervention.

The qualitative data stemming from pre- and post-survey open-ended questions, online facilitated dialogues and e-portfolio reflections were analysed using qualitative content analysis, where preliminary coding categories (or "codes") drawn on Saldanas' (2013) approach were first identified.

From 26 participants, who participated in the IDCB VE project, only the remaining 19 that took the pre-and post-surveys and completed all the required tasks formed the sample for the

analysis. The 07 participants who did not take the post-exchange survey, succeeded to get their Erasmus badge but were excluded from the analysis as they did not participate in all the seven OFDs, actively participated in Moodle weekly activities and did not send their reflections on e-portfolios.

5.2. Research Questions' Key Findings

The sections below present the key findings related to the research questions posed in the study. It delves into the results and their implications, shedding light on how the data gathered through the different methods answers the core questions that guided this VE research project.

5.2.1. Response to Research Question One (RQ1)

How do virtual communities in VE projects impact intercultural communication and cooperation among EFL students?

The question explores how the Algerian-Turkish VC within the IDCB VE project influence ICC among EFL students. It seeks to understand the impact of this online collaborative environment based on Salmon's five stage e-tivities model and e-portfolio reflections, on improving EFL students' ability to communicate across cultural boundaries and facilitating collaboration skills among students from different cultural backgrounds. The question is focused on identifying the broader educational and social impacts of participating in VE for EFL students.

The data collected from the pre-and post-exchange surveys, OFD, and E-portfolios reveal that the most important finding that can be drawn from this North African and Euro-Asian VC within the IDCB VE was that it was a powerful tool to promote the internationalisation of higher education, which has become a global strategic factor in HE (Knight & De Wit, 2018). More

importantly, Salmon's five-stage model created a supportive environment for learning; indeed, the well-structured e-tivities helped increase participants' motivation. As Ong and Quek (2023) note, this improves communication, encourage collaboration, and build a strong sense of community among peers.

Moreover, the data identified that VE fostered innovation and international learning in the university context by bringing together EFL Algerian and Turkish students from diverse specialties for three months and a half during the challenging time of the global pandemic, Covid-19. The IDCB community participants, demonstrated remarkable resilience and determination, came together, kept connected, and supported each other with acts of kindness, mutual aid, and solidarity to maintain hope and navigate the challenges as evidenced by Dooly (2019).

More importantly, IDCB VE promoted internationalisation at home by providing international learning opportunities within domestic environments supporting De Wit and Leak (2015) claim, and also offered an inclusive approach to global education for those who remained on campus because of travel restrictions (Cairns & França, 2022).

The quantitative and qualitative analysis of participants' responses to closed-and open-ended questions, OFD's interactions and E-portfolios' reflections reflected the development of their digital-pedagogical competence, as noted by Hauck, a skill deemed essential in preparing students for a digitalised global marketplace (2019). Further, the IDCB VE project reflected the virtual exchange's role in causing participants to experiment with new communication technologies and critically reflect on how these technologies can be used innovatively in HE settings as reported in their reflections: *"The use of Moodle, Padlet wall, WhatsApp, and Canva strengthened my ability and confidence to use digital technologies/ web platforms for*

communication and work. I feel more prepared to deal with the new technologies as I learnt to use them and solve the problems they might raise.”

Further, the study on EFL confidence and development demonstrated how virtual exchange contributes to students' ability to interact with and understand others. Remarkably, students also reported significant gains in using EFL. In this intercultural virtual interaction, the participants experienced for the first time using a foreign language (English) to communicate with speakers of other languages as noted: *“I learned a lot from this training; I practised my English with others virtually, which I never did before.”* Participants also considered regular video conferencing vital, allowing them to practice language successfully.

While VEs focus on the logistics of the exchanges and the pedagogical tasks that participants will work on together as noted by O'Dowd and Waire (2009). The data collected from the exchange surveys, OFD, and weekly e-tivities on Moodle provided valuable information on the importance of establishing good relationships, which supports Garrison's (2012) social presence concept. Participants noted that they felt like interacting with *'real people'*, by using communication tools they used regularly in their everyday lives, such as WhatsApp, to communicate with their partners and helped them establish virtual good relationships.

A participant reported, that thanks to videoconferencing via Zoom, *“this virtual exchange did it, it opened me to learning about others' cultures thanks to technology I could see and talk to them, they are real”*. So, s/he getting a better sense of who her/his partners were, as real people and not merely anonymous names and avatars on a computer screen.

Another noted ‘*I was excited and happy to meet new people from different cultures, and I remember the first time we tried to get to know each other; that was a moment of joy for me to know about where they come from, their cultural backgrounds, age and hobbies.*’

Another critical step that helped develop interaction and collaboration between the participants and their facilitator (the researcher), was the multimodal nature of the VE project that allowed integrating e-tivities, which allowed participants to get to know each other on a social level, enhanced engagement, and supported their progression from primary access to the advanced applications through reflecting by doing via Salmon's (2002) five-stage model for online learning that aligns with the experiential learning approach, and emphasises learning through reflection on doing by fostering. In fact, participants reported ‘*We interacted with each other mostly with video conferencing, which I think is the most useful as we see and hear each other from two different continents.*’

O'Dowd (2007), Hauck (2010) and (Fuchs et al., (2012) outline the specific skills needed for effective VE facilitation in the realm of telecollaboration, including multimodality, multiliteracy, intercultural communicative competence, task-design skills, and discourse facilitation Successful partnerships stem from having the opportunity to get to know each other and maintaining regular contact via Moodle or videoconferencing with the partners during the exchange itself. ‘*Padlet was a great choicel, it allows creativity and it's easy to use, I love it, I can post videos, photos, images and many others.*’, reported a participant.

The VE project, a technological tool for enhancing ICC and cooperation, has fostered mutual respect, empathy, and collaboration through the weekly online forums and Wikis on Moodle and Zoom sessions. Participants engaged in discussions about their respective cultures,

traditions, and societal norms, such as traditional cuisine “couscous” and customs like "Henna Night" celebrations. Algerian also discovered the significance of the "dervish", which they thought was a dance but discovered that it was a ritual part of a “Sufi religious ceremony”, have led to meaningful cross-cultural learning experiences, enriched their language skills and cultural understanding that were originally discussed by Helm (2018).

In conclusion, the Algerian-Turkish VC within the IDCB VE project has significantly influenced ICC among EFL students, showcasing its strong potential to promote HE internationalisation.

The project fostered international learning and innovation during a critical time of global disruption caused by the pandemic and provided an inclusive platform for cultural and linguistic exchange. The virtual mobility allowed participants to improve their English language skills, engage in meaningful cultural interactions, and develop crucial digital competences.

Finally, the findings collected from the various digital tools like Moodle, Padlet, WhatsApp, and Canvawere crucial in facilitating effective communication and collaboration. They underscore the transformative impact of VEs on fostering global education, enhancing mutual understanding, and preparing students for a diverse and digitalised global marketplace.

This is supported by Hauck and Satar (2018), who suggest that effective communication in VE involves multiple semiotic modes using visual, aural, and gestural cues. The digital tools used in VE provide multimodal forms of communication (text, video, images), enhancing the learning experience and catering to different learning styles.

5.2.2. Response to Research Question Two (RQ2)

What progress do EFL students at Abdelhamid Ibn Badis University make in their intercultural communication skills through participation in VE projects?

The investigation into research question two (02) delves into the progress made in IC proficiencies among EFL students at Abdelhamid Ibn Badis University. It analyses the impact of their participation on these skills, highlighting the transformative potential of such initiatives in fostering cross-cultural understanding and competence.

