

**The Flow between Spaces: The Experiences of
International Doctoral Candidates Negotiation
and Construction of Professional Identity on
Social Media**

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Dedication

I dedicate this thesis to Charity Celeste Rymer

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To my family. Eula Flax, Siobhan Flax, and Charity Rymer, your loving support, encouragement, and laughter sustained and nurtured me throughout this process. Thank You!

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"I come as one, but I stand as 10,000." Dr. Maya Angelou

Abstract

This doctoral thesis explores the experiences and practices of seven international doctoral candidates in the UK use social media for professional identity development. It analyses, too, what challenges (if any) are encountered navigating personal and professional selves on social media, and how such issues are navigated. Addressing such issues involved knowledge of social media, doctoral education, professional identity development, and international learners' experiences.

Doctoral education is a period of becoming and negotiating new environments, roles, expectations, and attitudes. Along this path, a greater sense of personal and professional self is expected to develop. For international doctoral candidates, however, this process is fraught with unique and complex challenges as they develop their identity between the intersections of doctoral study and cross-cultural communities.

Vertovec (1999) concept of transnationalism and Castells (1996) networked society were used to understand the motivation, social interactions, and identity development of international doctoral candidates' practices on Facebook, Twitter, and Instagram. A digital ethnography approach was employed to answer the research questions within the context of social media. Data collection entailed online observation of social media (Facebook, Twitter, and Instagram), and two rounds of interviews.

The study found that international doctoral candidates appeared to be supporting the development of professional identity through belonging, strategic networking, mentoring, and professional branding on social media. Negotiating social media between cross-cultural communities led to complex issues of privacy, content collapse, imagined audience, and collective pressure. These issues were alleviated through compartmentalisation and controlling the online narrative.

This calculated and self-directed approach to social media indicates that self-reflexivity, agency, and imagined-self were motivating factors in developing their professional identity in online social spaces. International doctoral candidates in this study demonstrated a favourable approach towards social media as a transnational space in which borders, identities, and notions of imagination become more fluid.

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Chapter 1 Introduction

This introductory chapter establishes the overall scope and contextual background for the study. The first section reviews the general area of research to set the context for the research problem. This is followed by the problem statement, the purpose of the study, and the research aims and questions. The chapter concludes with an outline of the thesis.

1.1 Contextual Background

In recent years, the higher education sector has begun to design policies and programmes aimed at restructuring the landscape of doctoral education. One of the key areas of structural change is the focus on enhancing the internationalisation of doctoral education to maximise enrolment and minimise attrition rates of international doctoral candidates. Typically, such initiatives seek to encourage universities to embrace the shift from an input output market-driven approach towards a focus on process and outcomes, thus ensuring doctoral candidates are prepared and competent to succeed in an increasingly global and interconnected society. Relevant examples of these changes include financial incentives for increasing enrolment and limiting drop-out rates, enhancing global outreach and capacity development, and the advancement of international trade partnerships. In addition, there has been demands to stress the need for collaborative approaches to meet the multiple opportunities and challenges of the world by multilaterally sharing knowledge, skills, cultural intelligence, and innovative ideas. Thus, the way forward to ensuring effective, responsible, and sustainable internationalisation of

doctoral education includes moving from a static, linear approach toward a broad, innovative process rooted in the context of a global knowledge society.

This thesis seeks to understand the process of contemporary doctoral education. Specifically, it explores the way international doctoral candidates studying in the UK use social media as a cross-cultural space for developing their professional identity and suggests that a greater appreciation is needed for the role these processes play as contributors to global outreach, networking, and knowledge sharing.

International doctoral candidates are vital to the internationalisation of higher education in the UK and remains a priority to many universities around the world (Wit et al., 2015). As conceptualised by Knight (2003), internationalisation is “the process of integrating an international, intercultural, or global dimension into the purpose, functions or delivery of (postsecondary) education.” In the UK, internationalisation in part accounts for approximately 50% of full-time doctoral candidates spanning over 20 different countries worldwide (HESA, 2018). The terms ‘international doctoral candidates’ and ‘international students’ broadly refer to individuals who cross national borders for education-related activities (OECD, 2011). In the UK, higher education sector, the categorisation of learners is based on their fee-paying status. Therefore, students from EU member states are considered ‘home’ students. For this thesis, doctoral candidates from EU countries are included in the term ‘international doctoral candidates’ as they are citizens of countries other than the UK.

There are great opportunities and potential for international doctoral candidates to satisfy the new bilateral goals of internationalisation. For example, international doctoral candidates as highly skilled workers can offer ways for institutions to build international links. Also, the wide range of cultural knowledge they bring can support the development of mutual cultural intelligence. To achieve these objectives will require a holistic understanding of their life experiences and outlook.

The doctoral process at its core is about learning to be. It is a transitional period that is as much about becoming an independent scholar (Smith and Hatmaker, 2014, Park et al., 2018), as it is about developing and re-negotiating new identities (Dobrow and Higgins, 2005, Kuo et al., 2018, Green, 2005). Doctoral candidates often exhibit a fluid perception of who they are; their self-identification changes depending on the space they inhabit at any given time (Kovalcikiene and Buksnyte-Marmiene, 2015, Smith and Hatmaker, 2014, Räsänen and Korpiaho, 2011).

The path to doctoral completion is arduous. However, it is often a more complex and multifaceted experience for international doctoral candidates (Ritzvi, 2010, Phelps, 2016). The life transition and rigour often contributes towards attrition rates such as 30% in the UK and 50% in the US (Geven et al., 2018). Negotiating cross-cultural dynamics, life in a new country, shifts in identity, and adjusting to doctoral study are complex adjustments to simultaneously endure. It is to this aspect of the literature on international doctoral education that this thesis focuses on.

Our understanding of the challenges international doctoral candidates face and methods of overcoming is rich (Interiano and Lim, 2018, Kuo et al., 2018, Ye and Edwards, 2017, Phelps, 2016, Soong et al., 2015, Fotovatian and Miller, 2014, Cotterall, 2013). However, there is a gap in studies that neglect to examine the use of social media to help mitigate these issues.

We know that social media is positively associated with levels of perceived social adjustment in international students (Kashyap, 2011), however, thus far literature has failed to move beyond this one-dimensional stance. This thesis endeavour to fill this dearth of knowledge and move the literature forward by exploring how social media is used to support the professional identity of international doctoral candidates and their experiences abroad. It engages with a conceptualisation of transnationalism and the network society as lens to interpret international doctoral candidates' life in this space. Chapter 2 further highlight previous literature and expound on the research gap in more details. The understanding gained through this study will enable stakeholders at all levels to develop policies and practices that facilitate a more positive, successful, and culturally inclusive experience for international doctoral candidates. In addition, it will promote the use of social media to enhance the internationalisation of doctoral study.

1.2 Research Aims

The central aim and contribution of this thesis is to explore the use of social media to support the professional identity development of international doctoral candidates in the UK. The inquiry is twofold: (a) to understand the lived experiences and self-reported interpretations of international doctoral

candidates' use of social media to support their professional identity, and (b) to identify the social media practices and strategies that international doctoral candidates use to negotiate their identity online. To meet these aims, this study adapts an in-depth qualitative approach to exploring the experiences of seven international doctoral candidates studying in the UK.

1.3 Research Questions

The aims outlined leads directly to the research questions of this thesis. Answering these questions will provide useful insights into a broader understanding of international doctoral candidates' use of social media during doctoral study. In addition, findings can serve as guidance for universities, academic supervisors, and policymakers in charge of designing socialisation, enculturation, and internalisation processes to better respond to the needs of international doctoral candidates.

RQ1. How is social media used by international doctoral candidates to support their professional identity development?

Answering this question would address the lack of studies in doctoral education focused on an in-depth understanding of the complex experiences of international doctoral candidates' professional development (Phelps, 2016, Laufer and Gorup, 2018). It would also represent a contribution to the growing body of literature on digital technology use in doctoral education.

RQ2. What issues (if any) do international doctoral candidates encounter between performing their personal and professional selves on social media?

O'Regan et al. (2018) assert that social media is at the intersection of personal and professional identity, and engaging on social media as a professional

requires the right balance of maintaining one’s professionalism while having the right to a social life. This research question will provide an understanding into the dynamics of social media and identity management, especially as it relates to the shifting identity of academic scholars.

RQ3. How do international doctoral candidates negotiate identity tensions on social media?

As a follow-up to the second research question, this question is devoted to understanding how international doctoral candidates manage and balance the issues they encounter between their personal and professional identity, what strategies they use, and the effectiveness of those strategies.

Research problems and research questions

Table 1.1 outlines the alignment of the research problem to the relevant research questions, literature, data source, and contribution to knowledge. The data sources of participants’ social media observation and interviews are explored in more detail in chapter 3.

Table 1.1: Alignment of research problems and questions

Research problem	Research questions	Relevant fields of literature	Data source and collection method	Contribution to knowledge
The use of social media to support the professional identity development of international doctoral candidates is yet to be closely studied.	How is social media being used by international doctoral candidates to support professional identity development?	Social media in doctoral education; international learners’ experiences (cross-cultural and transnational); socialisation in doctoral education	Online observation and interviews	A strong contribution to theory and practice for digital education and doctoral education, particularly applicable to international doctoral candidates’ experiences of study abroad
	What issues (if any) do international doctoral candidates encounter between performing their personal and professional selves on social media?	Professional identity; challenges of social media use by professionals; blurring of identity; privacy	Online observation and interviews	A contribution to understanding the complexities of international doctoral candidates’ use of social media in a transnational space; a contribution to understanding social media use in doctoral education
	How do international doctoral candidates negotiate identity tensions on social media?	Impression management; reputation management	Online observation and interviews	A contribution to understanding identity management on social media, in doctoral education, and among international learners

1.4 Positionality Statement

The research questions used to guide this study is exploratory in nature. This study, therefore, is qualitative research in which the primary instrument and the findings rely on how the researcher understands and makes sense of the phenomena from the participants' perspectives (Marshall and Rossman, 2011). This section discusses the researcher's position relative to the study and the implications that this position may influence on the research process.

Positionality in research is an explicit self-consciousness about one's social, political and value positions in relation to how these beliefs might influence the design, implementation and interpretation of theory, data and conclusions of a study (Greenbank, 2003). Essentially it forms the basis for a reflexive discussion about a researcher 'location' within the research (Cousin, 2009).

As a doctoral candidate studying in the UK, my position places me at the core of this study as both the researcher, and a representative of the doctoral candidates' population being researched. As a doctoral candidate born and raised outside of the UK, I am effectively an 'insider in a similar role as the international doctoral candidates who are the participants of the study. However, my status as a UK citizen also positions me as an 'outsider' with the privileges and experiences not afforded to non-UK citizens. I came to this project, therefore, as at one and the same time an 'outsider' and an 'insider' (Gair, 2012).

Rowe (2014) argues that it is not possible for the researcher to exist outside the research and indeed whilst I had no direct personal or academic relationship with the participants, I brought my experiences, values and

interpretations to this work. Additionally, I acknowledge that my background, my philosophical approach and biography are 'essential to understanding the type of data that are collected' (Scott and Usher, 2010, p.116). Moreover, qualitative research such as this study, 'is an interactive process shaped by [my] personal history, biography, gender, social class, race, and ethnicity, and those of the people in the setting' (Denzin and Lincoln, 1994, p.6).

Born and raised in the British Virgin Islands (BVI), a small group of islands situated to the east of Puerto Rico and the US Virgin Islands. The BVI is one of five Caribbean countries that remain British Overseas Territories (BOTs) under the jurisdiction and sovereignty of the United Kingdom. Leading up to the British Overseas Territories Act 2002, citizens of the BVI were considered British Overseas Territories citizen and carried a BVI passport. The change in legislation in 2002 allowed for BVI Islanders and all Overseas Territory residents to become British Citizens and obtain British Passports. Having UK citizenship allowed me the privilege of travelling to many parts of the world without much difficulties.

In addition, for generations my family has lived in the BVI and have owned several businesses. I grew up having the opportunity to travel to many countries and eventually lived in the US for six years as I pursued my undergraduate degree. Moving from the BVI to the US was my first experiences of feeling 'othered' or marginalized. It was my first realization of the position of a Black woman within a more westernised society. This experience helped to shape my understanding of existing in a foreign country

as an international student and the challenges that comes along with being on a student visa.

After completion of my studies in the US I returned to the BVI where I immediately started working and teaching in higher education. I spent six years in the BVI working before I decided to move to the UK to further pursue my education. As a UK citizen coming to study in the UK where I had the privilege of paying 'home' fees and working without restrictions, I quickly realised that my Blackness, womanhood and accent still restricted me to a space of being marginalized in a country where I am a legal citizen. Nevertheless, during my time at university, I found it easier to navigate both spaces of being a UK citizen and being international. As a UK national, having never lived in this country, I came to understand some of the complexities of relocating to a new culture and country. However, I am also conscious of privileges afforded to me as a 'home' doctoral candidate and how my experiences may be significantly different from others labelled as 'international'. It was through their stories that inspired me to focus my research on their experiences and give voice to their experiences.

Interestingly, the title for this thesis – 'The Flow between Spaces' – was not originally intended for this research as my topic changed over time. However, I kept that part of the original title. As I went through the research process, I realised just how significant 'the flow between spaces' resonates with the transitional experiences of international doctoral candidate. Often having to navigate between home and abroad, they frequently flow between relationships, identities, career opportunities, and decisions about wanting to

remain or return home. In this state of “in-betweenness”, international doctoral candidates have found social media as an important asset to staying connected. A type of space that allows distant synchronous, real-time interactions (Castells, 1996).

My ontological and epistemological perceptions, my experiences and own development have significantly influenced the qualitative, interpretivist methodology, methods and instruments employed for the research. In my view, the need for precise labelling of my position in this work is less imperative than ensuring conscious, explicit awareness of ‘positionality’ (Pendlebury and Enslin, 2001). This ‘paves the way’ for a reflexive and thoughtful engagement with the data gathered and of the literature read (Cousin 2009, p.32).

