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EXPLORING HOW FACULTY MOTIVATIONS AND PROFESSIONAL DEVELOPMENT STRATEGIES INFLUENCE DIGITAL LITERACY PRACTICES IN A STUDY ABROAD PROGRAM IN ITALY: A CASE STUDY

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ABSTRACT

EXPLORING HOW FACULTY MOTIVATIONS AND PROFESSIONAL DEVELOPMENT STRATEGIES INFLUENCE DIGITAL LITERACY PRACTICES IN A STUDY ABROAD PROGRAM IN ITALY: A CASE STUDY

Paolo Bartolini

The purpose of this qualitative case study research was to explore the multifaceted motivations, perceptions and attitudes that influence digital literacy practices in a small group of study abroad faculty and how professional development can help inspire them to act to innovate their digital literacy practices within a study abroad context. The role of study abroad programs in the U.S. has grown significantly in recent decades. As the number of students participating in these programs continues to increase, so have questions about the role of digital literacy practices in foreign education. Digital literacy embodies a way of learning that focuses on solving real-world problems, awakening students to their democratic social responsibilities, and has transformative implications. Participants were drawn from faculty teaching in the Italian branch campus of a higher educational institution in the eastern United States. The data from interviews and observations were coded to generate themes to structure potential answers to the research questions. The findings of this research showed that faculty digital practices are influenced by four domains: the professional domain, the personal domain, the environmental domain, and the cultural domain. These domains are interrelated and can

shape the way faculty approach digital practices. The forces driving digital transformation affect both the environmental domain and cultural domain which consequently impact the professional and personal domains, forming a dynamic model where professional development is key to support faculty in approaching technology changes and in helping them succeed in integrating digital practices in their teaching models and strategies.

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and you can craft it as you wish. Always believe in yourself, be always curious to find unexplored paths, and strive for your dreams. With your commitment and ambition, they will come true sooner than later.

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CHAPTER 1

INTRODUCTION

In the 1990s literacy was not only studied as a set of skills in mental processing, but also as social and cultural practices. This was the result of the so-called sociocultural "turn" of contiguous disciplines, such as psychology, situated cognition, ethnography, cultural model theory, and sociolinguistics (Gee, 2010; Lankashear & Knobel, 2008). Researchers placed their studies in instant socio-cultural contexts as they concentrated their attention on intrastate and local literacy methods (Lam & Warriner, 2012). Multiliteracy studies focused on researching the global aspects of literacy methods in the so-called "translocal" organizations and multicultural communities (Blommaert, 2003; Luke, 2004). The global digital context emerged as a vital literacy environment from these studies.

For college students going abroad, poor digital literacy may limit language learning opportunities (Murray & Blyth, 2011), their capabilities to function in the overseas society (Brine et al., 2015) as well as their chances to engage deeply with local culture (Kinginger, 2011). Considering also that students are required to work independently in many ways to solve personal and academic problems during their studies abroad, Jarman-Walsh (2015) reaffirmed the need of developing information and communication technologies (ICT) skills that can support independent learning. This author also stressed out how learners can access resources and reinforce interactions within their new college community using multimedia and social networking programs. Similarly, Kinginger (2011) proposed the use of computer-mediated communication instruments to connect informally with colleagues in organizations overseas. This type of communication can provide a safe context and an opportunity for students to develop their foreign speaking identity. During this process,

learners can explore the language decisions, or the communicative standards used by local students.

In this context, it is critical that consideration to faculty learning be given well in advance and that technology-based professional development focus on helping the largest number of faculty as possible to improve their digital literacy practices. The key is to support educators to understand the crucial role of technology in opening the potential of learners. Students, in fact, do not automatically improve their learning process just going abroad (DeKeyser 2010) and faculty can play a central role in developing the students' critical understanding of the different barriers, limitations and ideologies that restrict their autonomy and motivations in the social context they experience while studying abroad (Ushioda, 2006).

Statement of the problem

According to Kinginger (2013a), "ready access to travel and to technology-enhanced social networking (e.g., Facebook or Skype) has changed the nature of study abroad to the point where today's experiences are fundamentally different from those of earlier eras" (p. 345). It is important that students are adequately prepared for studying abroad, and poor digital literacy practices may limit students' language learning incentives that enable them to benefit from the profound engagement with hosting culture and their ability to function in foreign society (Godwin-Jones, 2016). Italy represents the second largest destination for US study abroad students accounting for approximately 11% of the world total study abroad population in 2017/18, according to the 2019 Open Doors Report on International Education Exchange. This reflects the importance of Italy as one of the top players in study abroad education.

In order to make the most from the study abroad experience, it is important for study program educators to prepare their students appropriately, linguistically and culturally, and to provide opportunities for engagement and mechanisms for reflection and sharing (DeKeyser, 2010; Ushioda, 2006). In this process, mobile and networked technologies are expected to play an ever-increasing role (Godwin-Jones, 2016).

It is important for educational leaders to ensure that digital literacy practices are integrated into certain key areas of the institution's culture (United Nations Educational, Scientific and Cultural Organization, 2011). In particular, the purpose is to gain the necessary skills to plan and develop both digital literacy strategies and appropriate infrastructures as well as professional development. Furthermore, it is important to develop motivations, abilities and expertise needed to successfully implement a digital literacy strategy and execute it. Finally, it is key to increase the effectiveness of the digital literacy strategies and the delivery of professional, technical, and ethical provision to the academic and non-academic staff (Pettersson, 2018).

Studies on the effects of digital literacy practices, especially on college students' engagement, have been largely cited (Fredricks & McColskey, 2012; Harbaugh & Cavanagh, 2012; Noh, 2017). However, there is a deficiency in the literature in studying the motivations, perceptions and behaviors of faculty in relation to their digital literacy practices (Adam-Turner & Burnett, 2018; Georgina & Hosford, 2009; Hobbs & Coiro, 2019; Knobel & Kalman, 2016; Liu Blythe, et al., 2014). This pertains, in particular, to faculty teaching in a very diverse cultural environment that generally characterizes a study abroad programs. In this context, this study attempted to extend the findings from previous studies to analyze the different motivations, perceptions, and behaviors that

influence faculty digital literacy practices. At the same time, this research was intended to add to the practice of professional development as a key contributor to innovate in digital literacy.

Theoretical Framework

The New London Group's (1996) Multiliteracies theory led this research. This theory has expanded the idea and scope of literacy pedagogy to reflect upon the context of increasingly global and culturally diverse societies, and the plurality of circulating texts. Furthermore, within this theory, literacy pedagogy is intended to take account of the growing variety of text types associated with information and multimedia technologies. This involves awareness and competent management of modes of representation that are becoming more and more important in the communication environments; for example, visual images and their connections to the written word, visual design in desktop publishing, and visual and linguistic meaning interfaces in multimedia.

New technologies and fast-pace developments transform the way people, organizations and societies interact, learn, operate, and regulate (Meyers et al., 2013; The New London Group, 1996). The current socio-technical reality demands that respondents have the ability not only to use technological instruments, but also to understand the standards and procedures for suitable use. According to Meyers et al. (2013), being a digital literate entails cognitive power, security and privacy, creativity, ethics, and accountable use and reuse of digital media. A deficiency in digital literacy can increasingly inhibit an individual full potential of being a skilled student, an empowered worker, and a committed citizen.

Digital literacy is often regarded as a school-based skill, but it is introduced and developed in informal learning environments such as libraries, museums, social groups, internet affinity spaces and the home environment (Cope & Kalantzis, 2009). In response to the distinct ways in which our interconnected society participates in meaning-making and forms social interactions using distinct technologies, a multimodal approach to literacy pedagogy is required (Coiro et al., 2008; Cope & Kalantzis, 2009; Gee, 2010; Lankshear & Knobel, 2008; New London Group, 1996). Thus, writing an academic article, engaging in a social network debate, producing online fan fiction, playing video games or programming can all be considered as literacy practices (Fields, et al., 2014; Hull, et al., 2013; Padgett & Curwood, 2016; Thibaut, 2015).

Purpose of the Study

The purpose of this qualitative case study research is to explore the multifaceted motivations, perceptions and attitudes that influence the digital literacy practices in a small group of study abroad faculty; how professional development can help inspire them to act to innovate their digital literacy practices within a study abroad context; and, finally, how digital transformations affect their teaching approach. The concept of "multifaceted motivations" is defined based on its main components: (a) interest, (b) preference for challenge, (c) involvement, (d) self-efficacy, I competition, (f) recognition, (g) grades, (h) social interaction, and (i) work avoidance (Baker & Wigfield, 1999; Bandura, 1997; Wigfield & Guthrie, 1997).

Consistent with the theoretical framework, digital literacy is not just an assemblage of skills in technology. Instead, digital literacy is essentially an extension of literacy that requires access, analysis, evaluation and reflection and iterative practices that

foster the individual's understanding, intellectual growth, and learning. Considerations relative to socio-emotional skills, ethics, mind habits, skills and arrangements allow faculty and students to develop critical competencies in digital literacy (Hobbs, Ranieri, et al., 2017). In this context, it is valuable for the research on this field to build on prior research on digital literacy by extending further these studies to investigate the specific requirements needed to advance digital literacy practice skills and exploring the potential for improving teaching and learning.

This study was hypothesized to have positive effects on faculty. The findings were expected to add an in-depth insight on the motivations and perceptions underlying faculty digital literacy practices as well as the professional development approaches that can help improve digital literacies in global academic programs.

Research Questions

The main research question in this research is:

- What are the motivations, perceptions and interests that influence digital literacy practices for faculty engaged in a study abroad program in Italy?

Two related sub-questions are also addressed in this study:

- How do leadership approaches shape professional development programs that aim to improve faculty digital literacy practices in a study abroad context?
- How do digital transformations influence teaching strategies in a study abroad program?

Definitions of Terms

Digital Literacy: refers to the skills and confidence educators must have in order to use the technology to improve and transform institutional practices and enrich their own professional development and identity (Hall et al., 2014).

Digital Competences: are the set of knowledge, skills, attitudes (including skills, strategies, values and consciousness) needed when using Information and Communication Technologies (ICT) to conduct tasks, solve issues, interact, handle data, cooperate, generate and share content, and build understanding effectively, properly, critically, creatively, autonomously, flexibly, ethically (Ferrari, 2012).

Digital transformation: can be described as the "changes that the digital technology causes or influences in all aspects of human life" (Stolterman & Fors, 2004, p.689)

Digital practices: are technology-mediated learning practices. This can take the form of particular instruments and equipment or internet services and software packages (Ferrari, 2012).

Discourses: are "different ways in which we humans integrate language with non-language 'stuff', such as different ways of thinking, acting, interacting, valuing, feeling, believing, and using symbols, tools" (Gee, 1999, p. 13).

Faculty Professional Development: is used as both an extensive word that includes a wide variety of operations aimed at improving student learning and a less broad term that describes a purposeful effort to help educators and academics enhance their skills (Eble & McKeachie, 1985).

First Language (L1) learners: refers to the language used by those with whom, or by whom, an individual has brought up from infancy (Encyclopedia Britannica, n.d.).

Global Collaboration: "an effective global collaborative project is an educational project that flattens or joins classrooms and people from geographically dispersed places within a technology infrastructure built for a common curricular purpose. Interactions foster cultural understanding and global awareness in the process of learning" (Lindsay & Davis, 2013, p. 7).

Information and Communication Technology (ICT): is used to indicate the diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information (Tinio, 2003).

Instructional technology: is used to refer to "the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning" (Seels & Richey, 1994, p.1).

Leadership Approaches: to be effective, many leaders embraced one leadership theory, a combination of theory or their own theory about leadership (Rowitz, 2014).

Literacy practice: relates to the ways in which people use written language in their everyday lives (Edwards, 2012). These practices involve values, attitudes, feelings, and social relationships (Street, 1993).

Meaning-making: refers to what a student says when connecting the relationship between new information in the text with already-established ideas regarding the content (Palincsar & Brown, 1988).

Multiliteracies: a set of open ended and flexible multiple literacies required to function in diverse contexts and communities (The New London Group, 1996).

Professional identity: is defined as one's professional self-concept based on attributes, beliefs, values, motives, and experiences (Ibarra, 1999).

Study Abroad Program: is an education abroad enrollment opportunity designed to result in academic credits. Many abroad programs may be housed at the same location or center. Concurrently, an educational institution or an independent program provider may offer different programs at a location (The Forum on Education Abroad, 2011).

Technology-Enhanced Learning: relates to "technology-based learning and instructional systems through which students acquire skills or knowledge, usually with the help of teachers or facilitators, learning support tools, and technological resources" (Wang & Hannafin, 2005).

Summary

This chapter explored the issues related to the importance of technology in transforming the way people, organizations and societies interact, learn, operate, and regulate. In particular, the chapter focused on the importance for educational leaders to ensure that digital literacy practices are integrated into certain key areas of the institution's culture.

The following chapter will present a review of literature related to the evolution of the concept of digital literacy, the peculiarity of study abroad programs in Italy as well the implication of professional development for faculty digital literacies.

CHAPTER 2

REVIEW OF THE LITERATURE

Literacy Definition

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2019), literacy extends beyond the standard notion as a collection of abilities in reading, writing and counting; literacy is now seen as a mean of identifying, understanding, interpreting, creating and communicating in a progressively digital, text-based, information-rich and rapidly changing world. The Organisation for Economic Co-operation and Development (OECD, 2013) described literacy as the capacity to comprehend, assess, use and engage written texts in order to participate in society, attain its objectives and develop its expertise and potential. According to the European Declaration of the Right to Literacy (2016), literacy refers to the ability to read and write at a level where people can understand and use written communication effectively in all media (print or electronic), including digital literacy.

Although literacy is widely recognized as the capacity to read and write, its definition usually includes also the capacity to use cultural symbol systems to understand, compose and share thoughts, and experience information and meanings (Hobbs, 2016). In other words, literacy involves the capacity to decode text, engage in meaning-making through interpretation and composition. It also uses text in a functional manner to understand its specific forms, structures, and purposes. Finally, it critically evaluates texts by acknowledging how they represent the universe in a selective and incomplete form. Texts are recognized in this formulation as symbolic depictions in any of several types, including spoken and printed language, still and moving pictures, sound, and multimedia.

As Hobbs (2016) noted, literacy theories are infused with values because academics have accounted for the beneficial consequences of literacy for people and society. Hobbs (2016) also noted that literacy is a type of social power and, as such, was limited to a restricted group of powerful individuals for thousands of years, until the 19th century when political elites started to acknowledge the importance of literacy as a social value for all people only.

According to Caestle (1988), the alleged positive impact of literacy led to the belief that education should be mandatory for all, although upper class white males in urban environments were typically those who benefited from literacy. The concept that literacy is a form of social power, resonates also in the theory of cultural literacy conveyed by Hirsch (1987) who asserted that "to be truly literate, a person must be conversant with a specific body of knowledge known to educated people, or, more precisely Sociocultural conceptions, the cultural knowledge of the dominant society" (p. 16). According to Devine (1994) the importance of literacy in the United States is somehow controversial. This is because in a print-dependent culture, anyone who is unable to read and write is at a huge disadvantage in school, in the job market, and in social relationships. In other words, Devine (1994) asserted that in an extreme literate cultural context, personal growth and self-fulfillment of illiterate individuals may be severely restricted. As Gee (1990) argued, the functions of authority and willingness in social life are interrelated with reading, writing and language. For Graff (2010), the effect of literacy is not universal, autonomous and determinative, in fact, its "importance and influences depend on specific social and historical contexts, which, in effect, give literacy its meanings … literacy's impacts are mediated and restricted … its effects are social and

particular … literacy must be understood as one among a number of communication media and technologies" (p. 645).

Theoretical Framework

This research is grounded on different conceptual frameworks that focus on the interaction of digital literacy with pedagogy and faculty training paradigms.

Theories of literacy tie philosophical ideas about the role of symbols in culture with practical concerns about learning and teaching, as literacy is considered central to education and cultural participation (Hobbs, 2016). Interdisciplinary and comparative education research have informed theory and philosophy of literacy for more than 80 years. Indeed, theories of literacy represent the views of academics and thinkers in a variety of fields, including history, education, literature, psychology, philosophy, and communication.

The Multiliteracies Theory (Lankshear & Knobel, 2003; The New London Group, 1996) perspective led this research. According to Tracey & Morrow (2017), the Multiliteracies Theory can be outlined within the context of social learning amongst which, the most significant theories for this study are represented by the Socio-Cultural Theory (Bronfenbrenner, 1979; Moll, 1992, 1994) and Social Constructivism (Vygotsky, 1962, 1978). The perspective of social learning emphasizes the central role of social interaction in knowledge and learning development. The social learning viewpoint, when applied to the field of literacy, emphasizes the importance of social influences and social interaction for learning literacy (Tracey & Morrow, 2017). These theories share the common assumption that studying literacy is social in nature, although they focus on the

different aspects of that assumption (Bawden, 2008; Street, 2003; Tracey & Morrow, 2017).

Understanding literacies from the sociocultural perspective means that reading and writing can only be understood as socially, culturally, politically, economically, and historically important activities (Gee, 1996). According to Cope & Kalantzis (2000) the term *Multiliteracies* "describes two main arguments we might have with the emerging cultural, institutional, and global order. The first argument engages with the multiplicity of communications channels and media; the second with the increasing salience of cultural and linguistic diversity" (p. 5). Indeed, the Multiliteracies approach concentrates on two interrelated and important dimensions of meaning-making: multimodality and social diversity. The first point concerns the multiplicity and convergence of meaning-making types, where the textual is also related to the visual, the audio, the spatial, the behavioral, etc. The second argument concerns the realities of increasing local diversity and global connectivity as well as how, daily, we negotiate differences in our local communities and in a more and more interconnected working and community environment (Cope & Kalantzis, 2000)**.**

Conceptual Framework

Sharpe and Beetham's (2010) model of students' digital literacies indicated that the term "practices" includes learners making informed decisions about how to use technology and create flexible strategies to meet situational needs. The term "practices" requires both a critical consideration of the pedagogical value of the technology and an agency to implement that decision (Walker and Patel, 2018). Sharpe and Beetham's, 2010); a model portrayed the motivation for the development of digital literacy among

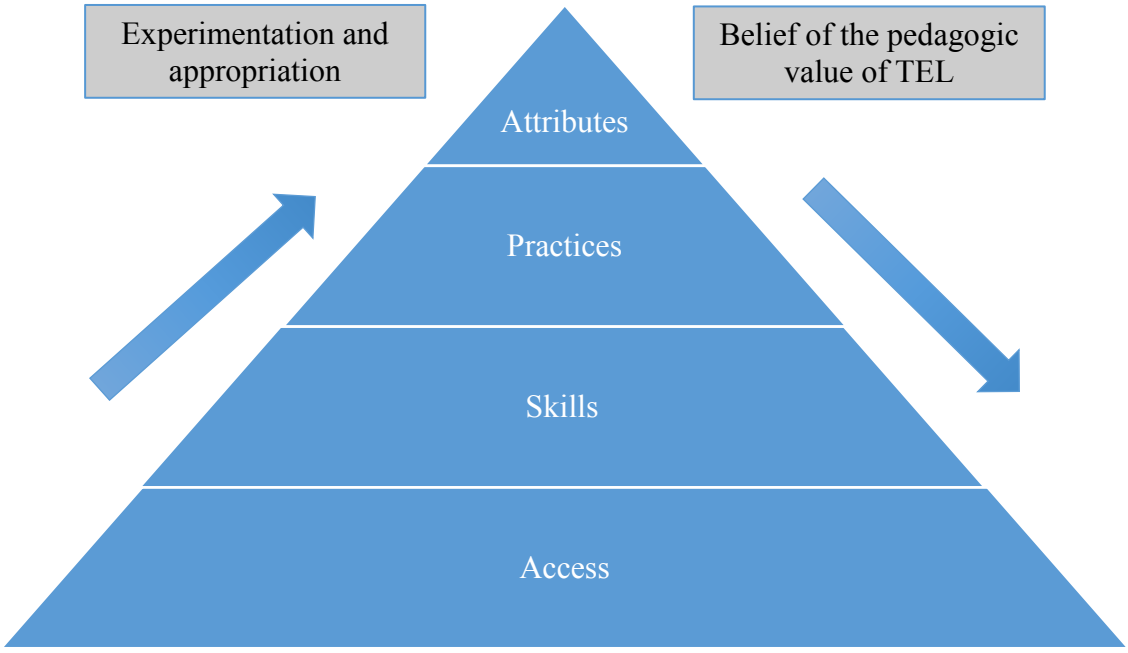
students and positioned digital literacy as social practices. This model differentiates between access, skills, practices and attributes and describes how they relate in a hierarchy (Figure 1). Access at the bottom of the pyramid reflects the most basic conditions for learners to use technology to support their learning; skills relate to the learners' application of technology to learning; practices are defined as learners who make informed choices about using technology on their own and with others; attributes apply to the learners' disposition and identity with respect to their learning. The left hand up arrow in Figure 1 illustrates how access can drive skill development, which in turn can lead to successful practices and identification with a positive digital learner's attributes. Similarly, the right-hand down arrow shows how a learners' attitude towards technology motivates the learning of new practices and the development of new skills and access.

Bennett (2014) explored how Sharpe and Beetham's (2010) model of students' digital literacies could apply to higher educational teachers. Bennett (2014) referred to this model as Digital Practitioner Framework (DPF). This model is based on the concept of the 'digital practitioner' developed by Ecclesfield, et al. (2012). This concept identifies faculty who are comfortable in using technology-enhanced learning (TEL) methods, who have a self-managed approach to implementation, who are willing to experiment and invest time in discovering the technologies and how to apply them to teaching and learning practices. Bennett (2014) found that it is the TEL attitudes, convictions and trust to drive the design of technology-based learning activities and the necessary investment in skill development and access search (Greener and Wakefield, 2015). In other words, Bennett (2014) found that faculty first concentrate on the level of pedagogic practice, exploring ways of teaching and learning, and then research through suitable technologies

to define their value in meeting this goal. This means that focusing on practices is more meaningful and motivating than focusing on skills (Walker and Patel, 2018). The DPF (Bennett, 2014; Sharpe & Beetham, 2010) is described in Figure 1.

Figure 1

Digital Practitioner Framework



In this model both students' and professors' digital literacies can be seen as a hierarchy of access, expertise, practices and attributes (Bennett, 2014). However, unlike Sharpe and Beetham's (2010) model of students' digital literacies, the DPF indicates that the faculty motivating factors for adopting TEL practices rely on their commitment to improve teaching and learning outcomes for their students rather than their desire to become a digital practitioner (Walker & Patel, 2018). At the top is the level of Attributes, which refers to the different facets of the professor's character that enable her to make use of technologies. The ways of working with technologies are incorporated and integrated into the ways of doing activities. Hence, this is not just a mere identification in a set of skills,

but it is a real integration with the individual's values and beliefs. At the "Practice" level, faculty adopt technology to meet pedagogical needs, not for their own benefit. At the "Skills" level, there is the faculty detailed knowledge of how technologies operate. At the Access level there is the faculty acknowledgement of the need to invest time in learning about new technologies, and the opportunities to find new methods of working.

In discussing how faculty use digital technologies, the concept of "mindsets" provided opportunities to explore why people use (or do not use) technologies in particular ways (Tour, 2015). Thinking of mindsets as "sets of assumptions, beliefs, values, and ways of doing things that orient us toward what we experience and incline us to understand and respond in some ways more than others" (Lankshear & Knobel, 2006, p. 31) can allow to evaluate what individuals valued in their experiences with digital technologies, and what assumptions drove them towards new digital literacy practices (Tour, 2015).

From Literacy to Multiliteracies

Earlier studies by Street (1995), with his critique of the autonomous model of literacy, and Gee (1990) helped reshape the field's thinking about reading, and also enlighten the reason why it was no longer suitable to think of reading as a process residing solely in one's head. Indeed, it is important to understand why the autonomous and the ideological models (two competing literacy models) have been instrumental in shaping literacy teaching as we know it today. The autonomous model, popular in the US classrooms, was a prevailing framework. This framework considered reading and writing as neutral processes primarily clarified by human mental and physiological processing variations (Unrau & Alvermann, 2013). This view assumed a universal set of reading and

writing skills to interpret and encode printed text. Its persistence was particularly noteworthy in light of Heath's (1983) work, which indicated that it is how children are socialized into various literacies that is important. For example, the different ways of using words, and whether these ways suit the school's approach to reading instruction. In his critique of the autonomous model, Street (1984, 1995) challenged the conjecture that reading and writing were neutral methods, creating the conditions for his theoretical model. Street's (1995) work connected the social aspect of language and literacy with contemporary educational practices. He described the autonomous model in this way:

> A great deal of the thinking about literacy…has assumed that literacy with a big "L" and single "y" [is] a single autonomous thing [with] consequences for personal and social development….One of the reasons for referring to this position as an autonomous model of literacy is that it represents itself as though it is not a position located ideologically at all, as though it is just natural. One of the reasons why I want to call the counter-position ideological is precisely in order to signal that we are not simply talking here about technical features of the written process or the oral process. What we are talking about are competing models and assumptions about reading and writing processes, which are always embedded in power relations. (pp. 132–133)

Social semiotic theory was also particularly relevant to the research conducted as part of the new literacies. According to Unrau and Alvermann (2013), semiosis is a process for meaning- making on the use of signs, which comprises both the observable signifier (for instance the color red) and the signified meaning (for example, danger). When literacy researchers refer generally to multimodal frameworks as theoretical

constructs, it is important to note that the theory behind those theoretical constructs is semiotic theory, more precisely social semiotic theory, according to which researchers view people as having action in shaping and using semiotic resources (Halliday, 1978; Hodge & Kress, 1988). It is clear, indeed, that multimodality is only the context in which a social semiotic theory is applied (Jewitt & Kress, 2003). According to Kress and van Leeuwen (1996), social semiotic theory is useful to explain how people play a central role in making-meanings, how they use different resources (signs, for example) to convey what they want to communicate to others through different modes (e.g., oral and written language, still and moving pictures, sound, movement, performance). This means that researchers and educators can discern what matters to the participants and students through the representations people make of the resources available to them (Jewitt & Kress, 2003). Discerning this kind of matter is particularly relevant when a dominant community's outlooks about both reading and reading instruction are challenged. Gee's (2012) synopsis on sociocultural approaches to language and literacy that came up in the last decade or two of the 20th century, offered an understanding of the relationship of the New Literacy Studies to social semiotic theory.

It is within the aforementioned conceptualizations of literacy, that approximately at the end of the 20th century, a group of researchers, so-called the New London Group, developed the concept of multiliteracies to describe the new kinds of skills readers needed to negotiate in the electronic environments (Doerr & Temple, 2016).

Handsfield (2016) defined multiliteracies as the emergence and change of methods and activities associated with the rapidly changing interaction and globalization technologies. This scholar also noted that "what counts as literacy should be broadened to

encompass multiple semiotic modes" (p. 87). This resonates Lankshear and Knobel (2003) when they contended that The New London Group shed light on how trends in literacy technology and media effects in the everyday lives of people come together to describe what academics have called "new times." For this reason, Lankshear and Knobel (2003) claimed that new times need to change the way teaching and learning are elaborated.

The New London Group published its paper on multiliteracies in 1996. Their research demonstrated the need for a multitude and convergent forms of communication. For example, within the context of a linguistically and culturally diverse world, language, still and moving images, voices, sounds, gestures, and movements have become increasingly more connected through new communication technologies (Lankshear & Knobel, 2006). The New London Group (1996) perspective was fundamentally focused on two main elements. First, it extended "the idea and scope of literacy pedagogy to account for the context of our culturally and linguistically diverse and increasingly globalized societies, for the multifarious cultures that interrelate and the plurality of texts that circulate" (p. 61); second, it accounted "for the burgeoning variety of text forms associated with information and multimedia technologies" (p. 61). Under this lens, society and learning are based on the belief that the human mind is embodied, located and social, which means that human knowledge is rooted in cultural, material and social contexts, with this latter profoundly shaping the changing nature of literacy (Leu, et al., 2004; The New London Group, 1996). Moreover, the New London Group argued that originally, human knowledge was formed as part of cooperative experiences with others of different abilities, backgrounds and viewpoints. According to this perspective, the

human knowledge is formed as a component of collective experiences with different abilities, backgrounds and viewpoints that are unified in a particular epistemic group, a community of learners, engaged in common practices based on a specific historically and socially constituted knowledge domain. For the New London Group, abstractions, generalities, and overt theories are drawn from this initial ground and must always be returned to it or to a re-contextualized version of it.

This overview of mind has driven to conceptualize pedagogy as a multifaceted combination of four elements: *Situated Practice*, *Overt Instruction*, *Critical Framing* and *Transformed Practice* (New London Group, 1996). The first element, Situated Practice, is based on the domain of learners designed and designing experiences. In the learning process, connecting the 'what' and the 'how' of literacy pedagogy on Situated Practices involves considering that there are critical differences in workplaces, civic places, and complex lifeworld. As a result, teaching and learning must include students' own perspectives and discourses that are influenced by their cultural and subcultural diversities, the different language contexts, and the practices associated with this diversity. The second element, Overt Instruction, allows students to shape an explicit metalanguage of Design for themselves. This is meant to help students develop a metalanguage that accounts for Design differences rather than telling or empowering students in relation to the grammar of one correct, standard, or powerful language practice. The third element, Critical Framing, concerns meanings to their purposes and social contexts. The fourth element, Transformed Practice, allows students to transfer and reproduce Designs of meaning from one context to another, like for instance redesigning

strategies of meaning in a way that they can be transferred from one cultural condition to another.

In his study on the New Literacies Studies (NLS), Gee (2015) argued that "literacy was something people did in the world and in society, not just inside their heads, and should be studied as such" (p. 35). So, under this lens literacy is characterized for its sociocultural implications rather than for its cognitive implications as in the previous traditional psychological approaches to literacy. Indeed, Gee (2015) maintained that:

> 'literacy' is plural: 'literacies.' There are many different social, historical, and cultural practices which incorporate literacy, so, too, there are many different 'literacies' (legal literacy, gamer literacy, country music literacy, academic literacy of many different types). People do not just read and write in general. They read and write specific sorts of 'texts' in specific ways. And these ways are determined by the values and practices of different social and cultural groups. (p. 36)

This concept of "literacies" is furthered by The New Literacies Studies (Coiro, et al., 2008; Knobel & Lankshear, 2014; Lankshear & Knobel, 2011; McVee et al., 2008). As Gee (2015) stated "The New Literacies Studies is about studying new types of literacy beyond print literacy, especially digital literacies and literacy practices embedded in popular culture" (p. 11). To provide and receive meaning, The New Literacies Studies envisioned a significant diversification of digital tools as technologies. The New Literacies Studies claimed that the consequences of these technologies are dictated by the political, economic, social and organizational patterns of various groups of people. These

activities include more than just digital tools, as they also include ways of behaving, communicating, valuing, and learning, as well as other forms of tools and technology.

The term multiliteracies has been described as representing more than "mere literacy" (Cope & Kalantzis, 2000, p. 5), which in traditional classroom instruction remains language and print centered. The notion of literacy with a "large ' L ' and a single ' y '" has lifted over time to make space for plural forms of literacies: multiliteracies. Moreover, concepts like situated literacies (Barton et al., 2000), digital literacies, and the New Literacy Studies (Gee, 1996; 2010; New London Group, 1996) have become increasingly dominant in the research literature, as having multimodal texts that are part and parcel of New Literacy Studies (Unrau & Alvermann, 2013). Importing, uploading, lowering, and dragging text and images from a limitless global information repository have different effects. It creates new ' textual ' production skills and multimodal forms that promote creativity, imagination, interdisciplinary interactive authorship, editing, reading and writing, and finally problem-based learning (Luke, 2000).

According to Meyers et al. (2013), new technologies and developments transform the way people, organizations and societies interact, learn, operate and regulate. Leu et al. (2004) evidenced that the major social forces that influence the changes to literacy are**:**

- the global economic competition within economies which is based on the effective use of information and communication
- the Internet as a powerful technology for information and communication

- the Government-wide public policy initiatives to promote higher standards of education including the use of the internet and other information and communication technologies.