The data gathered from the pre-and post-exchange surveys, OFD and E-portfolios show that the participants claimed that they had invaluable opportunities to engage in authentic linguistic exchanges with peers from diverse cultural backgrounds. They learned about their partners' countries' cultural knowledge, beliefs, and attitudes. The exposure goes beyond conventional classroom settings, participants navigated real-life conversations, where Algerians and Turkish learned about one another's cultural practices such as traditional cuisine “*couscous*” and customs like “*Henna Night*” celebrations. Algerian also discovered the significance of the “*dervish*”, which they thought was a dance but discovered that it was a ritual part of a “*Sufi religious ceremony*” as emphasised by Byram (1997), Lewis and Kan, (2021).

Moreover, the IDCB VE fostered empathy, understanding, and a deeper appreciation for each other's cultural backgrounds. Through discussions and cultural exchanges, Algerian and Turkish EFL participants shared personal stories and experiences. For example, Algerian students talked about their habits and rituals during Ramadan, such as “*Suhoor and Iftar*” which gather families and friends who come together to break their fast with “dates, milk or water, and a variety of traditional Algerian dishes like “*chorba*” and “*burek*”. While Turkish students shared insights

into Turkish "*Şeker Bayramı*", in which neighbours and relatives offer sweets, candies and a little money to children who wish them a happy Bayram (*Eid El-Fitr*).

More importantly, participants appreciated the personalised, real-life interactions that enabled VE, which involved a deeper cultural understanding that transcends surface-level cultural facts. A Turkish partner reported "*I thought women's rights are not respected in Africa, but I was astonished to discover that education in Algeria is obligatory for both girls and boys and that women have the right to work, to vote and have the same salary as men.*"

Cultural critical awareness competence requires an advanced level of complexity to avoid simplistic or essentialist views of cultural groups (Kramsch, 1993). Enabled by videoconferencing, the VE helped them challenge stereotypes and develop a more nuanced understanding of diverse cultures, as echoed by Byram (1997).

Thus, the participants underwent a transformation process as they were exposed to new cultural perspectives and challenged to reflect critically on their own beliefs and assumptions (Mezirow, 2000 & Fleming, 2022).

Moreover, the constant practice on Moodle and regular discussion via Zoom about topics such as cultural traditions, personal experiences and current events contributed to improving their language proficiency in English, particularly in conversational skills and vocabulary related to intercultural communication as a participant mentioned: "*I practised my English and improved my speaking skills with others virtually, which I never did before.*". These interactions helped refine their speaking and listening skills, crucial in language proficiency that are best developed through practice (O'Dowd & Lewis, 2016).

As part of the IDCB VE project, Algerian and Turkish EFL students collaborate on a addressing a shared global issue such as Covid-19 pandemic. They created “flyers” in English and in their native languages to help their local communities. This experience encouraged them to develop a sense of global citizenship and responsibility. Many expressed empathy, understanding and solidarity with their partner: *“I can imagine how frustrating it must have been for Lina to experience PC problems during the pandemic when we've all become so reliant on technology for work, school, and staying connected with loved ones. We all felt sad about her and offered to help. We're all navigating this together, and we wanted her to keep on till the end of the training.”*

At the end of this VE project, Algerian EFL students collaborated with their Turkish peers on a joint video design using Canva. Aiming to enhance their cultural awareness and promote collaboration and teamwork. They collaborated to make a video of cultural, tourist, and historical landmarks about both countries.

By doing so, they learned about iconic sites like the “*Kasbah*” of Algiers in Algeria and the “*Hagia Sophia*” in Turkey, the different celebrations, languages, cuisine and pastry. This telecollaborative project enhanced their cultural awareness of each other's cultural heritage and fostered respect and appreciation for both nations' rich history and architecture. More importantly, it encouraged the development of soft skills such as adaptability, empathy, flexibility and leadership, this is clear in a partner stating that: *“Being flexible and open-minded is the key to avoiding conflicts and building good relationships because, after all, we are different, and we think differently even within the same group.”*

This virtual collaboration also promoted teamwork, problem-solving skills, and cross-cultural cooperation as they navigated conflicting ideas and approaches among the same Algerians

themselves or Turkish and Algerians Turkish, such as the choice of the music for the video, whether to feature Algerian "chaabi" or "Rai" or Turkish kanun and Guitar ‘‘Mağusa Limanı’’ music. They succeeded in reaching a consensus on various cultural elements to showcase, such as deciding between highlighting the Algerian festival of "Mawlid Ennnabawi" or "Yennayer" or the Turkish celebration of "Nevruz" and "Hıdırellez", selecting "couscous" and "tajine" from Algeria or "kebab" and "baklava" from Turkey, and choosing to display traditional Algerian "kaftans" or Turkish "fezes". Despite its difficulty, this collaboration helped them learn to integrate diverse cultural symbols in a harmonious presentation that respected and celebrated both heritages and assessed IC skills' development.

Furthermore, participants' use of various platforms, such as Moodle, Wikis, and Canva for collaborative writing, Zoom for synchronous dialogues, e-portfolios as reflective tools and WhatsApp for quick messaging reflect their adaptability and the promotion of their digital literacy.

In their reflective E-portfolios, Zoom meetings, and more importantly in their farewell messages on the Padlet wall, some Algerian and Turkish participants wished to keep in touch on WhatsApp and continue collaborating on academic projects after the project, forming thereby a community of practice.

However, some participants tended to minimise cultural differences, focusing instead on universal similarities such as: *"I wasn't very comfortable before with new people, especially from different places, because I didn't know how to talk to them or what to talk about. This virtual exchange did it, it opened me to learning about others' cultures and I discovered that we're not so different, only language and the weather since we don't belong to the same continent."* This

phenomenon, known as "the illusion of commonality," suggests a superficial understanding of cultural differences, which can undermine the educational efficacy of VE (Bennett, 1993).

In conclusion, in spite of oversimplifying differences, the IDCB VE initiative has bridged cultural gaps between Algerian and Turkish EFL students, cultivated a profound intercultural understanding and enhanced English linguistic proficiency.

Further, engaging in authentic dialogues and collaborative projects equipped participants with valuable intercultural communication skills and a more profound empathy towards diverse cultural perspectives. The e-tivities and Zoom meetings, ranging from shared culinary traditions to collaborative video projects, underscored the transformative power of virtual exchange in fostering global citizenship and digital literacy. The reflections captured in their E-portfolios and farewell messages via Padlet highlight a continued desire for intercultural engagement, implying this project's lasting impact on their personal and academic growth.

Vygotsky's social development theory supports and explains these findings, where social interaction plays a fundamental role in the development of cognition. VE guided by Mezirow's transformative learning theory, acts as a mediator for such interactions, enhancing learning through social engagement and cultural exchange.

This initiative met its educational objectives and laid a foundation for ongoing cultural exchange and cooperation, promising a future where such dialogues continue to enrich and enlighten most of those involved in the project.

5.2.3. Response to Research Question Three (RQ3)

What are the perceived benefits and challenges of VE integration into university internationalisation strategies?

VE is an educational approach that uses digital communication technologies to enable students and educators to engage in intercultural collaboration and learning with peers worldwide (O'Dowd & Lewis, 2016). VE is crucial for university internationalisation strategies as it offers a cost-effective and inclusive way to internationalise the curriculum and prepare students for a globalised workforce without physical travel (Beelen & Jones, 2015).

This analysis explores the benefits and challenges of integrating VE into university internationalisation strategies. By examining the advantages and obstacles encountered throughout the IDCB VE project, this study provides insights into how VE can enhance educational outcomes and identify factors that may hinder its successful implementation, helping educational stakeholders make informed decisions.

Through the IDCB, VE partners interacted directly with their international peers in a virtual environment, discussing cultural norms, traditions, and societal values without travelling physically. This direct interaction helps students develop ICs crucial in today's globalized world. For example, Partners shared personal stories and cultural practices with their peers, such as the Algerian tradition of "couscous" preparation during family gatherings. Meanwhile, a Turkish participant described the process and cultural importance of making Turkish "baklava", especially during religious festivals like "*Ramadan*" and "*Şeker Bayramı*", which illustrate an understanding and appreciation of diverse perspectives, thereby enhancing their intercultural communication skills.