1.5 Summary and Thesis Overview

Social media, by reconceptualising ‘time’ and ‘space’, affords opportunities for doctoral candidates that may otherwise be unavailable or limited. For example, doctoral candidates can access instantaneous personal and academic support, engage in networking with other scholars around the world, and disseminate their work to a broad audience inside and outside of academia. Much of what is known about social media in doctoral education is limited to the perspectives of home students, and a large knowledge gap exists in terms of how international doctoral candidates respond to the use of social media during doctoral study. To understand the unique experiences of international learners, international doctoral candidates studying in the UK were interviewed and observed to determine how they use social media to support their professional identity development, what issues they may face

performing their personal and professional self on social media, and how they mitigate these challenges.

Following this introductory chapter, Chapter 2 provides a synthesis of current research on international doctoral candidates, social media, and doctoral education. The chapter concludes with the conceptual framework of the study and the identification of gaps in the research area.

Chapter 3 discusses the methodological approach adopted for this thesis (namely, a digital ethnography methodology). The topics covered in Chapter 3 includes: the research design, the methods of data collection, the data analysis plan, and issues of trustworthiness and credibility. Chapter 4 highlights the main findings from the international doctoral candidates' interviews and online observation. Chapter 5 discusses the findings of the research and answers the research questions. In the final chapter, I conclude the thesis with some practical implications, limitations of the study, and suggestions for further research.

Chapter 2 Literature Review

To develop an understanding of the ways in which international doctoral candidates develop and negotiate their identity on social media, several relevant areas of research must be reviewed. This chapter focuses on the following key themes in the literature: (1) international students in higher education, (2) socialisation to doctoral education, and (3) social media and professional identity development. Many researchers in higher education have examined professional identity development as part of the formal enculturation processes of doctoral education. However, few have explored it from the perspective of social media, and even fewer have addressed professional identity in terms of the diverse identities of international doctoral candidates.

This chapter takes a deductive (general to specific) approach to outlining literature relevant to the examination of international doctoral candidates' social media practices and professional identity. It consists of six sections. It starts with a review of recent literature on international doctoral candidates' experience. It goes on to discuss research on socialisation in doctoral education, professional identity development, social media in doctoral education, and, finally, social media and professional identity development. The chapter then outlines the conceptual framework that frames the study and highlights the key gaps in the literature. It concludes with a brief chapter summary.

2.1 International Doctoral Candidates' Experience: An Overview

Doctoral education is a significant part of economic growth in many countries. Academic scholars are considered 'one of the key actors behind the creation of knowledge-based economic growth' (Laudeline, 2010). A knowledge-based economy entails economic reliance on knowledge and intellectual ideas to generate innovation and a high-skilled labour force (OECD, 1996). To compete, many countries are investing in tertiary education to support their input in the knowledge economy (Lee and Kim, 2009; Suh and Chen, 2007). Thus, the past two decades have seen a worldwide increase in international students' mobility as they pursue doctoral education abroad.

Universities in the UK are privileged to have doctoral candidates from a rich set of educational, social, cultural, and career backgrounds. Cohorts such as international, part-time, and mature candidates comprise an increasingly diverse doctoral community. Each of these groups is likely to have specific needs that are complex and non-conventional. What is exceptional about international doctoral candidates is that they represent a large body of learners from all over the world. According to HESA (2018), international doctoral candidates comprise almost half of doctoral candidates in the UK. With such diversity, there is great potential for learning from this group and for enhancing the doctoral learning environment for all.

Discussions regarding international learners' aspirations and motivations for studying abroad have dominated the literature on student mobility (Guruz, 2011). Much of this research has identified factors such as perceptions of a better quality of education abroad, the opportunity to experience a different

culture, parental influence, a lack of academic opportunities at home, the chance to learn a new language, and the view that education might lead to immigration. These factors are generally found in the rationale for international learners in all levels of tertiary education.

However, there are a broader set of intentions that international learners interested in doctoral education exhibit. Ritzvi (2010) argue that doctoral hopefuls employ a more self-reflective approach to their aspirations in studying abroad, which are typically based on 'perceptions of transnationality and the role higher education plays in building professional identities and forging academic careers.' This outlook is often based on international doctoral candidates being highly mobile individuals. This perspective surmises that doctoral candidates' aspirations are processed through intentions developed before they leave home, including national and global considerations. Phelps (2016) study found that international doctoral candidates from highly developed and emergent economies had extensive mobility before travelling abroad for doctoral study. She explains that some international doctoral learners had already possessed a 'global' or 'nomadic' perspective on life. Similarly, Bilecen (2013) and Cohen and Kennedy (2007) have both referred to this worldview as having a cosmopolitan imagination, a mode of consciousness – a way of thinking about belonging to the world as a whole.

Pásztor (2015) argue that international doctoral candidates' high skill set and experience of mobility create a belief that they are not limited in terms of their choices in working and migrating to any country on completion of their studies.

Thus, international doctoral candidates are self-reflective and understand the role that mobility in higher education plays in building their professional status and forging their academic careers (Ritzvi, 2010). A study examining the factors influencing international doctorate recipients' decisions to stay in the US found that about 81% of the study participants decided to stay in the US after completion.

The literature on both home and international doctoral candidates report perceptions of isolation; loneliness, stress, anxiety, and imposter syndrome; lack of motivation; and conflict with supervisors (Acker and Haque, 2014, Bryan and Guccione, 2018, Gardner, 2009, Li and Collins, 2014). These issues are often compounded by doctoral candidates' 'culture of silence' (Colbeck, 2007). Freire (1985) suggest the culture of silence in higher education arises from the weak voice of a dependent group who try to reiterate the values and perceived ideals presented as legitimate by the dominant social group. In the context of doctoral education, the culture of silence can be realised through doctoral candidates struggling in silence as opposed to speaking out or making formal complaints.

The culture of silence is especially worrisome for international doctoral candidates who often have no immediate external support as they experience challenges that span their new environment and their home. For example, they may have to negotiate the structures and traditions of a different academic structure, language barriers, and issues with accompanying family members while dealing with a connection back home. These cross-cultural

dynamics along with the typical dilemmas of doctoral study can result in international doctoral candidates feeling overwhelmed.

Despite most universities having programmes in place to support doctoral candidates in general, more work can be done to include the needs of international doctoral candidates (Sherry et al., 2010, Son and Park, 2014, Evans and Stevenson, 2011, Elliot and Kobayashi, 2018). Cotterall (2011) has identified three issues – community, communication, and chance – that, when addressed in support programmes, may effectively address the challenges faced by international doctoral candidates. The issue that is most important to this study is the community.

The community issue refers to few opportunities for international doctoral candidates to connect with other researchers, staff, and peers. Previous studies claim that engaging with researchers, peers, mentors, and others outside of the formal structure of the candidate-supervisor relationship is valuable (Shacham and Od-Cohen, 2009, Fenge, 2012, Lahenius, 2012). Much of this research is framed around the concept of communities of practice (CoP). Lave and Wenger (1991, p.98) define communities of practice as ‘a system of relationships between people, activities and the world; developing over time, and in relation to other tangential and overlapping communities of practice.’ These structured relationships can be created with the goal of acquiring knowledge from each other around shared interests.

Another benefit of structured communities of practice is that they provide opportunities for doctoral researchers to engage with each other, which might be invaluable to international doctoral candidates. Ryan and Viète (2009,

p.39) report that international doctoral candidates often feel 'excluded, ignored, isolated, marginalised, or simply distanced.' The perception of being excluded heightens international doctoral candidates' sense of isolation (Janta et al., 2014). In a more recent study, Laufer and Gorup (2018) examined the experiences of international doctoral candidates who dropped out of their doctoral programme at a Western European university. Eleven international doctoral candidates shared their life stories of factors that influenced them to leave their doctoral programme. The researchers found that the candidates felt that they were perceived as different by those in positions of power or privilege, which led them to feelings of 'being othered'. Othering – that is, the 'process which serves to mark and name those thought to be different from oneself' (Weis, 1995) and the constant undertone of feelings of inequality contributed to the candidates' decisions to drop out of their doctoral programmes. Janta et al. (2014) suggest that the candidates were also vulnerable to being challenged due to their international status and their fear of speaking up, which hindered them from attempting to change their situations.

Irrespective of the obstacles international doctoral candidates face, existing literature maintains that they perform well and complete their doctoral degrees at high rates (Groenvynck et al., 2013). Rose-Redwood and Rose-Redwood (2013) found that one way international doctoral candidates cope with alienation is to self-segregate by primarily seeking connection with other doctoral candidates from their home countries or other international candidates. This behaviour rejects the rhetoric of the two-way process of internationalisation and instead leads to a 'one-way flow of knowledge'

between candidates from the same country (Ryan and Vete, 2009). Eventually, these candidates settle in and take a self-determined focus on getting through their programme (Litalien and Guay, 2015).

Doctoral education is inherently built around a perception of autonomy and self-reliance. The general aim is to 'produce' independent scholars who are 'creators of knowledge through their original research' (Gardner, 2009). Johnson et al. (2000) claim that there are institutions where 'the experience of isolation and abjection often appears so widespread ... [that] it may in some sense be a condition of the production of independence and autonomy, which is the goal of the pedagogy and practices of the PhD' However, Hopwood (2010) challenges the notion of separatism in doctoral education by highlighting and encouraging collaborative and social approaches such as cohort learning, guardian supervisors, and self-help groups.

Although international doctoral candidates' core needs are like those of undergraduates, their lives are often more complex. Many have families that travel with them abroad. They may have left careers and other responsibilities in their home countries. They exist in a space where they must negotiate and balance these issues between their home and host countries. Andrade (2006) asserts that an understanding of international doctoral candidates' experiences should be considered as a primary concern and it is necessary to provide suitable programmes and develop appropriate services. Andrade (2006, p.133) further argues that 'Institutions cannot simply admit foreign students and expect them to adjust to life in a new country and educational system without appropriate support and programming.' Therefore, there is not

only a great need for developing contextually appropriate support and training schemes for this group of learners; it is also important to attain a deep understanding of their psychological, sociocultural, and educational experiences. For example, it is vital to understand their need for belonging and how that impacts their experience of doctoral study and of living away from home in general.

A sense of belonging has long been recognised as playing a crucial role in education. Maslow (1962) assert that belonging is considered a basic human motivation. Maslow states: 'If both the physiological and the safety needs are fairly well gratified, then there will emerge ...belongingness needs.' A sense of belonging generally refers to a feeling of connection and that one is valued and matters to others (Powell, 2012). The lack of a sense of belonging is typically described as a 'sense of alienation, rejection, social isolation, loneliness or marginality' which has been linked to negative outcomes in the literature on international learners' experiences (Harvey et al., 2017, Mwangi, 2016, Stebleton et al., 2014). In the context of doctoral education, O'Meara et al. (2017) found that professional relationships had a significant influence on doctoral candidates' sense of belonging. A sense of belonging not only impacts retention and completion rates but also doctoral candidates' interest in pursuing a career in academia (Ostrove et al., 2011). In a study that examined doctoral education socialisation for work in academia, Austin (2002) found that doctoral candidates who did not feel that they belonged were more likely to pursue careers outside of academia. Austin also found that many doctoral candidates expressed the feeling of being on their own to make sense of the doctoral process because of a lack of regular mentoring and advising.

Austin highlights the importance of informal relationships and mutually respectful and effective advisory relationships.

It is increasingly important to understand and, indeed, to strategically change the structure of doctoral education. The stereotypical image of the doctoral candidate as being self-reliant (Janta et al., 2014) and doctoral study as being a predominantly isolating 'solo journey' (Lee and Danby, 2012) is changing. Some structural shifts in the pedagogy of doctoral education have expanded to include industry partnerships and cross-border and cross-university collaborations. This collaborative approach is part of the broader global strategy of making doctoral education more responsive to the changing needs of society and doctoral candidates.

Thus, regardless of the reasoning for the continued recruitment of diverse research cohorts, Ryan (2012) argues that international research candidates contribute a wealth of ideas and perspectives. The usual expectation is that candidates will return home with knowledge, skills, and attitudes to help develop their countries' economies. However, in a study examining the factors influencing international doctorate recipients' decision to stay in the US, Xueying et al. (2015) found that doctoral candidates who intended to pursue a career not limited to academia had a 90% probability of staying in the US upon graduation. International doctoral candidates chose these institutions abroad because they perceived value in the quality of education and in living in these countries. Therefore, institutions should consider how best to serve all doctoral candidates to maintain high completion and satisfaction rates (Luo et al., 2018).

The typical structure of doctoral programmes provides the space in which candidates can learn how to conduct research, advance into the role of independent scholars, and function within the academic community (Mantai, 2017). Dependent and independent in structure, the doctoral degree is often plagued with issues of isolation, loneliness, a need for belonging, and uncertainty (Janta et al., 2014). The independent stage requires self-reliance and the capability and self-efficacy to accomplish independent research (Lovitts, 2008). The dependent stage sees the researcher as gaining knowledge through courses, supervisors, workshops, and building relationships within the research community (Lovitts, 2008). Candidates can develop personal support networks, learn from and with other scholars, and engage with faculty and staff at their universities and around the world (Hopwood, 2010, Jairam and Kahl, 2012).

Doctoral candidates bring with them a multiplicity of identities into this new era of their lives. As they socialise into doctoral education they endure the continued process of developing an academic professional identity aimed at acquiring the knowledge, skills, norms, and attitudes of academia and understanding the responsibility, roles, and behaviour of the profession (Twale et al., 2016).

Research has demonstrated that interpersonal relationships are a critical part of numerous aspects of the doctoral degree process, including identity development (Meschitti, 2018). In fact, one lens used to understand doctoral candidates' decision to remain or leave their doctoral programme is that of socialisation. Socialisation into doctoral education affects every aspect of the

candidate's experience, from initial preparation and contract with a graduate programme through to the defence of the dissertation (Gardner, 2008). Furthermore, research has revealed that formal and informal relationships have a positive impact on doctoral candidates' identity development and attrition and completion rates (Young et al., 2019, Baker and Pifer, 2011). In addition, these networks influence the professional identity of doctoral candidates.

Opportunities to connect and interact with other professionals, from both within and beyond academia and the graduate learner's educational institution, are essential to doctoral candidates' exploration of self (Austin, 2002, Sweitzer, 2008). In fact, research has shown that digital technology has the potential to enhance interconnected and collaborative knowledge generation (Yemini and Sagie, 2015). The 2016 OECD Science, Technology and Innovation Outlook report posits that this trend will radically modify doctoral research in all fields through (1) open access to journals, (2) open research data, and (3) open collaboration.