Indeed, the current socio-technical reality demands that the respondents have the ability not only to use technological instruments, but also to understand the standards and procedures for suitable use. Meyers et al. (2013) also noted that being digitally literate in this context requires including problems of cognitive power, security, and privacy as well as creative, ethical, and accountable use and reuse of digital media. A deficiency in digital literacy can increasingly inhibit the individual's full potential of being a skilled student, an empowered worker, or a committed citizen. Therefore, the mere knowledge of how to use technology cannot be considered a "sufficient condition" to consider an individual as digitally literate. This is echoed by Burgess, Price, and Caverly (2012) who maintained that "one of the most important aspects of being digitally literate does not rely completely on the ability to use technology, but rather on how a person is able to discern and critically analyze content in digital form" (p. 15).

Digital Literacies: Definition and Conceptualization

Digital literacy is often regarded as a school-based skill, however it was introduced and developed in informal learning environments such as libraries, museums, social groups, internet affinity spaces and home. In response to the distinct ways in which our interconnected society participates in meaning-making and forms social interactions using distinct technologies, a multimodal approach to literacy pedagogy is needed (Cope & Kalantzis, 2000; Gee, 2010; Lankshear & Knobel, 2008; New London Group, 1996).

In this sense, *Multiliteracies* highlights the need to incorporate extracurricular literacy practices into the classroom.

Gilster (1997) was the first scholar to bring the idea of "digital literacy" to the world's attention in the late 1990s. He identified digital literacy in terms of education, acknowledging the basic, yet innovative, nature of the internet. He recognized that a digitally literate student is characterized by a specific collection of knowledge skills (e.g. assessment, search) and is capable to apply these skills to text and multimedia data found on the internet and situated in a structured educational context. It is clear, even in its earliest conceptualization, that being digitally literate exceeded the basic literacy skills of reading, writing, listening and speaking. As a matter of fact, users can now also create, work, upload, socialize, study, play, connect, interact, and learn through today's digital media and technologies. This indicates that digital literacy derives from a skill-based understanding of the concept and therefore relates to the practical use of technology and skills development (Gourlay et al., 2013; Joosten et al., 2012).

The initial concept of digital literacy given by Gilster (1997) was developed, modified, and extended to become increasingly central to social, civic and economic participation (Aabo, 2005). With the increasing expansion of technologies, a participatory culture has evolved to require the ability to communicate, develop, upload, connect and participate, well beyond Gilster's early vision of digital literacy. More recent scholarly studies (Chan et al., 2017; Mishra et al., 2017; Beetham & Sharpe, 2011) have defined digital literacy by pointing to the cognitive skills and competences; the practical access, skills and practices needed for a secure, agile adoption of a range of social, educational and professional technologies; the ability to understand and use knowledge in multiple

formats with an emphasis on critical thinking, rather than technology skills. The definition of digital literacy now ranges from simply being technologically fluent to the ability to apply data literacy skills, such as discovering, mining, organizing, handling, presenting and assessing information in virtual environments, to broader and more nuanced conceptual frameworks that include a wide range of skills, understandings, standards and practices (Meyers et al. 2013).

Digital literacy is a term used by several different academic and professional disciplines, often from different perspectives. A first perspective (Meyers et al., 2013) of digital literacy described it as a collection of distinct skills or attitudes conveyed by users of digital information systems, often in the research process. This *skills* perspective focused on user activities in the digital environment, where digital literacy could be measured by evaluating user success on standardized tests or heuristic behavioral evaluations (Meyers et al., 2013). A key attribute of the *skills* perspective was its measurement concern: if digital literacy is observable and measurable, institutions are able to determine the impact of educational programs on the skill level of the participants. A second perspective on digital literacy (Meyers et al., 2013) suggested the implementation of abstract mental models to digital content activities. In other words, this perspective framed digital literacy in terms of how well students adapt to cognitive constructs in educational and daily contexts. A third perspective (Meyers et al., 2013) recognized digital literacy as a dedication to a set of practices involving digital tools and media that are deeply integrated into educational and daily circumstances in a particular context or event. This perspective was closely related to the development of the 'multiliteracies' framework, where participation is key in developing digital literacies.

Thus, the way to inform and build capacity for young people is to find new ways of engaging in digital culture and to encourage new modes of learning. Informal contexts can build mechanisms for involvement and participation in digital tools and activities that lead to social learning and peer growth (Smith & Hull 2013).

As Meyers et al. (2013) noted, digital literacy researchers often focused not only on what digital literacy means, but also on the impact of non-digital literacy on individuals. Being digitally illiterate means not only the lack of skills, but also lack of understandings and approaches necessary to successfully manage the ever-changing digital environment. Concerns about the lack of digital access have raised concerns about being digitally illiterate. The increase in the capacity of new and emerging information including teaching, communication technologies and digital tools requires a dynamic and organic understanding of digital literacy. Therefore, the consolidated perception that sees schools as the only ones responsible to prepare students to be digitally literate citizens has now shifted to recognize accountable all kinds of formal and informal learning spaces (including home and the workplace). These learning spaces have to guarantee both the preparation and a persistent improvement of digital literacy skills for all different students. In this more comprehensive perspective, informal and formal digital literacy contexts are important components of an ecosystem of information. Under this lens, digital literacy is not strictly conceived around the competences acquired through school-based research tasks, as it entails an active participation in the new digital world. Meyers et al. (2013) argued that these ideas represent an expanded definition of digital literacy, which goes beyond conventional skills or knowledge concepts. These scholars proposed a broader understanding of a digitally literate person as a creative individual working

within a socio-technical network that provides opportunities for growth, sharing and learning. The context in which this type of digital literacy takes place more effectively is the informal environment where these individuals can convey themselves outside the limits and constraints of a curriculum and standards.

Greene et al. (2014) described digital literacy "as critically inclusive of searching, vetting and integrating information into the meaning-making process during online learning" (p. 56). These scholars believe that current interpretations of digital literacy do not adequately emphasize the critical cognitive and metacognitive processes required to learn from multiple content representations effectively. Indeed, Greene et al. (2014) advocated that digital literacy requires effective and self-regulated learning skills, where learners are active builders of knowledge. Moreover, digital literacy requires an epistemic cognition, which incorporates a variety of cognitive processes that direct and promote information acquisition, reification, and help create the conditions under which adaptive learning can take place.

Coiro and Hobbs (2017) conceptualized digital literacy in relation to the needs of experienced mid-career practitioners whose motivations for integrating electronic texts, resources and technology into their curriculum vary widely. The notional construct of digital literacy built by these researchers is based on decades of scholarship in education. Media and cultural studies have theorized learning as a process of inquiry and exploration in which meaning-making is an active process involving not only the form and content of messages, but also the affordances and limitations of the technologies used to produce them. Coiro and Hobbs (2017) envisaged literacy practices as situated cultural practices, using multimodality to activate multiple knowledge modes. They also recognize that

media and technology are a cultural environment and serve as the primary storyteller of culture. In this context, digital participation encourages personal and social reflection, self-reliance, collaboration. It also promotes literacy practice by reshaping the relationships between faculty and learners and between learners and their culture. Digital media has transformative implications for pedagogical practices that place learners and teachers at the center of an increasingly socially networked world and it facilitates learners to have choice and voice in ways that make student-driven learning a reality for all learners (Tuzel & Hobbs, 2017). In this perspective, digital literacy embodies a way of learning that focuses on solving real-world problems, awakening students to their democratic social responsibilities. In other words, a way of learning that uses knowledge and collegial discussion to recognize and address problems (in neighborhoods, communities, and in our planet) and that can help create a more equitable world (Coiro & Hobbs 2017).

As we have seen the concept of digital literacy has been described by the scholars in different ways. This concept embraces both fluency with digital texts and critical approach to digital texts, as well as an understanding of the contexts generating those texts. Some of these conceptualizations focused on explaining the complex ideas in digital media while others concentrated on the skills and tools required for using technology to approach information sources. These studies, although providing significant scholarly elements to help understand how digital literacy has been conceptualized, have not fully addressed how its practice is driven by faculty's motivations and interests, especially in a study abroad context.

Digital Literacy in the Classroom

Different researchers explored how digital literacy initiatives influenced classroom instructional strategies. Barone and Wright (2008) addressed the role of new literacy in the classroom and the advantages of using digital and media technology to support new literacies. In their article, these authors evidenced that new literacies need to be wisely weighed and planned in order to be effective and educational. There are three important elements, according to these authors, that are significant in the process of introducing new literacies into a classroom. Firstly, the effective use of software; secondly, the preparedness to adjust with the new literacies; thirdly, the consideration that new literacies are crucial to the classroom and for supporting equal opportunities for students.

Whereas Barone and Write (2008) mainly focused on the advantages using digital and media technology to support new literacies, Alvarez (2013) performed a qualitative study that involved a survey on the use of open educational resources (OERs) for 16 teachers and 128 university students. Before the program was launched, Alvarez found that no Web 2.0 tools were used in the University of Surrey's Dance Department. OERs were introduced to change old paper-based education. The introduction of OERs turned old paper-based learning experiences into experiences grounded in digital technologies that enabled students to become digital object producers and thus to serve as a bridge between educational and professional interests. Alvarez stressed the need to tackle digital literacy with a guidance on the use of technology for teachers and students. The use of new technology in educational settings, in fact, can influence the attitudes and behaviors

of students and teachers as they assume new roles related to the use of technology in academic settings.

Unlike Alvarez (2013), who mainly focused on how technology influences students and teachers' behaviors, Houck's (2016) study concentrated on the importance of balancing literacy with digital literacy as both of them are perceived as necessary for students to develop and gain knowledge. The use of digital texts in class has the advantage of increasing students' motivation and commitment, allowing versatility and choice, encouraging inquiry and application of strategy, and enhancing reading experience with proper scaffolding and support. While the implementation of a balanced approach has its advantages, Houck also addressed the complexity associated with applying this method in class, which is mainly connected to how to self-regulate and to embrace technology-implementation changes in the class.

This literature evidenced the advantages of digital literacy initiatives along with some of the hurdles associated with the use of technology in class. Additional research was needed to evaluate how these advantages and hurdles could affect study abroad faculty behaviors and interests in their digital literacy practices.

Digital literacy in higher education

In their study on higher education, Alexander et al. (2017) identified three different literacies with distinct standards, potential curriculum, and implications for educators, as summarized in Table 1.

Table 1

Literacies according to Alexander et al. (2017)

Universal Literacy	A familiarity with using basic digital tools such as office productivity software, image manipulation, cloud-based apps and content, and web content authoring tools.
Creative Literacy	It includes all aspects of universal literacy and adds more challenging technical skills that lead to the production of richer content, including video editing, audio creation and editing, animation, an understanding of computational device hardware, and programming along with digital citizenship and copyright knowledge.
Literacy Across Disciplines	Diffused throughout different classes in appropriate ways that are unique to each learning context, e.g., sociology courses can teach interpersonal actions online, such as the ethics and politics of social network interaction, while psychology and business classes can focus on computer-mediated human interaction.

These three levels of institutional implementation range from universal literacy (combining information literacy, critical engagement, and the student as a producer) to creative literacy (placing greater emphasis on digital creation, including more advanced skills such as audio / video editing, 3D printing, and animation) and, finally, to a

discipline-specific sense (in which learners focus on best suited skills). Alexander et al. (2017) argued that in an era in which automation boosts efficiency and machines take over traditionally laborious and tedious activities, human imagination cannot be replicated or replaced yet. In other words, the essence of learners as creators is rooted in successful digital literacy training. Although emphasis on the word *digital* underlines the growing role of technology in teaching and education, adaptability is essential to digital literacy. In this context, it is not sufficient to simply know how to use a variety of mobile devices, software and media creation resources that exist in higher education at a given time. Professor and students also need to be able to acclimate intuitively to new digital environments, develop habits that cultivate lifelong learning and continue to master new skills, due to the rapid technological development and its practical uses. Furthermore, students must make a critical assessment of their selection of digital tools, assess their contributions to digital space within their own geographical context and the potential extent of their work.

This literature provided a significant evidence of the role of higher education in shaping digital literacy practices as seen from the perspective of students' learning. Additional research was needed to explore how faculty digital practices were influenced by a significantly diversified digital environment that generally characterizes study abroad programs.

Approaches to Digital Literacy Practice

Some of the research in the field have evidenced the importance of considering digital literacy practices as part of the institution's culture. Jeffrey et al. (2011), focusing on digital information literacy, asserted that this involves a multifaceted approach to

learning. Digital information literacy is also connected to strategies for independent learning and lifelong learning which are all aspects that are believed to be prerequisites for information literacy and that can be achieved by making people think critically and by helping them build a framework for learning. Similar to Jeffrey et al. (2011), Hobbs and Coiro (2016) argued that the significance of digital literacy is rooted in the idea that intensive, purposeful, hands-on multimodal reading, critical analysis, reflection and media development can provide meaningful learning experiences for students and their teachers alike. This is the reason why, according to Hobbs and Coiro (2016), digital literacy practices should be incorporated into the current educational systems.

Although digital literacy skills can be activated out of school as part of informal interest-driving learning (Ito et al, 2013), Hobbs and Corio (2016) placed their vision of digital literacy in the context of formal education. Focusing on digital media, these authors argued that digital media is able to offer significant, disruptive consequences for pedagogical practices that place learners and teachers at the center of a growing networked social world (Aspen Institute, 2014; Hobbs & Corio, 2016). For this reason, it is important to value the true and demanding constraints of school rather than dwell on the alleged supremacy of learning outside of school.

The approaches to digital practices mentioned in the literature clearly reflected the importance for educational leaders to consistently develop and foster a digital literacy consciousness within their institutions. In this context, professional development has a key role in improving digital literacy practices among instructional teachers and in keeping up with the recurrent changes in the digital environment. Indeed, exploring the

way leadership approaches shape professional development programs had the potential to extend the research in this area.

Role of Professional Development in Digital Literacy Practices

Borko (2004) argued that professional development is particularly important in light of the changes in the global world, including the accessibility to technology; faculty need a lot of learning to integrate those changes. In order to prepare students for an ever-changing world, Borko (2004) argued that faculty must be given consistent and high-quality professional development with training in the fields they are teaching. When high-end professional development is available to faculty, it is more likely that they will improve their teaching strategies, become more aware of the role of student's learning, and cooperate to maintain and enhance high-quality education. In other words, Borko (2004) argued that, when teachers are pushed towards learning 21st century skills, professional development of new literacy activities becomes increasingly relevant. This concept echoes Siemens' (2005) connectivism, which is a learning theory that emphasizes an individual as part of a complex and interconnected digital network through a constant exchange of information and knowledge. This model has been used as a framework in different studies (Cowan et al., 2013; Fonseca 2011; Mackey & Evans 2011) that focused on adults and professional development.

It is also important to mention how other studies focused on the consequences of inadequate professional development programs. For example, Pusey and Sadera's (2012) study found that pre-service professors lacked the skills to teach students how to use social media technologies. They concluded that when teachers are unable to provide instructions and models of digital citizenship roles because of a lack of knowledge of the

technology involved, society cannot expect students to take on the role of digital citizens as models, as well. Similarly, in a mixed method study conducted by Chik (2011) on 34 Hong Kong English faculty, this scholar found that there was a lack of teacher familiarity with social networking sites and digital gaming. As a result, teachers could not recognize the potential value of social networking sites and digital gaming in educational settings. Indeed, Chik (2011) reaffirmed the importance for additional professional development. In fact, they asserted that "to include and legitimize youth digital practices is perhaps where our future lies if we are to achieve positive participatory language learning both in and out of language classrooms" (p. 164).

Importance of Professional Development for Digital Practice. Olson and Kroeger (2001) conducted a study on how educators developed their global skills and intercultural communication abilities so that students in our increasingly diverse world could be better educated. These scholars found that there is a need for a global, intercultural, and professional development for faculty and staff that is continuing, significant, and inclusive of other languages and cultures. Faculty and staff internationalization are the first critical steps in the internationalization of a university campus. This can be achieved by hiring people with global and intercultural expertise and by promoting global training opportunities where global and intercultural professional development should include both on-campus and off-campus training (Olson and Kroeger, 2001).

Another study that explored the importance of professional development was conducted by Hobbs and Coiro (2019). These scholars argued that professional development is key in the context of digital literacies to develop educators' digital literacy

skills, create opportunities for them to reflect on their reasons to use digital media, make collective inquiry a concrete element of hands-on learning experience, and create opportunities to focus on teachers and learners. Information and communication technologies play a role in virtually every academic activity: in classroom, training, work experience, collaborative events, etc.

Hobbs and Coiro's (2019) study was preceded by a study commissioned by UNESCO. The authors of this study (Tornero et al, 2010) evidenced how faculty-training curriculum should emphasize the structuring power of ICTs and new media through the construction of media-based educational contexts and the promotion of situations that foster cultural diversity and participation. Similarly, Barone and Wright (2008) argued that educators necessitate adequate access to technology, time, and support to develop an effective curriculum. This also includes the continued support, even after a curriculum is developed, that can be accomplished for example through workshops about prevailing and new technologies, by appointing a technology support leader, and by providing time to learn the technology and applications.

Obstacles and Supports to Professional Development. In their study on the development of digital information in higher education, Jeffrey et al. (2011) attempted to identify obstacles and supports to the development of digital information in higher education. These scholars traced the elements that are important in the development of programs to reduce inequality in the opportunities to fully participate in social, work, and lifelong learning activities. Seven major themes were identified: collaboration, access, confidence and self-efficacy, time and permission to play, openness and learning from play, changing one's approach to learning, and personal growth. Collaboration is a well-

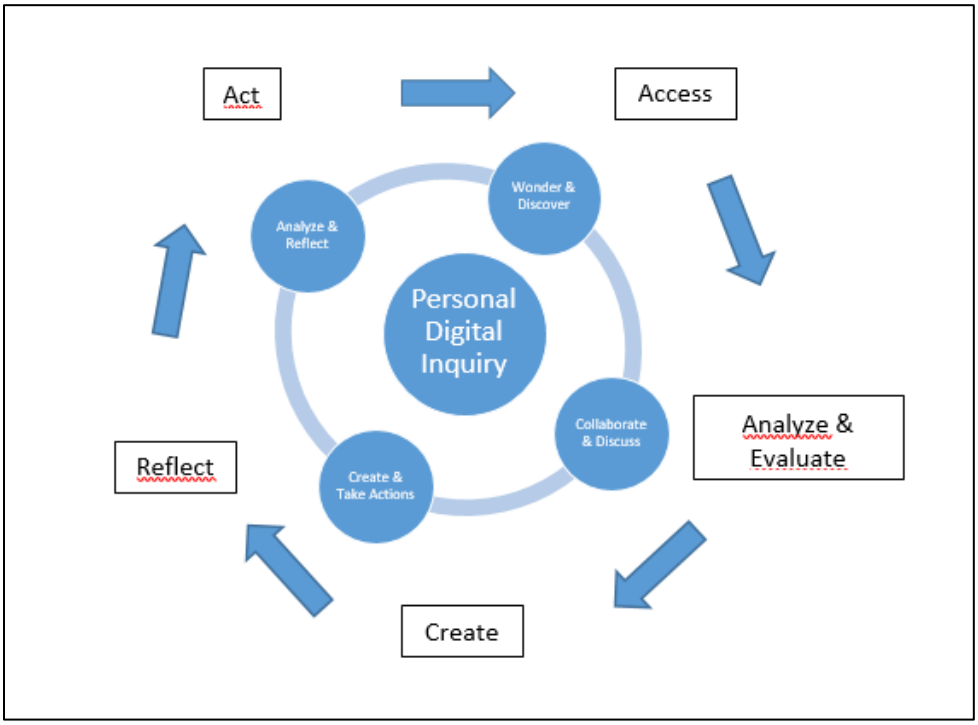
established element in the literature to improve learning and motivations. Sharing experiences, diverse skills, incidental learning characterize a collaborative learning. Access to technology can be an obstacle to improving digital literacy due to socio-economic issues of accessing technology. This is often associated with the concept of "digital divide" that reflects the concerns for lower socio-economic groups that are in disadvantage due to their lack of access to advanced technology at home, at work, and at school. In relation to confidence and self-efficacy, Jeffrey et al. (2011) found that, while some participants in their study had high levels of digital information skills and self-efficacy, there were others at the other end of the spectrum who were technophobic. Such a mindset discouraged them from taking risks or exploring unknown digital territory. Participants also felt that having more time in the workshops helped them to play with new tools and work towards achieving their digital information literacy goal. The value of dedicated time to develop digital information skills is therefore important. The value of experiential learning is something largely discussed in literature (Dewey, 1933; Harel-Caperton, 2005; Tuckle, 1995;), the idea of being open to new opportunities and the ability to learn from them has proved to be an effective strategy in building the confidence in tackling new aspects of digital information. Most participants in Jeffrey et al.'s (2011) study found that their digital information literacy growth mirrored a change in the way they learned resulting in a "growing self-awareness of how they approached learning and what worked for them" (Jeffrey et al. 2011, p. 403). Lastly, the participants showed a personal growth that resulted in building a major level of autonomy when they adopted digital information resources. This study confirmed the importance that both professors and students are able to improve their digital knowledge and skills if they are

to engage in higher education and lifelong learning. Obstacles can be internal, such as behaviors, or external, such as access to opportunities. Self-limiting barriers to self-efficacy, confidence and attitudes can shift if the learning environment meets certain conditions (like for example a safe, collaborative learning environment that is perceived as being part of a supportive community).

Collaboration represents a key element, also in Hobbs and Coiro's (2016) professional development program in digital and media literacy. According to these scholars, digital culture relies on interdependence. Building collaborative energy is crucial, as learners deepen their awareness of digital literacy when they recognize the intrinsic importance of collaboration and teamwork in fostering learning. Working within a dyadic partnership encourages personal reflection in a social context, provides cognitive and emotional support for the process of learning to use digital tools, and supports the cycles of risk taking, experimentation, creative iteration, and rapid prototyping. Digital literacy practices must be integrated within existing structures of school and culture (Coiro & Hobbs, 2016). Educators need to experience collaboration and inquiry directly as a process of complicated engagement and problem solving in order to recognize the cognitive, social and emotional dimensions of digital literacy when considering how best to support their own students (Hobbs & Coiro, 2019). The learning process in Hobbs and Coiro's (2019) professional development approach relies on a model they have developed, the "Personal Digital Inquiry" (Fig. 2). Within this model participants in the professional development program undergo collaborative enquiries as they wonder, explore, collaborate, debate, build, take action, evaluate, and reflect.

Figure 2

Personal Digital Inquiry Model



According to this model, faculty attending professional development programs "access, analyze, create, reflect, and take action using the power of communication and information. For educators to develop competencies in teaching digital literacy, they must first experience this process as learners themselves" (p. 407). In this model, a collaborative peer-to-peer learning approach is central. As a result of direct research and collaboration as a learning process, participants are expected to be inspired to address the challenges of research and collaboration in their workplaces, schools, and communities.

The literature suggested that examining the perceptions faculty members have of their specific technology literacy skills and training allowed to assess more thoroughly the relationships between technology training and the effects in their digital practices. More research was needed about effective faculty training strategies, especially in a study

abroad context which presents specific critical issues as it will be evidenced in the following sections.

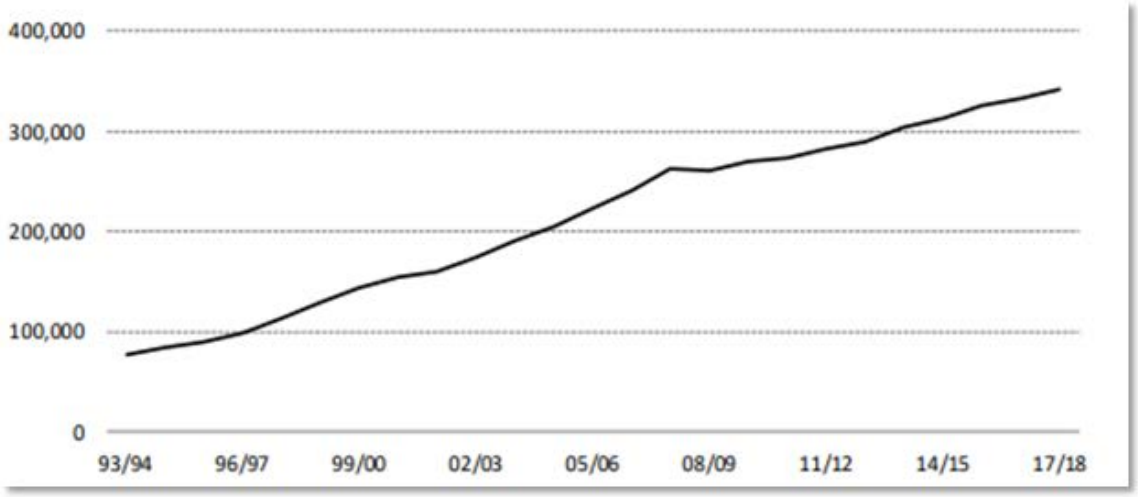
Study Abroad Programs

In the field of study abroad, there has been an extensive research into how this experience represents a key component of any academic program that seeks to create global citizens willing to manage the complexities of a globalized world and on the impact, success and value of student mobility (Deardorff & van Galen, 2012; de Wit, 2009; de Wit & Urias, 2012; Kehm & Teichler, 2007; Tarrant et al., 2014). These studies explored a wide range of mobility settings and discussed several aspects of outcomes, including cultural learning, student development, global awareness, foreign language skills, general academic improvement, and career development. One interesting study (Adam et al., 2018) found that people who experienced living abroad, reported a clearer sense of self than people who did not. International experiences can enhance creativity, reduce intergroup bias, and promote career success. Furthermore, study abroad has been strongly encouraged, for example for language learning, because it has "the potential to enhance students' language ability in every domain" (Kinginger, 2013a, p. 4).

Importance of Abroad Programs. According to the 2019 Open Doors report published by the Institute of International Education (IIE), a non-profit organization whose mission is to help individuals and organizations harness international education's strength to succeed in today's interconnected world, about 342,000 US students studied abroad for academic credits during the academic year 2017/18. For U.S. students, study abroad numbers grew by 2.7% (as seen in Fig. 3), which means one in every 10 U.S. students go on a study abroad program during their undergraduate career.

Figure 3

US Students Studying Abroad



In addition, Open Doors Report 2019 showed that the profile of U.S. students going abroad continued to diversify.

Figure 4

U.S. Study Abroad Students Race/Ethnicity

Characteristic	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Race/Ethnicity												
White	81.9	81.8	80.5	78.7	77.8	76.4	76.3	74.3	72.9	71.6	70.8	70.0
Hispanic or Latino(a)	6.0	5.9	6.0	6.4	6.9	7.6	7.6	8.3	8.8	9.7	10.2	10.6
Asian, Native Hawaiian or Other Pacific Islander	6.7	6.6	7.3	7.9	7.9	7.7	7.3	7.7	8.1	8.4	8.2	8.4
Black or African-American	3.8	4.0	4.2	4.7	4.8	5.3	5.3	5.6	5.6	5.9	6.1	6.1
Multiracial	1.2	1.2	1.6	1.9	2.1	2.5	3.0	3.6	4.1	3.9	4.3	4.4
American Indian or Alaska Nativ	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5
TOTAL	**241,791**	**262,416**	**260,327**	**270,604**	**273,996**	**283,332**	**289,408**	**304,467**	**313,415**	**325,339**	**332,727**	**341,751**

As it can be seen on Figure 3, the percentage of students identified as racial or ethnic minorities in study abroad programs in 2017/2018 was 30%. In 2006/07, racial and ethnic minorities accounted for only 18.2% of the study abroad population. Students

majoring in the STEM fields, that include agriculture, engineering, health professions, math, computer science, and physical or life sciences majors, represented the main percentage of students studying abroad (about 25%). The other popular major fields of study were business and management at 20% and social sciences at 17%. The summer term remained the most popular time to study abroad, with 38% of students going abroad in the summer of 2016/17. This represents a growing interest among students in short-term programs, with 60% of students studying abroad in programs that last less than eight weeks. Thirty-two percent of the students studied abroad for a full year, down from 5% in 2005/06 and less than 3% of students studied abroad for an academic or calendar year. The growing interest in studying abroad reflects the commitment of the US Government through its Department of State to foster international academic experiences for US students as they value study abroad experiences "to build skills and knowledge, prepare to solve the world's toughest challenges, and compete in the 21st century workforce." ("The Value of Study Abroad", n.d.).

Study Abroad Programs in Italy. The data retrieved from 2019 Open Doors showed that Italy represented the second largest destination for US study abroad students accounting for approximately 11% of the world total study abroad population in 2017/18. As shown on Figure 5, Italy was only preceded by the UK (12%) and followed by Spain (9.5%), France (5%) and Germany (3.6%). Italy was, indeed, the first non-Anglophone country choice for US study abroad students.

Figure 5

Top 10 Study Abroad Destinations 2017/18 & 2016/17.

Rank	Destination	2016/17	2017/18	% of Total	% Change
	WORLD TOTAL	**332,727**	**341,751**	**100.0**	**2.7**
1	United Kingdom	39,851	39,403	11.5	-1.1
2	Italy	35,366	36,945	10.8	4.5
3	Spain	31,230	32,411	9.5	3.8
4	France	16,462	17,185	5.0	4.4
5	Germany	12,585	12,250	3.6	-2.7
6	Ireland	11,492	11,965	3.5	4.1
7	China	11,910	11,613	3.4	-2.5
8	Australia	10,400	10,332	3.0	-0.7
9	Costa Rica	8,322	8,681	2.5	4.3
10	Japan	7,531	8,467	2.5	12.4

According to the Association of American Colleges and Universities in Italy (AACUPI), a non-profit organization whose main scope is to develop and facilitate the international educational interests of North American university programs in Italy by cooperative effort, Rome and its surroundings host the greatest number of US academic institutions in the country totaling 62. The number of students enrolled in these academic programs reaches approximately 10,000 students annually. The second largest region in Italy for the number of study abroad students, is Florence and its surroundings which host more than 55 member institutions and more than 8,000 students ("Welcome to AACUPI", n.d.). The total annual student population reported by AACUPI that comprises all academic institutions operating in Italy is more than 31,000. A recent study conducted by Schneider (2017) for AACUPI indicated that the 147 overall AACUPI member institutions hire a total of 1,158 instructors locally, while only 383 are sent from the home institutions which means that 3/4 of the faculty are hired locally. Moreover,

Schneider (2017) indicated that full credit course curricula were set up at the home institutions and were usually taken abroad with only minimal or no variations. However, the implementation of the course objectives in another cultural and socio-economic environment could lead to different learning opportunities. In this context, Schneider (2017) identified 11 teaching subjects that were taught by the AACUPI member institutions in 2012-13, which are ranked in Table 2.

Table 2

Study Abroad Teaching Subjects in Italy

Ranking	Course Subjects
21%	Liberal Arts
16%	Languages
12%	Fine Arts
11%	Political Sciences/International Studies/Business
10%	Architecture
10%	Short term
7%	Classical Studies/Archeology
4%	Fashion/Industrial/Graphic Design
4%	Other (Human Rights, Social Justice, Comparative Law, Music)
3%	Global Human Science/Agriculture/Food/Nutrition
2%	Engineering/Nursing

The collective data described here showed how study abroad programs in Italy represented a meaningful way to exemplify the study abroad programs in the USA. This was, indeed, a significant element for the purpose of this study.

Technology Integration in Study Abroad Programs

Studying abroad programs provide students with an excellent opportunity to speed up their language learning and gain cultural capital (Byram & Feng, 2006). In order to promote a more successful academic and cultural study abroad experience, one suggestion is for teachers to concentrate on students' digital literacy (Kinginger, 2011).