Moreover, VE is a significantly more equitable and cost-effective alternative to traditional study abroad programs. Many participants supported VE within their academic communities by highlighting the lower costs compared to traditional study abroad programs, which require visas, travel tickets, housing, and other expenses, which align with De Wit claims (2011). Partners shared personal anecdotes about how VE allowed them to gain international exposure without the financial obligation of travelling. *"I was excited and happy to meet new people from different cultures without the need to travel. I remember the first time we tried to get to know each other; that was a moment of joy for me to know where they come from, their cultural backgrounds, age and hobbies,"* a participant stated, raising thereby, awareness about the inclusive nature of VE in providing international experiences to all even during great global challenges such as Covid-19 pandemic.

Further, participation in VE naturally requires using digital tools and platforms that enhance participants' digital literacy. As participants navigated various digital communication tools, such as Moodle functionalities for weekly tasks, Padlet wall for getting to know one another better and farewells, WhatsApp via instant messaging to keep informed, e-portfolios to reflect and document their progress, and Canva to design their tourist video, they developed a set of essential skills in digital information and collaboration technologies. These skills are increasingly necessary in academic and professional settings, making students more competent and competitive in the digital age.

The wish to keep in touch after the VE ends demonstrates how VE fostered long-term relationships and networks across borders besides building VCs. A participant advocated that: *"Rafik is one of the partners with whom I was communicating the most, and now we are friends;*

we always talk about the difference between our two towns, and sometimes we get to discuss our future dreams and world views."

However, due to various challenges, incorporating VE into university internationalisation strategies can be quite complex. Issues of access and quality such as a good connectivity and infrastructure are challenging for participants (Koran & Sarnou). A participant from a remote area in Algeria shared his experience of trying to participate in the IDCB VE Zoom meetings but facing constant interruptions due to unstable internet connectivity mainly during the pandemic. A Turkish participant reported having technical issues with her smartphone and could not fix it because of the COVID-19 lockdown. These obstacles could lead to frustration and a feeling of being disadvantaged compared to peers with better access to technology (Koran & Sarnou, 2022). More importantly, it could hinder participants' engagement and motivation.

Differences in cultural norms and communication styles could have led to misunderstandings in the IDCB VE project. For example, during the collaborative video design, an Algerian participant narrated an instance where his Turkish partner misinterpreted his direct communication style as being direct and aggressive, which could have led to tensions within the group, requiring the intervention of the facilitator, who clarified that each culture has its distinct nuances in communication style due to their unique cultural, historical, and linguistic factors. For instance, by recognising and adopting the knowledge of the Algerian or Turkish culture and their specific conventions, communicators create hybrid communication forms where they can more effectively convey their messages and better understand those of others. According to Gunthner (2007), the blend of communicative genres emphasising the complex relationship between

language (Arabic/ Turkish) and culture (Islamic and North African/ European and Asian) are vital to understanding and navigating IC.

Furthermore, resistance to change within HE institutions can seriously hinder the integration of VE into existing curricula. Many Algerian and Turkish participants involved in the VE program mentioned that their willingness to participate in this initiative was to get a virtual badge that certifies the acquisition of specific skills or completion of courses, which could not have been possible without Erasmus's partnership.

Overall, while VE offers significant educational benefits and enables university internationalization, it also requires careful implementation to address technological, cultural, and institutional barriers, especially due the pandemic and the general lockdown.

5.2.4. Response to Research Question Four (RQ4)

What recommendations can be made to overcome barriers to VE adoption at different levels and enhance learning opportunities?

VE, an innovative educational approach using digital communication technologies to connect students and educators across different geographical and cultural boundaries, facilitates collaborative learning and intercultural exchange.

It significantly enhances students' global competences, preparing them for a workforce that increasingly values digital literacy and cultural skills. This teaching approach democratises international education, making it more accessible and aligning with modern educational needs in an increasingly globalised world.

However, its adoption in Algerian universities faces several challenges that can hinder its effectiveness and reach. These challenges include technological barriers such as inadequate access to reliable internet and digital tools, cultural barriers that stem from misunderstandings and different communication styles, and institutional barriers like resistance to new teaching modalities and lack of formal recognition in curricula.

The response to research question four aims to provide targeted recommendations to overcome these barriers and suggest strategies that could significantly enhance the learning opportunities provided by VE.

Many participants faced technological barriers, such as unreliable internet access or a lack of digital tools, which inhibited their participation in the IDCB VE program.

Algerian universities could collaborate with local telecom companies to provide students with free-of-charge access to the Moodle platform, discounted data plans, and Wi-Fi hotspots, particularly in remote areas (Peiser, 2016; Koran & Sarnou, 2022).

Additionally, as suggested by Koran and Sarnou (2022), universities could enable underprivileged students to access technical devices, such as personal computers and modern learning mobile gadgetry, through financial aid, such as discounts and /or funding

Cultural differences can lead to misunderstandings in communication styles and may create resistance to the VE educational approach. To overcome resistance, Algerian universities might introduce faculty development programs that showcase the benefits of diverse teaching methods. They could also develop ICC modules within the curricula to empower learners to develop their

intercultural communication skills and foster a culture of positivity, which will benefit all parties for sustainable development.

Further, resistance to change within educational institutions often stems from a hierarchical structure that may undervalue the benefits of VE.

On the other hand, there is frequently a lack of formal recognition for the coursework and achievements obtained through VE, which can demotivate participants (Starke-Meyerring & Wilson, 2008; Olson & Olson, 2016).

The Algerian Ministry of Higher could develop robust e-learning policies at the institutional and national levels to recognise VE activities as credit-bearing parts of curricula, increasing their perceived value and integration (O'Dowd, 2013).

5.3. Discussion of Findings

The research study on VE within the IDCB project has generated a significant impact of VCs on enhancing IC and cooperation among EFL students. Based on Salmon's five-stage activities and reflective e-portfolios, the project facilitated a dynamic intercultural dialogue between Algerian and Turkish students, who improved their language skills and deepened their cultural understanding and empathy by exploring worldviews different from their own. Further, the participants' engagement proved crucial in expanding the students' perspectives and preparing them for a globalised workforce, highlighting the importance of virtual exchanges in the internationalisation of higher education.

A novel aspect of these findings lies in the resilience and adaptability demonstrated by students during the unprecedented challenges of the COVID-19 pandemic. The ability of VE to

maintain and even enhance educational and intercultural engagement without physical travel during a global crisis showcases its potential as a robust and flexible educational tool. Moreover, integrating diverse digital platforms like Moodle, Padlet, WhatsApp, e-portfolios and Canva into the training process supported this engagement and equipped students with vital digital skills.

These outcomes emphasise the transformative power of VE in creating inclusive and accessible international learning experiences, thereby offering significant implications for the future of global education.

5.3.1. Internationalisation at Home and Intercultural Communication Skills

The findings underscore the critical need for enhanced IC skills in today's globalised and interconnected world. Transnational initiatives like VE projects involving students studying at a foreign university while remaining in their home country provide invaluable opportunities for students to engage internationally from their local environments (McBurnie & Ziguras, 2011), enabling more university students to gain real-world international experience by facilitating virtual collaboration with peers from diverse cultures via a user-friendly and affordable method. These initiatives also align with the strategic goals of the 2021-2027 Erasmus+ program (European Commission 2021).

VE projects proved essential in maintaining internationalisation efforts, especially during global challenges like the COVID-19 pandemic. The findings support Knight and De Wit (2018), who emphasise the role of education in preparing students for global citizenship by enhancing their digital and intercultural competences. This line-up with the idea that universities are teaching students to become global citizens through an international approach to learning by developing an awareness of self (Rubin & Guth, 2015).