Barnacle and Mewburn (2010) believe that doctoral study is an intense learning experience that likely has a transformative effect on candidates' lives. However, it is important to recognise that international candidates endure an added layer to their experiences while studying in foreign countries (Ryan, 2012) as they are faced with sociocultural adjustments, language competency, and the task of getting used to a new environment (Zhang and Goodson, 2011). Kamler and Thomson (2006) argue that completing a doctoral degree is not just about academically pursuing and creating

knowledge; it also comprises a transformation of identity towards becoming a researcher (Kamler and Thomson, 2006) or the crafting of a 'scholarly self' (Mewburn, 2011).

2.2 Socialisation in Doctoral Education

As Shulman (2005) highlights in his article 'signature pedagogies', understanding a profession requires studying its preparation and training. Consequently, doctoral education socialisation is the primary way of preparing doctoral candidates for their future academic careers (Austin and McDaniels, 2006, Golde and Walker, 2006). A comprehensive review of the literature reveals a consensus that doctoral candidates as part of their socialisation would value gaining an understanding of (a) their professional identity as academic scholars; (b) the profession; (c) the vast opportunities and types of institution they can potentially work in after doctoral study; and (d) the purpose and history of higher education (Austin and McDaniels, 2006, Anderson, 2017, Baird, 1992, Clark and Corcoran, 1986, Rhoads et al., 2017).

Socialisation is a learning and adjustment process that is often described in relation to a person becoming part of a group, organisation, or career. It focuses on the characteristics of the newcomer in regard to their acceptance of and adjustment to the workforce and organisational culture. Tierney (1997) describes organisational culture as 'the sum of activities – symbolic and instrumental – that exist in the organisation and creates shared meaning.' Thus, socialisation is concerned with the successful understanding and incorporation of those activities by the new members of the organisation. To

this end, a person who joins a group or organisation should ideally learn the rules, guidelines, and culture associated with the group (Li and Collins, 2014). In the specific context of doctoral education, socialisation frameworks are centred on the culture of academia (Lovitts, 2008, Weidman et al., 2001, Golde, 1998). Building on the work of (Thornton and Nardi, 1975), Weidman et al. (2001) define academic socialisation as the 'process through which individuals gain knowledge, skills, and values necessary for successful entry into a professional career requiring an advanced level of specialised knowledge and skills.' The framework identifies four overlapping stages of socialisation for new doctoral candidates: anticipatory, formal, informal, and personal. During the anticipatory stage learners seek out information about their doctoral programme; they learn the new rules, structures, and expectations in the hope of easing their entry into the programme. It is expected that, during this stage, candidates will be uncertain and tentative in terms of their expectations. The subsequent stages reflect a developing sense of self in the new position, increased confidence, and internalisation of the roles and responsibilities (Golde, 1998). Doctoral candidates develop these attributes in part by learning with and from the academic community, for example through learning how to conduct research, networking with the academic community, and benefiting from the guidance of academic supervisors (Mantai, 2017). Therefore, it is evident that relationships and social interactions are vital to enculturating into academia and that they contribute to a sense of being, belonging, and inclusion (Weidman et al., 2001, Austin, 2002, Sweitzer, 2008, Lovitts, 2008, Tinto, 2012).

Unfortunately, as stated in the previous section, international doctoral candidates often experience greater rates of isolation and loneliness during their study compared to home doctoral candidates (Ye and Edwards, 2017). Previous studies have almost exclusively focused on a generalised approach to socialisations, thus excluding the needs of diverse doctoral candidates. Felder (2015) argues that academic institutions need to intentionally plan for embedding the needs of heterogeneous groups of doctoral learners. Similarly, Gardner (2008) states that, for diverse doctoral learners, 'normative socialisation patterns may not fit their lifestyle and the diversity of their backgrounds, making them feel they do not "fit the mold".' These approaches may, in turn, hinder international candidates' progress and perhaps result in unnecessarily traumatic overall experiences.

The literature highlights the direct link between socialisation and professional identity development. Ultimately, socialisation processes lead to the development of what Merton (1957) describes as a sense of a *professional self*, an identity that embodies the specific characteristics of the profession. Staton and Darling (1989) describe this as a process of role identification by which newcomers construct professional identities as they interact with other group members. The next section will explore the relationship between socialisation and professional identity in greater detail.

2.3 Professional Identity Development in Doctoral Education

Professional identity is defined as an individual's sense of self-based on commonly held beliefs, values, norms, and practices of a profession (Ibarra, 1999, Schein, 1978). It is both a personal and professional developmental

process. In part, it involves subjectively assigning meaning to a career role based on personal attributes, values, beliefs, and attitudes (Dobrow and Higgins, 2005). This meaning-making process is essential to identity development and rooted in self-conceptualisation. Super (1963, p.18) defines self-conceptualisation as:

A perceived self with accrued meanings. Since the person cannot ascribe to himself in a vacuum, the concept of self is generally a picture of the self in some role, some situation, in a position, performing some set of functions, or in some web of relationships.

The theory of self-conceptualisation provides a way of understanding the process people use to make meaning from their experiences. However, traditional concepts of identity suggest that individuals create distinct selves that are singular, unified, and with no regard to contextual considerations Gardner (1995). Similarly, Erikson (1980) views identity as a fixed phenomenon to be attained and located in well-defined stages. This simplistic perception of identity is indicative of the belief that identity is derived from a singular core/true self (Gergen, 1991), and is permanent and unchanging (Yon, 2000). However, cultural theorists such as Hall and Du Gay (1996) and Jenkins (1996) conceive of identity as a relational process based on social interaction and contextualised experiences. Importantly, identity is defined based on one's subjective experiences, rather than an objective certainty of the 'true self' (Vignoles et al., 2006). For example, it is unlikely that most adults today will define themselves as having one static, unchanging identity. This is in part due to the situational characteristics of identity development (Yon, 2000, Burnham, 2017, Baumeister and Leary, 1995). Therefore, people's conceptions of their identities are reviewed and renewed in an ongoing way

based on different life circumstances (Törrönen, 2014), such as their self-image related to personal attributes such as nationality, ethnicity, religion, career, locality, or any kind of social group that has its own distinct culture (Ovrebo and Tian, 2016).

There are periods of identity stability dependent on circumstances and conditions being experienced at that time in a person's life (Vivekananda-Schmidt et al., 2015). Nevertheless, previous research has found that, under changing conditions, people are forced to re-examine the ways in which they view themselves in relation to others (Erikson, 1980). Mercer (1994, p.43) suggests that 'identity only becomes an issue when it is in crisis, when something assumed to be fixed, coherent and stable is displaced by the experience of doubt and uncertainty.' Thus, life changes such as starting a new job, losing a job, getting married, having children, moving to a new country, or starting university often affect a person's self-perception (Kleinke, 1978).

Identity and self-awareness are at the core of the doctoral process, as is often confirmed when the title of 'doctor' is conferred on successful candidates. Green talks about doctoral education as a practise that 'is as much about identity formation as it is about knowledge production' (Green, 2005, p.3). As highlighted in the previous section, doctoral education is a transitional process, it is a shift towards becoming independent scholars. According to Hall and Burns (2009, p.25) this shift impacts doctoral candidates' identities as they 'negotiate new identities and reconceptualise themselves both as people and professionals.' For example, many doctoral candidates

(international and home) had professional careers before starting doctoral studies. The change from a position of power with authority and influence to being a novice or new learner can be difficult for all doctoral candidates to negotiate. This point is highlighted in a study by Ritzvi (2010), who conducted interviews with international doctoral candidates from culturally diverse backgrounds studying in Australia and the USA. Ritzvi found that many of the doctoral candidates had prior professional experience as academics and/or in other professional jobs that were overlooked during their doctoral studies. Ritzvi argued that this led to feelings of frustration as the candidates began to experience the overlapping and displacement of their prior identity as working professionals to the shift of being perceived as novices in their roles as doctoral candidates.

In addition to adjusting to a new role as a doctoral candidate, international doctoral candidates also experience the added dilemma of leaving their familiar home environment and adjusting to a new country. They commonly experience multiplicity, ambiguity, and flux in their sense of self and belonging (Phelps, 2016, Bilecen, 2013, Robinson-Pant, 2009). This 'crisis of identity' (Brown and Holloway, 2008) can result in intensified feelings of isolation, uncertainty, fear and anxiety. Ritzvi (2010) expands on this and states:

The formation of their identities involves calculative logics that both require them to interpret the social spaces of their research training and also the transnational space they might occupy after their studies. Their experiences are forged in transnational social networks that suggest that their professional identities are in a state of 'becoming' rather than 'arrival'.

Ye and Edwards (2017) suggests that, to mitigate identity conflicts and support professional identity, international doctoral candidates should enact an autonomous, self-determined approach to reaching their goals. International doctoral candidates' self-concept and agency can help shape their professional identity during doctoral study. Fotovatian (2012) has found that international doctoral candidates use a self-directive approach to choose their own pathways for integration, networking, and identity development. Fotovatian (2014) highlights the role of agency and intentionality in shaping candidates' doctoral experience. Fatovian's findings were replicated by Cotterall (2015) who studied the identity-related experiences of seven international PhD candidates and the impact on their personal and professional identity. The seven candidates' identity trajectories were influenced by the confidence they developed through their supervisors and the academic community. Agency also played a significant role as some of the candidates actively sought to expand their academic networks and their repertoire of scholarly practices. Cotterall suggests that confidence is both an antecedent and an outcome of agency which led to the candidates taking a proactive approach to shaping their professional identity. In this context, agency is used to take control of the learning process. It proposes reflexive/reflective thinking as a means of deliberately shaping one's own experience (McAlpine and Amundsen, 2009). Agency has been posited as an essential ingredient of productive and beneficial identity development (Hopwood and Stocks, 2008).

Given the social construction of identity development and the context of the current study – professional identity and international doctoral candidates – it

is important to address the issue of identity development in diverse groups, as well as the concepts of personal and professional identities. Some recent studies have begun to fill the gap of understanding how cross-cultural mobility influences international doctoral candidates' identity. Phelps, (2016) studied the experiences of 31 international doctoral candidates studying in Canada and the impact of moving abroad had on their identity and sense of belonging. Phelps found that their experiences of living in Canada were profoundly shaped in part by their experience of being highly mobile individuals. Some candidates were comfortable and embraced the disruption of their identity that came with 'exposure' to their new environment. However, others found it more difficult to adjust to the shifts in their sense of self-identity. Additionally, Phelps argues that their experiences of being international transient subjects allowed them to engage and immerse themselves more fully in the attributes of a globalised society. Similarly, Ritzvi (2010) has found that international research candidates are highly aware and self-reflective of the transnational space they have to navigate between their host and home identities and the pressures that may arise.

Below is an extended range of current studies that further focus on international doctoral candidates' identity (personal and professional) development and relevant issues (see Table 2.1). The table summarises the theoretical/conceptual frameworks used, key aims, research methods, sample size, and key findings. As shown in the table, there is an emergent interest in understanding how international doctoral candidates develop their identity in doctoral education. These studies primarily examine the topic of identity based on the issues and challenges of assimilation, adjustment, and socialisation

into doctoral study. Issues of identity and identity development are mainly examined in terms of the gaze of their 'host' country as the site of investigation, where their social and professional identity is assumed to undergo various processes of transformation.

Although most of these studies recognise that international doctoral candidates exist and study in transnational spaces, they do not explore what Vertovec (2009) considers the 'glue' of transnationalism: digital and social media. While these studies have provided some insights into how learning and identity development may occur in social media spaces, less is known about international doctoral candidates' self-initiated experiences of their participation on social media. Only one study (Kashyap, 2011) indirectly highlights the role that social media plays as part of international doctoral candidates' experience. However, this study was limited to framing social media as a tool for personal support and assimilation.

To my knowledge, no prior studies have explored international doctoral candidates' use of social media to support their professional identity development. Social media platforms are increasingly recognised for their capacity to support international students' experiences between their home and host countries (Gomes et al., 2014, Binsahl et al., 2015). Current research and literature suggest that social media is important to the experience of international doctoral candidates for cross-border relationships, building communities of practice, and learning (Ye and Edwards, 2017). However, at the intersection of these issues is space for understanding how social media can be used as a transnational space that supports these issues, and their

professional identity development. The next section will examine the literature on social media.