Since study abroad students are often required to work independently during the program, in order to solve personal and academic problems, Jarman-Walsh (2015) promoted the development of ICT skills to support their independent learning. This author also emphasized how the use of digital and social networking services, such as Facebook allows students to access resources and improve connections within their new university community. Similarly, Kinginger (2011) encouraged the use of computer-mediated communication tools to communicate informally with peers in institutions abroad. Kinginger argued that such methods provide a safe contact context and give students an opportunity to develop their foreign- language speaking identity. During this process, students can explore the linguistic choices or communicative norms used by local students. For example, to prepare their Japanese students for studying abroad Brine et al. (2015) included a video interview project into their preparatory program. These authors argued that along with the development of language skills, the project developed technical and digital collaborative skills.

Godwin and Jones (2016) argued that technology can play a positive role, particularly when adequate guidance and support are given to students. These authors pointed out the personal and learning advantages of using technology while traveling, the creation of second-language identities, the opportunities for proactive language development, the use of mobile devices for location-based language learning, and opportunities to improve intercultural communication skills. It is possible that the host group are as digitally active as the students themselves. Connecting to that group electronically, both at a local and a national level, can provide opportunities for interaction while studying abroad. This can lead to longer-term relationships through

ongoing electronic networking. Godwin and Jones (2016) suggested also that a structured study abroad program should provide pathways for successful adoption of technology, not only through an appropriate orientation and counselling, but also through a dedicated shared online space. Students who are able and willing to look for opportunities to stay in contact with a local community are likely to have a variety of experiences and reactions. Meetings with the target culture can lead to curiosity and acceptance, but can also lead to anxiety, anger and rejection in the opposite direction. Students who have the most rewarding and positive experience from studying abroad are those who participate in the host community to the degree that they carry on this additional identity (Block, 2007). Study abroad, as a voluntary and time-delineated enterprise, may not provide the same strong incentives for integration that migrants experience (Block, 2007). One way to make up for this loss of immediacy and necessity, is to engage students through their own personal interests. In order to make connections with the target culture, students may search for groups, hobbies, or sports clubs that match their own inclinations. Studies have shown that establishing such links makes enormous differences (Dewey et al., 2013; Meier & Daniels, 2013; Schauer, 2008). Not only do these links offer opportunities for real-world language communication with native speakers, but they also offer valuable cultural experiences. Online communities are likely to include at least some local community groups or organizations with realistic interest. Participating in such groups can have multiple advantages for studying abroad students. Investigating the possibilities and making contact before the start of the program help build connections that allow students to reach the target cultures more easily (Trentman, 2013). Once in the country, online participation can lead to face-to-face meetings and associated groups. Continued

participation after the program can be crucial in preserving connections with the target culture. Several studies found that engagement in email, web or chat conversations can be helpful in building relationships and increasing cultural awareness (Thorne, 2003; Tudini, 2007; Zeiss & Isabelli-García, 2005).

Goen Todd et al. (2019) provided an attentive synthesis of their own experiences with communication technologies and study abroad. They discussed how changes in communication technology led to changes in their own study abroad program experiences, including the integration of communication technology into the academic parts and program logistics. These authors also evidenced through their own experiences and program development, that reflexive practices are necessary if communication technologies are to be effectively incorporated into study abroad programs. In fact, the majority of faculty leaders and study abroad professionals have radically different experiences. However, they outlined that it is undeniable to disprove the changes that technologies bring to study abroad and the fact that adapting to these changes is a continual task. Indeed, these authors suggested that: a) the effective integration of communication technologies into study abroad requires in-depth observation and an understanding of the use of communication technologies by students; b) faculty design assignments and activities integrate communication technologies into study abroad to encourage learning outcomes and exploit their ubiquity; c) faculty leaders and other study abroad professionals need to help students search for ways where technologies both aid and hinder cultural adaptation. In this respect, it should not be forgotten that communication technologies are simply a human tool. The main objective of study abroad remains cultural adaptation as Goen Todd et al. (2019) argued. Technology can

help but can also hinder this objective. Students should understand that communication technologies affect human experiences and that they differ from home cultures in ways that alter experiences abroad. Faculty must focus on their own experiences, use communication technologies in a deliberate manner and be mindful of their interaction with students, if they want students to process and adapt the role of communication technologies in their study abroad experience. Similarly, Burbidge (2018) argued that technological criticism of language learning abroad emerged from the opinion that it interferes with the fundamental immersive element of the experience. However, the reality is that the participating communities may be as connected as those they came from and their peers "as digitally engaged as the students themselves" (Godwin-Jones, 2016, p.2). Burbidge's findings show that the use of technology in study abroad contexts extends across a diverse range of activities and represents significant engagement for example with second language learning. This engagement provides a counterpoint for those who emphasize the potential of technology to undermine immersion. It is well recognized that simply studying abroad is not a panacea for granting instant language and intercultural abilities.

Challenges of Technology Integration into Study Abroad Programs. A research by Cote and Milliner (2017) on Japanese study abroad programs found that the subjects in this study lacked a certain degree of digital literacy in several key areas. This finding was similar to Murray and Blyth's (2011) conclusions. They found that respondents lacked experience and skills for using productivity software. Very few students resulted in having experience with blogging, website design, online discussions, computer games, file sharing, cloud software and presentation software. Cote and

Milliner (2017) suggested that teachers should build opportunities for students to use a personal blog or website to practice self-expression. Along with English language improvement, such activities can develop typing abilities, composition skills, and digital editing. However, some studies into returnees from a variety of study abroad programs, have revealed that this is not always the case (e.g., Kinginger, 2011; Sato & Hodge, 2015; Yoshimitsu, 2009). For example, Goertler (2015) discussed the advantages and disadvantages of the use of technology for language learning and intercultural skills development in relation to experiences abroad. This scholar evidenced how technology was perceived as an enemy of an authentic study abroad experience. In fact, students listen, read, and watch entertainment and news from their first language (L1). All these elements imply that these students can never fully engage with the community, language, and culture. Similarly, Trentman (2013) contended that students used more of their L1 than their second language (L2) in part because of all the technology mediated L1 communication.

The above criticisms to the integration of technology into study abroad programs were furthered by a study by Marijuan and Sanz (2018). These authors argued that a study abroad environment is highly diversified, and the actual benefits deriving from this experience are influenced by a complex range of interrelated contexts and individualistic factors that can lead to a variety of different outcomes. Thus, educators should think critically about the broader role that technology can play in participants' lives and how that will be transferred to contexts abroad. The ongoing development and integration of technology into a human experience will only make these elements more critical for both

understanding what it means to study abroad and the capability of participants and coordinators to exploit the learning opportunities available.

Technology Integration: Implications for Learners. Shively (2010) in considering the advantage of the affordances that an immersion environment and new technologies have to offer, proposed a model for pragmatic instruction in study abroad that fosters both intercultural competence and language skills. According to Shively, pragmatic competence "refers to the knowledge and skills needed to use and interpret the meanings, assumptions, and actions expressed by language in its sociocultural context" (p. 106). For example, in L2 acquisition, pragmatic skills are acquired rather slowly during a natural acquisition. Besides the use of face-to-face classroom activities to teach L2 pragmatics, Shively asserted that some studies showed how new technologies such as interactive websites, synchronous chatting and virtual environments can be used effectively to facilitate pragmatic development. Some scholars (Citron, 2003; Ogden, 2006) complained about the growing access to technology in studying abroad, as this can enable students to disengage from the host culture. Unlike those scholars, Shively (2010) suggested that, instead of restricting the use of technology, study abroad programs should rather stimulate students' enthusiasm in new technologies as a way of re-engaging them in language and culture at all stages of study abroad. According to Shively (2010), the study of pragmatics is part of a study abroad experience that can help students to develop both practical skills for successful intercultural communication and abstract conceptual skills to understand and articulate cultural differences. The model of pragmatic education brings together insights from the fields of international education, second-language acquisition, pragmatic education, and computer-mediated communication to take

advantage of pre-departure, in-country, and re-entering stages of study abroad, as well as opportunities for online and long-distance co-operation. It is important to note that this model does not attempt to displace, but rather to supplement other aspects of cross-cultural training which can also be useful for learning, adaptation, identity discovery and psychological well-being of students. The model re-conceptualizes to some degree what it means to live and research in an immersion context by incorporating computer-mediated communication into pragmatic instruction for studying abroad. Even though most practitioners in study abroad have focused on the opportunities that students have for face-to-face interactions in the host country, educators should recognize that being a member of a culture also includes being a member of an online community, especially as the number of people involved in online communities around the world continues to rise. Given this context, instead of discouraging students from using technology while traveling abroad, educators might want to consider how best to use new technologies as a means of engaging students in online communities and helping them develop pragmatic skills (Shively 2010).

Study Abroad Faculty Digital Practices, Professional Development and Technology Changes: Putting It All Together

The inclusion of digital information literacies in the curricula is important if learners are to keep up with the fast-technological changes that occur globally (Littlejohn et al., 2010). This means that technology should be employed in multicultural teacher training to prepare faculty to develop the expertise, abilities, and character to foster globally inclined, twenty-first century world citizens (Liu Blythe et al., 2014). According to Liu Blythe et al. (2014), it is important to leverage technological innovation in training

faculty candidates, especially in a context where multicultural educators are increasingly armed with globally informed conceptions of diversity and pedagogical approaches to address equity problems in the 21st century. This resounds Goertler (2015), as she asserted that "technology can also be used successfully to prepare for study abroad and maximize the study abroad experience through facilitated interactions and technology-mediated awareness raising activities" (p. 15). This scholar also focused on the importance that an expert "should assist learners in noticing problematic (language) behavior and being able to adjust the language production or cultural interaction to the norms of the community" (p. 15).

A more nuanced understanding of the implications of using technology to improve global multicultural education was clearly encouraged by Ferdig et al. (2007) as they argued that while there is evidence that technology can facilitate international dialog among students, much of the extant research had focused on access. In fact, Ferdig et al. (2007) asserted that "simply having the connection to others does not ensure that users will instantly have or gain the multi- and inter-cultural skills necessary to understand or appreciate cultural diversity" (p. 60). Hence, these scholars advocated for a more nuanced understanding of the implications of using technology to improve global multicultural education.

It is also important to note that while growing maturity in the use of communication resources facilitates more inclusive intercultural international interchanges, responsive multicultural teacher training approaches are also evolving to ensure that such use represents today's technology-infused youth culture and promotes practical experiences (Liu Blythe et al., 2014). Technology not only has the potential to

increase accessibility of knowledge and connectivity among diverse groups, but also provides creative ways to foster more nuanced dialogs and understandings of disparity and plurality that include international participants. Further research can indeed extend the findings of previous studies in this context.

In this study, fast pace development of digital environment is linked to the concept of digital transformation (Henriette et al., 2015). Due to the drastic technological shift, the entire society is pushed to change the way it communicates and collaborates at a very fast pace. Digital transformation does not only refer to a shift of technology. In fact, according to Stolterman and Fors (2004), digital transformation can be described as the "changes that the digital technology causes or influences in all aspects of human life" (p. 689). Digital transformation leads to a progressively interrelated reality. In business contexts, for example, digital transformation bolsters an organizational shift, where big data, analytics, cloud computing, mobile applications and even social media platforms have become ever-present (Nwankpa and Roumani, 2016).

Finally, the research by Liu Blythe et al. (2014) showed that teachers should incorporate technology into their activities to create opportunities to make educational resources more available, interactive and meaningful to broader audiences around the world. This should also include expanded opportunities to bring real or virtual communities together across perceived intercultural, international boundaries. While mobility is an evolving tool for creating effective opportunities for learning from different contexts and cultures new skills blends, curriculum awareness, adaptation and cooperation can be developed.

Although these opportunities are part of the technology design, they may not immediately be apparent or embraced by users (Tour, 2015). Selwyn and Facer (2007) proposed to approach digital technologies in terms of affordances. For these scholars, affordances are users' socially constructed interpretation of digital technology opportunities that prompt how they can be used and what they can do. An affordance is a blend of digital technology properties and the perceptions users have of these properties. This concept helps explore to what degree the meaning of new literacies is a part of the individuals' practices. Indeed, the development of theoretical frameworks on the interplay of technology and multicultural education on a global scale is imperative for future research in this field. By exploring faculty motivations, perceptions and attitudes affecting their digital literacy practices this research contributed in the development of such frameworks.

CHAPTER 3

Research Method

Introduction

The overarching objective of this study was to explore the multifaceted motivations, perceptions and attitudes that influenced digital literacy practices in a small group of study abroad faculty and how professional development helped inspire them to innovate their digital literacy practices within a study abroad context.

The role of study abroad programs in U.S. colleges and universities has grown significantly in recent decades. As mentioned in Chapter 2, according to the 2019 Open Doors Report on International Educational Exchange, study abroad programs in Italy are a long-standing reality representing the second most popular country for study abroad after the UK and indeed the first non-Anglophone country choice for US study abroad students.

The main research question in this research was:

- What are the motivations, perceptions and interests that influence digital literacy practices for faculty engaged in a study abroad program in Italy?

Two related sub-questions were also addressed:

- How do leadership approaches shape professional development programs that aim to improve faculty digital literacy practices in a study abroad context?
- How do digital transformations influence teaching strategies in a study abroad program?

Qualitative Paradigm

Research approaches are plans and procedures that set phases from broad assumptions to detailed data collection, evaluation, and interpretation methods (Creswell & Creswell, 2018). A methodology (i.e. the process of research) is a way to think and research social reality that can be conducted qualitatively or quantitatively (Strauss & Corbin, 1990). According to Creswell and Creswell (2018) a qualitative study reflects a method for investigating and understanding the nature of a social or human issue for individuals or groups while a quantitative research is a way to test scientific hypotheses by analyzing the relationship between variables.

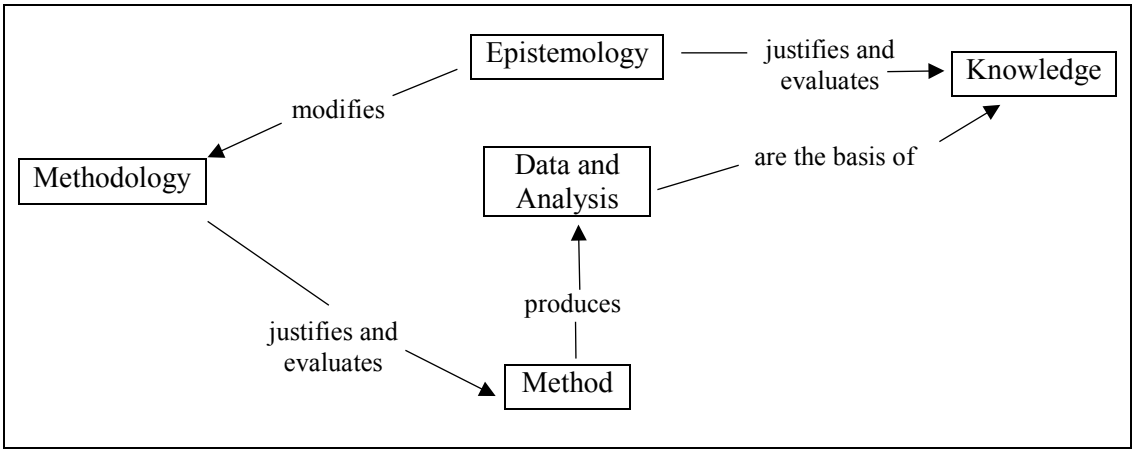
Within the context of the research design, paradigms are a collection of ontological and epistemological assumptions made by the researcher that refer to the purpose and interpretation of a study (Hammersley, 2012). There are three main questions concerning the nature of inquiry according to Guba (1990):

a. The ontological inquiry: what is the nature of reality?
b. The epistemological inquiry: how do we know something?
c. The methodological inquiry: how do we go about discovering knowledge?

These three questions clarify the way an individual views knowledge and relates with it, as well as the methods adopted to discover it. According to Carter and Little (2007) "methodology justifies method, which produces data and analyses" (p. 1317). Data and analysis are the basis of knowledge. Epistemology modifies methodology, and substantiates the knowledge produced (Figure 6).

Figure 6

Epistemology, methodology, and method



Lichtman (2013) suggested that it is not possible for a researcher to keep their values (axiology) from influencing aspects of the research. In research, axiology indicates what the researcher believes is valuable and ethical (Killam, 2013).

This study was influenced by the constructivist paradigm. Constructivism is a theory, which contends that knowledge is created by the researcher and is influenced by its background. As Faux (2005) asserted "the subject is the meaning maker, and whatever meaning is imposed may come from a seemingly endless source of experiences" (p. 5). A relativistic ontology, a subjectivist epistemology and a hermeneutic methodology guide the constructivist belief. Axiology in a constructivist paradigm supports different codes of ethics emphasizing authenticity, trustworthiness, fairness, reflexivity, rapport, and reciprocity (Merthens, 2010). According to Killam (2013), the ethical principles in this paradigm seek to ensure that the voices of participants are reflected in the research and "measures are also taken to ensure that the interpretation of participant experiences is trustworthy and can be easily followed by others" (p. 459).

Different from Constructivism is Positivism. This paradigm is based on a realistic ontology, an objectivistic epistemology, and experimental methodology. Values (axiology) are integral to beliefs and "positivism relies on the honesty and integrity of the researcher" (Killam, 2013, p.307). These two key paradigms are summarized in Table 3.

Table 3

Ontology, epistemology, and methodology

	Ontology	**Epistemology**	**Methodology**
Positivism	Realist. Single reality, objective reality, independent from individual	Objectivist. This is critical in the acquisition of knowledge in scientific approach	Experimental, theory testing. Hypothesis is proposed and evaluated using empirical methods
Constructivism	Relativist. Reality is built by the observer	Subjectivist. All knowledge is socially developed and informed by the individual previous experience	Hermeneutic, theory building. Inquiry attains to acquire a better understanding of a phenomenon

There are two dominant views in answering the ontological query: realism and relativism. The realist argues that an objective reality exists outside and independently of the observer. This reality is governed by a collection of natural laws that are used to generalize reality (Guba, 1990). The relativists agree that an outside world exists but contend that reality is experienced personally. When dealing with a research, the relativists acknowledge that there is an interpretative difference between the outside world and the way we account for it. This concept was supported by Parker's (1990) as he argued that when we engage with data "we produce another layer of interpretations, another web of preconceptions and theoretical assumptions" (p.84). Hence, constructivist

researchers seek to understand how people interpret different circumstances in certain social and historical contexts (Schwandt 2007).

The epistemological issue has a dichotomic nature which is represented in their objectivistic and subjectivistic perspectives. Rand (1982) maintained that an objectivist believes that a fact is a fact, and that reality is real, independently of whether there is awareness around it. The positivist belief that focuses on measurability, predictability, controllability and positions the researcher as a neutral observer is heavily influenced by objectivism (Cohen, Manion & Morrison, 2011). Subjectivism, on the other hand, deems knowledge to be socially conditioned; everyone builds his understanding of the world through his or her experiences and involvement in it. Therefore, research is the product of the direct interaction between the researcher and the participants (Guba & Lincoln 1989).

Unlike anthropologists and sociologists who have used qualitative methods for almost a century, researchers in the field of education initially adopted methods drawn from natural sciences and psychology. Qualitative research in education expanded starting from the end of the 1970s when anthropologists commenced focusing on the educational realms (Spradley, 1979). Lincoln and Guba (1985) suggested that a research should be carried out in natural environments rather than in laboratories and denoted it as naturalistic inquiry. According to Cooley (2013), a qualitative research makes it possible to identify and examine small daily events that may have gone unimportant in sporadic studies or survey questionnaires. This allows to illuminate a thorough understanding of learning and develop pedagogical techniques.

Lichtman (2013) evidenced ten critical elements of qualitative research: (a) qualitative research aims to identify, recognize and interpret human events, human

interaction or discourse; (b) it is dynamic, in other words a qualitative research is considered to be fluid and constantly changing. As such, there is no special way to do things; (c) different methods of conducting qualitative research can be employed; (d) it uses an inductive approach, which means that qualitative research starts with specifics and moves to the general; (e) it is holistic as it involves analyzing the entire situation or problem instead of identifying specific variables; (f) data are typically collected in natural settings, without creating artificial conditions or experiments; (g) the role of the researcher is instrumental and pivotal in creating an understanding of reality; (h) specific phenomena are thoroughly investigated, which means looking at a few things intensely rather than the surface of many; (i) reporting is a thick description, often using participants' words; (j) qualitative research is often carried out in a non-linear manner, which means that the researcher moves back and forth between data collection and data analysis, rather than from data collection to data analysis in linear fashion.

Even though there are several approaches or choices to qualitative research, according to Merriam and Tisdell (2015), the most widely used methods for qualitative research are: basic qualitative research, phenomenology, grounded theory, ethnography, narrative analysis and qualitative case study. For its interpretative nature, basic qualitative research represents the most common form of qualitative research in education. The other types of studies even though grounded in an interpretive nature, entail additional elements. So, for instance, ethnography is used to explain how individuals communicate within and across the society they dwell in. On the other hand, phenomenology even though is interpretative in nature, is used to help understand the essence and underlying structure of the phenomenon being studied, while a grounded

theory analysis is characterized by the development of a concrete theory of the phenomenon to be studied. The researcher uses a narrative analysis to understand the meaning of participant experiences as revealed through an analysis of stories revealed by individuals. Finally, if the unit of evaluation is a specific framework in which a person, program or event is being examined, the most suitable type of research method would be a qualitative case study (Merriam & Tisdell, 2015).

Different authors (Flyvbjerg, 2006; Morgan & Smircich, 1980; Strauss & Corbin, 1990) evidenced that the research question(s) and the facts surrounding the research question(s) are the most important factors in determining the type of qualitative research approach to adopt. In this sense, Flyvbjerg (2006) asserted that "good social science is problem-driven and not methodology-driven, in the sense that it employs those methods which, for a given problematic best help answer the research question at hand" (p. 27). Due to the nature of the questions raised in educational settings and the amount of details that these types of research offer, qualitative research is particularly useful in education. In this regard, Punch (2014) emphasized how the use of qualitative research is justified on the basis of the subject of the study and existing knowledge, which generally favors a theoretical generation approach rather than a theoretical verification approach. As the nature of the research does not rely on pre-structured data, this enables participants to share new ideas and unexpected perspectives while expressing their views on default issues.

Consistent to a qualitative approach, the focus of this study was represented by the "understanding [of] how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences" (Merriam & Tisdell, 2015,

p. 6). Thus, a qualitative design provided a better understanding of the underlying faculty motivations in fostering digital literacy practices, how professional development influenced their digital technology skills, and how these skills affected their practice and teaching strategy.

Research Design

A case study is a descriptive research methodology (Merriam, 1988) that studies a case within a bounded system and enhances an understanding of the researched case with questions such as "how" and "why" (Barone, 2011; Stake, 2000; Yin, 2017). The case can be an individual, multiple people, a process, an activity, an event, an organization, and an issue. The bounded system defines what is included or excluded in a study in terms of time or space (Barone, 2011). This methodology is highly appropriate if the researcher has no control over the demeanor that is to be analyzed and is especially valuable for descriptive, explanatory, and exploratory purposes. According to Stake (2000) there are three major purposes for a case study: (a) collective or multiple case studies are characterized by several bounded cases that are adopted to exemplify an earlier identified issue or concern; (b) intrinsic case studies are characterized by a bounded case that aims to get a better understanding of a case because of its interest and not because it is primarily built on the theory; (c) instrumental case studies are characterized by a bounded case that is adopted to get a deeper insight of a previously identified issue or concern. As Barone (2011) noted, “case studies are complex because they are built around multiple data sources that must be analyzed into themes or patterns” (p. 47). Indeed, data collection for these studies included online observations, interviews, and digital artifacts.

In order to facilitate the exploration of the "how" and "why" motivations, interests and perceptions influence digital literacy practices for faculty engaged in a study abroad program, a qualitative case study was adopted to help answer this type of questions (Yin, 2017). Indeed, the research questions in this study were most suitable for a case study since a case study is a thorough study of the specific situation, in which the researcher seeks to increase his understanding of the phenomena under examination (Johansson 2002). Similarly, Yin (2017) described a qualitative case study as a method of analysis in which the study of a modern phenomenon is discussed in its real-life context. Although some scholars (Creswell, 2007; Merriam & Tisdell, 2015) presented a wide range of qualitative research tools, they also suggested different forms of case study methods to choose from. In this regard, Bogdan and Biklen (2007) introduced six forms of qualitative case studies based on the conditions and settings of the investigation, while Merriam (1998) suggested a general approach to qualitative case studies in the field of education. Moreover, a graphic representation of case study was introduced by Miles and Huberman (1994) where the heart was the focus of the study and the circle defined the edge of a case. Lastly, Yin (2017) suggested three types of case studies: explanatory, exploratory, and descriptive. The explanatory case study is used to describe how or why certain events have happened, while an exploratory case study is used to define the research questions or measures to be used in a subsequent investigation. A descriptive case study, by contrast, describes a phenomenon in the real-world context. As Bogdan and Biklen (2007) noted, researchers in qualitative cases aim to consider the relationship between the specific piece and the whole, where the specific piece chosen must be positioned in a natural setting.

The research questions in this study aimed to explore how digital literacy influences teaching in a culturally diverse environment, the factors that motivated faculty to foster their digital literacy, and how leadership approaches shaped professional development programs. A descriptive single-case study methodology for conducting this research allowed to carry over the investigation of the phenomenon in a real-life context (Yin, 2017) and was appropriate as the "researcher [had] little or no control over behavioral events" (Yin, 2017. p. 2). This element was suitable with this research because the goal of this research was not meant to monitor or influence participants in a natural or live classroom setting. In addition, this methodology allowed to consider the connection of the piece to the whole, where the piece selected was located in a naturally existing unit (Bogdan & Biklen, 2007). Participants in this study complied with the bounded system definition with respect of time, situation and "what is and is not included in the study" (Barone, 2011, p. 28). A qualitative case study research can be used if the number of variables of interest is higher than the number of data points available (Yin, 2017). This, indeed, applied to this study as the number of participants and data points was lower than the number of variables associated with the research questions. Yin (2017) urged case study investigators to resist altering the study's premise and to take an objective approach to the study. Caution was taken when generalizing the findings of case studies; in fact, case studies are generalizable to theoretical propositions and not to populations or universes. In this regard, Yin asserted that "the case study, like the experiment, does not represent a sample, and in doing case study research, the goal will be to expand and generalize theories (analytic generalization) and not to extrapolate probabilities (statistical generalizations)" (p. 21).

A single descriptive case-study research design was adopted rather than a multiple case study design because the participants came from the same original case in which they were participants (Yin, 2017). Yin also noted that "the conduct of a multiple-case study can require extensive resources and time beyond the means of a single student or independent research investigator. Therefore, the decision to undertake multiple-case studies cannot be taken lightly" (p. 57). This argument supported the choice of a single case study design in this research. Yin also maintained that "a major insight is to consider multiple cases as one would consider multiple experiments—that is, to follow a "replication" design" (p. 57). This concept reinforced the decision to carry out a single case study design, since multiple cases could not provide the research with any additional value. Indeed, Yin noted that "the rationale for single-case designs cannot usually be satisfied by multiple cases" (p. 57).

Finally, in light of the deictic (contextualized) nature of new literacies, Leu (2000) acknowledged the usefulness of case studies to research specific situational contexts as they can provide valuable insights into the use of these technologies in academic programs. This case study methodology was also aligned with previous studies completed in this area (Adam-Turner & Burnett, 2018; Noh, 2017; Hartnett et al., 2011; Sullivan et al., 2018).

To summarize, the instrumental and descriptive case study design was the most appropriate for the present study for various reasons: it is a research design that is descriptive and nonexperimental (Merriam, 1998); it is a study of a bounded system (Stake, 2000; Yin, 2017); it is particularistic (Merriam, 1998), as this study focused on a particular situation; it is instrumental as it allows the researcher to seek for insights into

an issue; it is a study that focused on data collected from interviews, observations and artifacts (Barone, 2011; Yin, 2017); it is heuristic (Merriam, 1998) as the study enhanced the understanding of a reader.

Baxter and Jack (2008) noted that Yin's approach to case study is based "on a constructivist paradigm. Constructivists claim that truth is relative and that it is dependent on one's perspective. This paradigm recognizes the importance of the subjective human creation of meaning but doesn't reject outright some notion of objectivity" (p. 545).

The case study design was consistent with Yin's (2017) design approach according to which five components are particularly important in a case research design: (a) the study's questions; (b) its propositions, if any; (c) its unit(s) of analysis; (d) the logic linking the data to the propositions; and (e) the criteria for interpreting the findings.

In this qualitative study the method of single instrumental and descriptive case study approach was adopted to address the main question:

- What are the motivations, perceptions and interests that influence digital literacy practices for faculty engaged in a study abroad program in Italy?

And the two sub-questions:

- How do leadership approaches shape professional development programs that aim to improve faculty digital literacy practices in a study abroad context?
- How do digital transformations influence teaching strategies in a study abroad program?

The case study was defined by four faculty members selected from the Abroad Campus (a branch campus of Alfa University). The case was bounded in one academic

semester (Spring 2020), and took place at the Abroad Campus in Rome, Italy. Students and administrators at the Abroad Campus were not the focus of the case although they were part of the context where the case was analyzed. Merriam (1998) proposed four analytic techniques for linking data to propositions: ethnographic analysis, narrative analysis, phenomenological analysis, and the constant comparative method. This latter method was used in this research.

Research Site

The selected site was a university branch campus located in Rome, Italy. The home university is a private Catholic academic and research institution located in one of the five boroughs in New York City. The overall university student population including both undergraduate and graduate levels, comprises about 20,000 students. The university offers over 100 programs of study in Business, Education, Health Sciences, Liberal Arts and Sciences, and Professional Studies. The academic offer at the Abroad Campus includes semester study abroad programs, short-term programs, and a full graduate program in Government and Politics. The student population attending academic programs at the Abroad Campus when this research was conducted was about 500 students per academic year.

There are three academic semesters at the Abroad Campus: summer, spring and fall. The summer semester is divided in two separate sessions (session 1 from May to June; session 2 from Jun to Jul); the fall semester runs from August to December; the spring semester runs from May January to May. Each semester is made up of 16 weeks and each class offered during the semester carries 3 academic credits (40 hours/semester).

The Abroad Campus is sited in a five-story building in the center of Rome near the Vatican. The facility includes about 200 hundred beds that are available to students enrolled in study abroad and faculty-led programs. Students are mostly from the home campus; there is a limited number of visiting students coming from other US higher educational institutions. There is one permanent graduate program offered at the Abroad Campus that is opened to both local and US students. There are five full time professors, 10 part time faculty members and 10 full time administrators employed directly by the Abroad Campus. Students can enroll in the study abroad program by choosing from a selection from the most popular classes and the most flexible major courses offered at the home campus. Faculty members at the home campus can propose short-term, faculty-directed programs to be offered at the Abroad Campus that they run directly at the Abroad Campus.

Participants, Sampling and Setting

Participant pool. Creswell and Creswell (2018) asserted that the sample size depends on the qualitative design adopted by the researcher and that case studies generally comprise about four to five participants. Hence, the participants in this study included four faculty members teaching at the undergraduate level at the Abroad Campus.

The research was conducted in the spring semester 2020 when a total of 27 courses were offered in different areas: Arts, Business, Italian Language, English Literature, Philosophy and Theology. A total of 15 faculty members were on campus during the semester. One additional member in this pool was also an administrator at the same campus and former faculty member for this same university campus where the

research took place. The major demographic characteristics of the pool is summarized in Table 4.

Table 4

Participant pool demographic

Gender	9 female; 6 male
Race	White
Age (min-max)	32-62

Participant recruitment and selection. A purposive sample (Patton, 2002) was selected based on the faculty availability to participate in the study and a feasible schedule that could allow me to conduct interviews and participate in online classes. The sample strategy was to interview those who were recognized by me, the researcher, as having a suitable knowledge on the topic of this research. From the pool, I identified four faculty members who were recognized for having this kind of knowledge and being available to participate in this research. The participants agreed to accommodate this study throughout one entire semester. Participants were contacted by email and provided an informed consent form (see Appendix B) that defined the criteria for the study and the right to withdraw from research at any time as well as the confidentiality and privacy of participants in the study.