5.3.2. Enhancement of Intercultural Communicative Competence (ICC)

The results above, gained from the participants' asynchronous participation in the weekly tasks on Moodle and their Zoom meetings, were echoed and supported by the findings from the pre-and post-exchange surveys that reveal a substantial enhancement in various skills.

In fact, the IDCB VE project significantly enhanced ICC among participants from Algeria and Turkey, which aligns with O'Dowd's (2013) findings on VE's role in fostering linguistic skills and intercultural awareness through direct interaction. Participants reported increased confidence in using English and improved their ability to engage across cultural boundaries that reflects the dual impact of synchronous and asynchronous VE modalities in facilitating real-time and flexible communication (Hauck & Youngs, 2008; Lewis & Kan, 2021); supporting, likewise, the Community of Inquiry (CoI) framework's emphasis on meaningful educational experiences (Garrison et al., 2000) and the crucial role social presence plays in building trust and the feeling of being part of a learning community despite geographical distances, thereby enhancing their engagement and participation (Law, 2014).

Moreover, participants appreciated the personalised, real-life interactions enabled by VE, which helped them challenge stereotypes and develop a more nuanced understanding of diverse cultures. This finding echoes Belz (2002) and Kinginger (2003), who noted the value of online interactions in facilitating significant knowledge acquisition about distant peers, who often provide first-hand exposure to their cultures.

These outcomes validate experiential learning theories (Kolb, 1984), particularly relevant in the VE context as reported by researchers like Grau and Turula (2019), suggesting that integrating VE into language curricula can prepare students more effectively for global communication and encourage policymakers to foster intercultural literacy in educational systems.

5.3.3. Role of Digital Technologies in VE

The study also highlights the crucial role of digital tools like Moodle, Padlet, WhatsApp, e-portfolios and Canva in facilitating communication and collaboration within the VE framework. This finding is consistent with Hauck's (2019) research, which suggests that digital tools create immersive learning environments that mimic real-world interactions. Indeed, integrating these technologies enhanced students' language skills besides their digital literacy, a skill essential in preparing students for a digitalised global marketplace (Hauck, 2019). They also fostered interactions that bridge linguistic and cultural divides, as Dooly (2019), Helm, and Van Der Velden (2019) claimed.

Thus, these results emphasise the need for educational practices that use diverse digital platforms to cater to various learning styles and enhance student engagement and outcomes.

5.3.4. Impact on Diverse Cultural Backgrounds

Participants from Algeria and Turkey, with their rich cultural heritages influenced by Arab, Berber, Mediterranean, African, Middle Eastern, Balkan, and Caucasian elements, found themselves in a multicultural setting. This was particularly transformative as the VE platform

allowed them to express and share diverse cultural expressions, such as traditions, cuisine, arts, history, and music.

Additionally, the cultural exchange enriched the VE experience and democratised the benefits of internationalisation that emphasises the uniqueness of each culture and supported broader global understanding (Crowther et al., 2000).

However, the Algerian-Turkish interactions do not inherently guarantee in-depth intercultural communication or integration among the various cultural groups (Jackson, 2014).

5.3.5. Challenges of Commonality and Difference

The IDCB VE experience also highlighted the delicate balance between celebrating commonalities and respecting cultural differences, an aspect critical to Bennett's Developmental Model of Intercultural Sensitivity (DMIS) (1993). This project showed that while participants began to find universal themes and common ground, it was essential not to oversimplify or minimize cultural differences, an issue highlighted by Barna (1997) and Ilie (2019).

Therefore, the educational framework should carefully navigate Bennett's (1993) stages to deepen true intercultural understanding rather than foster an illusion of similarity, which could potentially lead to misunderstandings and misinterpretations (Ilie, 2019).

5.3.6. Inclusivity and Accessibility of VE

Further, VE has proven to be a cost-effective and inclusive alternative to traditional study abroad programs, especially significant during the COVID-19 pandemic. It has allowed students

to gain international experience without leaving their home countries, democratising international education and making it accessible to a broader student demographic, as scholars like O'Dowd (2013), Wang (2016), Bax (2003) and Koran and Sarnou (2022) emphasised.

The findings also echo Beelen and Jones' (2015) perspective on VE's role in making international education more accessible and suggest that VE can be a viable option for expanding international programs even in financially restrictive times, such like the Covid-19 pandemic.

5.3.7. Sustainability and Resilience of VE During Crises

Lastly, VE's adaptability in providing continuous international learning opportunities during disruptions like the Covid-19 pandemic highlights its potential as a resilient educational model. This result is particularly relevant to Knight and De Wit's (2018) research, which discusses internationalisation as a global strategic factor in the resilience of HE models in global challenges.

VE's ability to maintain educational continuity in times of uncertainty could serve as a model for educational strategies to emulate in the future. O'Dowd (2013), Koran and Sarnou (2022) supported institutional and policy adjustments to integrate virtual technologies in educational systems to enhance resilience and sustainability.

5.3.8. Challenges and Digital Literacy

Despite its successes, the IDCB multimodal VE project faced technological, cultural, and institutional challenges. Inadequate access to reliable internet and digital tools, the fuel of any online learning and VE initiative as emphasised by scholars like O'Dowd (2013), Wang (2016), and Bax (2003), greatly influenced the participants' ability to engage with the project, where only

19 of 25 participants remained till the end of the project, mainly in times of Internet overuse due to the pandemic as echoed by Koran and Sarnou (2022).

Moreover, cultural misunderstanding due to differences in cultural practices, principles, and beliefs posed communication challenges, as interpretations are deeplyrooted in one's cultural perspective, which underscores as Žegarac (2007) suggested the need for increased cognitive work from the facilitators and the importance of recognising and valuing the distinctiveness of each culture emphasised by Ilie (2019).

Another critical challenge the IDCB VE project faced is the lack of formal recognition for the coursework and achievements obtained through VE. This issue could have significantly impacted participants' motivation and the project's overall success. Yet, the Erasmus virtual badges that recognise activity completion, skills acquisition and academic achievement (Anderson & Staub, 2015) provided Algerian and Turkish participants with motivation, status recognition and evidence of achievement (Gibson et al., 2013) that can be transferred to professional networks and job applications (O'Brien, 2019) were crucial in the project achievement.

Indeed, besides their motivational role in online environments, they also introduced a gamification element to the IDCB VE, highlight participants' accomplishments and facilitated connections to new learning opportunities (MacKinnon, 2021) when displayed online.

5.4. Limitations

While robust, using the mixed methods sequential explanatory design revealed several challenges. The two-phase process to align the statistical data on IC improvements with qualitative insights into personal experiences and perceptions was complex, leading to extended research

durations and increased timelines. In the case of the IDCB VE project, it took one year to collect the data, mainly the qualitative one, and another year to analyse it.

In addition, in qualitative research, researcher bias is a concern. Not using computer-assisted data analysis software like NVivo, which manages large volumes of qualitative data and supports the identification of genuine patterns and themes manual methods might miss, for managing qualitative data could have increased the risk of subjectivity and inconsistency in interpreting the data.

The study's findings were based on a relatively small sample size, 19 participants, which may not be generalizable to other settings or populations. The unique context of IC among EFL Algerian students at Abdelhamid Ibn Badis University and their partners from Turkey may not reflect broader trends or experiences in different educational or cultural environments.

Additionally, the participants' engagement levels varied mainly due to the Covid-19 pandemic potentially that might have affected participants' ability to engage with the project, with some being more active than others, which could have biased the perceived effectiveness of the VE project. Moreover, both Algerian and Turkish participants faced technological challenges, such as inconsistent internet access and inadequate digital tools, which could have hindered their full participation and engagement during the study period.

Given these limitations, the IDCB VE project's results should be considered indicative rather than definitive. The effectiveness and challenges documented reflect specific conditions that may not be applicable universally. Readers should apply these findings cautiously, keeping the study's context and the characteristics of the sample in mind.