Table 2-1 Literature on identity and international doctoral candidates

Authors	Theoretical/ conceptual framework	Research aim	Sample	Method	Key findings
Ingleton and Cadman (2002)	The role of emotion in learning	To explore international post-graduate research students' sense of agency	7 international postgraduate students at an Australian university	Qualitative memory work methodology where groups of students share, reflect upon and write memories	PGRs' academic identity is strongly linked to the construction of pride and confidence through 'interpersonal experiences of acceptance, validation and support'
Szelenyi and Rhoads (2007)	A "post-national" definition of citizenship which emphasises its "social" and "economic" dimensions	To examine meanings of "citizenship" as part of personal identity in a global context among international doctoral students in the US	30 Brazilian, Chinese, and Italian graduate students studying in the United States	Qualitative methodologies, Semi-structured interviews	Doctoral candidates experienced varying patterns of change in citizenship affiliation in response to relocating to a new country for study. These changes ranged from becoming more globally-oriented in response to exposure to diverse cultures to becoming more nationally-oriented in response to viewing and perhaps defending one's own country through the eyes of others abroad. The students experienced an expansion of self-perceived citizenship identities and the imposition of limitations on their ability to claim new dimensions of citizenship due to being "foreign" within the institution.
Tubin and Lapidot (2008)	Globalisation and socialisation processes of graduate students	To explore the process of professional identity construction among outstanding Israeli graduate students who have been awarded Fulbright grants for doctoral and postdoctoral studies in the USA	27 Fulbright Israeli alumni	Qualitative study, comparative analysis of semi-structured interviews	Doctoral candidates' identities were developed through the intertwine method, ordering, and buffering. Students created a coexistence of both identities while taking the best of each – a 'global identity'
Robinson-Pant (2009)	<i>Not Applicable (N/A)</i>	To explore international graduate students' experiences of renegotiating their sense of academic identity as knowledge producers because of	N/A	Seminar discussions with international research students in a UK university setting	Students are concerned about two primary areas of academia "cultural conflict": criticality and research emphasis and approach. Upon returning home, some of them faced with a dilemma as their home academic culture puts more emphasis on teaching than research.

		transitioning into a western academic environment			Writing up the thesis in English and in the first person poses some difficulties for them too. Some of them felt “disempowered” or “self-centred”. The study exposes an interesting tension at the intersections of academic and cultural identities as the international graduate students negotiate the gap between Western academic norms and the cultural habitus of home countries and institutions
Ritzvi (2010)	transnational space	To understand the cultural dynamics of international student experiences; To theorise relationally issues concerned with the emerging forms of transnationality	5 Ph.D. candidates in the US and Australia	Qualitative study, students reflect on their expectations and experiences through narratives	International doctoral students’ professional identities are developed around “a complex set of processes that are hybrid, channelled and networked”. Each student forms his identity his own way, considering his position and situation in the transnational space during and after his studies.
Kashyap (2011)	Transnationalism, adult transitional theory, and the graduate socialisation model	To understand graduate international students’ social experiences through their transient lives	10 graduate international students at a University in the US	Phenomenological study 30 in-depth interviews, multiple social contacts, and group and member checking sessions	Graduate international students cannot be grouped as a single monolithic entity; rather, they lead variant and divergent lives. They regularly stay connected and engaged with family and friends in their home country through transnational social fields. Even though they confront adversity and challenging situations, they tend to succeed in developing a strong sense of identity. Social media and communication technologies are seen to keep them socially isolated within their current “place” while connecting them across “space”, thus inhibiting or protecting them from experiencing “identity flux”.
Fotovatian (2012)	Agency Theory	To map international doctoral students’ approaches to the negotiation of their institutional identity.	4 international non-English speaking background Ph.D. students in an Australian university	Case Studies	Doctoral students chose different pathways for integration, engagement in institutional interactions, and identity construction. The findings highlight the role of agency and intentionality in participation and learning through interaction which leads to a critique of the ‘international student’ as a label that underplays student agency.
Bilecen (2013)	Social constructionist perspective	To describe a dynamic process through which students negotiate the	35 international	Extensive semi-structured interviews	Students develop the cosmopolitan identification, affected by flexible external (host society – native students and

		meaning of their identities in different societies and communities	students from two graduate schools in Germany		professors) and internal (their same nationality, ethnicity or language group) influences.
Fotovatian and Miller (2014)	Identities emerge dynamically in language interactions and are negotiated within them	To observe out of classroom interactions among international students and to examine the process of construction and negotiation of students' social and institutional identities	8 international Ph.D. students in Australia	Qualitative case study, using audio-recorded information conversations of the students	Informal institutional interactions can be arenas for the construction and negotiation of institutional identity. Multiple identity transitions may occur in a new institutional context.
Li and Collins (2014)	Socialisation	To explore how Chinese doctoral students, socialize into a US doctoral program and how they perceive their socialisation experiences	26 Chinese doctoral students	Interviews	Faculty mentoring practices, frequent meetings and progress checking were efficient in socializing the doctoral candidates within the academic norms in the intellectual community.
Cotterall (2015)	Activity Theory	To examine how different individuals, events and interactions contributed to (or disrupt) their sense of self as researchers and scholars	Six international Ph.D. students enrolled at an Australian university	Narrative inquiry	Students' identity trajectories are influenced by the confidence they develop through their supervision experiences, their ability to exercise agency and the academic community.
Soong et al. (2015)	Interculturality	To portray reshaping of three authors' identity as doctoral students	3 academics in Australia	Self-narratives	Becoming an intercultural research student is intimately linked to the process of self-empowerment and reconstruction of oneself as a flexible and reflexive intercultural learner and human being.
Phelps (2016)	Network society, global social imaginary, transnational space, and transnational social fields	To explore international students' the transition of identity and belonging in a globalised university Canada;	31 international doctoral students studying in Canada	"Multiple case narrative" methodology	Students constructed and interacted with the notions of social diversity and globalism in many ways. Their sense of identity and belonging constantly change from a largely "untroubled" experience of simply expanding one's repertoire of cross-cultural interactions and reference points, to more profound experiences of identity flux, confusion, and transformation.
Dang and Tran (2017)	Transnational social Fields Positioning Theory	To explore the students' connectedness and professional identity change	2 Vietnamese doctoral students in Australia	In-depth interviews	Professional identity and research interests change but root identity is not affected by the doctoral study sojourn. Their academic connectedness with the host is complex. There is an interplay between their existing identity and new identity formation in the new physical locales.

Ye and Edwards (2017)	Giddens (1991) 'project of the reflexive self'	To explore the identity formation of Chinese Ph.D. students in relation to study abroad.	4 Chinese doctoral students	Narrative inquiry – interviews and focus group	Doctoral students were found to illustrate individual agency, motivation, self-determination, and reflexivity. Transitional events such as study abroad require heightened reflexivity to maintain a 'robust' sense of self-identity. Their self-identity was also shaped by and shapes their experience of study-abroad.
Interiano and Lim (2018)	Phenomenology	To explore the interplay between a multi-dimensional model of acculturation and professional identity development among eight foreign-born doctoral students in the US. counsellor education.	8 foreign-born doctoral students	Semi-structured interviews	For international counselling students, professional identity development is an arduous and complex process deeply intertwined with their acculturation experiences.
Park et al. (2018)	Academic socialisation	Tracking the process of Asian STEM (Science, Technology, Engineering, and Math) graduate students encounter in graduate studies as they build professional identities	27 STEM doctoral students	Interviews and observations	Students' previous work experiences, disciplinary skills acquisition, English proficiency, and socialisation with peers and faculty advisors were significant influential factors to their professional identity development.
Herman and Meki Kombe (2018)	Agency Theory	To examine the role of social networks in facilitating the transitional processes of international doctoral students in a South African University	23 Intl. Ph.D. Students from various countries in Africa	Two sets of interviews	Students are involved in several social networks, which all, apart from their academic network, exclude local students. In addition, family networks back home played a role in instilling worries and doubts among students related to xenophobic attacks against foreigners.

2.4 Social Media in Doctoral Education

The shift from analogue to digital technology has ushered in the emergence of new media that includes digital, networked information and communication technologies. This transformation has ushered in the information age/network society, which is a social structure of connections that rely on the dissemination of information across digital communication technologies (Castells, 1996). Digital communication technology is a genre of communication technology that includes written, verbal, visual, and audible communication using digital media. These new media have improved and advanced dramatically over the years to include emails, SMS text messaging, phone calls, video calls, artificial intelligence, and social media.

Although Castells (1996) does not specifically reference higher education in his theorisation of the network society, the pace and nature of change, which he has theorised, is also central to understanding the role of digital technology in higher education. Digital media has in many ways enhanced, supported, and changed the teaching and learning processes in higher education at all levels. One of the key advances has been in digital technology's ability to compress space, place, and time (Niemandt, 2013). For example, today's learners are not limited to one place of study; digital media has allowed for new education localities, including through fully online degrees, blended learning (online and face-to-face), massive open online courses (MOOCs), and artificial intelligence tutoring systems. This concept of space and spatiality is grounded in geographical studies that examine the notion of place as unbounded and relational. In particular, Castells (1996) has theorised

contemporary society in terms of the 'space of flows' and the 'space of places'. The 'space of flows' is characterised by the networks of communication, while the 'space of places' denotes the geographic countries and communities of everyday life. Castells (1996, p.443) asserts that digital technologies are the cornerstone for which the spaces of flows and places are created, maintained, and integrated because of relationships that span across the world.

The affordances of social media to impact space-time compression while simultaneously strengthening social connectivity offer great opportunities for scholarship. However, the traditionally structured framework of doctoral education has previously resisted the direct influence of digital technology. In recent years, there has been a shift in contemporary doctoral education towards a more 'open and flexible' methodology that values collaboration, openness, and sharing (Cumming, 2010). Thus, the interest in digital technology uptake in doctoral education and scholarship has increased. In the landmark, longitudinal study 'Researchers of Tomorrow' in the UK, Carpenter et al. (2012) found, unexpectedly, that doctoral candidates with their high competence and skills in technology were not keen on using technology in their research work. The authors suggest that this was due to the lack of adequate technology available at universities for doctoral candidates and the perspective that some technologies and platforms disrupt the conventional and conservative traditions of research practices. Likewise, in a more recent study, Dowling and Wilson (2017) also found that doctoral candidates were sceptical and cautious of using digital tools. In addition to the arguments found in the Carpenter et al. (2012) study, Dowling and Wilson argue that supervisors scepticism towards digital research and, notably, that doctoral

candidates' main focus on completing their studies on time thus limited their uptake of digital technology. As part of the study, Dowling and Wilson (2017) listed the potential uses of digital resources in doctoral education based on the functionalities of the tools and their affordances for doctoral practices (see Table 2.2).

Table 2.2: Potential uses of digital tools in doctoral education

Components of doctoral education	Generic digital tools available
Practices – research training	Learning management systems (e.g., Moodle and Blackboard) and online library resources
Practices – research (including project management, information management, and data analysis)	Project software (e.g., SPSS and NVivo) and RSS feeds
Relationships – social/emotional support	Social media, blogging, and PhD-related humour (e.g., Piled higher and deeper – PhD comics)
Relationships – supervisor	Communication, file sharing, collaboration tools, and presentation sharing
Development of research identity	Social media (e.g., Academia.edu; LinkedIn) and blogging

Adapted from (Dowling and Wilson, 2017)

The Dowling and Wilson (2017) model offers a contemporary approach to doctoral education that goes beyond the goal of completing a thesis to view it as an amalgamation of practices, relationships, and development of researcher identity. Previous researchers have also begun examining how specific digital tools are being used in scholarship. For example, William and Andrew (2015) have examined the use of blogs to support academic writing, Quan-Haase et al. (2015) have explored the informational and social use of Twitter, and Leggo et al. (2014) have investigated the role of podcasts and other multimedia in research.

There is also a growing body of research that seek to understand the impact of social media in academia. As is highlighted in Dowling and Wilson (2017) model, social media is identified for its practicability for doctoral candidates' relational support (emotional and with supervisor) and the development of

their professional identity. Thus, social media has the prospect to influence the structural reform of traditional doctoral education through global networking, collaboration and sharing of knowledge not restricted by space and time.

In its broadest sense, social media has shifted the hierarchal nature of communication mostly dominated by passive consumption. It creates online spaces for people to connect with and broadcast to others, and to form groups with shared interests (boyd and Ellison, 2007). In addition, social media has fundamentally changed the dynamics of communication as it creates spaces where people can consume and produce their own content. Considering the prospects of social media in academic research, Sumner (2012) asserts that it is vital for university doctoral programmes to consider how they will respond to the new potentiality of social media and how they can support researchers willing to use these tools. With its social and participatory/collaborative features, social media can impact the traditional ideology of knowledge sharing and outreach (Jhangiani and Biswas-Diener, 2017, Bonk, 2009, Levy, 2009).

Social media is defined by Kaplan and Haenlein (2010, p.61) as ‘a group of internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of user-generated content.’ boyd and Ellison (2007)¹ further offers a generalised

¹ Note: danah boyd chooses not to capitalize her name for personal and political reasons. See danah boyd, what’s in a name?, DANAHA.ORG, <http://www.danah.org/name.html>.

definition of social networking, of which social media is considered a subset as web-based networks:

that allow individuals to (a) construct a public or semi-public profile within a bounded system, (b) articulate a list of other users with whom they share a connection, and (c) view and traverse their list of connections and those made by others within the system.

Social media came onto the global digital communication field several decades ago. Specifically, its history can be traced back to the 1990s when some of the first known social media sites such as Six Degrees and Friendster were created (Dijck, 2013). Myspace and LinkedIn quickly came on board in the early 2000s, followed by dynamic video-sharing websites such as YouTube, which created an entirely new way for people to connect and share content (Bollmer, 2016). Facebook is one of the most popular social media sites. Initially created with limited membership, it was opened and released to the world in 2006 and it now boasts over 2 billion users (Sumpter, 2018, Brügger, 2015). Equally dynamic is WeChat, China's multi-purpose messaging, social media, and mobile payment app, which was launched in 2011 (Zhao and Wei, 2017). With approximately 1 billion users, WeChat made history in its own right by being considered one of the world's largest standalone social media mobile apps (Park, 2016). It has been described as China's 'app for everything' and a 'super app' (Xu et al., 2015). These platforms are constantly evolving, ubiquitous, and, at this point, mainstream. In the Global State of Digital in 2019 report, Kemp (2019) contends that social media popularity and use continues to rise with approximately 3.484 billion users worldwide, up 9% from the previous year.

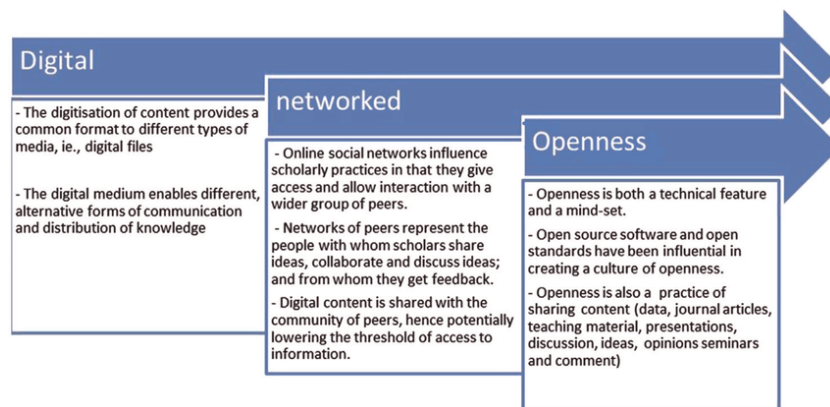
The term Digital Scholarship (Ayers, 2004, Sewell and Andersen, 2004) was coined to conceptualise the use of computer-mediated communication to achieve scholarly and research goals. Over the years, the term has become more broadly associated with understanding the complex issues around the technological uptake by academic scholars and institutions. Conceptual frameworks such as social scholarship, networked participatory scholarship and digital scholar identify the practices and dispositions that have the potential to fundamentally alter the perception of scholarship. Cohen (2007) states that social scholarship is the academic practice 'in which the use of social tools is an integral part of the research and publishing process characterised by openness, conversation, collaboration, access, sharing, and transparent revision.' Veletsianos and Kimmons (2011) identify Networked Participatory Scholarship (NPS) as the ways in which scholars 'share, reflect upon, critique, validate and further their scholarship.' Veletsianos and Kimmons (2011, p.766) further explains the benefits of using NPS by stating:

engaging in NPS via such tools as blogs and online social networks may enable scholars to remain current in their research field, explore new approaches to teaching via networking with colleagues, interact with individuals mentioning their research/work, and expose their work to larger audiences .engaging in NPS via such tools as blogs and online social networks may enable scholars to remain current in their research field, explore new approaches to teaching via networking with colleagues, interact with individuals mentioning their research/ work, and expose their work to larger audiences.