The case was chosen based on a predetermined criterion of importance to ensure relevance to the research question (Patton, 2002). In particular: 1) courses were online; and 2) course expectations required students to participate online within the learning community as an integral part of assessed coursework. According to Leedy and Omrod (2013) a purposive sampling is suitable when participants are connected to a phenomenon. The use of a purposeful sampling in this study depended on the fact that

participants represented different perspectives on the subject under investigation: their motivations, interest, and attitudes relevant to digital literacy practices. This purposive sample was drawn from different teaching areas comprising humanities, business, language, and arts. It was not the goal of this study to cover the range of every study abroad professor in Italy. This is supported by Donmory (1990) and Patton (2002). These scholars argued that a qualitative researcher is more interested in the wealth of information that can be generated from the case rather than the ability to generalize. This also is consistent with the concept of transferability described by Lincoln and Luba's (1985) which parallels external validity. The researcher is responsible for providing thick descriptions so that transferability can be judged by those who wish to transfer the results to their own site (Lincoln & Guba, 1985).

The participants' demographic information is described in Table 5. The participants' real names are not displayed to ensure anonymity and privacy. Indeed, they are identified with pseudonyms.

Table 5

Participants' demographic information

Participant	Gender	Age (range)	Years of Teaching Experience	Area of teaching interest	Primary form of technology used in classroom
Remo	Male	50-60	20	Management & Marketing	Audio-visual equipment/digital academic platforms
Giulia	Female	40-50	15	Art & Italian Literature	Audio-visual equipment/digital academic platforms
Teresa	Female	45-55	15	Italian Language	Audio-visual equipment/digital

					academic platforms
Leonardo	Male	40-50	10	Operations Management & Information Technology	Audio-visual equipment/digital academic platforms

Remo graduated in Economics from Libera Università Internazionale Studi Sociali (LUISS) in Rome, Italy. In his professional role as management consultant, he specialized in international business and management. He has extensive teaching experience in both Italian and US academic institutions. The main teaching areas include International Business, Marketing Management and Economics of Poverty and Income Inequality. Classroom technology includes the use of digital devices (i.e.: pc, laptop, tablet, audio and video equipment), digital platforms for academic purposes (i.e..: online library resources, blackboard and YouTube), and professional software packages (i.e.: Microsoft Office). The instructor participates in online professional development (PD) programs mainly conducted on YouTube or on massive open online course (MOOC) platforms.

Giulia graduated in Foreign Languages and Literature at the University of Rome La Sapienza. She holds a Ph.D. in Modern Languages and Literature (English and Spanish) from the University of Pisa. She has taught British and American Literature in another American higher education institutions based in Rome, as well as a course on "The City of Rome" at the same university where this study was conducted. The use of technology in her teaching environment encompasses digital communication platforms such as email systems to communicate with peers, students, academic organizations' leaders. Classroom technology includes the use of digital devices (i.e.: pc, laptop, tablet,

audio and video equipment), digital platforms for academic purposes (i.e..: online library resources, blackboard and YouTube and finally professional software packages (i.e.: Microsoft Office).

Teresa has taught Italian courses at university level in the United States and Italy since 1995. She uses a communicative approach to provide students with a whole immersion in Italian language and culture. Her teaching experience ranges from Italian language to Italian literature, culture, society, history and film. Her main areas of research are focused on teaching Italian as a second language and on Italian women writers, in particular Anna Banti, Grazia Deledda and the new Sardinian female writers. The use of classroom technology includes the digital devices such as pc, laptop, tablet, audio and video equipment, digital platforms for academic purposes (i.e..: online library resources), and professional software packages (i.e.: Microsoft Office). She has attended a few professional development programs in the last year

Leonardo is employed as an administrator in the same institution where this study was conducted. He holds a master in Business Administration and is responsible for the Information Technology (IT) operations for his organization. He has extensive teaching experience at the university level in both graduate and study abroad programs. His teaching experience spans from IT to Operations Management. He has also broad experience drawn from his professional role in many of the operational activities related to Information Technology. His professional expertise spans from networking infrastructure implementation and software assessment to IT advising to staff and faculty. In his teaching role, he adopts technology solutions extensively. These solutions include the use of digital devices (i.e.: pc, laptop, tablet, audio and video equipment), digital

platforms for academic purposes (i.e..: online library resources, Blackboard and YouTube), social media (blogs, Twitter and Facebook) and finally professional software packages (i.e.: Microsoft Office, Adobe Suite). Due to his role in IT, he attends professional development programs mainly online by using either MOOC platforms or social media.

Data Tools

According to Yin (2017), a case-study-evidence can come from six sources: archival records, documents, direct observations, interviews, participant-observation, and artifacts. In this research, online interviews, online observations, and digital artifacts were used. This helped ensure that enough data were collected to guarantee that: (a) there was confirmatory evidence (evidence from two or more different sources) for most of the main topics; and (b) there was evidence of attempts to investigate major explanations (Yin, 2017). Yin also argued that multiple data sources support triangulation to help build a convergent evidence for validity. In addition, a chain of evidence from multiple data sources helped establish reliability (Yin, 2017). In the development of the interview and document protocols, the literature review was used to formulate interview questions, which were subsequently linked directly to the research questions.

Data collection instruments to record data for this study included: (a) an interview protocol (Yin, 2017; Creswell, 2014) used to conduct the semi-structured interviews, (b) an observation protocol that added new dimensions for understanding the actual use of technology and to complement participant interviews (Yin, 2017), and (c) a digital artifact protocol that evidenced the artifacts collected digitally during the interviews and

the online observations (Yin, 2017). The research material consisted of all the participants' theme interviews, online observations, and digital artifacts.

Research Procedure

Interview procedure. The study was conducted over a period of one semester (i.e.: 16 weeks). Yin (2017) asserted that "one of the most important sources of case study evidence is the interview" (p. 234). Online interviews supported this study by suggesting explanations about the "hows" and "whys" of key events, and provided the insights reflecting participants' relativist perspectives (Yin, 2017). The case-study interviews were consistent with Yin (2017) in: (a) following the researcher's own line of inquiry, and (b) verbalizing the actual (conversational) questions in an unbiased manner that served the needs of the line of inquiry. Interviews were conducted following Yin's (2017) recommendation according to which a case-study required operating on two levels: satisfying the needs of the researcher's line of inquiry while concurrently putting forth friendly, nonthreatening, but also relevant questions in the open-ended interviews. Indeed, the main goal in the interviews was to hear what participants had to say in their own words in order to elicit participants to share what they knew and learned. This allowed to add a dimension to the understanding of the situation (Lichtman, 2013; Mack et al., 2005).

Yin (2017) warned that a conversation can lead to a mutual and subtle influence between the interviewer and the interviewee with the risk that the interviewer's perspective unknowingly influences the interviewee's responses, but those responses also unknowingly influence the researcher's line of inquiry. To mitigate this risk reflexivity was attentively disclosed and addressed.

Emails were sent to prospective participants to invite them to participate in the study. Participants were informed that they could voluntarily leave the study at any point. It is important to note that the Institutional Review Board (IRB) suspended all face-to-face research and data collection activities with human subjects due the national emergency brought on by the COVID-19 pandemic. To be compliant with this requirement all data were collected electronically, and interviews were conducted using Microsoft Teams and Skype. The interviews were conducted by me, the sole researcher. Each participant was asked to take part in an interview that lasted between 40 to 45 minutes. Pseudonyms were used to identify participants and maintain participant anonymity during the research process. In this way, it was ensured that information revealed by a participant could not be linked to any of the actual participants. Furthermore, all information shared by the participants were kept private to avoid any interference with job status or career advancement opportunities for participants.

In the semi-structured, one-on-one interview, an online session was held with each of the four faculty members through one of these supporting digital platforms: Microsoft Teams and Skype. The participants were asked open-ended questions (see Appendix A). This approach ensured that they could best voice their experiences unconstrained by any perspectives of the researcher or past research findings (Creswell, 2014). As mentioned above, the interview questions were directed to address the research questions. Specifically, open ended questions were asked (a) to explore the participants' use of technology in class and the perceptions, interests and motivations guiding their digital literacy practices and the effects on their teaching strategies (RQ1); (b) to explore the way professional development programs supported their digital literacy (RQ2) and (c)

to describe and enlighten how the fast pace development in the digital environment influenced their teaching strategies (RQ3).

Creswell and Creswell's (2018) recommendations were followed to develop the interview protocol for asking questions and recording answers during a qualitative interview. Information from interviews were recorded by making word-processing notes and by audiotaping using two separate recording devices. Although interviews were digitally audiotaped, notes were taken in case the recording equipment had failed (Creswell & Creswell, 2018). The number of questions in the interviews were aligned to Creswell and Creswell's (2018) recommendation according to which "the total number of questions should be somewhere between 5 and 10, although no precise number can be given. It should be prepared in advance of the interview and used consistently in all of the interviews" (p. 342). A set of potential interview questions retrieved from previous academic studies ordered by research questions are described in Appendix A.

To develop the interview protocol components, a framework developed by Creswell and Creswell (2018) was adopted. This is shown in Table 6.

Table 6

Interview Protocol

Basic Information about the interview	The interviewer records the following basic information about the interview: a. Time and date of the interview b. Setting c. Names of both the interviewer and interviewee d. Projected length of the interview e. File name for the digital copy of the audio recording and transcripts
Introduction	This section provides directions to the interviewer to ensure useful information is not overlooked during the interview. a. Interviewer introduced himself and discussed the purpose of the study b. Prompt to remind to collect a signed copy of the informed consent form c. Interviewer provided a brief commentary of the general structure of the interview (i.e.: number of questions and time it should take) d. Interviewer clarified some important terms that were used in the interview

Opening question	To set the interviewee at ease the first opening ended questions was an ice-breaker type of question (i.e.: What is your job?)
Content questions	The open-ended questions in Appendix A provides probe of the questions that aim to parse and enlighten the different facets of the central phenomenon in the research questions
Using probes	Probes are reminders to the interviewer to ask for more information and explanation of ideas (e.g.: "Tell me more"; "I need more detail"; "Could you explain your response more")
Closing instructions	The interviewer: a. Thanked the interviewee for his or her time b. Reassured the interviewee of the confidentiality of the interview c. Asked the interviewee to follow up with the interview in case it was needed to clarify some points

As mentioned, pseudonyms were used to differentiate participants and interviews to protect the privacy of participants, so information disclosed by participants could not be traceable to specific participants. As a result, all information shared by participants was kept private to ensure this could not interfere with the job position or career development opportunities of the participants.

Observation Procedure. Yin (2017) noted that because a case study is likely to take place in the real-world setting of the case, this creates the opportunity for direct observations. Yin also informed that when the phenomena of interest have not been purely historical, some relevant social or environmental conditions are available for observation and such observations serve as another source of evidence in doing case study research. Indeed, observations can add new dimensions for understanding the actual uses of a new technology and any problems being encountered.

Mach et al. (2005) stated that the data obtained through participant observation serves as a check against the biased reporting by the participants of their beliefs and actions. These authors also noted that observations are useful for understanding the physical, economic, cultural and social aspects in which study participants live; the relationships among and between people, contexts, ideas, norms, and events; and people's behaviors and activities. A similar view is supported by Lichtman (2013) who noted that "observing humans in natural settings assists our understanding of the complexity of human behavior and interrelationships among groups" (p. 373).

In conducting online class observations, a personal commitment was made to protect the identities of the observed participants including any individual I interacted with, even if informally. As Mach et al (2005) asserted "maintaining confidentiality means ensuring that particular individuals can never be linked to the data they provide" (p. 29). Consistent with this assertion, my role as a researcher in this study was that of a non-participant observer. In total, three online class observations were completed. They were selected based on the participants' availability to allow me to attend their online classes. The number of observations ensured that a *thick description* of the dynamics of

the context observed was accomplished. Ponterotto (2006), combining the work of Ryle (1971), Geertz (1973), Denzin (1989), Holloway (1997), and Schwandt (2001) exemplified five main components of thick description:

1. Thick description involves a precise description and interpretation of social actions in the appropriate context of social action. For this purpose, I attempted to take notes of the date, time of faculty discussion, teacher in charge, and subject being taught and a description of the online environment.
2. Thick description captures the feelings, emotions, and network of social interaction between observed participants in the context of their operations. For this purpose, I documented in the notes the faculty and students' gestures and actions I observed online.
3. A central feature to interpreting social actions entails assigning motivations and intentions for the said social actions. For this purpose, I annotated in the field notes any background information that could provide an explanation on the motivation behind faculty's actions during their class.
4. A central aspect of social actions analysis includes assigning motives and objectives for the social actions stated above. For this purpose, I attempted to provide finer details of the actions I observed.
5. Thick description of social actions encourages thick understanding of these acts, leading to a thick sense of the readers' findings. For this purpose, I attempted to include a statement about what was meaningful about the interactions I observed.

These observations were conducted to ensure that some distance was maintained, not interaction was incurred, and a concealed role was kept.

According to Creswell (2014) the protocol is a pre-data collection method developed by the researcher to take field notes during the observation. Consistent with this indication, a chronology of events, a detailed portrait of the attendees, and verbatim quotes of individuals were recorded. The form comprised a single page with a dividing line down the middle to separate descriptive notes (portraits of the participants, a reconstruction of dialogue, a description of the physical setting, accounts of particular events, or activities) from reflexive notes (Creswell & Creswell, 2018). In the form, information about the time, place, and date of the field setting where the observation took place were reported. The protocol structure is summarized in Table 7, based on Creswell's (2014) recommendations.

Table 7

Observation Protocol Structure

a. Header	Recording time, position, setting and observation data. The header was in two rows. Both columns split the reporting site into two data types: an event summary and a representation of the researcher's themes, quotes, and personal experiences.
b. Description of the chronological order of events.	This description was useful when examining a process. This section was also used to describe the individuals, physical setting, events, and activities

c. Reflective notes	This section served to document observations, such as ideas on important results and perspectives or new subjects for later analysis

Digital Artifacts. Yin (2017) noted that the final source of evidence is a physical or cultural artifact. In this research, examples of technological devices, tools or instruments, or some other physical evidence of the use of technology observed in class were disclosed. Yin (2017) suggested that such artifacts can be collected or observed as part of a case study as they have been used widely in anthropological research. The collection of digital artifacts in this research was consistent with Gerber et al. (2017), as they stated that "contemporary researchers have found that video screen captures, screenshots, and still images are instrumental in capturing artifact data and tracing learning within online spaces. Given the impermanence of online data, these approaches allow researchers to collect artifacts before they are modified, archived, or deleted" (p. 104).

Data Collection

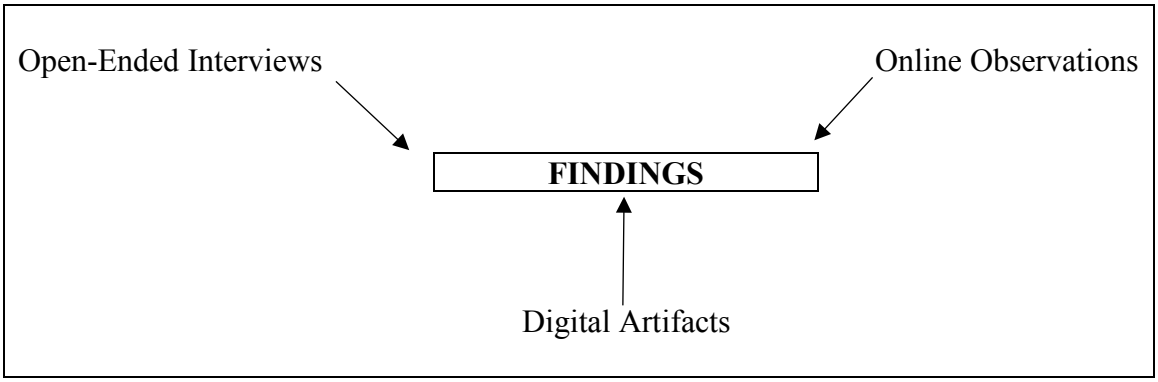
Data were collected and analyzed to develop themes that addressed the research questions. Although not generalizable to other populations, the results of this qualitative analysis can be used to help inform studies at the discretion of the reader. The qualitative design adopted was grounded on the constructivist worldview according to which:

> Individuals develop subjective meanings of their experiences—meanings directed toward certain objects or things. These meanings are varied and multiple, leading the researcher to look for the complexity of views rather than narrowing meanings into a few categories or ideas. (Creswell & Creswell, 2018, p. 30)

In collecting data, Yin's (2017) four principles of data collection were followed. They ensured that the three selected sources of evidence (i.e.: interviews, observations, and artifacts) were maximized. The first principle addressed the use of multiple sources of evidence. Yin (2017) noted that case-studies are in-depth and contextual. This means collecting a variety of relevant data and hence relying on multiple sources. Indeed, multiple evidence sources allowed this research to go beyond the scope of a case-study and developed converging lines of inquiry. The integration of multiple data sources allowed also the compilation in a contextualized format of dense, rich accounts of faculty motivations on digital literacy, professional development and teaching strategies in a study abroad setting (Rich, 2012; Schonfeld & Farrell, 2010; Geertz, 1973). According to Yin (2017) a case study research should rest upon "multiple sources of evidence, with data needing to converge in a triangulating fashion" (p. 18). This is a strength of the tradition of case study research. Triangulation allowed the accomplishment of rich, "detailed observational evidence" (Yin, 2017, p. 19) of the "phenomenon being studied" (p. 24). In this study, the phenomenon was represented by the faculty motivations on digital literacy, the professional development and teaching strategies as placed in a contextualized study abroad setting (Fig. 7).

Figure 7

Evidence Convergence



Similar to Yin (2017), Baxter and Jack (2008) noted that "each data source is one piece of the puzzle, with each piece contributing to the researcher's understanding of the whole phenomenon. This convergence adds strength to the findings as the various strands of data are braided together to promote a greater understanding of the case" (p. 554). The second principle involved the construction of a database that was created by using a Computer Assisted Qualitative Data Analysis (CAQDAS), *Nvivo*. This was a way of effectively organizing data suggested by Yin (2017). Using a database improved the reliability of the case research as it allowed to track and organize data sources such as notes, key documents, digital artifacts and audio files for easy access at a later date (Baxter & Jack, 2008). The main function of the database was to retrieve the data gathered. In addition to serving external readers, a well-organized database facilitates researchers' future analysis. The database was developed based on two of the four components exemplified by Yin (2017): (a) notes; (b) documents; (c) tabular materials; (d) narratives.

- Notes. The notes were stored electronically in a personal folder on a protected drive in a way that could be retrieved by the researcher.

Source:	Interviews Audio/word-processing	Observations Word-processing	Digital Artifacts Document analysis
Organized by:	Participant	Participant	Participant
Categorized by:	Open ended questions		

- Narratives. The narrative compilation took the form of coding/themes for the interviews, observations, and digital artifacts.

The third principle related to maintaining a chain of evidence. This principle enables the reader of the case-study to track any information from initial research questions to the final findings of the case study and indeed it increased the construct validity of the information of the case study (Yin, 2017). Moreover, the process was kept as tight as possible, as with forensic evidence, so that the reader is able to trace the steps in either direction, from findings back to initial research questions or from questions to findings. A step by step process is reported in the data analysis section of this chapter, for both interviews and observations. The fourth principle concerned exercising care in using data from media and from social media sources. In this research, social media and media did not represent meaningful data and indeed were not collected.

Fontana and Frey (2005) evidenced the importance of gaining access to the sample under review and the willingness to share the researcher's knowledge and environment. For this reason, all participants were asked to complete a letter of informed consent for participation in the research study (see Appendix B) where it was clearly outlined the purpose and scope of the research, how information was used and processed, and the participants' right to withdraw from the study at any time. At the beginning of the

interview, this informed consent was discussed with each participant. It served to reassure all parties that the collected data were kept confidential and that each personal identity was replaced by a code. The information connected to this code was kept in a protected folder saved in my secured laptop. All participants were provided a clear explanation of the purpose of this study and the reason of the importance of their participation. The interview and the recording of it began only when the participant verbally agreed with the process. The recordings were manually transcribed on Microsoft (MS) Word and saved in an encrypted folder. Data were also stored in a separate password protected file on my laptop and kept accessible only from myself. Participants were informed that they could request copies of any of the data collected at any given time.

For each interview session and online observation, notes were taken by using MS Word from my laptop. The audio from the interviews was recorded by using Quickvoice pro application on my password secured mobile device and, as a backup voice recorder, one of the recording features embedded in one of the digital platforms (Microsoft Teams and Skype) used to conduct the online interviews. These media files were saved on my secured laptop. As a backup device, a password protected Microsoft cloud drive was used. This drive was separated from the laptop drives. Transcripts were analyzed, elaborated, and developed right after the end of each interview and observation, as detailed in the following sections of this chapter.

My role as a researcher in this study was that of a non-participant observer in the observations where I listened, observed, and took field notes. I played a more participatory role in the interview process and for this reason, I acknowledged my background bias. Since I am also an administrator at the Abroad campus, I frequently

participate in technology development projects. I have, indeed, a direct experience with the use of the technology in classrooms and the program development plans for faculty. Thus, as per Lichtman (2013), I realize that such experience may have had an impact on the research. In Table 8 there is a summary of the data collected.

Table 8

Summary of data collected

	Conducted-Collected	Length of the recordings	Length of the notes collected
Interviews	4	40 to 50 min	
Online Observations	3		1 to 2 pages
Digital Artifacts	23		

Initially, I had planned to conduct multiple observations, two to three for each of the four participants in this study. Similarly, the artifacts I had planned initially to collect included both physical and digital ones. The teaching disruption caused by the pandemic emergency affected this initial plan by limiting the number of the observations to 3 and the collection of only digital artifacts.

Data Analysis

Yin (2017) stated that having a general research strategy is the best preparation for carrying out the case study analysis. Hence, the aim of the analytical strategy was to link the case-study-data to the relevant concepts and then give a sense of direction in analyzing the data. However, Yin (2017) warned that the literature largely lacks data analysis for case-study research and, thus, requires the researchers to develop their own analytical rationale. Case-study researches are not based on a particular set of guidelines,

but rather on the researcher's own style of systematic analytical analysis, with sufficient evidence and careful consideration of alternative interpretations.

Consistent with Yin (2017), the data analysis strategy focused on handling data from the ground up. This strategy approach allowed to "find that some part of your data suggests a useful concept or two. Such an insight can become the start of an analytic path, leading you further into your data and possibly suggesting additional relationships" (p. 169).

In adopting a data analysis strategy, Merriam (1998) suggested that "some data analysis strategies are identified with different theoretical traditions or disciplines; others have emerged as general approaches to any qualitative data" (p. 1878). These disciplines are ethnographic analysis, narrative analysis, phenomenological analysis, and the constant comparative method. These techniques are mainly intended to deal with the development of internal and external validity.

In the data analysis phase, I strove for trustworthiness by using all the evidence, by focusing on the most significant aspects associated with the case study, and by demonstrating familiarity with the predominant thinking and discourse about the case study subject (Yin, 2017).

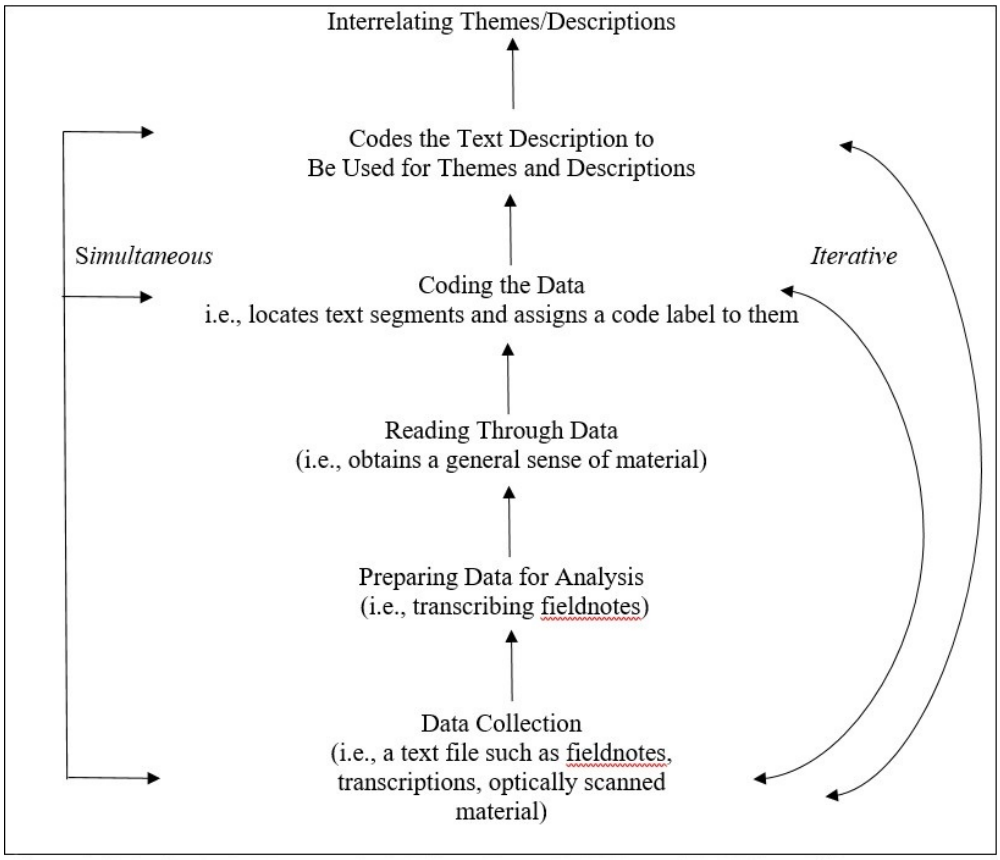
Stages of data analysis. Following a "bottom up" approach (Creswell & Creswell, 2018), once the field notes were collected and reviewed for each interview and observation session, the audio recordings and field notes were transcribed. For the data analysis was used a CAQDAS (Creswell, 2014; Yin, 2017), *Nvivo*. Creswell and Creswell (2018) asserted that "qualitative computer programs do not analyze the data for you" (p. 132) but they can facilitate data analysis by helping the researcher organize, sort,

and search for information in text or image databases. Similarly, Yin (2017) contended that "the software will not do the finished analysis on its own, but it may serve as an able assistant and reliable tool" (p. 166).

Before starting a transcription, I listened to the recording twice. This enforced trustworthiness and allowed to wrap up thoughts about coding. When the transcription of the audio recordings and field notes were completed, the data were reviewed, at least once, through attentive and thorough reading. Then, the coding process was initiated by going through all the transcripts. In this process, observable traits engaged by each participant without predetermined themes were also identified and then coded. Subsequently, the transcripts were used to identify the rationale for behaviors, to generate themes for each observation and interview session, and to compare them to conceptual framework and literature. This process can be visualized in Fig. 8 (adapted from Creswell and Creswell 2018, p. 74).

Figure 8

Data Analysis Process



This process according to Creswell (2014) is inductive, going from specific or descriptive information (e.g. transcripts or written interview notes) to general codes and themes; it is a simultaneous process of analyzing while also collecting data; it is iterative, in the sense it is possible to cycle back and forth between data collection and analysis.

This process is here described:

***Step 1 -data collection and data transcription*.** Data from sources of evidence (i.e.: online interviews, online observations, and digital artifacts) were organized by participants in a database (Yin, 2017) and categorized based on two components: notes

and narratives. *Nvivo* served as a database. A duplicate copy of all forms of data were kept on a secured Microsoft cloud drive.

Consistent with Creswell, (2014) according to whom transcription is the method of converting audiotapes or field notes into text data, digital recordings were transcribed from the interviews using MS Word and saved the related file on a secured folder on my laptop. As Mach et al. (2005) recommended, backup copies of the digital recordings were made and saved on a secured Microsoft cloud drive separately from the original audio recorded file. MS Word was used to type field notes for both interviews and observations and the relative file was saved on my personal laptop in a secured drive. Mach et al. (2005) argued that field notes provide contextual information which could enhance the researcher's interpretation of the transcript and therefore should be easily identifiable as part of the same data collection event. Expanded notes were typed as separate computer files for each observation analysis activity. Transcription of recordings began right after the data collection event (Lichtman, 2013; Mach et al., 2005). Similarly, field notes were expanded as observations and interviews were completed for each event.

In transcribing the digital recordings, I listened to them and simultaneously wrote down or typed everything that was said on the audio recording (Lichtman, 2013; Mach et al., 2005). Nonverbal sounds (e.g.: laughter, sirens, someone knocking on the door) were also noted on the transcript.

Consistent with Mach et al. (2005) recommendations, data were identified based on archival numbers that were assigned to each data collected. These numbers were assigned in a sequential order to each data collection event. The archival number was used to label all records related to a specific event in data collection. The archival log was

the list of sequential numbers allocated to each occurrence of data collection and was used to track data.

Step 2 -reading through all data. Yin (2017) recommended that one starting point for any analysis is to "play" with the data to search for patterns, insight, and concepts. For Creswell and Creswell (2017) this is the first step in data analysis, and it helps the researcher explore the data in order to obtain a general sense of the data, memo ideas, and consider whether more data is needed.

Following Yin's (2017) recommendation according to which "the best preparation for conducting case study analysis is to have a general analytic strategy" (p. 174), a constant comparative approach (Merriam, 1998) was adopted. As the name suggests the basic strategy of the method is just constantly comparing data. The researcher begins with an incident from an interview, observations or artifact and compares it with another incident in the same data set or in a different collection. These comparisons lead to preliminary categories (or themes) comparable to one another and to other instances. There are frequent comparisons within and between degrees of conceptualization before a hypothesis can be formulated. As Merriam (1998) argues this method was elaborated to develop grounded theories, however it has been also adopted by several researchers who are not searching to build substantive theory.

Step 3 -coding the data. Coding is an inductive process where text is segmented and labeled to form descriptions and broad themes in the data (Creswell, 2013). In other words, it is the process to move from raw data to meaningful themes (Lichtman, 2013). It is the researcher's responsibility to generate codes by providing the input, regardless the researcher may or may not use a software for data analysis (Yin, 2017; Creswell, 2013;

Lichtman, 2013). Indeed, for the coding process the following steps were implemented based on the constant comparative method of data analysis (Creswell & Creswell, 2017; Creswell, 2013; Merriam, 1998; Tesch, 1990):

- All transcripts were read thoroughly to get a sense of the whole and, the, some ideas were written down
- One interview was selected focusing on the underlying meaning (e.g.: what is the person talking about?). Then, two or three words on the margins were written.
- The process of coding the document started. As the software *Nvivo* was used, text segments were identified by highlighting them on the screen and assigned a code (or node as defined by *Nvivo*) that described the meaning of the text segments. A lean coding approach (Creswell, 2013) was adopted. According to this approach, a few codes (15 to 25) were assigned the first time. Then the text was analyzed. This way the process of reducing a smaller number of codes to broad themes was wieldier.
- After coding the entire text, all code words were listed and then grouped based on their similarity and search for redundant codes. This was a way to reduce the number of codes to a lower number (around 10).
- The list of the codes was used to review the data again. Specific quotes from the participants that support these codes were indeed highlighted.
- Moving to the next set of data (transcript, observations, or artifacts), these were scanned in the exact same way as outlined above. The list of groupings that were extracted from the first transcript were taken in consideration to check if they were also showing in this second set. A distinct list of comments, terms, and notes

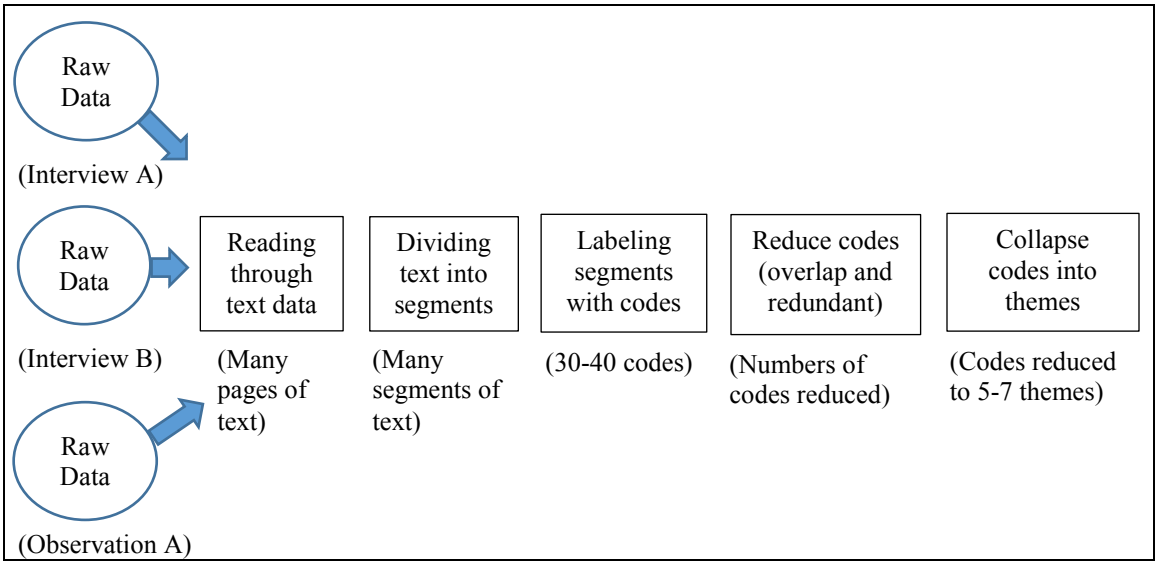
from this set was also made and then compared with the list derived from the first transcript.