Summary

The IDCB VE project proved effective in enhancing ICCskills and cooperation among EFL students by using virtual platforms that connected Algerian and Turkish participants. This initiative was pivotal in fostering international learning and innovation during the COVID-19 pandemic by maintaining educational continuity and international connections without physical travel. Participants improved their English proficiency and digital literacy, gained confidence in intercultural interactions through user-friendly digital tools like Moodle, Padlet, WhatsApp, e-portfolio and Canva.

The project also demonstrated the value of VE in democratising international education, providing a cost-effective alternative to traditional study abroad programs during Covid-19 travel restrictions. However, it faced challenges such as addressing technical and technological issues in virtual learning environments.

Overall, the IDCB VE project highlighted the potential of VCs to enhance global education and ICs, crucial for navigating today's globalised world.

Chapter Six: Conclusion

In chapter conclusion, all the data analysed and discussed in the practical parts of the research study is recapitulated to confirm or nullify the suggested hypotheses mentioned in the current study. Based on the findings, some suggestions and recommendations for further studies have been provided. This enquiry opens other doors to investigate since the research process is endless, especially in ICC and new technologies.

6.1. Summary of the Findings

The current study aimed to enhance IC skills and cooperation among EFL students through the IDCB VE project by connecting Algerian and Turkish participants via digital platforms like Moodle, Padlet, WhatsApp, e-portfolio and Canva.

The findings confirm and validate the first three hypotheses, which proposed that participation in VE projects significantly enhances EFL students' IC and cooperation skills and shows measurable improvement in IC abilities. However, their integration into university internationalisation faces significant challenges, including resource allocation, technological infrastructure, and faculty training, despite its potential benefits. First, participation in VE projects helps EFL students improve their IC and cooperation skills. Second, the surveys' data measured students' IC and cooperation skills; improvements in IC skills were observed after analysing and comparing the changes in these metrics before and after participating in the the IDCB VE project. Lastly, the assessment of barriers, like resources, technology, and faculty training via the pre-and post-surveys, facilitated dialogues, and reflective e-portfolios show evidence of the obstacles faced to integrate VEs into university programs. Meanwhile, these results highlight the positive impact

of VE projects and the existence of some obstacles that need to be addressed for broader implementation.

However, the fourth hypothesis that suggests addressing barriers like policy revisions, technological upgrades, and faculty development programs would improve VE adoption and enhance international learning was partially validated because while many recommendations address technological and cultural barriers, challenges like institutional resistance and formal recognition of VE in curricula may require more than policy revisions or faculty programs. Institutional change is complex and might need profound systemic reform, which was not captured in the present study. Therefore, while the solutions provided are effective, their impact on large-scale and lasting change remains uncertain, which make the validation of the last hypothesis partial.

6.2. Contributions

The IDCB VE project has made significant contributions and successfully filled several critical gaps in the field of IC and the development of ICC through VEs, particularly within the context of Algerian higher education.

The IDCB VE project addressed the significant underrepresentation and minimal research on the impact of VCs on ICC development in Algeria, a region rarely covered in existing literature or research has not been disseminated. By focusing on Algerian Language and Communication Master's students in an EFL setting, the project provided new insights into the effective use of VE in previously marginalised areas. This research has expanded the geographical scope of VE studies, demonstrating its potential in diverse cultural and geographical landscapes beyond the traditional contexts of North America and Europe.

More importantly, Salmon's five-stage model, on which the training was built, managed to prioritise participants' comfort and motivation and foster their IC skills learning and development; demonstrating that the success of VEs depend more on a well-structured learning design than on the technology employed. Additionally, e-portfolios, as reflective tools and evidence of ICC growth, played a crucial role in helping the participants show their progress, receive feedback, and develop self-awareness. They also allowed the researcher to assess the participants' progress.

Moreover, while existing research often highlights the lack of empirical studies on the pedagogical uses of e-learning platforms like Moodle, Padlet, WhatsApp, Zoom and e-portfolio in developing ICC. the IDCB VE project employed them and systematically evaluated their effectiveness. This approach provided concrete data and findings that contribute to the body of knowledge on the educational impacts of VE.

Further, the project addressed the requirement for adequate technological infrastructure and professional training for VE implementation. The insights gained are important for educational institutions that wish to integrate VE but may lack the necessary resources or knowledge on how to do it effectively.

Furthermore, snowball sampling emerged as a highly effective and innovative recruitment method for international participants in VE projects. The use of trusted networks and digital platforms allowed geographic and cultural diversity, while also addressing recruitment challenges and enhancing the quality of intercultural interactions, making snowball sampling a valuable contribution to the field of global education. Additionally, it adds value to the literature on participant recruitment methods, particularly in studies involving cross-cultural and international engagement.

The adoption of a mixed-methods approach has enriched the predominantly qualitative research landscape on VE. This methodological diversity enhances the generalisability of the findings and offers a minor understanding of the impacts of VE on IC skills development across the Algerian-Turkish cultural settings.

Additionally, by implementing a VE project and reporting the challenges met, the study provides a realistic view of what teachers and institutions can expect when adopting similar initiatives. These practical insights are invaluable for educators and policymakers aiming to implement VE in their curricula, helping them to anticipate and mitigate potential barriers.

Finally, the IDCB VE project provided targeted recommendations to overcome identified barriers in VE implementation which could serve as a practical guide for educators and institutions and help them navigate the complexities of integrating VE into university internationalisation efforts to enhance the reach and effectiveness of such programs.

Overall, the IDCB VE project enriches theoretical understandings and offers practical solutions for educators and policymakers to foster ICs inclusively and effectively. It promotes the adoption of VEs in previously neglected regions, thereby expanding international education and enhancing global intercultural dialogue. These contributions significantly deepen our understanding of how VEs can strategically support IC skills and university internationalisation, especially in emerging educational settings.

Thus, the study fills critical gaps in the existing literature and establishes a solid foundation for future research and practical applications in IC and VE implementation.

6.3. Limitations

While the IDCB VE project pioneered integrating a grassroots, multimodal virtual exchange into the curriculum for ICC development in the Algerian context, several limitations influenced its outcomes and generalisability.

The study was conducted with a relatively small group from specific cultural backgrounds (15 Algerian and 11 Turkish), which may not represent broader demographic and cultural variations; limiting thereby the applicability of the results to other settings or populations. A larger sample would provide detailed insights and understanding about how different population segments might be affected by the variables under study. Besides, participants were only from Algeria and Turkey, which might not reflect the broader outcomes of VE in other cultural or educational settings.

Additionally, some participants faced challenges related to weak internet bandwidth and limited digital tools. This technological disparity could have influenced their engagement and learning outcomes highlighting the need for more equitable access to digital resources to ensure all participants can benefit from the IDCB VE project. As well as the global pandemic that could have possibly affected the implementation of the VE project and influenced participants' engagement and interaction. Indeed, the shift to online learning during the pandemic may have also affected the VE's outcomes, making it difficult to separate its effects from the effects of the pandemic on education.

Furthermore, the IDCB VE was initially planned for a short duration, one month and a half, and implemented over an extended period of three months due to the pandemic outbreak and uncertainty. This relatively short period might have required more time for participants to develop and fully demonstrate changes in intercultural competence. Longer-term projects could provide more insights into the sustained impacts of VE on students.

Equally important, the lack of a control group within the mixed methods sequential explanatory design of students who did not participate in the VE made it challenging to attribute changes in ICC and other skills directly to the IDCB VE project. Future studies could use control groups to isolate VE effects better from other variables. Similarly, voluntary participation in the IDCB VE might mean that those who accepted to participate were already more open to intercultural experiences or had higher initial competence levels. This selection bias could have influenced the outcomes and the perceived effectiveness of the VE.