Expanding on the work of Veletsianos and Kimmons (2011), Weller (2011, p.4) define a digital scholar as 'someone who employs digital, networked and open approaches to demonstrate specialism in a particular field.' He asserts that digital scholarship emphasises inclusiveness and reaches beyond

professional academics to include those outside of the profession. His conceptualisation (see Figure 2.1) expands on the networked aspect of scholarship and highlights the ‘open’ features of digital scholarship. Weller asserts that open scholarship is defined by the technical aspects of digital media and a mind-set that is accepting of the culture of open source and open access in academia. While there are subtle differences that may exist in terms of social scholarship, digital scholarship, and NPS, these ideas of scholarship emphasise not just the use of technology but more so a shift in thinking about academia and research in a digitised society.

Figure 2.1: Digital scholarship practices



Digital Scholarship Practices. Compiled and adapted from Weller (2011. p.549)

The concept of ‘Openness’ as defined in Weller (2011) model progresses from the foundation of digitisation of content, to the network community via social networks, to a culture of openness whereby research data and literature is shared openly and freely (Weller, 2011). In fact, the 2016 OECD Science, Technology and Innovation Outlook report posits that this trend will radically modify doctoral research in all fields through (1) open access to journals, (2) open research data, and (3) open collaboration. This typical perspective of

'openness' is often limited to data-sharing, open code, open peer review, and limiting paid subscriptions (Paola and Lennart, 2017).

Chapman and Greenhow (2019) argue that, in addition to connecting doctoral scholars with peers, social scholarship also provides a model for open, public scholarship using social media. In addition to connecting with communities, social media allows for a broadening of the term 'openness' to include alternative forms of peer review and public engagement, and the recognition of various forms of output as legitimate (Cohen, 2007).

2.4.1 Social Media and Professional Identity Development

Another outcome of the use of social media in doctoral education is for doctoral candidates to engage in professional development activities. Buck (2017) study supports this position with doctoral candidates in writing studies who all had an accumulation of interaction through various communities on social media that supported the development of their sense of professionalism. Moreover Thelwall and Kousha (2015) and Jordan and Weller (2018) report that the benefits of using social media include sharing of ideas, enhanced networking, mentoring, increased confidence, and professional identity. Veletsianos and Shaw (2017) identify the potential values of social media for doctoral candidates as support, relationship building inside and outside of academic institutions, encouragement, belonging, and peer sharing. Hildebrandt and Couros (2016) argues that methodical academic relational ties are vital for professional identity development; however, finding spaces to extend ideas and networks beyond institutional and intellectual context is also valuable. In a study examining the role of relationships in the professional identity development of doctoral candidates,

Sweitzer (2009) found that having the agency to purposefully develop relationships is necessary for personal and professional development.

O'Regan et al. (2018) argues that the professionalisation of digital media has resulted in modern challenges such as the shrinking barriers around privacy and negotiations around fragmenting of identity. Veletsianos (2013) maintains that such tensions are complex and challenging for doctoral candidates. In many ways, academia functions as a 'reputational economy' (Willinsky, 2010) whereby people's lifestyles and personal and professional habits can impact their effectiveness. A person's reputation is how they are perceived and judged by others. Thus, the use of social media can have a positive effect on reputation as much as it can have a negative impact, which makes it a complicated dilemma for academics. boyd (2011) asserts that, while social media platforms offer much potential, they 'demand the construction, performance, curation of intelligible public identities as a price of admission.'

Sumner (2012) found the mediation between the management of personal and professional roles and the perceived lack of control is why doctoral candidates who are worried about their future careers are discouraged from being highly visible on social media. Summer findings were replicated by Bennett and Folley (2014), who used an autoethnographic approach to study the use of social media as part of their doctoral practices. As doctoral candidates and practitioners in higher education, they experienced the difficulties of having to navigate their identities as professionals and learners at the same time on social media. They highlight the challenge of keeping both identities separate: 'tweets written with one audience in mind, such as

our work colleges, were also being read by other audiences, such as our friends and family.’ According to Marwick and boyd (2014), this constant awareness of one’s own imagined audience occurs in every mediated conversation on social media.

Additionally, it is easy to slip into context collapse, especially for users who are new to social media. When users blend personal and professional relationships they can be faced with ‘context collapse’ (boyd and Ellison, 2007), whereby the boundaries between these audiences shrink and are, at times, difficult to manage. The sheer diversity of the audience can become overwhelming. If being ‘personal’ is crucial in building a professional ‘brand’, yet authenticity is vital to the believability of this brand (Marwick and boyd, 2010), then context collapse can be a source of frustration.

In a recent study, Fox and Bird (2017) interviewed 12 teachers in England to examine the challenges they encountered with using social media as professionals. They found that privacy, peer pressure, and worrying about their imagined audience were all identified as challenges when it came to managing their personal and professional identity. To navigate some of these issues, some of the teachers would limit what they shared on social media and seek to secure their privacy by ‘unfriending’ persons whom they did not want to access their content. Bennett and Folley (2014) argues that setting boundaries are critical to maintaining and keeping one’s audience within context.

2.5 Conceptual Framework

The issues of identity development on social media must be analysed through a set of theoretical constructs that addresses the unique and complex position of international doctoral candidates in higher education abroad. Previously, the identities of international doctoral candidates have been examined using different theoretical framing. Cotterall (2015) has used activity theory to analyse the development of the scholarly identity of international doctoral candidates over a period. Agency theory has been used to understand the identity of international doctoral candidates' intentionality and reflexivity (Fotovatian, 2012). Ye and Edwards (2017) have framed the exploration of the identity formation of Chinese PhD students in relation to study abroad. Despite the value in these human-centred approaches, the limitation of these frameworks is that they seem to detach international doctoral candidates' experiences from their cultural, social, and physical worlds (Phelps, 2016).

Given the nature of this study, two constructs frame this research; the networked society (Castells, 1996) and transnationalism (Vertovec, 1999). A wider explanation of these frameworks is preceded by a brief discussion of constructivist pedagogy which serves as a guideline for understanding doctoral education as a process of learning by doing. Constructivist pedagogy is rooted in the view of constructivism as a learning theory. Resnick (1989) posits that constructivism is a theory of learning and meaning-making that explains how individuals create their own understanding based on their interactions and experiences. Social constructivism centres on the way knowledge is socially and culturally developed in an active manner as opposed to being discovered (Jovana, 2011). Thus, this perspective operates

on the assumption that meaning is actively constructed in the human mind (Richardson, 2003). It views identity formation/expansion as a self-conceptualised developmental process influenced by formal and informal relationships. This directly lends itself to the examination of the types of professional development activities doctoral candidates are exposed to and engaged in (Huberman et al., 1993, Bloom and Jorde-Bloom, 1987). Doctoral candidates can shape and determine their professional identity by observing their mentor and engaging in activities themselves, then drawing meaning from those observations and experiences. Thus, with the access that social media provides, social constructivism as the theoretical basis best captures the way meaning and knowledge are formed by social media relationships.

A network society is defined as 'a society whose social structure is made up of networks powered by micro-electronics-based information and communications technologies' (Castells 1996, p.3). The concept of networks is not a new phenomenon. In fact, networks have always existed as part of social organisation in communities. The new aspect of the network society is to be found in the digital technologies that provide the traditional society with new capabilities and reach. The networked society has reshaped the experience of 'space' and 'time' by allowing synchronous and asynchronous communication globally (Castells, 1996). Castells asserts that the relativity of space and time are transformed in everyday social practices due to the ability to do everything from everywhere thanks to the functionalities of digital technology. He explains that the ideas of 'near', 'far', 'fast', and 'slow' have been re-defined. Such observations have led to the development of the 'space of flows' concept, which emphasises how information flows within the network.

‘[T]he possibility of practicing simultaneity (or chosen time in time-sharing) without contiguity’ (Castells, 2004, p.36) allows for globally situated places to be integrated into international networks. Driven by digital technology, the collection of networks creates conditions under which social events that occur in a place in the world can be immediately and widely known and influential in others. In this sense, the network society creates ‘transnational spaces’ such as networks that constitute a system of relationships, ties, connection, and mobility that digitally spans the world (Ritzvi, 2010).

Drawing on Castells’ theorisation of the networked society, the concept of transnationalism adds to the understanding of international doctoral candidates’ experiences by providing the framework for understanding the dynamics of the cross-border spaces where they live and exist. Vertovec (1999) asserts that transnationalism can be viewed ‘as a social morphology, a type of consciousness, as a mode of cultural reproduction, as an avenue of capital, as a site for political engagement and as a reconstruction of “place” or locality.’ In this sense, transnationalism can be used as a noun – referring to people who have ‘moved bodily across national borders while maintaining and cultivating practices tied....to their home countries’ (Hornberger, 2007) – and as an adjective (i.e., to ‘depict social practices’). Transnationalism provides some insight into international doctoral candidates. These spaces provide critical social contexts in which relationships, integration, and ‘identity work’ take place, and in which the process of identity creation, regulation, negotiation, and modification happens (Bilecen, 2013).

Vertovec (2009, p.54) asserts that online digital communication is the 'social glue of transnationalism.' Thus, the networked society and transnationalism establish the conceptual foundation for this study. This examination of international doctoral candidates' professional identity development on social media allows these candidates to tell their stories in their own words. In addition, these concepts add much-needed nuance to understanding the individual stories of international doctoral candidates in a way that refutes the generalisation or homogenisation of international students and acknowledges simultaneity of locality and multiplicity in identities.

2.6 Gaps in the Literature

Based on the review of the current literature, there is a limited understanding of international doctoral candidates' use of social media. What is known about social media in doctoral education is still limited as much existing research has focused on the potentiality of social media in doctoral education and/or the experiences of doctoral candidates as a homogenous group. No studies were identified that specifically examined: 1) the lived experiences of international doctoral candidates' use of social media as part of their doctoral experience, 2) how social media is used to support their professional identity, 3) the issues they encounter between their personal and professional use of social media, or 4) how they manage these issues.

2.7 Literature Review: A Summary

In this chapter, I have discussed the themes and literature relating to this study. International student mobility and the conceptual lens of the network

society and transnationalism have been introduced to illustrate the importance of these concepts to understanding the lived experiences of international doctoral candidates living abroad and their use of social media to negotiate their identity. The chapter also discussed these issues relating to the research topic; identity in its general context; professional identity in doctoral education; identity and international doctoral education (review of current literature); and the construction and negotiation of professional identity on social media. Overall, while there are several studies that have examined the experiences of international doctoral candidates and professional identity development in general, there is still a gap in understanding the full scope of their transnational activities online. Digital technology has provided a transnational space for international doctoral candidates to develop and maintain cross-border relationships. In this space, new questions with respect to identity and identity formation are raised. In the next chapter, I will describe my methodology and methods for collecting and analysing the data.

Enthusiasts of digital scholarship have argued that the use of social media can 'enhance the impact and reach of scholarship' and 'foster the development of more equitable, effective, efficient, and transparent scholarly and educational processes' (Veletsianos and Kimmons, 2013). Thus, bridging the gaps of forming newer structures of relationship building, belonging, and identity development for doctoral candidates (Jordan, 2014).

Chapter 3 Research Methodology

This chapter presents the methodology for this study. It begins with a discussion of the chosen research design and the digital ethnography approach used. This is followed by a section on the research methods used, including participant selection and instrumentation. The chapter ends by outlining the data analysis process, and discusses issues of trustworthiness, credibility, and research ethics.

3.1 Research Design

This study was qualitative in nature. Underpinned by an interpretive paradigm, it sought to understand the context of the study from the perspective of the participants (Lewis-Beck et al., 2003, Denzin and Lincoln, 1994, Willis, 2007). Interpreting the data was concerned with discovering how participants conceptualised or made sense of what was happening in their environment (Walsham, 1995). Denzin and Lincoln (2011) explains the value of qualitative research for exploring participants' perceptions and experiences by stating:

qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry. Such researchers emphasise the value-laden nature of the inquiry. They seek answers to questions that stress how social experience is created and given meaning.

Emergent in design, this approach allowed for flexibility of methodological changes as the study progressed. Data collection and analysis procedures, such as the restructuring of research questions and goals, evolved as new data and insights were revealed.

This research focused on the experiences of international doctoral candidates as they engaged in digital spaces. Therefore, it was important to use a research design that permitted the problem to be examined within its natural context. Using digital ethnography, a qualitative framework, data was collected by observing social media activities and by conducting interviews. Digital ethnography also provided a holistic approach to the research problem by addressing the different nature of the research questions. An overview of the relationship between the methods used and the research questions is shown in the research design framework in Figure 1.1.

3.2 Digital Ethnography

Digital ethnography emerged as a research design with the rise in computer-mediated communication tools (Gallagher et al., 2013). The term digital ethnography is synonymous with online ethnography, cyber-ethnography, or virtual ethnography. It is an online research method that adapts ethnographic methods to the study of the communities and cultures created through computer-mediated social interaction. This approach to research focuses on gaining rich insights by examining the 'how' and 'why' of the lived experiences of people engaged in digital environments (Gobo, 2008). Within the context of education, digital ethnography studies are becoming increasingly relevant, especially in studies where learners' experiences and voices are critical to gaining a thorough perspective on the phenomena being explored (Juan Pablo Vera and Marín, 2007).