- These two lists were merged into one master list of concepts resulting from both sets of data. This master list constituted a primitive outline or classification system reflecting the recurring patterns in the study. These patterns became the categories or themes into which subsequent items were sorted and compared to conceptual framework and literature.

This procedure can be visualized in Figure 9.

Figure 9

Coding process



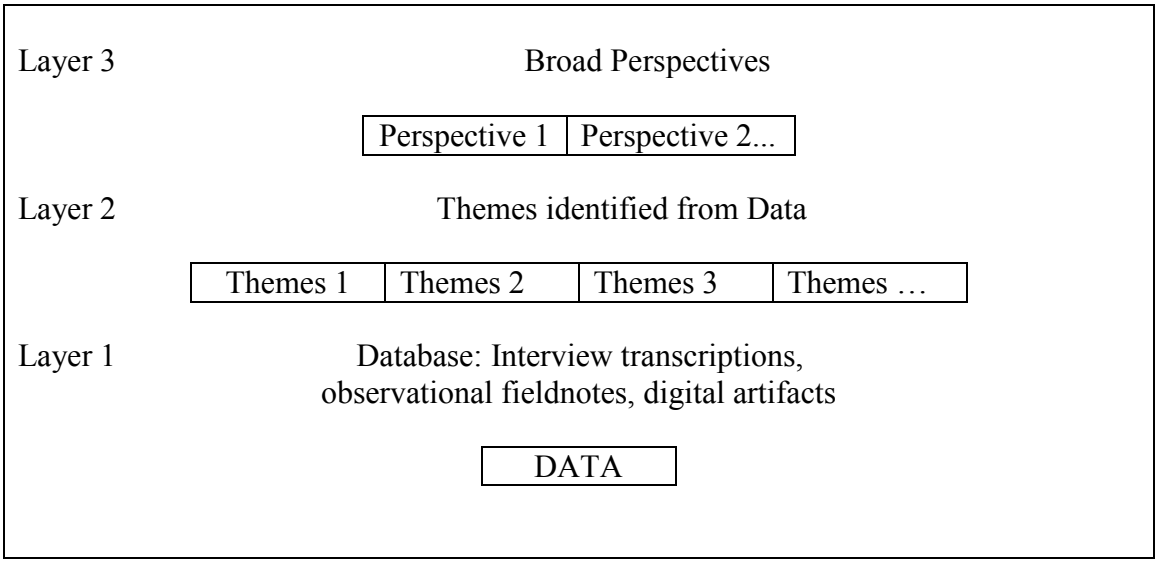
A code-recode procedure was also implemented to be sure coding was done accurately. This also added to the trustworthiness of this study. After one week from the first coding I started recoding random transcripts from my data to be sure my coding decisions were consistent. Two segments randomly selected from the coded data from interviews were taken and recoded. The results from the recoding was then compared to

the original coding. The segment that did not confirm the recoding was coded again to support accuracy.

Step 4 -themes. Guba and Lincoln (1981) suggested four guidelines for developing categories (or themes) that ensure reliability. First, the number of individuals who mention something or the frequency at which it appears in the data shows a significant aspect. Second, the audience can determine what is relevant. In other words, certain categories will look more or less plausible to certain audiences. Third, some categories will stand out because of their uniqueness and should be retained. Fourth, some categories can expose areas of inquiry that are not otherwise well known or have a specific leverage on a common problem. Multiple perspectives were provided as evidence for themes in order to cover the complexity of the phenomenon (Creswell, 2017) and saturation on a theme was evidenced when I realized that I was not able to add new information to my list of themes or to the detail for existing themes. Finally, to ensure that a chain of evidence (Yin, 2017) was clearly shown, themes were layered and then interconnected. *Nvivo* was used as database (for interview transcriptions, observational field-notes and digital artifacts) as Layer 1; the identified themes as Layer 2; and broad perspective (inferences and generated framework) as Layer 3. This is shown in Table 9.

Table 9

Layers in the Themes



Trustworthiness and Researcher Biases

In a quantitative research the concepts of validity and reliability are criteria used to ensure that the research represents what it explains, and that similar conclusions or findings are obtained by others carrying out the same study. Instead, the criteria for assessing a qualitative research varies depending on its focus which means how well the researcher has given a clear and detailed explanation of the context, the rigor and method involved in the study and how it has been evaluated (Bloomberg & Volpe, 2012). In a qualitative study, Lincoln and Guba (1985) identified four terms that qualitative researchers can use to create trustworthiness: credibility, transferability, reliability, and confirmability. Unlike Lincoln and Guba (1985), Johnson (1997) identified three types of validity: descriptive validity, which refers to the factual accuracy of the account as defined by the researcher; interpretive validity, which refers to the extent beliefs, feelings, expectations and perceptions of the participants are accurately interpreted and

represented by the researcher; theoretical validity, which is the extent a hypothesis or a theoretical interpretation is derived from a researcher. In this study, I appraised Johnson's (1997) twelve strategies: (a) researcher as detective; (b) extended fieldwork; (c) low inference descriptors; (d) data triangulation; (e) methods triangulation; (f) investigator triangulation; (g) theory triangulation; (h) participant feedback; (i) peer review; (j) negative case sampling; (k) reflexivity; (l) pattern matching. Some of these strategies were used to ensure the highest possible degree of trustworthiness for my study. Multiple information sources (Yin, 2017; Creswell & Creswell, 2018) were used to support validity and, in particular, multiple interviews and observations to meet descriptive validity to find a "converging line of inquiry" (Yin 2017, p. 253). The data obtained from codes and themes that emerged from all types of sources were triangulated to demonstrate linearity and to find a converging line of inquiry (Barone, 2011). By developing a convergent evidence, data triangulation helped strengthen the construct validity of the case study (Yin, 2017). To meet theoretical validity, after the transcripts were coded, one peer reviewer conducted a code-checking. Furthermore, during all the phases of the study, my mentor and committee members were consulted to confirm data analysis was being performed appropriately. Finally, to ensure that interpretative validity was met, two of the participants were asked to review the details of the study to evaluate their clarity.

Johnson (1997) asserted that "one potential threat to validity that researchers must be careful to watch out for is called researcher *bias*" (p. 283). To get the reader to trust the researcher, I acknowledge awareness of personal bias (Johnson, 1997; Lichtman, 2013; Probst, 2004; Creswell and Creswell, 2018) and use reflexivity to understand these

biases (Embraced Wisdom Resource Group, 2005, 1:05; Johnson, 1997). In my role as a qualitative researcher, I acknowledge the undeniable presence of biases, stemming from my own experiences as an administrator in the same research setting where I conducted the research, as an occasional faculty, as an advanced digital literate, and from my educational background in business management and literacy education. My relationship with the participants was restricted to my administrative role for the same institution where the participants were working as faculty. Instead of eliminating these biases altogether, which was an unfeasible task, I recognized their effects on the data collection and evaluation process and made a cognizant effort to mitigate these effects on my study. Reflexivity was used throughout the study to mitigate these biases. Memoing was an important tool for fostering reflexivity as it offered a space for reflection on the research process and any extant preconception associated with the work. Consistent with Charmaz' (2006) suggestion that the best approach to memo writing is to "do what works for you" (p. 80), memos consisted mostly in small sentences written on a side of the interview transcripts.

Summary

This case study was designed to help ascertain the "how" and "why" (Barone, 2011; Stake, 2000; Yin, 2017) the multifaceted motivations, perceptions and attitudes influence digital literacy practices in a small group of study abroad faculty, and the "how" and "why" professional development can help inspire them to act to innovate their digital literacy practices within a study abroad context. Interviews with current and former faculty members, as well as direct observations and digital artifacts were used as research instruments to better understand these practices. Adopting a "bottom up"

approach (Creswell & Creswell, 2018), I transcribed the audio recordings and field notes collected during each interview and observation session. For the data analysis a computer analysis of qualitative data (Creswell, 2014) was used. The program *NVivo* was, indeed, adopted for this purpose. When the transcription of the audio recordings and field notes was completed, observable traits that emerged from the data collected were identified and coded. Afterward, the transcripts were used to identify the rationale for behaviors and generate themes for each observation and interview session. After analyzing the data, all findings were disclosed and discussed in Chapter 4 and Chapter 5. Information from all sources were analyzed and presented for consideration to faculty and institutional leaders engaged in global education.

CHAPTER 4

FINDINGS

The purpose of this qualitative case study research was to explore the multifaceted motivations, perceptions and attitudes that influence the digital literacy practices in a small group of study abroad faculty; how professional development can help inspire them to act to innovate their digital literacy practices within a study abroad context; and, finally, how digital transformations affect their teaching approach. In particular, the main question in this study is:

- What are the motivations, perceptions and interests that influence digital literacy practices for faculty engaged in a study abroad program in Italy?

The two sub questions are:

- How do leadership approaches shape professional development programs that aim to improve faculty digital literacy practices in a study abroad context?
- How do digital transformations influence teaching strategies in a study abroad program?

The data that are analyzed and presented in this chapter include: transcripts of faculty members' interviews; observation notes and digital artifacts. The research questions served as the basis for the data analysis discussed in this chapter.

The notion of mindset (Lankshear & Knobel, 2006) was helpful to frame the way participants approached digital technologies. It allowed me to focus the attention on the assumptions the participants made, and their involvement in digital literacy practices without limiting the discussion of their diverse experiences to a specific form of mindset. For this reason, while presenting the findings, an individual case was used to explore the

participants' digital mindsets and to frame them in terms of the assumptions the participants held about the affordances of digital technologies. According to Selwyn and Facer (2007), *affordances* are users' socially constructed interpretation of digital technology opportunities that prompt how they can be used and what they can do.

Themes emerged during the data analysis within each research question. Data were analyzed in accordance with the data analysis protocol described in Chapter 3. This chapter is organized as follows: a tabular representation of relevant critical themes and a detailed review of the themes emerged by each research question. Each participant's understanding of his/her inferencing awareness and experience was emphasized through rich textural and structural explanations. Indeed, in this case study in my role as a researcher, I

- Investigated the essence of the digital literacy practices of the participants and the factors affecting their affordances.
- Explored the typical digital practices of the participants, their approach to professional development and digital transformation, as well as their related beliefs by comparing those areas.

Main Research Question

Main question: what are the motivations, perceptions and interests that influence digital literacy practices for faculty engaged in a study abroad program in Italy?

The main research question focused on identifying the multifaceted motivations that affect study abroad faculty as they aim to improve their use of technology-enhanced learning (Bennett 2014; Ecclesfield, et al., 2012). This latter essentially requires access, skills, reflection and iterative practices to foster the individual's understanding,

intellectual growth, and learning. Consistent with the constant comparative method, the list of codes was derived first from data coded without predetermined themes. As themes emerged from the data, codes were assigned and then compared to conceptual framework and literature. In particular for the main question, codes were assigned considering the elements that entailed the "multifaceted motivations" as described in the literature (Baker & Wigfield, 1999; Bandura, 1997; Wigfield & Guthrie, 1997): (a) interest, (b) preference for challenge, (c) involvement, (d) self-efficacy, (e) competition, (f) recognition, (g) grades, (h) social interaction, and (i) work avoidance. The codes and frequency that encompass all the data sets are shown in Table 10. The number of observations and artifacts ended up being in a smaller number than initially planned because of the teaching disruption caused by the health pandemic emergency that occurred when this study was conducted. Indeed, I consolidated all the references in one column.

Table 10

Codes frequency Referenced for Main Research Question

Codes	**References in Participants' Interviews, Notes from Observations, Digital Artifacts**
Beliefs in the value of technology	69
Benefits of using ICT	32
Shifts in digital teaching practices	22
Confidence-self efficacy in the use of technology	22
Efficacy of digital tool in helping students achieve learning objectives	21
Online learning environment	18

Use of digital tools in the online teaching environment	26

As evidenced in Table 10, from the analysis of transcripts, notes from observations and digital artifacts the indicators with the highest percentage of incidence were the following: beliefs on the value of technology (69 references); benefit of using ICT (32 references); use of digital tools in online teaching environment (26 references); shifts in digital teaching practices (22 resources); confidence-self efficacy in the use of technology (22 references). These codes showed recurring patterns that led to the three main themes. These three themes are related to the conceptual framework: *individual beliefs in the use of technology; confidence and self-efficacy in technology; use of Information and Communication Technology (ICT) in the online teaching environment*.

Individual beliefs in the use of technology. All participants evidenced clearly how their mindsets were shaped by their individual *beliefs* about the way technology can be supportive in their teaching environment. As conceived in Bennett's (2014) framework, individual belief is an attribute that affects the modality through which faculty can access technology, the way they perceive their technology skills and ultimately the way their digital practices are shaped. This is evident in this interview excerpt with Remo when he stated "well, clearly, we're living in a world where information technology is a basic structure of our lives and in doing research clearly you cannot do it without IT." From this except it is evident the direct impact of technology on digital practices. The use of technology in teaching can be conceived as a vehicle to ensure students acquire determined basic technological skills. This can allow them to

succeed not only academically but also in the working environment. In this regard, Remo also asserted

> When I introduce technology I do this in the view of making them experience things that they will use in a professional environment….Even [in] a simple presentation, what I try to teach them is to do that in a way that managers, their boss may appreciate

The importance of technology for the students' future professional life is further elaborated by this participant when he emphasized how important it is that students understand that technology is something they cannot do without in their professional life. Hence, he mentioned "we're living in a world where information technology is a basic structure of our lives and in doing research clearly you cannot do it without IT." Other participants also evidenced how students should be encouraged acquiring determined basic technological skills. For example, Giulia evidenced how technology enables to build strong relationships with the students. Technology, in fact, creates a sort of recorded evidence of the teaching work with the students. Giulia also asserted "these technological tools give us the evidence of our work and our dialogue with the students. So, in this sense, these technological tools guarantee a clear relationships." In other words, since teaching and learning are recorded using a specific ICT, it means that such a tool becomes a sort of database, a "memory" as Giulia named it, that can be used in the future.

Participants' professional and educational backgrounds emerged as another important theme influencing individual beliefs. For example, Remo explained his attitude

in developing his technology skills as something that was linked to his early professional experiences. This excerpt clarifies this point:

> Interviewer: And how do you think, you know, your technology skills have helped you manage this kind of online class?
>
> Remo: I must say that I started my career after university at IBM Corporation and I had 13 weeks training on personal information technology the use of…information technology for… for individual productivity. So, I have no trouble in using these platforms, no troubles in learning new things, because I have this kind of imprinting.

From this excerpt, it is clear how this participant was able to build up a positive attitude, or approach, in developing technology skills because of his early professional experiences and training. Professional experiences, indeed, affected his beliefs.

Similar to Remo, the other three participants evidenced how at least one of these elements, realm of studies, educational background, and professional experience, affected their beliefs. These elements affected their beliefs not only in the modality they were used but also in the extent technology was able to support their teaching strategies. In this regard, Giulia asserted "if we think at my academic area, right, being a humanist I'm more connected to words on a piece of paper rather than with technology." This was resounded by Teresa when she discussed her challenges in using digital tools "I think [it is] something about my personal attitude, like I'm an old fashioned professor…For example I have Kindle to read books, I don't like to read books like that. It's my personal approach." For Leonardo, the influence of his professional and academic area of interest

is even more evident. This excerpt was extracted from the participant's discussion about the importance of ICT in his teaching and research purposes.

> [ICT is] very important. You can use technologies to different degrees, it's your choice.... I would never be able to do without, after starting to use it. I've been in technology basically all my life (professional life) and it makes a huge different, you know. Speaking in general terms absolutely very, very important.

As evidenced in this excerpt, the way professional experience and background, and realm of study influence the individual's beliefs is, somehow, ambivalent as it can stimulate individuals in using technology but can also limit the perception of the need or advantage in using it.

Another element that emerged as a driver in shaping the individual beliefs was related to the tangible benefit of using technology for teaching purposes. For Remo, a tangible benefit of technology was related to the possibility to use digital platforms to reach out to students that were scattered around the United States and the rest of the world. Indeed, Remo stated:

> in a study abroad context yes, this is…this is…um...very important because as I said at the beginning, study abroad means that you have a group of students that live in very different parts of the world. In my last presentation, I had students talking from Vietnam, another one talking from New York and another one talking from Germany.

Indeed, technology demonstrated its potential in facilitating communication and global outreach. This represented a valuable and tangible benefit that had a positive effect on the individual's belief.

In discussing the tangible benefits in the use of digital tools, Giulia drew the attention of students' learning. One interesting element this participant brought up was related to her recent novel experience in teaching an online class. She recognized that a digital platform like Blackboard that contains discussion forums for the students, and sections where to exchange ideas and ask questions, can trigger even the most reticent and shy students to express their thoughts and their analysis of the topics with more openness than in a usual face-to-face class. Hence, she asserted

> Thing is that these new ICT are very helpful for a kind of student who usually has difficulties in class because the barriers collapse… I mean when there is a screen in front of them, they feel more secure, they feel can be themselves because there is always a filter and yet at the same time they also perceive that you support them

She also mentioned that students felt comfortable with this platform as they knew, regardless of the geographical distance, that there was always a connection with their professor. Students felt they were part of a global team in this way. However, she stated that, generally, she had a major preference for face-to-face teaching. In her opinion, face-to-face teaching can never be substituted by technology because the human relationships created in class are fundamental to work especially on the nuances of teaching in a study abroad program. She recognized that technology, although extremely useful, can create a more "black and white environment."

Another element that emerged from the interviews was related to the teaching sphere. In particular, the specific digital tools that can be used to foster learning and research objectives. In this context, all participants mentioned how the use of Blackboard and Zoom helped them during the semester and became very important, not only to store

and manage information, listen to presentations and group works, encourage students to find new way to communicate but also to create information, disseminate information and create a sort of stage where students could nurture their own creativity. For Leonardo, data visualization was very important, since this is an area where technologies offer great benefits. He asserted "so that's probably the academic area where I see technology offers probably the greatest benefit or probably the most measurable benefit, you know." Indeed, according to this participant, sharing information with the students was much more effective with technology. This is also a valid element when conducting a research that involves interviewing people and setting up big databases of people's opinions. Remo mentioned that "without IT…it's much more time consuming" and resembled how at the end of the 1980's and still during most of the 1990's the lack of sophisticated digital tools did not allow him to perform such accurate business analysis that nowadays is able to do. In this regard, Remo simply mentioned "I could not do without." Similar to Remo, Giulia evinced how it was important for her to access digital tools that could provide her the opportunity to create an evidence of their work with the students. Teresa, referring to the specific situation she experienced during her last semester, mentioned "maybe, I don't know, twenty years ago, you could have stopped the activities. Now, technology gives us the possibilities to keep teaching and carrying on our jobs." This reflection, even if it might appear obvious, evidences how digital literacy practices are shaped by individual beliefs that ultimately push toward new teaching models where technology is the key driver.

Leonardo summarized very well how the benefits of using ICT stimulate motivations in terms of interest and involvement. He asserted that a teacher should

develop a cognizant mindset of “the added value, the understanding of the added value of using technology, the understanding of the benefit that technology offers.” According to Leonardo, the benefits drawn from technology entails a twofold aspect: effectiveness and efficiency. Basically, technology has the potential to provide a faster learning with and better learning. However, he envisioned the use of technology more as a supporting tool for pedagogical approaches still based on a face-to-face environment rather than a substitute of this type of environment as he described in this excerpt

> I think that, especially after this experience with the COVID-19 pandemic, I think in person teaching still has a slightly higher added value for the students because interactions between you and the students is more effective to this day, especially in a study abroad context where one of the most important elements for students’ development is represented by the immersion in a diverse cultural environment.

Since pandemic was mentioned by Leonardo in the above cited excerpt, it is important to note that when this research was conducted, the participants to this research experienced an unprecedented incident. Study abroad students had to be repatriated after a few weeks since the beginning of the semester because of the rapid spread of a pandemic due to the novel coronavirus (COVID) that affected Italy, the US and the rest of the world. The spread of this pandemic around the world resulted in profound changes in social contact and organization, and the education sector was not exempted. While the student population (both K-12 and post-secondary) appeared to be at a lower risk of mortality compared to older adults, pandemic precautions called "social distancing" or "physical distancing" sought to reduce interpersonal contact and thus minimize the type of community transmission that could rapidly develop in dense social networks such as the

university camp (Weeden & Cornwell, 2020). One common trend in the education systems worldwide was to respond to the pandemic through emergency eLearning protocols, marking the rapid transition from face-to-face to online learning. Although public health officials were largely supporting this approach of mitigating the spread of the COVID through social distancing measures, the implementation of specific emergency eLearning protocols could not alter the pandemic itself, but only indirectly, by restricting face-to-face interactions in classrooms.

In this context, ICT represented an invaluable tool for both professors and students to ensure that the teaching and learning objectives were met and that students could complete their semester regularly. However, questions emerged in relation to the effectiveness of an online teaching, in particular, for study abroad students. It is to be considered, in fact, that an important element for (study abroad) students is represented by the opportunity of experiencing a cultural immersion while living and studying abroad. This kind of experience is generally difficult to replicate virtually and surely represents a main drawback. In-person teaching, in this context, provides a high added value for the students because it enables a more effective interaction between teacher and the students as well as the local community. Indeed, it was inevitable that all the participants focused on this deeply disruptive event during the interviews.

This unexpected event elicited some major reflections in the participants' mindsets. For some of them, it contributed to push them toward a radical shift in their beliefs about the use of technology. Remo, for example, stated that "there is a time before the corona-virus and a time after. Before we had to run online courses and I used information technology just to keep the students informed." Similarly, Giulia asserted, as

referring to the pandemic emergency, “things changed after the corona virus. Because before I mainly used ICT to communicate, to explore and merge information.” Once face-to-face classes were transferred online, she mentioned that digital tools such as PowerPoint, emails and Blackboard became important not only to store and manage information but also to create and disseminate information. Similarly, Leonardo, when discussing about the use of digital tools, mentioned that the use he did of ICT was quite diverse as a result of the pandemic emergency “if we look at present time because of the COVID-19 emergency obviously we use a lot of technology in ways we have not used before.”

Other interesting elements emerged from Giulia and Teresa interviews when they discussed switching from the usual in-person teaching to an online setting. The change in the way they were teaching, in fact, forced them to re-evaluate their digital practice mindsets. Both these two participants clearly stated that their digital practices were somehow limited to very basic use of digital tools, like emails for example. In this excerpt from the interview with Teresa, this participant’s approach to technology revealed an idiosyncratic perception of technology

Interviewer: I would like you to describe the use of Information and Communication Technology in your teaching experience.

Teresa: well I can say before and after the coronavirus. Because before this unfortunate virus, I had a very… I didn’t use technology in my teaching.

Giulia mentioned that in a normal face-to-face class she used PowerPoint presentations very carefully, because she found that this kind of digital tool pushed students to focus mainly on the images and provided only very synthetic concepts on keywords. So very

often students tended not to follow the rich explanations the teacher provided them. This was meant to encourage the students' critical thinking that is a major aspect in humanity studies. Teresa demonstrated even a more radical position in her approach to technology. In fact, she asserted

> I preferred to give space to real activities in the city, to take my students outside the classrooms. I was more concerned about that activity that I thought, you know, using technology in the class was not important. Being in Rome I think made me in a special case, so I use more the activities outside the classroom.

These beliefs changed as these professors were forced to use digital tools. From this experience, they realized that technology had a very important role in supporting their didactic as without it, they could not continue teaching. Also, their attitude towards learning new digital educational technology was more positive and open. Giulia asserted

> I use ICT basically to teach so for my job, and when I teach I use it because it's very important to be always there for my students, to be present even if we are so far, even when I am teaching at distance like in the past months.

As evidenced above, the findings revealed that the individual beliefs are influenced by different factors, like individuals' professional and educational backgrounds and experiences, tangible benefits in the use of technology, and external incidents. It is important to note that these elements do not always have the capacity to enable an individual to grow a full awareness of the benefits in using technology.

Confidence and self-efficacy in technology. The interviews with the participants evidenced interesting traits of how self-efficacy and confidence in technology shaped their mindsets for digital practices. The ability to master a skill can be considered as self-

efficacy. In this sense, self-efficacy and confidence emerged as elements that affect the participants' ability to master technology skills. In other words, self-efficacy provides a framework for explaining individual behavior, and can be described as the perceived capacity of a person to conduct a behavior. Confidence, as defined by Bandura (1997), is a catchword rather than a construct implanted in a theoretical structure. In this context, confidence and self-efficacy are interpreted based on the assumption that they are closely related, as both terms refer to the strength of belief. However, it is important to note that self-efficacy also incorporates a further element, the affirmation of a capability level (Bandura, 1997).

Remo and Leonardo seemed to have matured a quite strong confidence and self-efficacy to master their technology skills. That was evidenced in these professors' demonstrated ability to adopt ICT that could best fit in their teaching context. For example, Remo mentioned that he used Blackboard before and after he was forced to shift to an online setting, "I use to show videos in class taken from the most common platforms. I used to show the class…global databases that students can browse by themselves like doingbusiness.org database." He also mentioned that he felt comfortable in using ICT in both his professional and personal life which indicates that his confidence in digital tools goes beyond the pure need to accomplish a task but reveals an awareness of how ICT can provide an effective and efficient way to approach life. This excerpt exemplifies this idea

> I would say that there is no big difference between what I do in teaching assignments and what I do in the rest of my professional life. Because the tools

are the same, the content is same and the way we distribute content is exactly the same.

Similarly, Leonardo demonstrated a broad confidence in the use of digital tools "I've been using WebEx as a software for live streaming of lecture, real time interactive lecture." In addition, he adopted Blackboard to provide live, real time lectures, recorded lectures as well as Google Teams to communicate with colleagues and other faculty members. He also used cloud-based storage systems to share information with the students and receive information back from the students. Leonardo also evidenced that technology skills are necessary because "certainly you need to be able to use the tools quite effectively, right! You need to be familiar with the tools, right!" From his experience, when a teacher is not familiar with the digital tools that are available in a class, it can lead to potential disruptions in the teaching effort. According to this participant, this is definitively unproductive from a teaching perspective as well as from the students' learning perspective. Lectures become definitively less effective and less efficient, "not to say more boring." For Leonardo, it is paramount to be familiar with digital tools "you don't need to use a lot of technology if you don't want to, but you need to be familiar" as it can become a hassle if you don't know how to use it. Leonardo's confidence and self-efficacy in the use of technology was quite surely influenced by his professional role as an IT expert. He adopted technology every day in his administrative role and he was usually comfortable in using digital tools. His self-efficacy and confidence in technology was well manifested when he stated that "I find that technology in general, ICT, are incredibly empowering. I would never be able do without after starting to use it. I've been in technology basically all my life, professional life, and it

makes a huge difference, you know." From a pedagogical point of view, he maintained that he was quite comfortable in using technology. He also mentioned another important element "like anyone else I need to practice a little bit to make sure that tools are actually working the way that I want." So, there are two dimensions that were equally important for him. One dimension related to having a tool that worked from an engineering point of view. The other dimension involved teaching, and it was related to the proper use of the digital tool "and so, when it comes to the second part again you need practice." Thus, it emerged that technology skills and practicing are equally and mutually important elements affecting confidence and self-efficacy.

Another significant dimension of confidence in ICT is the teacher's ability to understand how comfortable students are in using a given digital tool for learning purposes and recognize that, in case students are not comfortable or do not have sufficient skills to make an effective use of a digital tool, alternative approaches should be adopted. This is evidenced in this excerpt from Remo's interview

> in class, the problem is to get to know what the students can do. So the problem is not offering some information [on] technology tools, but to make sure that students can make use of them. I had in the past, cases of students who [could] not use the technology, simple technology that I required. So sometimes in order not to have unbalances in class level learning I just use the regular interactions and I set aside information technology for this reason.

This was also evidenced in one of the online classes I observed. I noted, in fact, that the interactions between the students was not relevant during this presentation. For example, most of the students' videos were disabled (Fig. 10). One of the reasons was that class

presentations conducted online tended to have a less engaging approach as the professor could not drive the student's attention through his gestures, body language and visual in a more formal environment. Students who were presenting seemed to be very comfortable using their PowerPoint. That revealed they had mastered this kind of digital tool.

Figure 10

Remo: online class PowerPoint Presentation

Unlike Remo and Leonardo, Giulia and Teresa showed a diverging confidence and self-efficacy in the use of ICT. A first element related to some preconceptions these two participants had in relation to the use of technology as a driver to improve student's learning. In this context, merging more sophisticated technology tools into a more traditional pedagogy approach had its difficulties because both Giulia and Teresa did not see any major added value to the kind of teaching approach they were familiar with. For example, Giulia mentioned that she always preferred in-person teaching, because according to her "this is something that can never be substituted by digital educational technology." This ambivalent image of technology that was envisioned as something that separates human relationships instead of narrowing them is also evident in this excerpt

"as we know, I mean, the human relationships created in class are fundamental to work especially on the nuances of teaching." Teresa showed an even more extreme gap in her confidence and self-efficacy in technology as she asserted that "I didn't use technology in my teaching. Maybe because…personally because I was scared of technology, I didn't know how to use it, I didn't know the tools, so I didn't use it." She provided an explanation of the reason for her sentiment of "fear" about technology. One reason was strictly related to her teaching approach, as she stated that teaching in Rome and a class like Italian language and culture "I preferred to give space to real activities in the city, to take my students outside the classrooms." So, in this context technology was perceived as an element that was not worth using. Once again, it emerged as a preconception where technology and human interactions were regarded as two distinct and ambivalent factors that were not worth combining. A second reason related to her sense of belonging to a specific generation "I use, you know, the computer…for emails but very limited. I don't know, because maybe…because I come from a different generation." The implication of generation is also mentioned by Giulia when she was discussing how her students were able to learn new technologies more easily than her "I have to say that there is such a clear difference in generations. I mean, they…they know everything and if they don't know they are super-fast to learn." As both Giulia and Teresa are part of generation *X,* this is a quite interesting finding as it evidences some preconceptions about their generation as less inclined to embrace digital tools in their teaching and in most of the cases also in private lives. It is evident that this preconceived mindset was rooted in their specific cultural elements and educational backgrounds. Both these two faculty members completed their academic education in Italy where there is a strong tradition in

humanistic studies, especially Arts, Archeology, Latin language, and History. In these academic realms, teaching was based on a very traditional teaching approach where the adoption of innovative teaching models driven by technology received undoubtedly more resistance. Being educated in this kind of cultural context has certainly affected Giulia and Teresa's behaviors in approaching technology and developed their mindsets based on more traditional teaching models. Giulia asserted that "I'm not the kind of person that is particularly passionate as you've understood about technology." Similarly, Teresa stated that she is not comfortable using technology tools because "I don't know them, I'm always afraid to do the wrong things, it makes me a lot anxious." This mindset was suddenly challenged by the necessary shift from a face-to-face class format to an online context as a result of the health emergency. In dealing with this new context, Giulia and Teresa were forced to reset their preconceived teaching approach and had to embrace technology. In fact, this represented the only viable way for them to complete their teaching semester. This interview excerpt provides a clear explanation

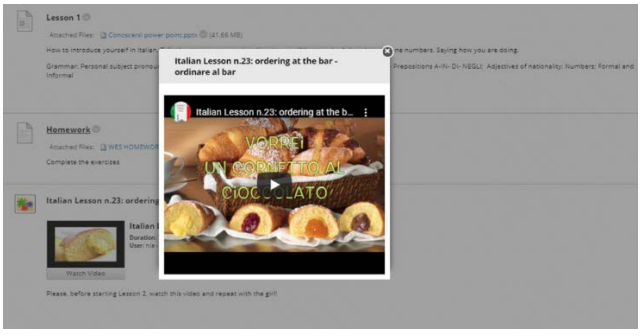
> Interviewer: how important is the use of ICT, information and communication technology for your teaching and research purposes?
>
> Teresa: Well, of course now I realize that technology is very important because, like in this experience we were forced to interrupt our normal classes. So, every of these software applications and tools or having people that helped us to use them was very important because we didn't have to stop the teaching. Maybe, I don't know, twenty years ago, you could have stopped the activities. Now, the technology gave us the possibilities to keep teaching and carrying on our jobs. So now I realize that it's very important, it's extremely important. Yes, yes.