Further, the project faced difficulties in effectively measuring IC skills development due to the complex nature of intercultural competence and the challenges associated with assessing such soft skills, especially in a virtual setting and the use of e-portfolios subjective nature that may affect the data collected accuracy. Along with the risk of bias by the non-use of software for qualitative analysis and inconsistent coding, these limitations could have reduced and limited the depth of the analysis, thus impacting the quality and efficiency of research outcomes.

Addressing these limitations in future research could improve the design and implementation of VE projects and contribute thereby to more effective educational practices in the field of intercultural communication.

6.4. Recommendations for Future Research

Based on the findings and the gaps filled by the IDCB VE project, several recommendations for future research can be proposed to continue advancing the field of VEs and ICC in educational settings.

Future research could explore the implementation and impact of VE in other underrepresented regions and across various disciplines to understand how different cultural and academic contexts influence the effectiveness of VE for developing ICC.

Comparative research between institutions implementing VE and those not could highlight the benefits and challenges of VE integration into higher education curricula, including comparative studies of technological platforms and pedagogical approaches to identify best practices.

Moreover, conducting longitudinal studies into VE long-term effects could provide insights on students' IC skills, professional development, and future career paths to understand the sustained impact of such educational practices. Equally important, studies could focus on innovative assessment methods in VE that are fair and equitable across diverse student populations to enhance understanding of how to measure IC skills effectively and to mitigate the subjective nature of e-portfolios.

Additionally, further research could focus on integrating emerging technologies in VE, such as virtual reality (VR) or augmented reality (AR), and their impact on immersive learning experiences, along with research on the influence of policy frameworks and institutional support

on the success of VE programs, such as exploring how policies can be shaped to promote inclusivity and accessibility in VE.

Moreover, future studies could also explore the socio-economic, political, cultural, and psychological barriers that prevent or discourage students and faculty from participating in VE to help develop strategies to overcome these barriers. Specifically, the research could analyse the benefits and challenges faced by non-mobile students to enhance the inclusivity of international education.

These recommendations aim to build on the current research findings and address remaining questions and challenges to contribute to a more effective VE implementation in educational contexts.

Summary

The conclusion chapter summarises the IDCB VE project effectiveness in fostering intercultural communication skills among EFL Language and Communication Master students from Algeria and multidisciplinary students from Turkey.

Furthermore, it details how the project improved English language proficiency and digital literacy and significantly enhanced students' intercultural communication skills. Moreover, the use of digital tools like Moodle, Padlet, WhatsApp, and Canva demonstrated how these virtual platforms can bridge cultural gaps and promote international learning, mainly during global disruptions like the COVID-19 pandemic.

Additionally, this chapter outlines how the study contributes to existing practices in the field of intercultural communication by demonstrating the practical applications of VE in

educational settings. However, it also acknowledges limitations such as sample size and technological disparities, which suggest areas for future research to expand and build upon these findings. Consequently, recommendations include diversifying participant groups and employing advanced data analysis tools to deepen insights into the impact of VEs on global education.

Conclusively, the IDCB VE project exemplifies how virtual communities can be used to internationalise HE and prepare students for a globalised world.

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Appendix A

Memorandum of Understanding

Erasmus+ Virtual Exchange Memorandum of Understanding

Transnational Erasmus+ Virtual Exchange Project

Between

Name of organization Djilali Bounaama Khemis-Miliana University, Algeria.

Address Route de Theniat El Had, 44225, Khemis Miliana, Algeria

Hereafter referred to as "partner institution"

and

UNICollaboration – La Asociación Internacional de Telecolaboración e Intercambio Virtual,
Universidad de León,
Facultad de Filosofía y Letras
Campus de la Vegazana 24071
León, Spain

Hereafter referred to as "Erasmus+ Virtual Exchange consortium member"

Collectively referred to as "the parties"

It has been agreed as follows:

Article 1 – Subject

The purpose of this agreement is to define cooperative arrangements between the parties related to the implementation of a Transnational Erasmus+ Virtual Exchange Project (or TEP) as implemented within the framework of the Erasmus+ Virtual Exchange project.

Erasmus+ Virtual Exchange is part of the Erasmus+ programme, providing an accessible, ground-- breaking way for young people to engage in intercultural learning. Working with Youth Organisations and Universities, the project is open to any young person aged 18--30 residing in Europe and the Southern Mediterranean.

Through a range of activities, Erasmus+ Virtual Exchange aims to expand the reach and scope of the Erasmus+ programme through Virtual Exchanges, which are technology--enabled people--to--people dialogues sustained over a period of time.

Erasmus+ Virtual Exchange offers a safe online community to participate in facilitated discussions, increasing intercultural awareness and building 21st Century skills through Virtual Exchange. The project encourages and promotes intercultural dialogue, employability, and citizenship, strengthening the youth dimension of the EU neighbourhood policy.

This flagship programme is established under a contract with the Education, Audiovisual and Culture Executive Agency, ("the contracting authority"), acting

financed by the Erasmus+ Programme



www.europa.eu/youth/erasmusvirtual

under powers delegated by the European Commission, and it is implemented by a consortium composed of Search for Common Ground, Anna Lindh Foundation, UNIMED, Sharing Perspectives Foundation, with the collaboration of their subcontractors Soliya, UNICollaboration, Kiron Open Higher Education, and Migration Matters.

Within the Erasmus+ Virtual Exchange project UNICollaboration is tasked to work with university professors and staff to integrate virtual exchange into their existing activities or develop new virtual exchange projects with partners they already collaborate with to support meaningful interactions between participants. It is in this context that the Erasmus+ Virtual Exchange consortium member collaborates with the partner institution to implement the Transnational Erasmus+ Virtual Exchange Project (TEP).

Article 2 – Duration

This agreement will enter into force at the signature of all parties. It will end after the implementation of the obligations detailed in the following Article 4 and will end on December 31st 2020.

Article 3 – Objectives of the project

The objectives of the collaboration between the parties on the implementation of virtual exchange are to:

1. Enhance the education process by facilitating the virtual exchange of the students and professional development of staff
2. Promote online, intercultural exchange and support mutual cooperation between participants of the Transnational Erasmus+ Virtual Exchange (TEP)

Article 4 – Roles and responsibilities

The partner institution of the project will:

1. Implement the TEP in close cooperation with the Erasmus+ Virtual Exchange consortium member in accordance with the project proposal approved by Erasmus+ Virtual Exchange consortium member
2. Collaborate with the Erasmus+ Virtual Exchange consortium member to guarantee participant registration, and completion of pre-- and post--exchange surveys on the Erasmus+ Virtual Exchange portal.
3. Provide the Erasmus+ Virtual Exchange consortium member with a brief report on the TEP upon completion.

The Erasmus+ Virtual Exchange consortium member will:

1. Provide mentoring and assistance during TEP implementation.
2. Offer technical assistance in terms of allowing TEP coordinators to use the UNICollaboration Moodle space and Zoom space, where necessary.
3. Provide an Erasmus+ Virtual Exchange Facilitator to work with TEP coordinators and facilitate the online discussions, where necessary.
4. Monitor and evaluate the programme through student registration, pre--exchange and post--exchange surveys and, where possible, interviews.
5. Issue badges to students who successfully complete the TEP.