The perceptions and practices of the participants are central to an understanding of international doctoral candidates' use of social media and

how they develop ways to use those practices to help shape their professional identity. Because the words of their experiences and observations of their social media practices lead to a deeper understanding of how they use social media and how they perceive it supports their professional identity, a digital ethnography approach was selected. The focus of this approach was not just to hear how they interpreted their experiences but also to observe their social media behaviour.

Scholars have called for 'thick and descriptive' investigations of the use of social media and its implications for society (boyd, 2007, Selwyn and Grant, 2009). Consequently, there has been an increase in online ethnographic research into social media communities (Postill and Pink, 2012, boyd, 2014, Miller and Venkatraman, 2018). The benefits of these studies are that they have led to an expansion of methods used to capture social media interactions (Blomfield and Barber, 2014). Digital ethnographers collect research data in digital form and determine its significance to the context of participants' lives. A common method includes using digital tools to understand and record the digital space. The digital ethnographer will often use tools such as capture software, website archiving tools, and content management software to understand and record the digital space (Kozinets, 2010).

A digital ethnography approach was selected rather than traditional ethnography. Ethnography includes direct observation of a social or cultural group within its natural environment. This shared philosophy of how people interact and learn from each other has traditionally been the focus of ethnographers (Gobo, 2008). Digital ethnography relates to traditional

ethnography as this approach also relies on the researchers' observation; however, the focus is on observing the digital practices of the participants (Murthy, 2013).

The conditions for ethnography have changed and its practice has been challenged due to the impossibility of observing full accounts of social interaction, which can now occur online, too. The very definition of ethnography has been called into question due to increased social mobility, globalisation, and hyper-connectivity, as well as constant changes in Internet applications and services, and the availability of digital data. Furthermore, since some limitations of ethnography derive from a lack of funding and time, as well as an emphasis on research policy expectations (or impact) and the need for quick results, the academic research agenda and mode of knowledge production can be restrictive.

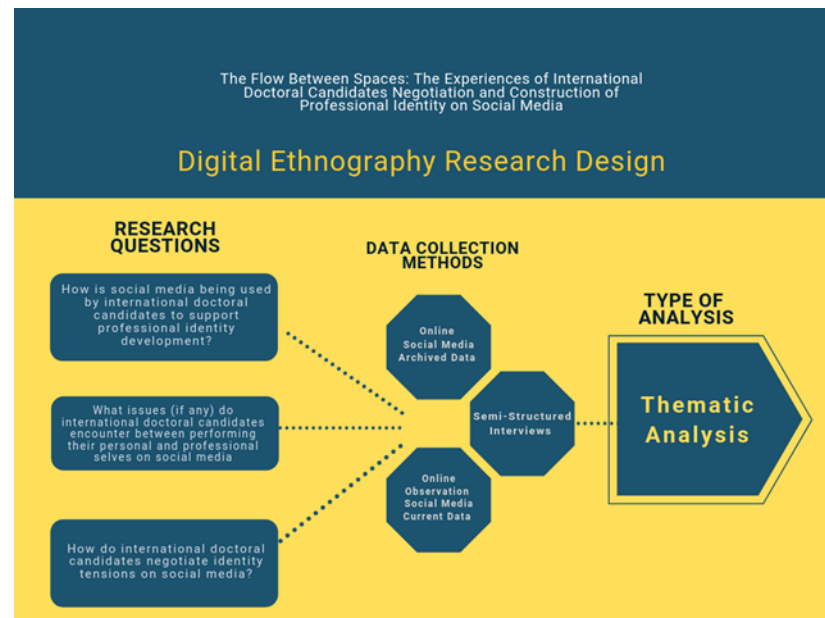
Digital ethnography, like other research methods, should be distinctive to the questions and challenges it is trying to address (Pink, 2014, Rossiter and Garcia, 2010). In this study, the combination of perspectives required to answer the outlined RQs called for methods that would allow for exploring how the participants engaged in social media and how they interpreted (the purpose and meaning of) those experiences.

Several qualitative approaches could have been used for this inquiry, though the selection of digital ethnography was based on the purpose of the research question. The purpose of this study was to uncover social media practices and behaviours that support international doctoral candidates with their professional identity development. Using the broad categories of qualitative

approaches outlined by Creswell (2007) and (Patton, 2002), I provide a justification for a digital ethnography framework.

Certainly, social media research can utilise different methods to obtain high-quality information depending on what the study is trying to accomplish (Baxi, 2010). Therefore, it is important to consider the different research approaches and paradigms to avoid 'method-led' research (Grix, 2010) and to choose an approach that is best suited for the context being studied (Robson, 2002). In this context, examining the experiences of participants in isolation through observation or interviews only would limit the opportunity to gain a truer understanding of the problem being explored. The research design framework below is a visual representation of the research questions, the methods used to collect the data, and the type of analysis used.

Figure 3.1: Research Design



3.3 Research Methods

This section includes an overview of the pilot study, the rationale for the selection of participants, a discussion of instrumentation, and the procedures used to recruit the participants. Each section includes enough detail to provide the reader with the procedures and processes necessary to recreate or extend the study. The section concludes with a comprehensive explanation of the data analysis process.

3.3.1 Pilot Study

A pilot study of this research was conducted in spring 2017 involving observation and interviews. The pilot study explored higher education learners' use of social media as it relates to their identity and instant gratification. The aim of the original study was to explore this topic from the perspective of undergraduate students. However, three MA students (one domestic and two international) volunteered as participants.

Using a digital ethnographic design, the pilot study consisted of online observation of the students' social media activities followed by a one-hour in-person interview with each student. Piloting the study as part of the process provided an opportunity to identify and correct any potential issues with the design of the research before commencing the main research project.

Online observation involved one week of following the social media activities of each student. Snapshots of their daily activities including images, text, and video were captured and stored in Word files for analysis.

The observation phase was followed by an in-person one-hour semi-structured interview with each student. The students were asked questions

based on an interview protocol to help get an understanding of their experiences of using social media as it related to their personal and academic lives and identities. In addition, the pilot study allowed for the testing of the 'interview plus' approach (Sharpe et al., 2005, Creanor et al., 2006), whereby snapshots of social media activities were presented to prompt the interviewees' memories and to elicit more conversation.

The pilot study was helpful in demonstrating several considerations that were considered in the structuring of the present study. First and foremost, piloting the study with MA students revealed insights into the experiences of more mature postgraduate students, particularly international students and their use of social media as it relates to identity. Thus, the data was interesting enough that it broadened my interest and curiosity into exploring the topic from the perspective of international postgraduate students. Previous literature then revealed that there was a gap in this area particularly as it relates to international doctoral candidates studying in the UK. In addition, it gave me an idea of the type and volume of data that would be amassed using this methodology. This helped to prove that a small sample would be adequate for the main study.

3.3.2 Participant Selection Logic and Recruitment Procedure

International doctoral candidates living in the UK were purposefully selected for this study. According to Van Maanen (1988), to uncover the meaning of a phenomenon, the individuals who have experienced the event must be included in the study and carefully interviewed to allow meaning to surface. It was important to select the participants using predefined criteria, as was

ensuring their confidence by maintaining their anonymity (Hammersley and Atkinson, 1995).

Following the example of the pilot study, the sample for this study was drawn from current PGRs in the UK. To answer the research questions, participants were selected on the criteria of citizenship from countries outside of the UK and enrolled in a doctoral programme in the UK. The predefined criteria also specified participants to be doctoral candidates who had an active presence on social media; that is, they had to be active users of 'hyper-social sharing' social media sites (e.g., Facebook, Twitter, and/or Instagram) and create and consume content (post, tweet, video, etc.) at least three times per week. Based on experiences in the pilot study, PGRs who exhibit this behaviour were more likely to have reflected on their online experiences and would be better able to articulate its impact on their meaning-making.

While LinkedIn is recognised as a popular social media platform for professionals, it was excluded from this study because it did not meet the criterion of being a 'hyper-social sharing' social media site on which participants were sharing and consuming content at least three times a week. Hyper-sharing social media platforms are designed for sharing and communicating, with the functionalities to let users communicate with each other based on any topic they choose (personal or professional).

A sample size of no fewer than four and no more than ten participants were selected for this inquiry. The availability of participants, quality of data analysis, and practical matters including time and resources influenced the number of participants. Considerations were also made based on lessons

learned from the pilot study; specifically, the large volume of social media data collected implied that a sample size goal of ten participants was deemed adequate for this current study. A minimum of four and a maximum of ten participants would help ensure the depth and detail of data collection as well as through analysis in the study. The strength of ethnography is not in the number of participants; rather, it is focused on the quality and richness of the responses of the participants (Atkinson, 2001). Each of the seven participants of this study met these defined criteria to ensure homogeneity within the study. The insights gained through observation, interviews, and gaining participant validation and feedback on data gathered (member-checking) will aid in the transferability of the findings.

3.3.3 Instrumentation

Online observation and recorded interviews were the primary sources of data collection. Social media observations included archival and current data. Archived data collection was used to observe the cached data such as profile information and earlier content posted in the earlier stages of their doctoral studies that were accessible and remained online (McCulloch, 2004). Archival data was important to the study, to help tell the story of the participants from the beginning of their doctoral process and explore changes in their online activity from when they commenced their doctoral studies.

A semi-structured interview protocol was used for the initial interviews (Given, 2008) and follow-up questions were asked that related to each participant's answers (see Appendix 4). The second interview utilised an 'interview plus' (see Appendix 5) structure (Sharpe et al., 2005) that allowed a semi-structured interview profile that included snapshots or artefacts of social media activities

to 'discover and record what that person experienced, and what he or she thinks and feels about it, and what significance it might have' (Mears, 2009, Creanor et al., 2006). Using the 'interview plus' format at this stage of the research proved to be an effective way of allowing the participants to recall past information and of getting context for why certain posts and online activities were relevant.

Interviews varied in length, and the natural flow of the session, as well as the comfort of participants, determined how long the interviews lasted. Initial interviews lasted at least one hour to give time to build rapport with the participants before starting the interview questions. Follow-up interviews lasted from 30-45 minutes as the responses were framed by the first interview and social media data.

The data collection process involved two phases: online observations (archival and current social media data) and interviews (in-person and Skype). Each phase was structured to complement the other and answer the different research questions. RQ1 is concerned with describing the nature of the participant's behaviours and activities, as they develop their identity on social media. RQ2 and RQ3 focus more on how participants conceptualise and understand the issues surrounding their actions as they engage on social media. The research design (see Figure 3.2) highlights how the research instruments were designed to collect specific data.

3.3.4 Procedures for Participation and Data Collection

Data were collected through two interviews and online observation of social media. The initial interviews were conducted in January 2018. Some

interviews were conducted face-to-face and others, due to participants' localities, were via Skype. I conducted the interviews and collected the data through audio recordings. I then transcribed each interview and checked transcripts for accuracy, listening again to each audio file. I started the interviews with questions that explored why they chose to study in the UK and their experiences with moving to a new country. This was then followed by questions that probed their use of social media and the factors they believed influenced their behaviour on social media as it related to negotiating their identity. Two interviews were conducted face-to-face in a private room at the University of Leeds and five were conducted via Skype. (see Appendix 4) for the initial interview schedules.

The procedure for collecting social media data followed the online observation strategies used by (Postill and Pink, 2012, Mare, 2017). The observation process included: 'friending/liking/following', 'observing', 'catching up', 'interacting', and 'archiving'. These actions are described below.

Friending/liking/following involved sending a request to the participants to gain access to their private social media networks. Once I received signed consent from participants, I sent a 'friending' request or began following to gain access to their social networks. I used my own personal profile on the network to send the request. I used my personal profile to help offer a degree of trust amongst the participants.

Observing involved observing conversations, posts, interactions, images, videos, and comments on participants' networks. Participant observation can teach much about the way people use and interact in online social settings.

(Farrell and Petersen, 2010). The main idea, as noted by Hine (2007, p.165), is that 'the researcher should become immersed in the social situation being studied and should use that experience to try to learn how life is lived there.'

For this study, I observed the participants' social media activity for four months. I focused on the occurrences of content that referenced identity and negotiations in their communications, particularly seeking out content that related to their doctoral experience, home cultural context, and UK context. I spent approximately three hours per participant each week observing and capturing their content.

Once observation started, the third routine was ***catching up***. I stayed updated on participants' activities by periodically checking my social media notification functions and through my news feeds. This was a way to get timely updates on participants' activities.

My fourth task involved ***interacting*** with participants through online messages, WhatsApp text, and mobile phones. This interaction, separate from the research interviews, was used to schedule interviews or to ask brief questions.

Finally, the ***archiving*** of the data was done to capture related excerpts of content that represented participants performing their identity. Snapshots of relevant social media content (posts, status updates, images, etc.) were noted and copied into MS Word files for data analysis.

The second round of interviews were conducted after the completion of online observations. These interviews took on the format of 'interview plus' (Sharpe et al., 2005). As for the initial interviews, Skype and face-to-face interviews

were conducted. Skype interviews utilised screen sharing capabilities so that both the interviewer and participants could see the social media artefacts under discussion. The second round of interviews followed the same protocol as the first round of interviews: a semi-structured approach was used, and all interviews were audio-recorded and transcribed after. After each interview, participants were thanked for their time and reminded of their right to withdraw from the study at any time they desired.

3.4 Data Analysis Process

Data analysis is a process of inspecting and organising collected data with a goal of discovering useful information (Marshall and Rossman, 2011).

Creswell (2007) states that qualitative analysis:

Consists of preparing and organising the data (i.e., text data as in transcripts, or image data as in photographs) for analysis, then reducing the data into themes through a process of coding and condensing codes and finally representing the data in figures, tables, or a discussion.

The qualitative data of this study consisted of words, social media observations, and social media multimedia (video and images). Qualitative data analysis typically occurs simultaneously with the data collection. Therefore, meaning and understanding often develop slowly over time in a non-linear fashion as the project progresses. Thus, the researcher alternates between the data and codes to establish newer codes and identify emerging patterns and themes aligned with the research questions (Marshall and Rossman, 2011).

This study used a thematic approach to data analysis. Thematic analysis involves examining the data, recording patterns by looking at characteristics of the data, and making a connection to uncover an overall story (Walford, 2009). It focuses on the interpretation of identifiable themes and patterns of people and their behaviours (Burgess, 1982). In using this approach to analysis, the data is reduced to smaller parts so that interpretation and meaning are derived from the data (Marshall and Rossman, 2011).