Indeed, I can conclude that confidence and self-efficacy in technology improved in both Giulia and Teresa as they were compelled to acquire the adequate technology skills that allowed them to continue teaching their classes online. The fact that technology allowed these professors not to interrupt their classes increases their strength of belief, or confidence, in technology. Likewise, the opportunity to achieve their teaching goals even in an online setting increased their self-efficacy in the use of technology.

The online class observations confirmed how Teresa's technology skills improved by teaching in an online setting. In particular, the interaction between the professor and the students was very effective, as the professor kept engaging the student who proactively followed her. It is to be noted that the use of digital tools was limited to WebEx and to the chatting notes. There were no multimedia tools used in the lecture; it was mostly a one on one verbal interaction. At some point, a student was assigned an exercise to complete in 5 minutes. The teacher unmuted and disabled video during this phase. The correction of the exercise occurred verbally by the student reading the solution of the exercise and the teacher coaching him. The teacher made use of body language constantly even if she was on a video. The use of multimedia was very limited, however in Blackboard some of the contents included multimedia (Fig. 11).

Figure 11

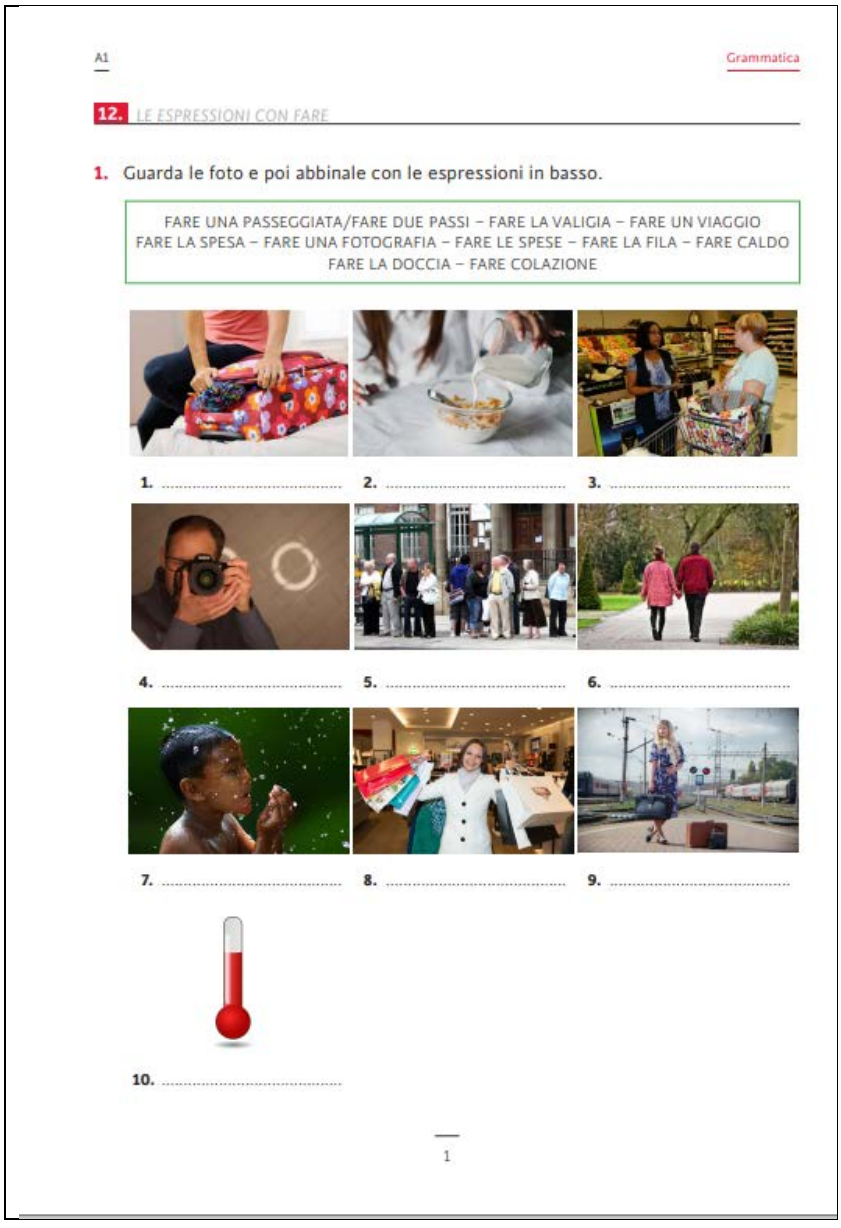
Teresa: Course Content (multimedia)



The class started with the professor driving the students through the conjugation of the Italian verbs (Fig. 12).

Figure 12

Teresa: Blackboard Content



In this transition some challenges emerged, as Giulia mentioned

> because of the epidemic we had to learn many new things and also learn these things very quickly in order to adjust us to the new circumstances…and we had to make them comfortable for our students in order for them to learn properly.

To help these participants succeed in this epic transition from face-to-face to an online setting in such a short amount of time, one key element that emerged from the interviews was the pivotal role of the IT support provided by the institution. The constant presence of an IT expert allowed these participants to improve their technology skills and thus their confidence and self-efficacy in using the digital tools in the new environment. In this regard, Giulia mentioned "I had a great support from my institution. I'm really grateful for the constant help in integrating ICT in my courses. They have been great. I mean we couldn't make it without them." Similarly, Teresa asserted that she "had a very strong technology support. In this experience, of course, I had people who supported me all the way through [on] how to use Blackboard, the different tools we could use in blackboard." The importance of a support emerged also from Remo as he stated

> In the last semester I was very lucky because I was assigned a specialist from home campus. She was really up 24 hours per day 7 days a week and that was very very useful because at the beginning the transition was a little bit hard because we had to use new tools and we had to learn quickly"

Remo found that having an IT expert constantly available to answer questions like "what happens if" was extremely useful to acquire (new) technology skills required to teach in an online environment. It is interesting to note that Leonardo provided a different perspective from the other participants, since he was also an IT expert himself. This excerpt clarifies this perspective

Interviewer: to what extent have you had support from your institution on integrating ICT into your course(s)?

Leonardo: I've been quite independent in integrating technology in my courses. I know that there's a lot of support actually available in both [omitted] University and University of [omitted]. Hmm, I've seen this mostly through colleagues that have had a lot of support and as far as I'm personally concerned, you know, I did had support when I needed it but it was quite limited but that's because I, that…, it was definitively satisfying, my request, I guess, was satisfied, has been satisfied successfully.

Interviewer: as far as you've seen, this kind of support is like an internal support provided by the institution or some sort of outsourced support?

Leonardo: I've experienced an internal provided support, you know, even though there are several, you know, several programs.

As evidenced in this section, confidence and self-efficacy in technology affect the individuals' mindsets. Personal and professional factors, like life and professional experiences, educational backgrounds, students' learning outreach and personal preconceptions emerged as elements influencing the level of confidence and self-efficacy. These factors create opportunities to increase confidence and self-efficacy but can also pose challenges that can inhibit to achieve an adequate confidence and self-efficacy of technology.

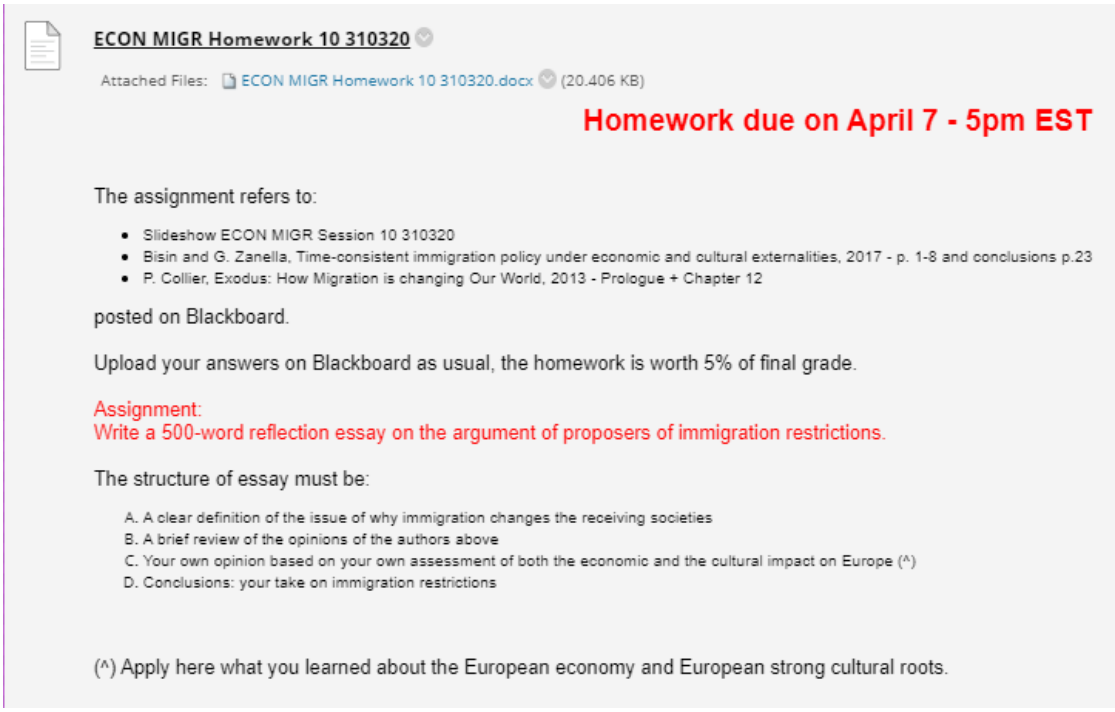
Use of digital tools in the online teaching environment. This theme emerged in relation to the opportunities offered by digital literacy practices adopted in an online environment that allowed the participants to rework some of the aspects of their self-

identity. In fact, one of the consequences of the rapid shift from the usual face-to-face class setting into an online context was the drastic change in the usual teaching approach the participants adopted in a study abroad context. In this framework, practitioners generally are committed to take advantage of the opportunities that face-to-face interactions in the host country provide to the students. All four participants evidenced how they had to adapt their courses to an online setting. For example, Remo mentioned "when the courses in March went online, I had to redesign the all course." Similarly, Giulia stated that "in the past months because of the epidemic we had to learn many new things and also learn these things very quickly in order to adjust us to the new circumstances."

Remo used technology "to keep the students informed, so to provide presentations and files and videos for them to browse." Before the emergency, when he conducted a regular face-to-face class the use this professor made of Blackboard, for example, was limited since he had a lot of in-person interactions and students could provide information in person. After the switch into an online environment, this participant's digital literacy practices had to shift across different contexts suddenly and quickly. These practices affected the way he communicated with his students that "were scattered around the United States and the rest of the world." This is also evidenced in the digital artifact (Fig. 13) collected from Blackboard.

Figure 13

Remo: extract of an assignment for the students



ECON MIGR Homework 10 310320

Attached Files: ECON MIGR Homework 10 310320.docx (20.406 KB)

Homework due on April 7 - 5pm EST

The assignment refers to:

- Slideshow ECON MIGR Session 10 310320
- Bisin and G. Zanella, Time-consistent immigration policy under economic and cultural externalities, 2017 - p. 1-8 and conclusions p.23
- P. Collier, Exodus: How Migration is changing Our World, 2013 - Prologue + Chapter 12

posted on Blackboard.

Upload your answers on Blackboard as usual, the homework is worth 5% of final grade.

Assignment:
Write a 500-word reflection essay on the argument of proposers of immigration restrictions.

The structure of essay must be:

A. A clear definition of the issue of why immigration changes the receiving societies
B. A brief review of the opinions of the authors above
C. Your own opinion based on your own assessment of both the economic and the cultural impact on Europe (^)
D. Conclusions: your take on immigration restrictions

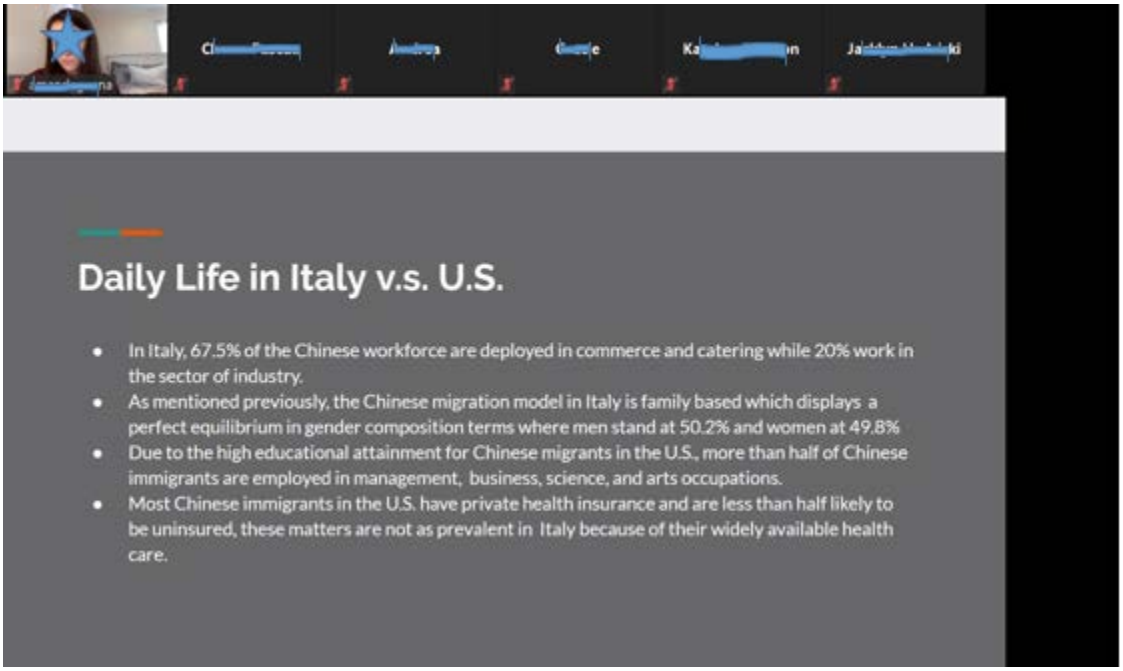
(^) Apply here what you learned about the European economy and European strong cultural roots.

The nature of these practices confirmed the Remo' assumption according to which the main affordance of digital technologies was the ability to connect with the students. Indeed, this was a dominant assumption in this participant's mindset. During the observation of the online class presentation, it was also interesting to note how the use of a digital tool (in this case a software for live streaming) for teaching affected both the students' attitudes and the way they participated. For example, all the students were dressed informally. This can indicate the perception that being home in a familiar setting can allow a more informal approach than when attending a class face-to-face. The students presented their project by sharing their PowerPoint slides through the digital platform named Zoom. This latter is a web-based video conferencing tool with a local, desktop client and a mobile app that allows users to meet online, with or without video.

The use of this digital tool allowed students to provide an effective presentation. For example, one student during his presentation popped up a video about the Ukrainian church in Rome from YouTube which was embedded in the PowerPoint presentation. This tool provided a clear example of how digital tools can help integrate multimedia with text and verbal communication. One other element that emerged from the observations was the way the professor coordinated the class discussions. The professor's interventions were very limited, and he tended to leave the floor to the students who were presenting. Similarly, interactions among the students were not relevant during the presentations. On some occasions, it could be noted that some students stepped in and out or kept their video off throughout their mates' presentations (Fig. 14). Most likely, because this kind of class presentations when conducted online tend to have a less engaging approach as the professor cannot drive the student's attention through his gestures, body language and visuals. In other words, students may feel less engaged in this kind of virtual environment than in a face-to-face setting where they can be more effectively encouraged to be more focused. This can surely have a consequence on learning effectiveness. Hence, professors should consider these elements as they adjust their practices in an online teaching environment. One other element that emerged from teaching in an online environment was the importance of the technical support provided by the institution to help professors use digital tools. This emerged from the interview with Remo when he mentioned that he could count on an IT expert from the university. This was extremely useful for him since he had to use new tools and was required to learn quickly how to use them, so "having somebody that [could] answer that question "what happens if" [was] very useful."

Figure 14

Remo: online class presentation



Unlike the other participants, for Leonardo the use of technology was twofold. First, in his administrative role as IT specialist the use of technology represented the core of his job; basically, without its practice he could not perform his tasks. These excerpts synthesize clearly this concept "I work with technology basically every day"; "I'm very comfortable with the tools itself"; "I find that technology, in general ICT, is incredibly empowering"; "I would never be able do without after starting to use it." Second, in his role as a faculty the major element related to the use of technology was connected to its ability to improve students' learning. In this excerpt, this participant provided an explanatory example of what he intended for effectiveness "but think at a moving graph, think at a graph that actually evolves over time, you can show data changes etc. that's an incredibly powerful visual, that's effectiveness 10. You really talk about a tenfold

effectiveness." Leonardo's digital practices were similar to Remo as far as to facilitate the connection and collaboration with students. However, Leonardo's practices also added some other elements like professional dialogue, shared resources, and collaboration in these digital spaces. The nature of these practices relies on Leonardo's assumption that digital technologies improve students' learning and teaching effectiveness. Multimodality, support, connectivity, improvements, and effectiveness are affordances that were pivotal in Leonardo's mindset.

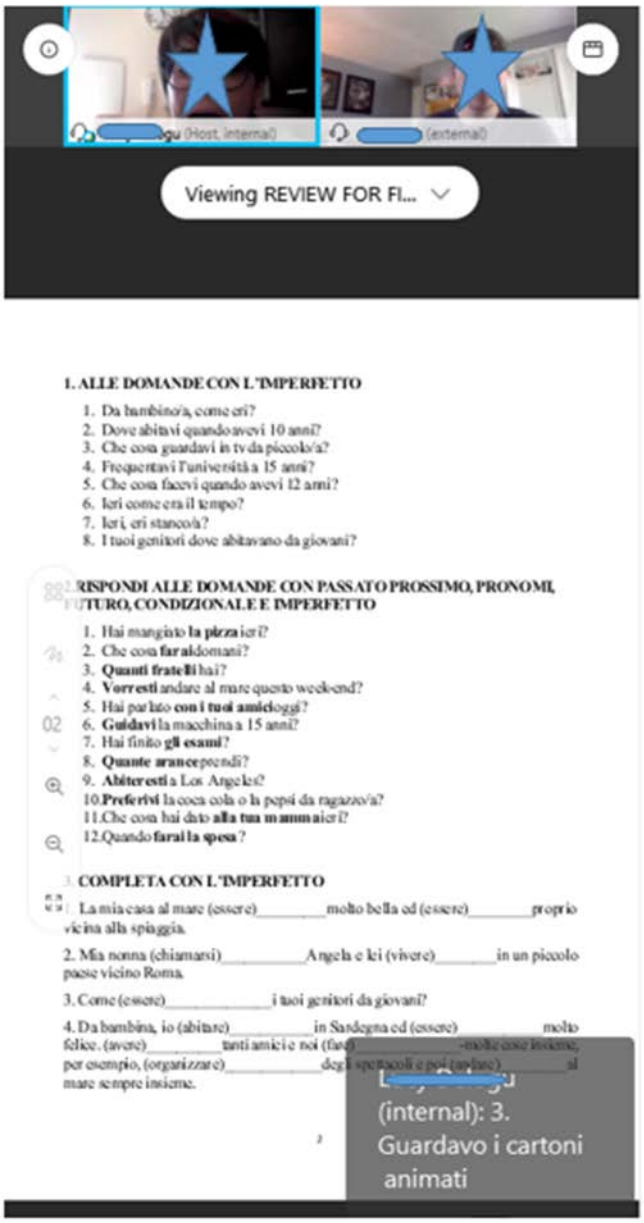
Unlike Remo and Leonardo, the use Giulia and Teresa did of technology before the shift to the online environment was more limited to basic digital tools (mostly, emails and PowerPoint presentations). Their digital practices were driven by their beliefs that their teaching realms, mostly within humanities, pushed them towards a more traditional teaching approach based on face-to-face lecturing and field visits. For example, Giulia mentioned that "especially if we think at my academic area, right, being a humanist I'm more connected to words on a piece of paper rather that with technology" while Teresa stated "because I teach in Rome and I teach Italian language and culture so I think I preferred to give space to real activities in the city, to take my students outside the classrooms."

Another bias, of behavioral nature, that affected the use of technology especially for Teresa was related to her concern about technology -"it makes me a lot of anxiety" mostly because she said "I didn't know how to use it, I didn't know the tools." The shift to an online environment had the significant effect to force both Giulia and Teresa to re-evaluate their professional identities and affordances toward the use of technology. Both these two participants recognized that without technology they would not be able to

continue teaching, as Teresa mentioned "[with] these software applications, tools and having people that helped us to use them was very important because we didn't have to stop the teaching." In other words, for Teresa the use of technology opened up the opportunity to keep teaching and carrying on her job. For Teresa, the nature of these digital practices was characterized by her assumption that the main affordance of digital technologies was its ability to support her teaching but not make a change in the way she was teaching. This was a dominant assumption in her digital mindset. The fact that she did not consider digital technologies in terms of improvement emerged also from the observations of the online class. While attending practical assignments, the teacher explained grammar rules through example with students interacting with her by answering her questions. As noted also in another class session, the use of supporting digital tools was only limited to text attachment of grammar rules (fig 15). All students were very engaged by the teacher. However, most of the interaction occurred verbally between the teacher and one student. She showed questions on the WebEx screen (a text format) and asked her students to answer the question. The professor explained mostly verbally without using any digital supporting tools. Indeed, the lecture was approached as it was in the classroom.

Figure 15

Teresa: Online Lecture



Compared to Teresa, Giulia recognized that the use of technology in an online class environment "has become super important and not only to store and manage information but also to create information, to disseminate information." Another important element emerged in relation to the students' participation. The use of Blackboard in her class,

required the students to share ideas in the discussion forum. She found that this was particularly helpful for those students who had more difficulties in class in participating in debates. Also, technology tools provided the evidence of her work and dialogue with the students. So, in this sense these technological tools ensure a more transparent relationship with the students. In her teaching approach, Giulia also recognized different affordances of digital technologies such as connectedness, sharing and multimodality.

In summary, three major themes emerged from the data collected in relation to the main research question. These three themes were: individual beliefs in the use of technology; confidence and self-efficacy in technology; use of Information and Communication Technology (ICT) in the online teaching environment. The findings confirmed that participants' motivations, perceptions, and interests are multifaceted and depend on individual beliefs and backgrounds. The different factors that emerged as significant patterns within each of the themes can indeed define different domains. These domains can be framed within the professional and personal spheres, and the cultural and environmental spheres.

Sub Research Question A

Sub question A: How do leadership approaches shape professional development programs that aim to improve faculty digital literacy practices in a study abroad context?

Sub research question A focused on examining how the participants' perception of their specific technology literacy skills and training allowed for a more detailed evaluation of the relationship between technology training and the consequences in their digital practices. This is important to shed a light on how professional development can encourage faculty to improve their digital literacy practices in a study abroad context.

Hence, this research question extends the main research question to examine the potentials from professional development in improving digital access, skills, and attributes to nurture the experimentation and appropriation of more sophisticated digital practices.

The list of codes was derived from the combination of the items listed in the last paragraphs in this section and from casual incidents that emerged from the data. The codes and frequency that encompasses all the data sets are shown in Table 11.

Table 11

Codes frequency Referenced for Sub Research Question A

Codes	**References in Participants' Interviews**
Supporting systems	27
Collaboration	6
Experimenting as a way to learn new technology	10
Learning-needs	35
Reasons for IT support	23
Supporting students in the use of digital tools	9
Perception and preference in technology PD content	20

As evidenced in Table 11, from the analysis of interviews and digital artifacts the indicators with the highest percentage of incidence were the following: technology training to improve digital skills (35 references); Contexts and modality for learning new

technologies (27 references); IT support (23 references); Perception and preference in technology PD content (20 resources); Experimenting as a way to learn new technology (10 resources). These codes showed recurring patterns that led to the three themes. These three themes are: *learning-needs; supporting systems for learning; preferences in PD contents.*

Learning-needs. All participants agreed on the need for professional development training to improve their access to technology and digital skills. It is important to note that for the purpose of this study the term access to technology has a broader meaning to include the need to invest time in learning new technologies. Even though learning-needs emerged has a theme in the data collected, the participants did not evidence common elements. In fact, the factors that shaped their learning-needs appeared to be quite different from one another.

Remo indicated that learning new digital educational technology should be useful and should provide a competitive advantage with respect to the other professional players. This is explained in this excerpt, "I always appreciate when somebody offers tutorials or something that can be useful in both inside and outside class. Because I know it is a competitive advantage. It's something that makes it different and better than your competitors." For this participant, another reason to learn technology concerned the opportunity to be a more effective professor and professional. He defined himself as "always opened to sign to [online] tutorials or in class [tutorials], or physical class...um... meetings." For this reason, Remo did not perceive PD as a waste of time but an opportunity to increase his productivity

> I'm always opened to sign [up] to tutorials or in class, or physical class...um… meetings. I must say that I've been participating in several of them, all of them useful, all of them...um…transferring information that have been using. So it's not that is a waste of time, at all. Many of my colleagues believe this is time we waste, but it is not. It's actually something that you [do] to be more productive, after all.

In another excerpt Remo provided an example of his need to increase productivity

> I would like keep on participating in workshops or I will watch tutorials where they offer tools or better use of existing tools that can improve my productivity, tools that can connect different databases for example or tools that can make writing down presentations easier or quicker.

Other important elements exemplifying the needs for learning technology were related to what it can be defined as adaptability and duty of care. Adaptability in this context can be conceived as the need to learn technologies to react to the technology changes within the school environment. This excerpt evidenced how Remo attempted to adapt to the new learning environment caused by switching from the normal face-to-face setting to an online environment

> since many of this people prefer to have off line tools they can use whenever they are free, I am trying to making better and better video presentations that connect the video presentations with forums or chat tools in order to remain in touch with the users of my presentations after the video is over.

Duty of care can be defined within the broader concept of professionalism. In this perspective, faculty actions are implemented to do the best for students not only as

learners but also as individuals. In discussing how his area of studies influenced his attitude and needs to receive PD, Remo stated that "[if I have to talk] about some resources that are available to students, I have to be updated and update myself in order to offer updated information to the students." In this other excerpt, Remo expanded this idea

> Recording a video presentation is not just sitting in front of a pc; this can be done in an artisanal way by learning by doing or this can be done very efficiently by learning how this can be done professionally. This second aspect I would like to explore more.

This excerpt clarifies how professor's expectations from PD go beyond the simple technical knowledge of a digital tool.

Another aspect of duty of care is the possibility for a technology skilled professor to encourage and train students in using technology. For Remo, this is an important element for learning technology. This excerpt exemplifies this argument

> I have always encouraged the students to...um...browse the databases that are offered by the international financial institutions. So [for example] macroeconomic database, the world economic forum that is offered online by the international monetary fund. I have assigned homework, which they had to browse the database, download data and then manipulate the data and create reports. Easy stuff nothing particularly hard, but they have to...um…go online, download, pick the data, download the data using excel or other simple resources and then create a presentation or a report

In one of the online class observations, it was shown how Remo engaged in his duty of care by encouraging his students to strive for presenting rich contents in their PowerPoint. For example, including text, tables, charts that were shown slide by slide in an overall format with different colors. This allowed students to maximize the potential of this kind of software, which offers a wide array of texture alternatives where colors, font, size can be modified that can elicit the attention of the audience. For example, when one of the students' groups popped up a video from YouTube embedded in the PowerPoint presentation, it proved how this digital tool could effectively integrate multimedia with text, and verbal communication. This demonstrated how this kind of digital tools can allow professors to provide their students a multifaceted way to express and propose ideas and an effective way to share information with their peers.

Compared to Remo, Giulia showed a different attitude concerning her needs to learn about technologies. She was driven by her belief that conducting a face-to-face class in a study abroad context where students are often engaged in field visits, did not require a significant use of technology. Giulia asserted that "I've had always preferred face-to-face teaching and also I'm not very curious about technology I have to say." She also admitted that on some occasions her students encouraged her to learn

> Well actually, they [students] have trained me sometimes [laughs]. No, I have to say that there is such a clear difference in generations. I mean they, they know everything and if they don't know they are super-fast to learn. So I confess that sometimes my students helped me

A clear element that forced this participant to change her attitude towards learning technology was the pandemic emergency. This pushed all faculty to shift to an online

teaching environment. In this excerpt, Giulia clearly stated, “of course in this moment with the corona virus has been a fundamental factor that drove me to attend for instance technology workshops.” In answering a question about her attitude toward learning a new technology she stated “now it’s really an open and positive attitude but it wasn’t like this before” referring to her limited use of technology in her face-to-face classes. It is evident that for this faculty her learning-needs relied mostly on external environment forces rather than her personal tendency and curiosity. This excerpt well describes this concept

> Giulia: I’m not the kind of person that is particularly passionate as you’ve understood about technology. But when I get close to it I often appreciate it. It happens by chance, it’s not something that I go and I look for it.
>
> Interviewer: so, it is more for a kind of need
>
> Giulia: Exactly
>
> Interviewer: you want to learn when you need it for something
>
> Giulia: Yeah, I don’t have that curiosity

However, this incident contributed to raising her awareness of the importance of learning teaching technologies. She stated, “I would attend anyway [referring to technology workshops] for other reasons if needed because they have been very enriching for me.” For this participant, it was also important the role of the institution in stimulating her interest in learning about technology “when I get close to it, I often appreciate it. It happens by chance it’s not something that I go, and I look for it.” Finally, it is interesting to note that this participant connected her personal scholarly background to the way she approached learning, and specifically digital learning,

> This is like I said before, teaching in the humanities gives really flexibility and this makes you to be always ready, you know, to new things. If this new things are technology, ICT, I'm happy with this and I have to say that this flexibility and creativity that maybe poetry and literature or art give me have been very handy especially in the past month to increase my digital skills

Giulia conceived her realm of studies, humanities, as a driver to stimulate curiosity. She perceived it as a factor that enables her to shape her personal attitude to be flexible in her approaches to learning. In this sense, flexibility derives directly from curiosity. It can be interpreted as a soft skill that enables an individual to be open minded and eager to learn about new tools. In this context, it stimulates the needs for learning, "when technology is connected to art really catches my attention. So …there is always to be a connection with my field and my passions basically"

One last element that emerged from the interview with Giulia was the importance of follow-up training sessions in providing opportunities to refresh memory and skills, so that faculty are still able to make use of the technology they have learnt during formal PD. As this participant asserted "it's important to recap often the training. This is really helpful. To recap more than once, you know, the training that we did." Equally important for this participant, is the relevance of the learning experience and the extent to which the IT supporting team was able to make the learning relevant to teacher needs. As she stated "I had a big support from my institution, I'm really grateful for the constant help in integrating ICT in my courses. They have been great. I mean we couldn't make it without them."