Article 5 – Data Protection

The Erasmus+ Virtual Exchange Privacy Statement can be found at the following link:

https://europa.eu/youth/erasmusvirtual/erasmus--virtual--exchange--privacy--statement_en

The partner institution of the project will:

1. Ensure all processing operations of personal data as part of this project are in accordance with the EU legislation which is applicable to the Education, Audiovisual and Culture Executive Agency, currently Regulation (EC) No 45/2001 of the

- European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data.
2. Process any personal data as part of this project only on behalf of the Erasmus+ Virtual Exchange consortium member and in compliance with the instructions of the latter.
 3. Process personal data only where it is necessary for the performance of the project and in particular not to use personal data in non-- production environments.
 4. Grant personnel access to the data to the extent strictly necessary for the performance, management and monitoring of the project.
 5. Adopt appropriate technical and organisational security measures giving due regard to the risks inherent in the processing and to the nature of the personal data concerned in order to:
 - a. Prevent any unauthorised person from gaining access to computer systems processing personal data, and especially: (i) unauthorised reading, copying, alteration or removal of storage media;; (ii) unauthorised data inputting, as well as any unauthorised disclosure, alteration or erasure of stored personal data;;(iii) unauthorised use of data--processing systems by means of data transmission facilities;;
 - b. Ensure that authorised users of a data--processing system can access only the personal data to which their access right refers;;
 - c. Record which personal data have been communicated, when and to whom;;
 - d. Ensure that, during communication of personal data and transport of storage media, the data cannot be read, copied or erased without authorization.
 6. Without prejudice to an appropriate risk management and mitigation actions by the partner institution, the latter shall notify to the Erasmus+ Virtual Exchange consortium member all personal data breaches relating to personal data for which it acts as Data Processor under this contract no later than 48 hours after the detection of the personal data breach. This notification shall include the date and time of the incident and detection of incident, circumstances of the personal data breach (e.g. loss, theft, copying), nature and content of the personal data concerned, technical and organisational measures applied (or to be applied) by the contractor to the affected personal data and the relevant use of other contractors (where applicable). After the evaluation of the personal data breach by the Education, Audiovisual and Culture Executive Agency (EACEA), the partner institution undertakes to follow the instructions of the EACEA.

Article 6 -- Eligibility Criteria

The partner institution and the Erasmus+ Virtual Exchange consortium member will make sure that participants fall within the Erasmus+ Virtual Exchange eligibility criteria. In particular, they will take measures to ensure that there are no participants below the age of 18.

Article 7 – Intellectual Property

The European Union and the Education, Audiovisual and Culture Executive Agency acquire irrevocably worldwide ownership of the results of the Erasmus+ Virtual Exchange project.

The European Union and Education, Audiovisual and Culture Executive Agency will not acquire ownership of pre--existing rights and materials. The partner institution will license to the European Union and the Education, Audiovisual and Culture Executive Agency, the limited rights to use the existing content for the following modes of exploitation, and only for the duration of the service contract Erasmus+ Virtual Exchanges 2017--3620 and its renewals between the EACEA and its four contractors (potentially until end 2020):

1. making available to the authorised staff of the European Union and the Education, Audiovisual and Culture Executive Agency, for reading purposes only;;
2. making available to the persons and entities working for the Education, Audiovisual and Culture Executive Agency or cooperating with it, including contractors, and the subcontractors whether legal or natural persons, for reading purposes only;;
3. communicating to the public about the course offered in the scope of this agreement on the European Youth Portal.

Article 8 – Financial provisions

All the services detailed in Article 4 will be offered at no cost for either party within the framework of the Erasmus+ Virtual Exchange project. The project is implemented under a contract with the EACEA financed by the European Union's budget.

Name:
Sarah Patricia Guth

Name:
El-Hadj AILAM

Organisation:
UNICollaboration

University:
Djilali Bounaama Khemis-Miliana

Function:
President

Function:
Rector

Signature:

Sarah Guth

Signature:

[Handwritten signature]

Date: **Feb 2, 2020**

Date:

Appendix B

Participant Information Sheet for the "IDCB" Virtual Exchange Project

University of Abdelhamid Ibn Badis, Department of English

Title of Study: "Developing Intercultural Communication Skills in Virtual Communities."

Researcher(s) Contact Details: Aziza KORAN, Department of English, University of Djilali Bounaama Khemis Miliana.

Principal Researcher Contact Details: a.koran@univ-dbkm.dz

1. Invitation to Participate: You are invited to participate in a research project examining the potential of Virtual Exchange (VE) projects to enhance intercultural communication skills. Participation is voluntary, and choosing not to take part will not disadvantage you in any way. Please read this information carefully and contact us if you need more clarification.

2. Purpose of the Project: This research study explores how VE project participation can develop intercultural communication abilities among university students.

3. Why Have You Been Chosen? You have been selected as a potential participant because you are a student in the English Department at Mostaganem University, studying English Language and Communication.

4. Participation Details: Participation involves scheduling a VE with Turkish students from different cultural backgrounds, completing pre- and post-exchange surveys, participating in the Moodle weekly tasks, and OFD. The total commitment expected will be approximately 3-4 hours weekly over the semester.

5. Voluntary Participation: Your participation is entirely voluntary. You may withdraw from the study at any point without any penalty. Should you choose to cancel, you can decide what happens to your data up to that point.

6. Benefits and Risks: While there are no immediate personal benefits or known risks, the findings are hoped to provide insights into the effectiveness of virtual exchanges in developing intercultural competencies.

7. Confidentiality: Your participation will remain confidential, and all personal information will be stored according to data protection regulations. Results will only be reported in aggregate form, and no individual participant will be identifiable.

8. Further Information and Research Results: Upon completion, you will receive a summary of the project findings. The results will also be disseminated through academic publications and presentations.

9. Agreement to Participate: By signing this form, you confirm that you have read the information provided, had the opportunity to ask questions, and agree to participate in this research project under the conditions outlined. **Signature:** _____ **Date:** _____

Appendix C

Pre- and Post-Exchange Surveys

1. Write your code
2. What's the name of your institution?
3. What's your gender?
4. What's your nationality?
5. In which country are you currently living?
6. The questions below should all be on a 5-point Likert scale: (1 = Strongly Disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly Agree)
 - a. I have high self-esteem
 - b. I frequently find myself looking for new opportunities to grow as a person (e.g., information, people, resources).
 - c. Everywhere I go, I am out looking for new things or experiences.
 - d. I find it easy to talk with people from different cultures.
 - e. I can express my ideas clearly when interacting with people from different cultures.
 - f. I believe that strong relationships between youth in Europe and Southern Mediterranean countries are possible.
7. Indicate how "Cold" or "Warm" you feel towards people with a different ethnic background from your own (from 0-10) Very Cold/ Very Warm/ Unfavorable Favorable
8. Indicate how "Cold" or "Warm" you feel towards people with a different religious background from your own (from 0 to 10)
9. I feel confident communicating in English/French/Arabic (language of exchange) (1 = Strongly Disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly Agree)

Pre only

10. Have you spent an extended period of time (3+ months) abroad or participated in a physical exchange programme?
11. If you replied yes, please briefly describe your experience.
12. What do you expect to learn from this Erasmus + VE?
13. Please share any other comments you have below:

Post-exchange only

10. How would you describe what you have learnt about people from other cultures in this Virtual Exchange?

1 = very negative 2.= negative 3. = Neither negative nor positive 4. = positive 5. = very positive

b.1 = very similar to my previously held beliefs 2= similar to my previously held beliefs 3= somewhat similar to my previously held beliefs 4=different to my previously held beliefs 5 = very different to my previously held beliefs.

11. Please indicate how much you agree or disagree with the following statements.

(1 = Strongly Disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly Agree)

- a. I built positive/meaningful relationships by participating in this Virtual Exchange.
- b. I have challenged media misrepresentation of other groups since participating in this Virtual Exchange.
- c. I shared information about what I was learning with my friends and/or other people in my community about my experience in this Virtual Exchange.
- d. I am interested in having further opportunities to engage in Virtual Exchange.
- e. Participating in this Virtual Exchange increased my interest in taking part in an educational programme abroad.

12. Participating in this Virtual Exchange improved:

- a. skills to communicate or work in a culturally diverse setting
- b. ability to listen actively
- c. critical thinking skills
- d. digital competences
- e. team-work and collaborative problem-solving skills
- f. English and/or foreign language skills.
- g. Other...