The data analysis procedures for this study followed Marshall and Rossman (2011) six steps guideline to thematic analysis (see Table 3.1). This was done continuously throughout the data collection process.

Table 3.1: Six steps to Thematic Analysis (Marshall and Rossman, 2011)

<u>Step</u>	<u>Description</u>
1. Organise data	Read and reread data to become familiar with the content and begin to edit and organise data
2. Generate categories or themes	The researchers need to identify prominent themes, recurring ideas, and patterns of belief that link people and settings together. These become the categories. This is inductive analysis because the categories emerge from the data
3. Test emergent understanding of data	By looking at the categories from the data and the patterns between them, it is possible that hypotheses can arise. It is important to test these against the existing data
4. Search for alternative explanations of the data	The researchers should also look for alternative explanations, describe them, and explain why they are possible
5. Write up analysis	This is part of the analytic process because, as the researchers choose particular words to summarise and reflect the data, they are busy with interpreting the process by giving shape, form, and meaning to the data

Organise data

Data from each recorded interview were transcribed and coded. Verbatim transcription provides a way to interpret the words of the participant outside the context of the interview (Wolcott, 1994). I made an active decision to transcribe all the interviews myself as part of the process of becoming familiar with the data. After transcription, I read and re-read the transcripts while making general notes and comments about initial thoughts and interesting issues that were starting to emerge from the data. As I began observation of the social media data, I captured direct screenshots of their social media activities that were relevant to the aims of the study. The initial interview transcription and social media observation notes were instrumental in helping to inform the second interview in which participants were asked to further express their feeling and ideas based on specific content presented from their social media activities. Following the process of the first interview, transcription of the second interview was done immediately after and further codes were identified.

Generate categories or themes

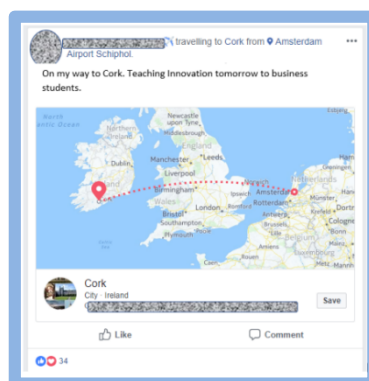
Rather than beginning from a pre-coding structure (Miles and Huberman, 1984), the raw data were coded as each transcript was read and re-read to let the themes emerge. Data were coded using an iterative process where successive coding sought from the interviews and observation data helped to create broader categories and themes (Miles and Huberman, 1984). The original plan was to use NVivo software to handle the coding of the data but I ultimately decided to do it manually. The first reason was that there were

seven participants and I felt that, based on the small number, it would be feasible to do it manually. Secondly, I felt that visually seeing the data and being immersed in it manually made me feel more connected to the study.

Social media data coding

During the coding process, social media data were coded for patterns of use. These codes identified any, and all patterns represented in the posts (see Figure 4.1). Notes were made of insights that would then be used as points of interest to inform the development of the questions for the subsequent interviews. Throughout this process, I made memos of my reflections on any interesting aspects of the data and emerging impressions that could form the basis of themes from the data. After initial coding was completed, the data was shared with participants to ensure credibility. Each participant's confidentiality was assured through pseudonyms and the removal of any identifiable characteristics. Conspicuous information that could identify the participants (i.e., country of birth or university) was removed to further ensure confidentiality.

Figure 3.2: Data analysis coding sample



Codes: travel, teaching, 'travelling to' (Facebook event), Cork

Interview coding

To code the interviews, I went through all the transcripts, line by line, assigning codes to chunks of data. Once all interviews were coded, I made revisions of the codes through grouping, discarding, merging, downgrading, or upgrading extensively throughout the data. Ultimately the coded interviews and social media extracts were collated to develop a list of the different codes identified across the data set.

Test emergent understanding of data

During this phase of analysis, the goal was to identify relationships between themes or data sets and attempt to find explanations from the data. I read and re-read the codes to be able to identify significant recurring patterns or themes. From the codes, I created sub-themes and initial themes. I then examined the relationships between the different codes, sub-themes, and themes to get a broader picture of the story of the data.

Search for alternative explanations of the data

It was important to search for alternative explanations of the data to avoid bias. An analysis of the data started from the beginning of the data collection. I made notes of different explanations, highlighted data that surprised me, sought to understand what these bits of data could be saying, and followed any lines of analysis that appeared fruitful.

Write up analysis

At the beginning of this stage, I developed lists of key ideas, created diagrams, and used models to explain the findings to begin formulating my

interpretations and understandings of the data. After themes, patterns, connections, and relationships were identified from the data, the process of writing up the analysis commenced.

3.5 Issues of Trustworthiness

This section explains how I ensured the trustworthiness and credibility of the study. Each subsection addresses specific elements that are appropriate for qualitative research. The section concludes with an outline of ethical procedures for the treatment of participants and their rights.

Validity and reliability are important aspects of all research. Although these are not terms normally associated with qualitative research, it is important to address any potential risk associated with the credibility of the findings from the research. To address these issues from a qualitative perspective, Lincoln and Guba (1985) applied the term trustworthiness as an alternative criterion for demonstrating rigour in qualitative research. To ensure credibility and generalisability for the methodology used, the following strategies were adopted.

3.6 Credibility

Data from each of the participants were explored to create a rich description of their lived experiences. Through this rich description, internal validity was increased (Miles and Huberman, 1984) as the full interview was examined, not just the key points (Maxwell, 2005).

All transcripts were crossed-checked for errors and continually checked for drifts in the code. In addition, the code was sent to participants (member-

checking) to ensure it was a correct and accurate reflection of their views. This helped to enhance the credibility of the study due to the opportunity for the participants to respond or clarify my interpretation of their answers from the data collected.

Triangulation occurred through the inclusion of social media observation and the two stages of interviews. The inclusion of multiple data sources enabled me to confirm each participant's responses in different contexts and at different times. Also, using multiple ways of collecting data (including in-person interviews and Skype interviews) meant that participants had several ways to share their thoughts, feelings, and interpretations.

To ensure trustworthiness in the coding, the Inter-rater reliability method was used, whereby an independent researcher coded a sample of the data. We came together to compare codes and concluded that there was a high level of agreement in the coding of the data.

3.6.1 Transferability

Lincoln and Guba (1985, p.316) states that transferability of research 'is, in summary, not the naturalist's task to provide an index of transferability, it is his or her responsibility to provide the database that makes transferability judgements possible on the part of potential appliers.'. A trademark of ethnography is a rich and thick description of the phenomenon being studied including specific techniques used during data collection which allows for establishing transferability (Agee, 2009, Flick, 2009).

3.6.2 Dependability

In addition to triangulation procedures and member-checking, all recordings were transcribed verbatim. Detailed records of how and when the data were collected were maintained to allow for transparency and possible duplication of the study. Also, the use of a secure central database for storing, managing, and coding the data provided a way to ensure the integrity of the data.

3.6.3 Confirmability

Confirmability is established in qualitative research in several different ways. According to Lincoln and Guba (1985), confirmability is similar to objectivity, in that the outcomes of a confirmable investigation are not the result of the researcher's biases and are instead informed by the context of the research. I assured confirmability by continuously self-reflecting on any potential bias by noting any feelings or biases that emerged during data collection.

One of the lessons learned in doing the pilot study related to my personal experiences and knowledge of the study area and being aware of how that could create bias in the present study and ways to moderate it. This self-awareness and accountability in the research process are crucial (Mercer, 2007). Thus, critical reflection was important to the study.

Throughout the process, I remained aware of my personal beliefs, values, and interest in the research topic and how this could impact my methodological choices and analysis (Berger, 2015). This is an essential process of constant self-examination (Davies, 1999) in which the researcher is keenly cognizant of 'the space between' an insider with knowledge of how the culture works and an outsider without that knowledge (Labaree, 2002).

In conducting the observation of participants' social media, it was important to be aware of the issue of the observer's effect; that is, the extent to which the participants may have altered their behaviour knowing they were being observed (LeCompte and Goetz, 1982). This reactive effect is especially noticeable at the beginning of observations when participants may respond to what they think the researcher is looking for in the study (Singleton and Straits, 2005). To help mitigate this and ensure participants felt safe in engaging naturally, I ensured them from the onset of the study that their data would be strictly confidential.

Having the awareness of researcher bias allowed me to be objective in the communication process, and avoid 'live puppet ventriloquism' (Hicks, 2002), whereby participants could potentially become vessels for my ideas due to my previous knowledge of the subject area.

3.6.4 Ethical Procedures

The key ethical concerns when collecting data from online sources, particularly social media, are: private vs. public, informed consent, anonymity, and risk of harm (Townsend and Wallace, 2016). The principals used to guide this project and safeguard participants were based on a combination of these factors. As this study used different forms of data collection methods, the awareness of ethical considerations was in mind throughout all the phases of the research. Prior to the commencement of this study, an application to the **AREA Faculty Research Ethics Committee University of Leeds** was submitted and approved in March 2017 (Ref: AREA 16-058) (see Appendix 1).

Informed consent

The argument is often made that online data sources are considered ‘public’ – that is, access is not restricted as information can usually be viewed by anyone online – so there is a common assumption that this information is free to be used by researchers without regard to acquiring consent. However, as boyd and Crawford (2012) note when discussing ‘Big Data’, ‘just because it is accessible doesn’t make it ethical’. For example, when considering Facebook for a data source, van Gilder Cooke (2011) notes that users probably do not consider researchers as an audience when posting and engaging within that space. This issue of what is private versus what is public in online digital spaces is often messy (boyd, 2010). This study collected data from a variety of social media platforms, with some being publicly accessible to anyone and others private. Therefore, informed consent was explicitly required from all participants before data collection commenced.

Each participant was fully informed of the research via an information sheet that detailed the main aspects of the research. The information sheet included the aims and objectives of the research, details about the data collection process, the nature of their participation as well as any associated risks, and the right to withdraw. Once participants showed interest in participating, consent forms were supplied for their signature before the data collection process began.

Confidentiality and anonymity of participants

To ensure the confidentiality and anonymity of participants, pseudonyms were used throughout the study. All collected data were stored in password-

protected electronic media and hard copies of any material were stored in a private and secure location that was only accessible by the researcher. Participants were assured that any images used would be pixelated to ensure the anonymity of participants and any other persons in the image.

Risk of harm

Related to the issues of anonymity is the risk of harm that participants might potentially face. The Association of Internet Researchers (2012) suggests that the researcher's responsibility towards participants increases with the heightened risk of harm if privacy and anonymity have been breached. Therefore, consideration was given to a common concern for digital ethnographers in the use of direct quotes taken from social media. This is an issue due to the possibility that direct quotes that are published can be Googled or searched to potentially reveal the identity of participants. To address this issue, participants were informed that their names would always be anonymised, and any quotes used would be paraphrased to protect their identities. The participants of the study were never put under any pressure to provide information and they were assured that any data from the study would be used solely for academic purposes such as conference papers, books, and journal publications.

Research Methodology: A Summary

The credibility of qualitative research is established and maintained through rigorous and detailed processes throughout the inquiry. As described in this chapter, to allow researchers to build upon this work, the credibility of the research has been considered in a manner consistent with qualitative

research. This chapter also included the rationale for the research design, data collection methods, and the data analysis plan. Chapter 4 will present the findings of the study organised around each research question.

Chapter 4 Results and Findings

So far the research questions, literature review, and methodology have been presented and discussed for this study. In this chapter, the results and findings from the interviews and online participant observation are presented in relation to the research questions. This chapter is structured around the three research questions.

In this chapter, the qualitative data is explored and presented. These findings are further discussed in relation to the literature and theory in the following discussion chapter (Chapter 5). In some instances, social media screenshots are presented from the evidence gathered. All identities have been disguised where possible and pseudonyms used in compliance with the ethical approval process (see Appendix 1).

The first section (4.1) highlights the demographics of the seven international doctoral candidates who participated in the study. Section 4.2 outlines how international doctoral candidates utilised social media to support their professional identity development. Section 4.3 describes the issues (if any) the international doctoral candidates encountered between performing their personal and professional selves on social media, and Section 4.4 shows how the international doctoral candidates negotiated identity tensions on social media.

4.1 Demographics

Seven participants were observed and interviewed for this study. Table 4.1 outlines their demographic characteristics and shows that they met the minimum requirements sought for participation as described in Chapter 3. The

table lists for each participant's: (a) pseudonym identification, (b) gender, (c) academic level, (d) age, and (e) social media platforms used. Each of the seven participants was a doctoral candidate at a university in the UK during the period of research. The participants came from seven different countries. Three of them had previously completed their MA studies in the UK. The ages of participants varied.

Table 4.1: Demographics information for participants

Pseudonym	Gender	Academic Level	Age	Social Media
Lea	F	PhD	25-30	Facebook Twitter Instagram
Max	M	PhD	35-45	Facebook Twitter Instagram
Logan	M	PhD	25-30	Facebook Twitter Instagram
Christine	F	PhD	45-50	Facebook Twitter Instagram
Ana	F	PhD	40-45	Facebook
Celeste	F	PhD	35-40	Facebook
Jade	F	PhD	25-30	Facebook Twitter Instagram

4.2 How Do International Doctoral Candidates Use Social Media to Develop Their Professional Identity?

The first section of the interviews was focused primarily on gaining an understanding of international doctoral candidates' social media practices. How did they use it, why did they use it, and, from their perspective, how had their behaviour supported (if at all) their professional identity development?

Belonging

Each of the international doctoral candidates expressed the need to fit in and feel that they were part of a group. Through the interviews and throughout social media observation, I interpreted that each of the doctoral candidates struggled with adjusting especially at the beginning of their programme. There was an overall experience of uncertainty; the candidates expressed that it was hard to connect with other doctoral candidates unless a huge effort was made to find opportunities to do so. The international doctoral candidates acknowledged that reaching out on social media to peers they met briefly on campus or engaging with academic groups was helpful in starting to feel that they were part of the academic community. Feeling a sense of belonging on social media appeared to support each of the candidates with starting to develop an emerging professional identity.