This same element was also important for Giulia. In fact, this participant asserted "having somebody that can answer that question "what happens if" is very useful. So, I would say that in general, in all the programs I teach, I have been teaching in the past this was very helpful support across all the programs."

Teresa showed some similarities with Giulia in that her digital practices were limited to basic technology tools and she had to remodel her teaching approach because of the shift to an online teaching environment. For this participant, the elements of adaptability and duty of care seen in Remo, played also a significant role to shape her learning-needs for technology. In order to adapt to this new teaching environment, she recognized that PD was very important

> I'm looking for that. Now, I'm looking for webinars I can take to improve my knowledge, now I'm very…very interested in that because I have understood how important it is especially because we don't know when we'll be able to teach again face-to-face

Similar to Giulia, who evidenced how supporting students, as part of duty of care, was an important element for learning need, Teresa maintained that she needed to create a more collaborative digital environment for her students and in doing it, it was crucial to not only improve her digital skills, but also learn how these tools could be applied to the different teaching objectives

> it's important that you include sessions with at least once a week or where you can talk with your students, see what problems they're having or checking the problems, or verify if they've studied the material that I posted on Blackboard. So

> yes, this semester was very important because it gave me the possibility to touch, to see what it worked and didn't work

In other words, Teresa noted that PD, as related to the use of technology, was more focused on providing general knowledge of basic technical features than focusing on how these digital tools could be used within the educational practice of students. This excerpt further explains this point

> I had a very strong technology support…um...not maybe as much in ideas on how to convert my teaching, how to get my students reaching their learning goals…because one thing is the technology and learn the technology but at the same time have ideas on how to change, how I can deliver my material to the students. That was very important and at [omitted] University I had only the first one, the technological support, not the other one

This clearly evidenced the importance for this faculty member to corroborate the practical use of a digital tool for her class. The ability to use digital tools to outreach students and support them was another element that Teresa found important in an online environment, as it emerged from this excerpt

> some students would come -hey professor I don't like to study languages by myself- so that makes me think -how can I create activities to reach them in a better way? - So now I'm very interested I want to...get better

Finally, Teresa's adaptability to learning new technologies was driven by a very practical reason. This participant needed to continue teaching in a context where face-to-face teaching was not possible to be carried over. Technology represented the only way to keep on teaching. She stated

> Now I realize, it's for my job. I cannot teach in a real situation so, if I want to keep working I need to get specialized in this new field. I'm worried about that. I teach with American students, with foreign students and if they cannot come to Italy I cannot work. So I need to reinvent myself, how to reach them. That is my, that is a practical…to survive in my job

Leonardo's learning-needs clearly showed the perspective of an IT expert. Adaptability and duty of care that drove the other three participants were even more evident in Leonardo. In his professional roles "the most important way is hands on test, take the tool, hack it, try to use it and, you know, experiment. That is really the best way to learn technologies." As an IT person, he was quite naturally drawn to test tools and exploring technology, but he recognized that when someone's area of expertise is different, that kind of drive might not be present. From this perspective, he evidenced that training is the most effective way for a non-IT expert to learn about technology. Training, for Leonardo, encompasses both formal (class) training and collaboration with peers, as he stated "you can simply ask somebody who knows about the tools so that makes the learning, you know, process faster. Or formal actual training courses." In this excerpt, Leonardo's clearly explained his idea

> Being an IT person, you know, I'm quite naturally drawn to test tools and exploring technology, but if your area of expertise is different that understandably you may not have that type of drive. For example, if you are interested in art history or if you are a lawyer and if you teach this kind of matters, then training in technology I suppose would be way more beneficial.

Training is also important for faculty to support their students in the use of technology tools. Leonardo asserted

> when I realize that some of the students were not familiar with the specific toll being used, I've been more than happy to assist and train them. And again, being an IT person it was quite easy for me, but I understand again if your expertise is in somewhere else it may be a little challenging.

Finally, according to Leonardo, adaptability was the major driver for learning-needs. Although this arose as a common element with the other three participants, one further element emerged from the Leonardo interview. This participant supported the idea that learning-needs are linked to the added value training can provide. This is a crucial element that can stimulate faculty to attend a training session. This excerpt explains this concept

> If you need to use a tool then having a training session is extremely precious, right. And, um, even most important is the added value, the understanding of the added value of using technology, the understanding of the benefit that technology offers, right. That becomes an incredibly powerful drive for anyone to attend a course.

Equally important, according to Leonardo, was the knowledge of theory underlying the use of a digital tool, "you want to know what the tool is for, what is the goal you want to achieve so you want to hear this in training sessions." In fact, "you want people to understand what is the purpose of the new tool being deployed and proposed."

As evidenced above, the main factors that shaped the participants' learning-needs were related to the opportunity to get a competitive advantage; adaptability, in other

words, the need to learn technologies to react to the technology changes within the school environment; duty of care, in other words, faculty actions are implemented to foster the best for students not only as learners but also as individuals; realm of studies as a driver to stimulate curiosity; follow-up training sessions in providing opportunities to refresh memory and skills.

Supporting systems for learning. The participants' interviews showed that the systems for supporting digital learning when embarking in digital practices, are multifaceted. They span from peer collaboration to external and internal training, workshops, and experimentation.

Peer collaboration emerged as one of the supporting learning systems all participants largely used. This is because it is easily accessible and provides an easy way for faculty to talk about their challenges and practical solutions they found. This is mostly an informal support in the form of a person seeking advice and assistance from another person. So, for example, Remo found that talking and collaborating with other colleagues was always an effective opportunity for learning, as they may have experienced the same problems and challenges before. Hence, they can share their experiences and provide effective practical answers that "can cut time and stress sometimes." In this excerpt, Remo clarified this point

> I had collaborations this semester, because we had split courses and we had to use a structure that was totally new to me. It was something like Blackboard but not exactly Blackboard and there were a couple of important difference from Blackboard that I could be aware of thanks to the colleague

Teresa's argument was like Remo in that this participant also found collaboration with her colleagues very important. She mentioned that "this semester I spoke with my colleagues and we helped each other. [I asked questions] like - do you know VoiceThread? How can you use that? - that was also important."

Like Remo and Teresa, Giulia also recognized collaboration as an important mean for learning. Even though this participant defined herself as an occasional technology user "it happens by chance it's not something that I go and I look for it", she mentioned that the most common way to learn about new technology is "basically through friends or by chance or colleagues."

Another element that emerged from the data collected was related to the role of the external support. Tutorials and webinars were mentioned quite often by all the participants during the interviews as means for learning about technology. Remo found that tutorials helped him to learn, for example, how to use web-based conference tools very easily, as they could be downloaded or accessed online anytime during the day. Similarly, he found it very meaningful to receive newsletters with links to tutorials and IT articles issued by specialized IT consulting companies. As he mentioned "you can learn by reading the email and also by connecting to the links he [the service provider] offers. It's useful tool be used in classroom and it is useful in a professional context, when you show something new you can stand up." Remo expressed his enthusiasm to participate in workshops or watch tutorials where new digital tools were presented or a better use of existing tools that can improve his productivity was proposed. This was also important for him because "it is a competitive advantage. It's something that makes a difference and better than your competitors." Like Remo, Teresa found that webinars were an easy

way to access learning "to improve my knowledge." It was important for this participant to have a resource that could drive her through the process. In other words, a step by step indication of what the digital tools are and how they can be used. Leonardo added up to these reflections, by evincing that there was also a type of convenience in following a training video, or a webinar as this can be watched anywhere in the world in a very convenient modality.

Internal support in the form of institutional training programs, personal IT trainer, self-practicing and self-testing also emerged from the interviews as significant learning systems. According to Remo, in a university context, faculty should be given the opportunity to learn about a new tool before they are required to use it. This is important as it can raise awareness of what technologies are available to faculty and the full functionality of these technologies. Knowing more about the potential of tools and resources already in place can help faculty improve their digitally literate practice. For this purpose, Remo also suggested that it would be beneficial to have the opportunity to have a direct correspondence to an IT person who can provide technical advice, as it is exemplified in this excerpt "if there is somebody, some specialist, available that would be really great."

Personal, one-on-one, support was also mentioned by Giulia and Teresa as being a very useful system for learning. In this regard, Giulia asserted "I have never felt alone in the past months. Anytime I needed help I received it." This was resounded by Teresa as she mentioned that "[omitted] University helped us using this technology…In this experience of course I had people who supported me all the way through". Teresa also found that it was extremely important that internal support should be provided by IT

experts to lead faculty throughout the process by indicating "these are the tools, how we can use the tools and...Um…then give us ideas on how to deliver a lectures or how to switch from face-to–face to remote, how to keep the students in a collaborative mood."

Similarly to the other three participants, Leonardo evinced a strong belief about the importance of on-site training since this is a kind of training that faculty receive directly in their job environment, "that's training provided in the right context." Leonardo also manifested his preference for a one-on-one training session as this allows a more tailored type of training crafted on the actual needs of the recipient. This participant advocated that universities in general should offer to faculty especially for those instructors that do not have an IT background. Leonardo also believed that training should be flexible in order to be tailored based on: (a) the type of the specific professional background the participants have; (b) the location where the participants spend most of their time. This is particularly important in a study abroad context. In fact, in order to provide added values to local faculty, different levels of training should be developed depending on where faculty are located. In this way, "you can enable people to actually learn within the time they have and within their professional needs." Leonardo explained that, generally, in a study abroad context, ICT is provided centrally by the home campus. In other words, new digital tools come with some degree of training for the users usually. This is organized centrally, but when the students are abroad a lot of training is also organized locally because some of the tools are only provided and used locally. This excerpt further exemplifies Leonardo's perspective

> Clearly, you want to have some degree of tech support on site that is quite precious, I think. Often there's some type of training that can't be done remotely,

can only be done locally. So that becomes really important for branch campuses to provide that type of training

Finally, active learning emerged as one of the most effective systems for supporting digital learning. This involves opportunities to play with new technologies and tools, as well as experimenting them. Active learning is a practice particularly evident in two of the participants, Remo and Leonardo, who proved to possess more advanced digital practices. For Leonardo, having hands on a new digital tool and testing it, represented an effective way to uncover how these tools work. In fact, experimenting with the tools allows the user to confirm that the tool is effective and efficient. Similarly, Remo adopted a very practical approach, "what I do is learn by doing typically or by watching others doing." For these participants, an effective learning approach should not only be limited to a description of how the tool works, but more importantly it should provide opportunities to take the tool, to use it and experiment with it to ensure it is appropriate for the objective it is meant to be used.

The concept of "time" emerged from the data as an important element, in relation to time to practice with new technologies, time to implement new practices, time to collaborate with others and time to reflect. For example, Teresa argued that

> First of all, I need time. I think now I have the time because I'm not teaching. We need time, because when I take a webinar you get the basic information, but then you need practice because you forget things, you don't know how to use. So it would be important to attend webinars but then at the same time for us to practice and someone that can support us, "I'm not doing well". Yes, it's important: time, the webinars and practice.

> Have time to practice and prepare and someone to support us during this process

Similarly, Teresa mentioned that "we had to learn fast and this didn't give us the opportunity to digest the new ICT because they really take time especially not only to learn them but to apply them to your field." Time was also seen as a barrier to PD as Teresa mentioned

> while I was teaching, I was not ready because I didn't have the time, I was very stressed about the teaching so now like I said I realize all these unlimited possibilities and really opened my mind to this new way of teaching. Of course, I still believe that the remote teaching is not good as the face-to-face teaching but it can be improved or it can reach similar learning objectives. It can. It takes a lot of work, especially for the professors to prepare everything.

As evidenced in this section, systems for supporting digital learning when embarking in digital practices, are multifaceted. Peer collaboration, external and internal support, experimenting, and time devoted to practice with new technologies emerged as main elements in supporting digital learning.

Preferences in Professional Development Contents. A common pattern emerged from the data collected from the different interviews as far as the participants' expectations in PD contents. It might appear obvious that the main expectation participants had in relation to what a PD program should offer was to acquire the necessary digital skills that could allow them to use the tools to help improve their teaching effectiveness. Most often, participants were expecting very specific content that could help them acquire proficiency in the specific tools they intended to use. In other

words, it emerged that the participants were not really looking for generic PD contents but for specific contents that could help them meet their expectations in their teaching role. For example, Remo asserted "what I'm doing right now is to learn better how to make video presentations because for the rest of this year I will deliver training, management training course online." For Teresa, it was important that PD contents not only included the technical instructions concerning the use of the digital tool but also provide ideas on how the tool could be used in practice to improve teaching quality. For example, one of her main questions during the semester was "how can I create activities to reach them [students] in a better way?" For Leonardo "training should be really quite flexible." It should be crafted on the type of jobs a participant has and it should ensure that participants understand the purpose of the new tool that is proposed and deployed.

In summary, three major themes emerged from the data collected that have the capability to shape professional development programs: the actual needs that drive faculty to learn about technologies, the supporting systems that help faculty to learn about technologies, and their specific preference in the PD contents. The findings indicated that learning-needs emerged primarily from the need to be trained in order to improve their access to technology. Other important factors were, the added value that training should provide, the opportunities to improve faculty's adaptability and duty of care, the potentials in raising curiosity in the users. Collaboration, internal and external support, and active learning emerged as the most significant supporting systems. Finally, teaching expectations, the ability to provide support to the students, and enhancing students' learning experience emerged as the most significant elements that should drive PD content.

Sub Research Question B

Sub question B: How do digital transformations influence teaching strategies in a study abroad program?

Sub research question B focused on examining how the participants' teaching approach was affected by the recurrent shifts due to technological advancement and access to new technology. These shifts do not only affect the educational sector but the entire society which is pushed to change in the way it communicates and collaborates. As we have seen in Chapter 2, digital transformation can be considered not only as a shift in technology *per se,* but also in its relation to the alterations that digital technology creates, as well as its influence in human life. This is important as it can enlighten how faculty perceive the changes in the digital environment and adapt to them to improve their digital literacy practices in a study abroad context. Thus, this research question extended the intent of the main research question to explore the motivations and personal interests that drive faculty to adapt to novel educational models pushed by the shifts in the digital environment.

Consistent with the constant comparative method, the list of codes was derived first from data coded without predetermined themes. As themes emerged from the data, codes were assigned and then compared to conceptual framework and literature. The codes and frequency that encompass all the data sets are shown in Table 12. All references were consolidated in one column because the number of observations conducted, and the artifacts collected was smaller than initially planned. This was caused by the disruption in teaching resulting from the pandemic that occurred during the spring 2020 semester that did not allow the researcher to attend in-person class observations.

Table 12

Codes frequency Referenced for Sub Research Question B

Codes	**References in Participants' Interviews, Notes from Observations, Digital Artifacts**
Approaches to embrace new digital tools	15
Challenges in embracing new technology paradigms and digital tools	18
Use of digital tools for global collaboration	13

As evidenced in Table 12, the indicators with the highest percentage of incidence were the following: challenges in challenges in embracing new technology paradigms and digital tools (18 references); approaches to embrace new digital tools (15 references); use of digital tools for global collaboration (13 resources). These codes showed recurring patterns that led to the two themes: *approaches to new digital tools; challenges in embracing new technology in a global collaboration context*.

Approaches to embrace new digital tools. The ways participants approached new digital tools or new technology paradigms emerged as a theme from the participants' interviews. These approaches were clearly described by the participants as having different facets.

For Remo, it was important to be aware of the type of students that were involved in the use of a new digital tool for teaching purposes. According to this participant, this fact defines the expected acceptance and the expected degree of adaptability students can show with a new digital tool. Remo suggested that with many different individuals in

class, it is useful to pay a lot of attention about what an institution is able to provide in terms of information about the students' audience, who the students are and what they are ready to do. Moreover, this participant proposed to have a questionnaire at the beginning of the course asking the students specifically, "these are new things. Can you do this? Are you used to this? Do you like to use this in class?" This suggests that for Remo, it is equally important in this process to acquire the technical skills in order to use a digital tool and also to be aware of the consequences of what a student is able to do with that tool. Finally, Remo found that it is also very important to have a constant reference from an IT expert, as stated in this excerpt

> It happens when you are delivering information, you have a new idea, something you would like to do and if there is somebody that you can talk and quickly have an answer you can incorporate new stuff and you can make your idea viable for the students right away

The support from an IT expert was also important for Giulia, as it is evidenced in this excerpt "if I have problems the presence of IT is very important for example [like] in the process from face-to-face to online program."

Collaboration with peers emerged as another important theme from the interview with Remo, "I had collaborations this semester, because we had to split the course and we had to use a structure that was totally new to me." Remo also found peer collaboration very important when a new technology is introduced. Collaborating with other colleagues has a twofold value for Remo. First, it allows to share issues with a colleague who may have an answer to how to solve it; second, it can help save time to implement a technology tool if someone else has already implemented it in a similar context.

From the data collected from the interview with Teresa, two main elements emerged. The first element was time. This element was not really perceived as a barrier in learning new ICT but rather as a need in terms of managing time between new practices and the existing teaching responsibilities, "we need time, because when I take a webinar you get the basic information, but then you need practice because you forget things, you don't know how to use." This means that faculty need time to experiment with new technologies, to incorporate fresh practices, to work with others and to reflect. A second element, which is similar to Remo and Giulia, entailed a need for support. Teresa argued that support is crucial to help the learning and practicing process especially when professors do not feel comfortable experimenting with digital tools. In this sense, it is important to "have time to practice and prepare and someone to support us during this process."

Leonardo added a further theme that comprised the importance of the training provided by the institution in approaching a new digital tool. In this regard, Leonardo mentioned that "if you deploy a new tool you want to explain your colleagues, all the employees, faculty how to use a new tool." Furthermore, Leonardo argued that in approaching a new digital tool, is important to assess that software matches the needs of the potential user. This is important because, according to this participant, every piece of software or every digital tool embeds its own paradigm, it operates and works in a specific way. However, this *modus operandi* may not necessarily match the way users are used to operate or manage their task.

As evidenced above, the modalities through which a new digital tool is adopted, can influence the faculty teaching strategies. The elements that emerged as the ways

faculty approach new technologies were related to the importance of knowing the target audience for the use of new digital tools, the support provided to faculty from both IT experts and peer collaboration, the time to experiment with the tools, and the training provided by the institution.

Challenges in embracing new technology in a global collaboration context. In a context of a global collaboration, educators aim to level or combine classrooms and people from geographically dispersed areas within a specific curriculum-built technology infrastructure. Interactions are focused on promoting mutual knowledge and global consciousness in the learning process. It is important to note that the focus of the participants was mainly driven by their recent experience with online teaching. This is a very atypical teaching setting for a study abroad context. In fact, face-to-face interrelation is highly encouraged in study abroad programs, as it allows students to immerse themselves in the local culture and interact with the local community. Hence, the participants tended to embody the concept of curriculum-built technology infrastructure within their recent personal experience with the online teaching more than referring to this concept in a more generic way. In other words, their specific experience related to the pandemic situation prevailed on the generic aspect of global collaboration.

Remo showed a sincere awareness of the pivotal role of technology to nurture global collaboration as he stated, “when you have a global audience the obvious answer is yes without IT you cannot talk to the audience.” The recent experience of shifting to an online teaching context was described by Remo to be very successful. Students were able to accomplish their learning objectives with minor technical issues, “I say that the students didn’t even use technical issues to skip work or to submit work beyond the due

date." Further reflections were directed to evidence how students were able to achieve their learning objective in an online context as compared to the usual face-to-face setting. In this respect, Remo ascertained that he tended to be less demanding in the online setting "this semester I had to be a little bit loose about the assignments. Because this occurred abruptly, this was a change we could not plan before." For this participant, students could achieve the same proficiency outcome also in an online class context as long as professors were committed to remodel the class in a way that students were able to put the same efforts they would put in a regular in-person class. However, Remo also mentioned that he missed not being able to have in-person interactions with his students. This participant sadly asserted "you don't get to know them." The fact that both teacher and students were able to exchange brief notes and emails was not perceived the same way as a direct, in person, communication. Remo thought that for many students, especially in a global teaching context that characterizes study abroad programs, "human touch is very important." For example, this participant used to talk often about country focused topics like the made-in-Italy, Italian products, the blend between Italian culture and Italian technology. He felt that without an in-person exchange of experience and information, a written exchange about this kind of experience he could not provide the exact learning experience as before. As Remo mentioned "it is the same kind of information that they collect, but there is a sense of…again…impersonal exchange."

Unlike Remo, Giulia described how students' experience within an online learning environment made them feel part of a larger global collaboration. This participant realized that students felt more secure and comfortable because there was always a connection with the faculty, even though they were geographically dispersed. Giulia

stated that on more than one occasion, students mentioned to her about their sentiments of being part of a global collaborative group. However, Giulia also depicted how in an online setting, students tended to learn at different times and at difference paces. This was perceived as losing the idea of a class in a sense of "all the students together at the same time." Giulia came to the conclusion that ICT had the potential to favor global collaboration as students felt more connected but she also warned about the fact that students can become less present, "less diligent sometimes because they think that they can make it up whenever they want." Finally, Giulia also recognized how the students in her class were able to achieve their learning objective. According to this participant, students produced a lot of good outcomes because even those students who were not really focused, tried to work diligently. That is because they had to upload their works in the digital platform (Blackboard) and if they did not do it everyone would see it. This kind of peer pressure had the effect to encourage students to collaborate with each other on how to approach their assigned works and projects. So, in this context collaboration was strengthened.

Teresa resounded Giulia, when she described the way students experienced global collaboration in an online learning context. Teresa noted that students were more independent as the teacher delivered the material and they were able to organize the study on their own. This made learning more exciting because they could collaborate with people coming from different backgrounds and different countries, "technology is a channel to help them to expand their learning, their knowledge." The teacher's role, according to Teresa, also entails helping students collaborate through the technology available. For example, Teresa mentioned that some platforms like Zoom had rooms

where students could be divided into smaller groups and collaborate on projects, or just get to know each other, “I know that there are a lot of activities we can use to help students to collaborate even if they cannot see each other in a real situation, social real situation.”

In summary, two major themes emerged from the data collected: the approaches to new digital tools, and the challenges in embracing new technology in a global collaboration context. The findings showed that the modalities through which a new digital tool is adopted, can influence the faculty teaching strategies. Similarly, in a global collaboration context the findings confirmed that teaching strategies are influenced by ICT. In this regard, switching classes from the usual face-to - face to the online setting required the faculty to reshape their teaching strategies to ensure the same learning outcomes for students.

Summary

This chapter presented the findings that emerged from the data collected and analyzed. This was accomplished by assembling and synthesizing the conglomerate of findings pertaining to each interview question to arrive at the overall results. The results were arranged in this chapter according to research questions and relevant interview questions. Data from interviews, class observations and digital artifacts revealed the beliefs and behaviors of the participants that influenced their digital literacy practices.

I will analyze and explain the results in relation to the literature and conceptual framework in the next chapter and then draw the conclusions for the results.

CHAPTER 5

DISCUSSION

This chapter will discuss the key findings from this study, as well as a consideration of the implications of these findings. Such findings will be presented according to the patterns that appeared after coding was applied to the main question: What are the motivations, perceptions and interests that influence digital literacy practices for faculty engaged in a study abroad program in Italy? And each of the two sub research questions: a) How do leadership approaches shape professional development programs that aim to improve faculty digital literacy practices in a study abroad context? And b) How do digital transformations influence teaching strategies in a study abroad program?

Implications of Findings from Main Research Question

Main research question: What are the motivations, perceptions and interests that influence digital literacy practices for faculty engaged in a study abroad program in Italy?

The purpose of this study was to explore the multifaceted motivations, perceptions and attitudes that influenced the digital literacy practices in a small group of study abroad faculty, how professional development can help inspire them to act to innovate their digital literacy practices within a study abroad context and, how digital transformations affect their teaching approach. Faculty members' interviews were audiotaped and discussed, observations were conducted and digital artifacts collected and analyzed to better understand how the participants' beliefs shaped their approach to technology and their digital practices, the way professional development supported them and their capacity to adapt to digital transformation.

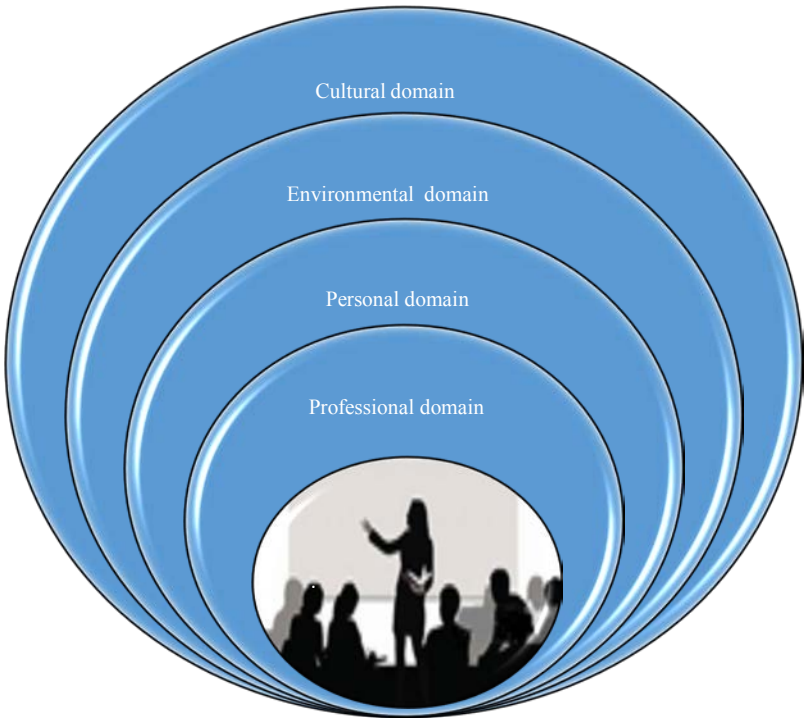
Findings indicated that the major drivers in shaping the participants' motivations and interests in nurturing their digital practices are their individual beliefs, and the level of confidence and self-efficacy in technology. Likewise, the perception they have of their digital practices depends on the benefits of the ICT in the online teaching environment and the actual advantage they can gain for their teaching goals. This is consistent with the conceptual framework by Bennett (2014) according to which is the technology-enhanced learning (TEL) attitudes, convictions and trust that drive the design of technology-based learning activities and the necessary investment in skill development and access search (Greener and Wakefield, 2015). As Bennett (2014) asserted, teachers concentrate first on the level of pedagogic practice, exploring ways of teaching and learning, and then research through suitable technologies to define their value in meeting this goal.

The findings of this study confirmed that participants' motivations, perceptions, and interests are multifaceted and depend on individual beliefs and backgrounds complementing the researches completed by Burnett (2009), Chik (2011) and Graham (2008) who contended that professors' attitudes to digital technologies influence their ICT use. Similarly, this study confirmed the importance of the power of digital mindsets and individual's assumptions about affordances of digital technologies that were corroborated by Tour (2015). These elements together with the time-availability to learn about new technology also showed how participants did not have the same level of confidence to embrace advanced digital practices in all aspects of their teaching. These findings pointed to considerations of how faculty make decisions about their digital practices. Within the results, four main domains of concern have been highlighted as important to faculty when considering their digital literacy practices (Fig. 16). First, the

professional domain that denotes the faculty's teaching needs. Second, the personal domain that relates to the perception participants had of their own digital abilities, aptitude, and skills. Third, the environmental domain that refers to the support available to faculty. Fourth, the cultural domain that includes the wider influence of the individuals' backgrounds and experiences.

Figure 16

Faculty Digital Practices Framework (a)



Professional domain. The professional domain relates to the way a professor perceives how effectively her/his teaching needs can be achieved through digital practices. Individual beliefs emerged as one of the main themes in the findings. This can be conceived to be an attribute in the conceptual framework by Bennet (2014) that affects how faculty members can access technology, how they interpret their technological expertise, and how they make sense of their digital practices.

The use of technology is another important element in the personal domain. It can be conceived as a vehicle to ensure students are able to acquire certain basic technological skills which should enable them to succeed not only academically but also in the working environment. This is supported by Alexander et al. (2017) who argued that it is not sufficient for college students to simply know how to use ICT tools that exist in higher education at a given time. They also need to be able to adapt to new digital environments, develop habits that cultivate lifelong learning and continue to master new skills. This has a direct impact on faculty digital practices. In fact, these practices are directed not only to find solutions to store and manage information, listen to presentations and group works and encourage students to find new ways to communicate, but also to create information, disseminate information and create a learning platform where students could nurture their own creativity. This finding is aligned with Meyers et al. (2013) broader conceptualization of a digitally literate person. These scholars conceived a digital literate person as a creative individual working within a socio-technical network that provides opportunities for growth, sharing and learning.

The benefits drawn from technology stem from effectiveness and efficiency. Basically, technology has the potential to accelerate learning and enhance learning. In this sense, the use of technology can be conceived more as a supporting tool for pedagogical approaches rather than a substitute of more traditional teaching models. From a practical perspective, a teacher should develop a cognizant mindset of the added value embedded in the use of technology as well as the understanding of the benefits that technology has to offer. This is corroborated by Venkatesh and Davis (2000) who asserted that job relevance, output quality and result demonstrability are the three factors

individuals consider when a new technology is introduced to make comparative judgments between their current working system and a new system. Jobs relevance is related to how well an individual thinks a program is tailored to their current job needs. Output quality refers to the way a person perceives that a system is able to carry out the tasks needed. This may include the evaluation of how a system can function in comparison with a more conventional and comparable one. It could also involve ensuring that a technology meets school and professional standards. For example, schools may have layouts for lesson planning which a new system would need to adhere to. Finally, result demonstrability concerns the modality through which the effect of new technology tools on teaching can be evaluated.

Another important determinant in the professional domain relates to the level of trust a faculty member has in ICT. This concerns the professor's ability to understand how students can make effective use of ICT for their learning purposes. Also, it involves the professor's ability to recognize that, in case students are not comfortable or do not have sufficient skills to make an effective use of a digital tool, alternative approaches should be adopted. Digital practices can facilitate not only the connection and collaboration with students but can also enable some other practices as professional dialogue, shared resources, and collaboration in these digital spaces. The nature of these practices relies on the assumption that digital technologies improve students' learning and teaching effectiveness and it is aligned to the findings by Coiro & Hobbs (2017) who envisaged literacy practices as situated cultural practices, using multimodality to activate multiple knowledge modes. Indeed, multimodality, support, connectivity, improvements, and effectiveness are affordances that are pivotal in faculty mindsets. Findings

evidencing how participants were able to remodel their mindsets because of contingent pressure beliefs are consistent with Giddens' (1991) seminal work. This scholar conceptualized individual "identity" as related not only to an essential self but also as something that is continually recreated; 'reflexivity' is central to how identities are sustained and possibly transformed.

Personal domain. The personal domain concerns the level of confidence and self-efficacy a professor has when she/he attempts to integrate technology in her/his teaching models. This level is affected by the faculty propensity to embrace a new technology, and the way their cultural backgrounds and experiences strengthen or undermine their understanding of their own capacity to use it effectively. In this process, professors tend to measure the perceived difficulty of a digital practice, their expectations about their own digital abilities in terms of time and resources available to improve their practice. These findings resemble Marijuan and Sanz (2018). These authors asserted that study abroad environments are highly diverse and the results from the integration of technology into this kind of context are influenced by a complex range of interrelated contexts and individualistic factors that can lead to a variety of results. Thus, educators should think critically about the broader role that technology can already play in participants' lives and how that will be transferred to contexts abroad.

As described in Chapter 4, self-efficacy can be conceived as a behavioral ability to master a skill. In other words, self-efficacy provides a framework for explaining individual behaviors, and is a powerful determinant of behavioral change influencing the effort an individual spends and the intensity of an individual's actions (Bandura, 2001). The circumstance that forced all the participants in this study to improve their digital

practices as a result of the contingent situation caused by the health emergency is a clear example of how self-efficacy can determine a change in the individual's behaviors. The concept of self-efficacy defined by Bandura (2001) as a determinant of behavioral changes can also be extended to those faculty members whose assumptions about the nature of their digital practices were characterized by the conjecture that the main affordance of digital technologies was related to their ability to support teaching but not to improve it. This is important since it has evidenced how faculty, if supported, can be helped to re-evaluate their professional-identities and affordances in the use of technology.