13. Participating in this Virtual Exchange improved:

- a. my knowledge and/or interest in global events
- b. my knowledge about the relationship between and across different societies.

14. How would you rate your satisfaction with this Virtual Exchange?

1. Very low 2. Low 3. Neither High nor Low 4. High 5. Very High

15. How likely would you recommend this Virtual Exchange to a friend or colleague?

0. Not at all likely 10. Very Likely

Open-ended questions:

16. What was the best thing about this Virtual Exchange?

17. How could this Virtual Exchange be improved?

18. What is the most important thing(s) that you learned through your participation in this Virtual Exchange?

19. Please list the topics you enjoyed discussing with your group the most. Please explain.

20. How would you describe what you have learnt about people from other cultures in this Virtual Exchange?

Appendix D

Student E-Portfolio Thematic Sections

Sections	Themes
Section 1: Introduction and E-portfolio Overview	It introduced the participants to the IDCB VE e-portfolio objectives, informing them that, besides the training objectives of improving intercultural communication skills, such as becoming more aware of cultural differences and similarities and learning to use digital technologies effectively and safely, the e-portfolio would serve as a collection of materials and interactions evidencing their learning, progress, and efforts, along with reflections on these experiences. In addition, the e-portfolio was designed to help them collect and organise significant experiences from their online interactions and set their learning objectives for the project.
Section 2: E-portfolio Guidelines and Objectives	The participants were given guidelines to help them complete the portfolio. They were asked to store it safely for regular updates and discuss language use with their teacher or facilitator. They were also asked to set their learning objectives before the VE began. Each week, participants needed to add examples of their online interactions and creations, writing commentaries and reflections on these examples. At the end of the Virtual Exchange, they had to review and evaluate their learning objectives.
Section 3: Virtual Intercultural Partner(s)	Participants were asked to write about their VE partner(s) and how they organised their exchange, discuss the frequency and tools used for communication (e.g., email, Zoom, WhatsApp, Moodle), and identify which tools worked best and why. They also needed to provide details about their partners' backgrounds, describe them by including quotes from their partners' messages, and reflect on what they learned from these interactions.
Section 4: Intercultural Values and Attitudes	Participants were informed that participating in a VE develops an interest in learning about diverse beliefs, values, and worldviews. They are encouraged to demonstrate respect for people regardless of cultural, religious, or political backgrounds and to show empathy toward others' emotions and needs. Participants were asked to provide examples of their significant online interactions highlighting these developments, reflecting on why these experiences were meaningful and what they learned from them.
Section 5: Linguistic, Communicative, and Plurilingual Skills	This section informed the participants that the IDCB VE would help them improve their ability to communicate effectively with people from different cultural backgrounds. Thus, they were asked to provide examples of how they noticed different expressions of politeness, mediated linguistically, and recognized various communicative conventions by including illustrations from their interactions and reflections on how these experiences enhanced their understanding and communication skills.
Section 6: Cooperation and Conflict-Resolution Skills	Participating in a virtual exchange enhances collaboration on tasks and resolving conflicts peacefully. Therefore, in this section, IDCB VE participants must provide examples of building consensus, supporting different viewpoints, encouraging active listening during conflicts, and being sensitive to others' emotional stress. These interactions are crucial for developing cooperation and conflict-resolution skills, and participants should reflect on their importance and the lessons learned.
Section 7: Participants' Critical Digital Communication Skills	As VE enhances participants' digital communication skills alongside cultural awareness, participants were encouraged to demonstrate their online presence, voice development, aid to others, connection-building, and challenge management. Participants should critically engage with various communication channels, assessing their strengths, weaknesses, and influence on perceptions. Additionally, they should narrate spontaneous or active activities, reflecting on their significance; illustrations could range from

screenshots to forum contributions, encouraging participants to describe, reflect upon, and reassess their experiences for future improvements.

Section 8: Looking Back

Reflecting on this project, participants were requested to consider the most critical lessons learned, any changes in their perspectives on collaborating with people from different cultural backgrounds, and any shifts in their views on their own society and culture. They should also reflect on their use of online technologies for communication and collaboration and think about what they would do differently in a future virtual exchange. Finally, participants were asked to give their opinion about of e-tivities they liked most and/or less, more interactive/ less interactive, satisfied/ non-satisfied about the e-moderator role and suggest ways to improve the project.

Appendix E

Mini-Online Survey

Participant Information:

1. Name (Optional):
2. Event/Program Date:

Overall Experience:

1. How would you rate your overall experience?

(Excellent - Good - Average - Poor - Very Poor)

Technology Used:

1. How effective was the technology used during the program? (Very Effective - Effective - Neutral - Ineffective - Very Ineffective)
2. Did you encounter any technical issues? (Yes - No)

- If yes, please specify:

Quality of Facilitation:

1. How would you rate the quality of facilitation? (Excellent - Good - Average - Poor - Very Poor)
2. Was the facilitator effective in managing the session? (Yes - No)

- Additional comments:

Overall Satisfaction:

1. How satisfied are you with the topic discussed? (Very Satisfied - Satisfied - Neutral - Dissatisfied - Very Dissatisfied)

Recommendations for Improvement:

1. Please provide any suggestions for improving future sessions:

Additional Comments:

1. Any other comments:

Appendix F

Observation Grid for Online Training Using Moodle

Stage 1: Access and Motivation (Getting Started)

Criteria for Assessment: Participants' initial engagement, motivation, and comfort in the online learning environment.

Participant information :

- Participant ID/ Name :
- Date of observation :
- Stage of online learning : 'Access and motivation-Getting started, socialisation, Information exchange, knowledge construction)

Observation Criteria	Level of engagement	N° of answers
Technical proficiency	Limited Proficiency: Struggles with basic technical aspects of the online platform (e.g., accessing course materials, navigating Moodle).	
	Moderate Proficiency: Demonstrates basic ability to navigate the platform but may need occasional assistance.	
	High Proficiency: Comfortably uses the online platform, easily accessing resources and interacting.	
Engagement with Materials	Limited Engagement: Skips or briefly interacts with orientation materials provided.	
	Moderate Engagement: Engages with orientation materials to some extent, grasping fundamental features of the online course.	
	High Engagement: Actively explores orientation materials, understanding how to navigate the course effectively.	
Introduction and Icebreaker Participation	Minimal Participation: Does not engage in introductory discussions or icebreaker activities.	
	Basic Participation: Provides a brief introduction with limited personal information.	

	<p>Meaningful Participation: Engages in comprehensive introductions, sharing personal interests and expectations.</p>
Motivation	<p>Low Motivation: Low enthusiasm for the course or intercultural communication skill development.</p>
	<p>Developing Motivation: Expresses interest in developing intercultural skills, though goals may not be well-defined.</p>
	<p>High Motivation: Demonstrates strong motivation and sets clear goals for intercultural communication skill improvement.</p>
Time and Resource Management	<p>Time Management Challenges: Struggles to allocate time for the course due to personal or logistical reasons.</p>
	<p>Moderate Time Management: Allocates time for course activities, but occasional scheduling conflicts may arise.</p>
	<p>Effective Time Management: Demonstrates a proactive approach to time management, consistently participating in course activities.</p>
Awareness of Online Learning Expectations	<p>Limited Awareness: Exhibits confusion about online learning dynamics and expectations.</p>
	<p>Developing Awareness: Gains a basic understanding of online participation expectations.</p>
	<p>High Awareness: Demonstrates clear comprehension of online learning norms and actively engages in course activities.</p>
Interpersonal Comfort	<p>Limited Comfort: Appears hesitant or uncomfortable with initial interactions with peers and the online instructor.</p>
	<p>Developing Comfort: Becomes more at ease in online interactions, though some initial reservations persist.</p>
	<p>High Comfort: Quickly adapts to online communication, readily engaging in interactions and discussions.</p>