The findings also revealed that the kind of use of ICT professors do not only in their professional life but also in their personal existence, can clearly indicate a level of confidence in digital tools that, in some cases, goes beyond the pure need to accomplish a task. In this case, it is evident that professors demonstrate an awareness of how ICT can provide an effective and efficient way to approach life. This is supported by Tour's (2015) who asserted that there are common patterns in how faculty members approach digital technologies in their personal and professional domains. In other words, Tour asserted that the affordances professors hold in everyday life are also evident in their teaching.

The findings also showed that technology skills and practice are important elements affecting confidence and self-efficacy. Practicing helps make sure that tools work the way and for the planned purposes. Faculty with high confidence and self-efficacy in technology found that technology can be incredibly empowering. This finding is supported by Jeffrey et al.'s (2011) study. These scholars pointed out that it is

important that professors should possess advanced digital knowledge in order to engage in higher education and lifelong learning. Professors who demonstrate a higher level of confidence and self-efficacy are more inclined to adopt ICT that can best fit in their teaching context. This is corroborated by Knezek and Christensen's (2008) who asserted that professors adopting ICT creatively have a highly positive attitude towards ICT.

Finally, findings have also evidenced how confidence and self-efficacy can be challenged by the preconceptions drawn by individuals' cultural and educational backgrounds that may limit the ability of a professor to conceive technology as a driver to improve student's learning. The findings evidenced that for some of the participants a true sentiment of fear and anxiety toward adopting more advanced digital practices existed, and this affected their level of confidence and self-efficacy. For these professors, merging more sophisticated technology tools into a more traditional pedagogy approach represented a challenging task as they were not able to fully recognize the added value technology could provide. The biases shown by some of the participants in attempting to integrate technology into classroom curricula has been largely cited in the literature (Becta, 2003; Ertmer, 1999; Jeffrey et al. 2011; Russell & Bradley, 1997) as being potentially overwhelming and resulting in a major disadvantage to the use of computers. Similarly, studies conducted by Drenoyianni and Selwood, (1998) and Piper, (2003) showed how teachers' perceptions of their computer competency and the adequacy of their technology, when limited, can pose barriers to the use of technology in class. It is important to recognize that in this specific context, the shift to an online setting was crucial to increase Giulia and Teresa awareness of technology as an effective supporting tool in their pedagogical approach. The anxiety and fear that initially inhibited their

confidence and self-efficacy was replaced by an improved awareness of the benefits resulting from the integration of technology into their teaching approach.

Environmental domain. This domain is represented by both exogenous factors such as incidents that affect usual teaching models and endogenous factors such as physical and the supporting systems faculty have access to, in developing their digital practices. In other words, this domain embraces not only external and internal environmental factors, the consistency of available technologies, the different strategies employed to support digital practices, and the resources available, but also the level of adaptability an individual possesses. This latter involves not only the importance of adopting new practices and the abilities to engage with them, but also the possibility for faculty to learn under the time constraints of their current workload. This is supported by Alexander et al. (2017) who asserted that adaptability is essential to digital literacy as this enables them to acclimate to new digital environments, develop habits that cultivate lifelong learning and continue to master new skills.

In Chapter 4, it was described how an event like the rapid spread of a pandemic had several different effects on all levels of our society. For the purpose of this study, the major finding that emerged from this unprecedented experience was that faculty were forced to re-evaluate their digital practice mindsets. ICT, in fact, represented an invaluable tool to keep a clear liaison with the students. This finding is supported by Liu Blythe et al.'s (2014) conclusions, according to which technology not only has the potential to increase accessibility of knowledge and connectivity among diverse groups, but it also has the potential to provide creative ways to foster more nuanced dialogs. In the same context, findings evidenced the pivotal role of the IT support provided by the

institution in helping professors succeed in this transition from face-to-face to an online setting in such a short amount of time. This is aligned with Linder-VanBerschot and Summers' (2015) conclusions suggesting that institutional leaders should accept that people live in a culture of change, and problems arise in an unstable digital learning environment.

Cultural domain. This domain relates to the professors' cultural background and its interrelations with the home institutional culture that emerged as main elements from the findings. These two elements had a clear influence in the way participants perceived their digital practices and is aligned with the seminal study by the New London Group (1996) that asserted that the human mind is embodied, sited, and social.

The findings indicated that the individual cultural background entailed two major elements: first, the faculty realm of studies and professional background; second, the faculty educational background. The attitude in developing technology skills was somehow linked to early professional experiences. The realms of studies revealed a net separation between faculty members whose educational background was more scientific and faculty with a more humanistic background. This supports the conclusions from Kim (2000) who asserted that the type of school an individual attended seems to have a positive effect on interest in technology. The participants whose educational background was humanistic, generally showed a more introverted approach to technology. Therefore, the extent of their digital practices resulted to be less relevant in their teaching approach as they tended to favor more traditional teaching models based (e.g.: face-to-face lecturing and field visits). This leads to a belief that technology and human interactions are perceived as two distinct and ambivalent factors that are not worth combining. The

dichotomy between humanistic and technology has been at the center of the debate for long time in the literature (Rapp, 1986; Snow, 1959) especially in Europe, where the participants in this study were educated and spent most of their professional lives. Rapp (1986), in particular, evidenced how humanists "tend to be critical and pessimistic about science and technology as they tend to overlook the material conditions of life, as improved by modern science and technology, concentrating instead on the emotional and existential aspects of the situation" (p. 428). Rapp (1986) also argued that an individual who is more interested in active life, practical problems and immediate outcomes would turn to technical practice. While a person concerned with inner life, historical, cultural, and artistic development would naturally choose a career dominated by those interests.

Another interesting element influencing the cultural domain that emerged from the findings is associated with the concept of belonging to a particular "generation." Some of the participants perceived themselves as less inclined to embrace digital tools in professional and in private lives because they belong to a "generation" that was less inclined to technology. It is evident that this preconceived mindset was rooted in the local culture. As Moricca (2016) indicated digital technologies entered the Italian school in the 1980s and initially there was not one clear didactic conception about their use.

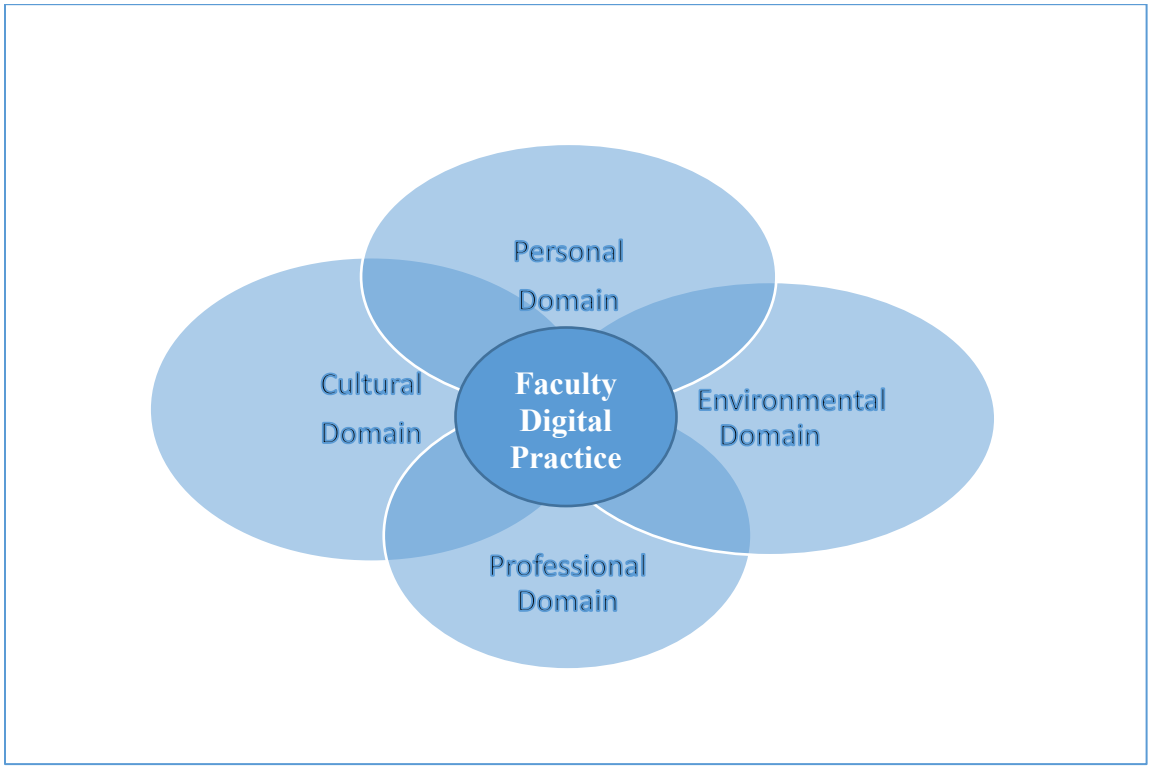
These elements that entail the cultural domain are important to be recognized as they represent a peculiar aspect of the local cultural environment. In study abroad programs, it becomes important to consider the local faculty educational and cultural background as this may differ substantially from the common assumptions that characterize the majority of the faculty body in the home campus. For various reasons that include, for example, asymmetric information, time to customize professional

development, financial and operational convenience, school leaders in the home campus tend to equalize local faculty backgrounds to those in the home campus. School leaders should be attentive not to dismiss the benefits from the interactions and mixture of the different cultural perspectives local faculty can provide and, at the same time, should be able to provide specific support to those faculty members. These conclusions can extend the findings from Liu Blythe et al. (2014) who asserted that it is important to leverage technological innovation in a context where multicultural educators are increasingly armed with globally informed conceptions of diversity and pedagogical approaches.

Conclusion. As shown in Fig. 17, we can conclude that it is the interaction amongst the four domains described above (Professional, Personal, Environmental and Cultural) to drive the faculty's perceptions, motivations, and interests in shaping their digital literacy practices. These practices are therefore the result of the interactions of these four domains. This is consistent with the DPF by Bennett (2014) in that these domains help faculty to experiment and invest time in discovering the technologies and how to apply them to teaching and learning practices. These domains have also the ability to drive the individual mindsets as defined by Lankshear & Knobel (2006) in Chapter 2: "the assumptions, beliefs, values, and ways of doing things that orient us toward what we experience and incline us to understand and respond in some ways more than others" (p.31).

Figure 17

Digital Literacy Practices Framework (b)



Implications of Findings from Sub-Research Question A

Sub research question A: How do leadership approaches shape professional development programs that aim to improve faculty digital literacy practices in a study abroad context?

This research question extends the main research question to investigate the capacity of professional development to enhance digital access, capabilities, and abilities to foster experimentation and the adoption of more advanced technical activities. As described in Chapter 2, IT support is a key element for faculty members at all levels of IT expertise (Goertler, 2015).

Leadership approaches should aim to integrate the three major elements that emerged from the findings of this study to shape professional development programs.

These elements are the actual needs that drive faculty to learn about technologies, the supporting systems that help faculty to learn about technologies, and their specific preference in the PD contents.

As seen in Chapter 4, faculty learning-needs emerged primarily from the need to be trained in order to improve their access to technology (in its broader meaning as specified in the previous chapter), their digital skills, and the application of the acquired skills for pedagogical purposes. This is aligned with Borko (2004) and Barone and Wright (2008) who asserted professional development is particularly important in light of the changes in the global world, including the accessibility to technology.

The findings have also indicated different elements that, most commonly, can be associated with the needs for training. First, PD should provide a clear added value for faculty engaged in training. Learning-needs are linked to the added value that training can provide, which is a crucial element to stimulate the interest in attending a training program. Second, PD should be designed to improve faculty's adaptability. In other words, the ways faculty learn about technology to respond to the technological changes within the educational environment. Third, PD should be designed to improve faculty's duty of care, which entails those actions that aim to do the best for students not only as learners, but also as individuals. Fourth, PD should be designed to raise curiosity in the users. As seen, some of the faculty with less IT technical background valued flexibility and curiosity as important drivers for their training needs. These learning-needs for PD that emerged from this study are aligned with a use of technology that is conceived as a process that develops through different phases: from the awareness and information about the resources of ICT in education, to a the utilization of ICT in classroom practice, and

finally to creative uses of technology for teaching and learning (Sandholtz et al. 1997; Christensen & Knezek 2008). The arguments raised by some of the participants regarding the usefulness of generic training programs resounded Joyce and Showers' (1995) debate according to which standard course-based training programs generally lack follow-up support at the workplace and are therefore proved to be not very useful.

The findings showed that supporting systems for faculty learning encompass multimodality and multilevel elements. These elements are aligned with the Personal Digital Inquiry Model by Hobbs and Coiro (2019) described in Chapter 2, where participants in the professional development program undergo collaborative enquiries as they wonder and explore, collaborate and debate, build and take action, evaluate and reflect.

In this context, peer collaboration (Coiro & Hobbs, 2019) emerged as a first layer system faculty adopt because it is readily available and provides faculty a simple way to share opinions about their problems and the concrete solutions to issues they have found. This can be carried over as either an informal support in the form of someone following another person's advice and tips or as a more formal training session. This is aligned to the concept of experiential learning (Harel-Caperton, 2005; Tuckle, 1995; Dewey, 1933) that was developed around the concept of being open to new opportunities and the ability to learn from them. This has proved to be an effective strategy in building the confidence in engaging with aspects of digital information.

A second layer supporting system is associated more specifically with what we have defined in Chapter 4 as external support, which involves training sessions delivered through tutorials or webinars, for example. As this kind of support is generally available

asynchronously, it is clear that faculty, especially those engaged in study abroad programs who do not have a direct access to the home campus resources, find this support system an effective way to learn. This idea extends the findings by Barone and Wright (2008) who asserted that professors need continued support, even after the curriculum has been developed. This can be accomplished for example through workshops about prevailing and new technologies.

A third layer supporting system relates to what we have referred to in Chapter 4, as internal support. This consists of the institutional training programs, personal IT trainer, self-practicing, and self-testing. Different features emerged from the findings for an effective internal support system. The most important element in tailoring the type of training is that it should be crafted on the recipients' actual needs. In a study abroad context, training systems should be flexible enough to be customized based on the different professional backgrounds the participants possess and the physical location where the participants spend most of their time. Furthermore, a fine-tuning approach is necessary in order to leverage the effects from the training coming from the home campus and the training organized locally. This is paramount to maximize the effectiveness of PD initiatives. The elements that emerged in relation to the supporting system for learning and preference in PD are consistent with Elmore and Burney, (1999) who evidenced four main factors for an effective PD: (a) focusing on turning general ideas into relevant classroom applications; (b) involving faculty members into actual practice rather than explanations; (c) offering opportunities for group support and collaboration; and (d) including evaluation and feedback by skilled practitioners.

A fourth layer supporting system relates to what we have defined in Chapter 4 as active learning (Atkins, 2018; Desimone, 2009; Birman et al., 2000). This involves opportunities for playing and experimenting with new technologies and tools, which have emerged as one of the most efficient systems for digital learning. In this context, *time* emerged from the findings as an important element; in particular in its specific meaning as "need time" to practice with new technologies, to implement new practices, to collaborate with others, and to reflect.

Finally, the findings have clearly revealed that faculty valued less generic PD contents with respect to specific contents that could help them meet their major goals: their teaching expectations, their ability to provide support to the students, and finally enhancing their students' learning experience. To accomplish these goals, contents should not only include the technical instructions on how to use digital tools, but also provide ideas on how these tools can be used in practice to improve teaching quality. This idea is supported by Hobbs and Coiro (2019) who, as mentioned in Chapter 2, argued that professional development is crucial in the context of digital literacies to advance educators' digital literacy skills, generate opportunities for them to reflect on their reasons to use digital tools, make collective inquiry a concrete element of hands-on learning experience, and create opportunities to focus on teachers and learners (not machines).

Implications of Findings from Sub-Research Question B

Sub -research question B: How do digital transformations influence teaching strategies in a study abroad program?

As mentioned in Chapter 4, this research question extended the intentions of the main research question to explore how faculty evaluate whether to adopt novel

educational models when they are pushed by the shifts in the digital environment. Findings showed that the modalities through which a new digital tool is adopted can influence the faculty teaching strategies.

A first element that emerged from the findings concerned the importance for a faculty to know the target audience for the use of new digital tools and what the expected degree of acceptance and expertise in this audience is. The institution leaders play a crucial role in providing this information, and it supports Jeffrey et al.'s (2011) argument of the importance of considering digital literacy practices as part of the institution's culture.

A second element concerns the support provided to faculty from both IT experts and peer collaboration. The presence of an IT expert allows faculty to have a clear reference contact to collect information in a timely manner and make suggestions on how to efficiently use digital tools. This is aligned with Borko (2004) who asserted that professors must be supported with clear and high-quality professional development and training in the fields they teach. Similarly, peer collaboration is valued by the faculty as it represents an effective way to share and resolve issues and save time.

Finally, in a global collaboration context that usually characterizes study abroad programs, the findings confirmed how teaching strategies are influenced by ICT. As seen in Chapter 4, switching classes from the usual face-to-face to an online setting required faculty to remodel their teaching strategies to ensure the same learning outcome for the students. This is a clear example how faculty had effectively adapted to the changes in the digital environment that significantly affected their digital literacy practices. This is aligned with the main concept in the theoretical framework in Chapter 2 that outlined

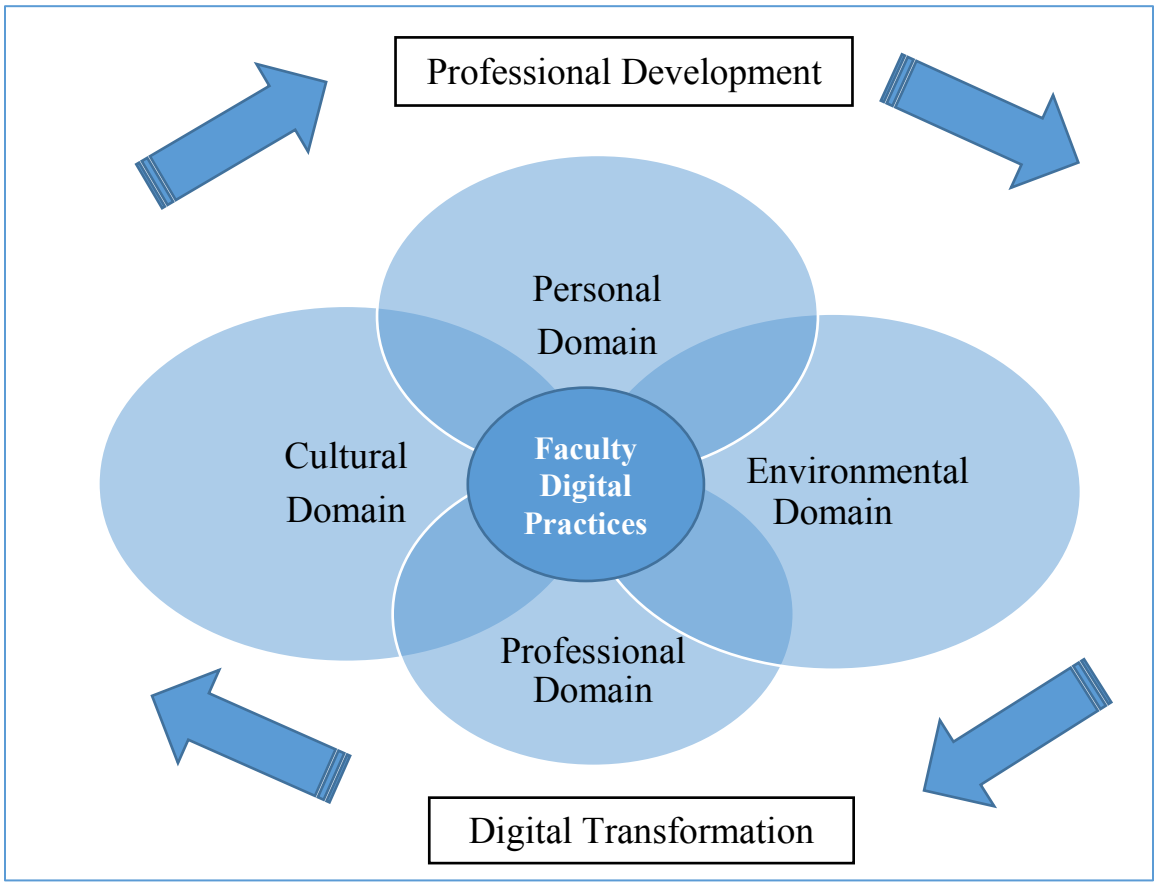
how new technologies and fast-pace developments transform the way people, organizations and societies interact, learn, operate and regulate (Meyers et al., 2013; The New London Group, 1996).

Final Reflections on the Implications of Findings

The findings of this research have shown how faculty digital practices are substantially influenced by four domains: the professional domain, the personal domain, the environmental domain, and the cultural domain. These domains are represented in the final framework in Fig. 18. They are interrelated and can shape the way faculty approach digital practices, which for this reason stands at the center of these four domains. The forces driving digital transformation affect both the environmental domain and cultural domain which consequently impact the professional and personal domains, forming a dynamic model where professional development is key to support faculty in approaching technology changes and in helping them succeed in embedding digital practices in their teaching models and strategies. This framework is consistent with the concept of technology-enhanced learning (TEL) methods by Bennett (2014) described in Chapter 2 that has been used as a conceptual framework for this study. According to Bennett (2014) it is the TEL attitudes, convictions, and trust that drive the design of technology-based learning activities and the necessary investment in skill development and access search.

Figure 18

Digital Literacy Practices Framework (c)



The results also evidenced that personal attitudes dictate the initial willingness to engage in the behavior. In this, consistently with Bandura's (2001) seminal study, self-efficacy is a key factor of behavioral change that determines the effort a person puts on and the intensity of the action. The findings are also aligned with Adam-Turner & Burnett's (2018) conclusions according to which, the leadership needed to achieve disruptive goals needs to be supportive for those engaged directly in the change and it has also to provide the means to mitigate the distresses from the rapid shifts in the technological environment. Hence, Northouse's (2016) idea of an adaptive support that integrates negotiation with the capacity of building interdisciplinary relationships is

critical and therefore should be extended to study abroad contexts. An adaptive leader is empathic and offers the insight and support required to navigate environmental changes, which could otherwise impair the attainment of these goals.

Limitations of the Study

There are three main limitations in this study. First, this case study comprised the analysis of a restricted sample size of participants from a single study abroad campus. Hence, this can result in a limited generalization to other groups. Additionally, since the campus was located in a very specific country and urban area, faculty members' perceptions may have reflected that specific premise and may differ from faculty working in different countries or non-urban areas. However, the thick description of the participants' responses provided a basis for applying the findings of this study to other specific contexts. This is consistent with Tierney and Clemens (2011) as they asserted that "the strength of qualitative research is in its capacity to allow the reader to understand the situation not so that the next study will be precisely like the last, but to think about how the particular study might inform future ones or different situations" (p. 31).

Second, another limitation in this study was represented by the concern of the possible influence of the researcher on the participants. Since the participants knew the researcher, their responses may have been affected by this relationship. Some participants might have tried very hard to overthink and offer answers they considered to be what the researcher was searching for, or some participants might have been less careful about their answers because they may have felt their answers were being judged.

Finally, the limitation that appeared to be the most prominent in this research, was drawn by the effects caused by an unprecedented pandemic that occurred when this study was conducted. Some of the major consequences of limiting the spread of the pandemic included lockdown measures and social distancing regulations that were mandated by the governments. For the purpose of this research this meant that (a) the data collection could not be extended over a semester since study abroad programs, in the research premise, were indefinitely suspended after the Spring 2020 semester; (b) the researcher had to comply with the IRB mandate that indicated that neither interviews nor observations could be conducted in-person. Indeed, interviews and class observations were entirely conducted online in this research. Similarly, the collection of artifacts could not involve physical ones but only digitally collected artifacts. Future studies should address these issues by increasing and extending the collection of data in a face-to-face setting.

Recommendations for Future Research

Future research can enhance the findings of this study by creating a larger database of information to acquire a broader understanding of faculty perceptions of their digital literacy practices. Participants should be also taken from different age groups and disciplines as well as educational backgrounds. Furthermore, the research should be extended to study abroad programs located in other countries.

As mentioned in the previous sections data collection should be extended to include face-to-face class observations and the collection of physical artifacts as well as quantitative surveys developed to measure teachers' self-motivation and self-efficacy.

Another interesting way to extend the findings from this study is to identify faculty members who have incorporated significant digital practices in their instruction

beyond basic use of digital tools and study the benefits of these practices for instruction purposes.

Finally, the research should be extended to explore how faculty and other professional practitioners worldwide foster broad learning and cooperate in multimodal environments. This can help inform literacy practice and professional development.

Recommendations for Future Practice

The development of a framework (Fig. 18) that places digital literacies at the center of the four main domains of influence can be used to consider different aspects of PD programs. A development plan for teaching and learning new literacies should be given to teachers by taking in consideration their everyday digital literacy practices and digital mindsets. The following recommendations are particularly significant for faculty and institutional leaders especially those engaged in global education.

Results from this study confirmed earlier conclusions (Brinkerhoff, 2006; Milbrath & Kinzie, 2000; Smith, 2001;) that there is a need for incorporating extended contact hours for instruction and practice of technology skills. It also confirmed the need to provide the necessary support so that teachers can immediately utilize their new skills and integration ideas. The recommendations provided in the literature (Brinkerhoff, 2006; Hobbs & Coiro, 2019; Kozma, 2008; Resta & Laferrière, 2008; Strudler & Haerrington 2008; Voogt et al., 2011) can be extended to study abroad context based on the findings of this research:

- PD programs should be designed around the teaching interests of the participants, using hands-on activities and end-product projects shared with the entire group. The results of this study support the idea that the home institution needs to

provide ongoing technical, human, and organizational support. Technical support has to do with maintaining the infrastructure to some standard in both the home and branch campuses. Local faculty need support in keeping up to date with the teaching and learning potential of hardware and software. Such support should relate to school-level provisions on professional development for teachers. Content development should be appropriate to reflect the peculiarities of the local context. This can involve digital contents that are developed in local languages and reflecting the local culture.

- Instruction should be varied so that participants are able to work individually, in pairs, and in small groups. Group intercultural exchange should be fostered by mixing local adjunct faculty members with those from the home campus. In other words, PD and learning should take into account teachers' personal experiences with technologies and provide teachers with opportunities to reflect critically on their digital mindsets, as well as to examine and challenge their dominant assumptions. Faculty also need opportunities to extend their understanding about affordance of ICT in creative and innovative ways. In turn, these experiences can help re-thinking approaches to teaching.
- Participants should be accountable for drawing up realistic lesson plans based on their ideas for technology integration. PD trainers should assess these lesson plans to ensure they meet minimum standards. The process of drawing up lesson plans should be repeated during the duration of the professional development. The rapid developments in technology also require a rather sophisticated support structure.

Finally, the results of this study reassure that a technology driven institutional leadership should be in place as this is shown (Bates, 2000) to be a critical factor for a successful use of technology for teaching purposes. An effective leadership that can create a solid sense of consensus for systemic reforms can overarch potential obstacles of resistance in integrating technology in the teaching environment.

Appendix A

Interview Questions

Intro/background questions:	Q1. Tell me about your work experience here at the Rome Campus (when did you join the faculty, what is your rank, have you had leadership positions). Q2. What jobs/positions did you have prior to joining the university (e.g., teacher)? Q3. Tell me about your educational background. What degrees do you hold? Where did you do your schooling? What were your major areas of interest?
Research Question 1: What are the motivations, perceptions and interests that influence digital literacy practices for faculty engaged in a study abroad program in Italy?	Q1. Can you please describe your use of Information and Communication Technology (ICT) in your teaching experience? (Sidani, 2017) Q2. How comfortable are you using ICT in your teaching? (Sidani, 2017) Q3. How important is the use of ICT for your program? (Sidani, 2017)

	Q4. To what extent have you had support from your institution on integrating ICT into your course(s)? (Sidani, 2017) Q5. Why are you using (or why not) ICT? (Hobbs and Coiro, 2019)
Research Question 2: How do leadership approaches shape professional do development programs that aim to improve faculty digital literacy practices in a study abroad context?	Q1. How would you describe your attitude towards learning new digital educational technology? (Sauvie, 2014) Q2. What are some of the ways (means, methods) in which you do learn about new technology? (Sauvie, 2014) Q3. How does your discipline/academic area affect how you perceive, receive, and prefer tech development? (Sauvie, 2014) Q4. What are the elements that would drive you to readily attend technology workshops/events on campus? (Sauvie, 2014) Q5. If your supervisors or department were to provide training on ICT in your roles and/or in your future careers, what

	would you hope to be included? (Ahlquist, 2015)
Research Question 3: How do digital transformations influence teaching strategies in a study abroad program?	Q1. What challenges do you experience when new digital solutions are introduced? (Adam-Turner & Burnett, 2018) Q2. What types of support would you need so that you can adapt to the rapid changes in technology effectively? (Adam-Turner & Burnett, 2018) Q3. How would you describe your attitude towards learning new digital educational technology? (Sauvie, 2014) Q4. How does ICT and global collaboration affect students' academic achievement? (Snyder, 2016)

Appendix B

Consent Form for Faculty

Dear Professor (insert name),

You have been invited to take part in a research study to learn more about how faculty digital literacy practices and professional development impact their pedagogy. This requires an examination of the motivations, interests and attitudes that influence digital literacy practices and how professional development leadership approaches can improve faculty digital literacy practices. Examining faculty perceptions, motivations of their personal technology literacy practices may allow for a more complete determination of the relationships between technology training and the integration of technology into pedagogy. This study will be conducted by Paolo Bartolini, School of Education at St. John's University, as part of his doctoral dissertation. His faculty sponsor is Dr. Lisa Bajor, School of Education at St. John's University.

If you agree to be in this study, you will be asked to do the following: take part in an interview to help the researcher understand the availability of technology in your classroom, the motivations and attitudes toward the use of technology in the class and with peers. Your interview answers to the interview questions will be audio taped and later examined to retrieve main themes. Participation in this interview will involve a minimum of 45-minute of your time to complete. I will also conduct two to three class observations by taking notes during the class to gather an understanding of how the use of technology integrates with teaching strategy. I will be the only person who will listen to these tapes and transcribe them. You may review these tapes and request that all or any part of the tapes be destroyed.

Although you will receive no direct benefits, this study may help the researcher understand multifaceted motivations, perceptions and attitudes that affect digital literacy practices.

Confidentiality of your research records will be strictly maintained by removing your name and replacing it by an alphabetic letter. Consent forms will be secured in a separate location from the interview documentation and will be stored in a locked file.

Participation in this study is voluntary. You may refuse to participate or withdraw at any time without penalty. For interviews, questionnaires, or surveys, you have the right to skip or not answer any questions you prefer not to answer. Nonparticipation or withdrawal will not affect your professional or academic career.

If there is anything about the study or your participation that is unclear or that you do not understand, if you have questions or wish to report a research-related problem, you may contact Paolo Bartolini at +39 347-8245750, bartolip@stjohns.edu, Via Marcantonio Colonna 21a, or the faculty sponsor, Dr. Lisa Bajor, at (718) 990-6455, bajorl@stjohns.edu, 8000 Utopia Parkway, Queens, New York, 11439.

For questions about your rights as a research participant, you may contact the Institutional Review Board, St. John's University, Dr. Raymond DiGiuseppe, Chairperson, digiuser@stjohns.edu, (718) 990-1995 or (718) 990-1440.

Please consider your participation in this study, and sign and return this letter by ******, 2020. Thank you.

Sincerely,

Paolo Bartolini, Doctoral Student

School of Education, St. John's University, New York

____Yes, I will participate. _____Yes, I give permission for the interview to be audiotaped.

____No, I will not participate. _____No, I do not give permission for the interview to be audiotaped.

You have received a copy of this consent document to keep.

Agreement to Participate

_____ _____

Subject's Signature Date

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