Lea and Christine. Both Lea and Christine shared their experiences with a lack of opportunities to form friendships on campus. Lea appeared to spend most of her time in the lab and, since her programme had a small number of cohorts, she felt isolated. Similarly, Christine shared that, due to the flexibility of studying at campus at any time, she would often prefer to work later in the day and by that time many of the other doctoral candidates had left for the day. They both spoke about these difficulties but also about how using social media helped to bridge the gaps between their isolation and connections with others:

My programme is fairly small so not many of us are studying in the field of I was alone in my lab for long periods of time when I started.... There were chances to meet other students.... and at workshops, for example, I would ask to take social media detail

*because I realised that might be the best way to be in contact..... I had all intentions of having more social time and going to PGR events on campus but I just had so much work to do... Facebook and Twitter were my lifeline to at many times to battle stress and being alone. **Lea***

*I added every PhD student I met to my Facebook, Instagram, and Twitter as I could... I just felt better knowing that I had access to them if I needed anything.... I found it hard to find the time to connect while I am at my workspace at university because we all work at different times... I am a night person so I only go to school in the afternoon. By that time the school is basically empty...but knowing that I had them on social media made me feel kind of secure... that I wasn't alone out here. **Christine***

Jade also reflected on the difficulties she had with feeling confident talking with others face-to-face on campus. She shared how social media helped her to gain some confidence:

*I don't think I have ever really felt fully confident as long as I have been here..... At first, I felt so confused and intimidated talking to my supervisors and even other PhD students who seemed to have it all figured out.... I used to go on Twitter and just read [to] try to engage a little at a time with others in my field. Even there it was so scary to me at first but I started out just engaging a bit and I think eventually just learning from everyone else gave me a bit more confidence as I started to really get a bit deeper into my research. **Jade***

When I asked Jade how gaining confidence helped her, she shared that by learning from others, seeking out information, and engaging, it helped her feel secure and that helped communicate with others on campus:

*I can't even fully describe but it was so much easier for me online.... Maybe because I was shy on campus.... on social media I went for it and put myself out there and somehow it felt safer testing out my ideas.... over time I have become a real talker on Twitter.... Still intimidating because there are so many smart people in academia..... I think it helped me a lot to be able to talk more openly to my supervisor.... also, to other researchers around the university... Felt like I found myself and got into some rhythm. **Jade***

Jade expressed that she was a bit insecure because of her accent and that it kept her somewhat less willing to talk to others on her campus. Through the interview she mentioned that most of the other doctoral candidates she came across were international candidates. She was not as intimidated with them as with her supervisors. She shared that she dreaded meeting with her supervisor because she had to learn to write better academically in English and overall her supervisors expected her to be confident. Jade used social media to work on her confidence. Speaking with other doctoral candidates around campus was also important in supporting her assertiveness.

Ana also discussed how social media supported her sense of belonging. Ana highlighted her use of Instagram and Twitter communities such as #PhDlife, #PhDchat, and #WithaPhD. She spoke about the often-instantaneous support, friendship, and information she found in these spaces. With this Instagram post, Ana sought to connect with other international doctoral candidates about her experience of moving to the UK in the hope that they would have a shared experience.



*This post shows how I felt when I first moved here... I didn't like it at all... it was so different from where I came from... I missed home and I met other international students doing their PhD and I figure they could understand what I was going through. **Ana***

Jade is married and has two children. She shared how a Facebook group for doctoral candidates with families helped her to adjust.

*Being a mother and doing this degree full time, I have little time to socialise.... I know how I try to balance everything and I found that many people at my university doing their PhD are parents. we've tried to meet a few times but it is impossible for us to be available at the same time...so I talk with them on Facebook...we talk about our children, our family, mostly tips on how to balance studying and family... we have talked about starting a group just for parents and how to navigate this degree...it is just so hard to find the time outside of all the responsibility so, for now, it has to be online. **Jade***

Logan shared about not being able to talk to his family back home because they do not understand his experiences. He explained how he struggled after having a setback with his transfer and how he reached out online for support:

*I do my research work at home and so when I am stressed sometimes, I would post about it because my family doesn't want to hear about it and plus they just don't get it.... So I post about it... like when I didn't pass my upgrade...I felt like such a failure and although I was told this happens and I am not a failure by my supervisor ...it was only when I shared what happened on Facebook and I got some sympathy and empathy from others in my cohort or other PhD students who had the same thing happened.... That's when I began to feel ok about it. **Logan***

To explain the awareness of collectively sharing these experiences as part of their academic identity development. Max said: 'I quickly realised that what we are all experiencing, is all part of what it takes to be a doctor'. Many posts emphasised some of the difficult times in their studies. Post such as these by Ana highlighted this:



*I was having a difficult time I've had to change supervisors and was facing a lot of backlash because of it...I ended up feeling depressed and was behind... I shared that I had to catch up and so I spent three months basically living in the lab by myself... probably one of the times I really wanted to give up on all this. **Ana***

When asked why she shared these posts on her Instagram, Ana spoke about almost dropping out of her programme. She said she just needed someone to 'understand' and have some 'empathy':

*Those were some tough times and I figured not my regular friends but those doing their doctorate would understand what I was going through. I wanted to feel that maybe this is part of what we all go through... yeah, I think getting responses or even just a like reassured me that maybe I can make it through...like we are all struggling in a way together and that just helped me so much at that time. **Ana***

Celeste believed that it was important to support other doctoral candidates, especially those just starting out who might have felt a bit like her initially. When asked why she wanted to do that and what benefit she got from this practice, she talked about how it impacted her sense of belonging:

I also try to spend time just reading and responding to posts in the doctoral support group. I can't expect people to just always respond to my questions... I feel like the more comfortable and confident I have gained by my second year I felt like I could support newer students who were like me and felt insecure. To me, giving back the same encouragement helped me..... it gave a feeling of being

more solidified..... more like a genuine doctorate student, I guess that might have helped my ego. Celeste

In summary, all the international doctoral candidates in various ways used social media to seek out support, to make connections, to feel like they mattered, to gain confidence, and to feel part of different groups connected to academia.

Mentoring

The interviews showed the important role of the mentoring relationship to the development of professional identity and to the process of learning the skills needed to complete the doctoral degree. International doctoral candidates used social media for emotional and social support, many of the candidates shared that they did not have a full grasp of what was expected of them, therefore they would go online to seek out additional guidance from more advanced doctoral candidates and academics. Max shared how he created a space on social media that supported his need for mentoring:

The fact is that we have to figure it out ourselves, which was my experience. There is no one to teach you to have to write up the literature review or write out your methodology..... I felt that everyone expects us to be able to do this level of work from the beginning and that is just not so...so it is a lot of pressure because how do you say I am not sure what to do? I knew that there are many academics in different groups online... so I decided to start my own Facebook group and that group..... has over 3000 members. It is a private group and academics at every level and what we do is help each other.... If I need help with writing or need someone to just read my work I have peers and others in the field that helps.... I think it feels less intimidating to me. Max

Logan's account below demonstrates how he could reach out to a professor in his home country for guidance:

I get frustrated a lot with my supervisors. I feel weird sometimes like I know they don't get me. I do believe that within..... within myself they think my English is bad.... It makes me feel incompetent because I often don't think they get the meaning of what I am trying to express. Sometimes I feel like it would have been maybe easier and less frustrating studying back in my country because I feel..... it is that we aredifferent perspectives. I found one of my past professors back home who had previously studied in the UK on Facebook and I started reaching out to him..... sharing what I was going through... it is because of this man I am still here... he saved me from leaving this degree...helped me to understand the dynamics with my supervisors and I am still touching base with them if I have any questions... he is my main guide just to get through and my supervisors review my work.
Logan

Having the kind of support that offers guidance and help with doctoral skills was important for these doctoral candidates. Social media provided the space for these candidates to show vulnerability. Throughout the data, participants shared examples of contacting other doctoral candidates who were further along in their programmes or gaining access to leaders in their industry. In this case, Logan found someone in his home country who he trusted and felt he could ask for help with his cultural difficulties. These participants expressed a deep need for connection beyond the limited time spent with their supervisors and other doctoral candidates on campus. The community of mentors that Max created on Facebook also provided him with a safe space outside of his university to seek additional guidance and feedback on his work.

Strategic Networking

All seven participants indicated they viewed social media as essential to building strategic networks of professionals inside and outside of their field of study. During data collection, their social media showed activity to build, reinforce, and maintain relationships with groups, organisations, and

professionals. Interviews confirmed that these behaviours were deliberate with the goal of potentially leading to learning, collaboration, and future job placements. Lea, Logan, and Max explained how social media had helped them build a professional network.

*My field is small, and I've had someone at a conference recognise me from Twitter...and I used to be shy at conferences, but I was thinking this was a good way to ease me into meeting people in my field. **Logan***

*I remember trying to come up with a term to describe a process in data and I had no idea where to start... I made a post on Twitter asking for suggestions and included #PhDlife. I got so much valuable feedback from people in my area of research... I was able to coin a unique phrase... through these types of interactions I have found that I have developed a great relationship with people I would never have access to.... I am amazed sometimes of the people who would respond to me on Twitter.... I honestly believe that through Twitter and specific research-based hashtags I have made some of the most valuable connections in my area. **Celeste***

Christine and Max shared the benefits of using Twitter to connect to leading scholars in their field:

*Twitter is powerful I think.... I have found publications, people in my field I didn't know about before, and gotten a wider sense of the current debates and issues in my field... it really helped me to identify who are the key people to cite in my work to be taken seriously as a contributor to my field... and some of these people are active on Twitter and I have made it a point to engage with them. **Christine***

*Some senior scholars are also active on social media and if you ask for help... some are willing to spend a few minutes to reply. It can be intimidating at first, but I just look at it this way.... They have a wealth of knowledge and experience and it is worth me sounding foolish when I ask a question...because just maybe someone will respond... so I put my ego to the side, and I go for it and ask... social media for me breaks that hierarchy. **Max***

Max also shared that he started a Facebook group at the beginning of his doctoral studies relating to his topic area. The group currently has over 3500 members. He has since could collaborate and work on published articles with other academics interested in his work. He believed that by sharing his work on social media he could attract people who were interested and therefore form networks that were possibly unattainable without the reach of social media.

*It is a bit of a balancing act when it comes to sharing your work on social media. One of the things I learned earlier on which my supervisor told me is that you can't just share everything.... You have to be selective, so you don't end up giving away all your research work.... So, I learned to be careful with what I post but just to still share enough to gain feedback and also connect with others who are interested in my study. **Max***

Christine explains how, through Twitter and Facebook, she can stay engaged with others at conferences when she is unable to attend:

*If I can't attend a conference that I am really interested in I look for the conference hashtag on Twitter and I follow it...sometimes there are people there live Tweeting the event and I still can get valuable information and learn more about the presenters and possible people in the field I've never heard about.... I also do the same if I attend a conference and find the information valuable I always try to tweet out anything interesting... there are also Facebook live events. I've watched colleagues present internationally that way... it is really about staying active online....to me, it connects me with some great people doing interesting things without even having to leave my flat. **Christine***

The sharing of oneself and one's work was also a factor in developing networks. Disseminating aspects of one's work or interesting content can invoke healthy debates or discussion which can potentially bring more people with similar research interests together. This, in turn, provides opportunities for doctoral candidates to further expand their networks after connecting with

individuals who have found the information shared to be promising or valuable in nature. Lea reflected on this:

*I have been offered a job in my field based on content I have posted on social media and the arguments I have made defending my work.... I think they did Google me to find out more about me but it just shows how just using Facebook or Twitter can open that door... it was an industry job and they were serious and it paid well so if I ever decide not to go the academic route it is something I might be able to consider. **Lea***

Self-branding

Participants used social media to promote what they stood for specifically as it related to their field of study. They shared how they thought about and formed their personal brands on social media. They curated their images by showcasing a combination of skills and experiences that might differentiate them from others. From the data, it was evident that the participants were constantly aware of how they wanted to present themselves as academics on social media.

At the forefront of this thought process was that they wanted to make sure they were professionals by those who viewed their pages. They wanted to highlight specific aspects of their lives that, in the long run, could potentially serve them well when it came to their careers. Some of them explained that this was the reason for using or representing this part of themselves on social media. Jade, for example, said that she wanted to make sure she showed that she was a mature, serious person focused on her career. Similarly, Max said: 'all of my social media has to show me a professional...that's how I want to be viewed.' He elaborated:

*I am my brand...everything I post represents who I am... so I use social media as a way to develop and build all of these things. Working in technology means the people I engage with for work all expect that I would have a strong presence. **Max***

Constructing this image started initially with changing their profile information to include their new roles as doctoral researchers and, in some cases, beginning to use platforms specifically to promote their work. They perceived this to make sure their audience was seeing them how they wanted to be seen. This awareness, in part, dictated how they presented and promoted themselves on social media:

*Before I used to just post randomly on social media.... I think since starting to do my doctorate, I've added more people to my pages who are in my field and I find myself now considering what I post so that I am thought of in a certain way like...this is my area of study and this is who I am. **Ana***

*I sometimes go and scan my social media to make sure it represents me... and I also Google myself because there are no doubt employers check up on potential new hires and I want to make sure my content represents me well. **Lea***

*I know that LinkedIn is the main place people think employers go to find out more about the interest of potential candidates...but I feel that they check everything... LinkedIn is so structured that you basically stick to a format...whereas with places like Facebook or Instagram... I feel that employers think they can get a more realistic view of who you are based on the content you more freely post... so I always try to make sure my content is updated and because I hope to get a great position after finishing my PhD. I always post with the thought that everything on social media will be looked at and I try my best to show myself in a positive way. **Logan***

The participants shared a universal awareness of the competitive nature of gaining teaching positions after completing their studies. Therefore, they felt that being intentional and having a brand as an academic was important. Max conveyed this:

*I don't feel like I am being inauthentic when I put my best foot forward on social media.... I feel like I can't just sit back and wait for my work or my thesis to do the talking at this age.... All of this is part of me and that's what I am on social media... I want any chance I can to stand out and I try in part to do that as part of my brand.... I want to be the leading thinker in social media for development so I make sure any audience I can reach online, or in-person is aware of this. **Max***

Christine echoed the sentiments of Logan and Max regarding publicising oneself on social media and likened it to having a second job without pay:

*Having to be out there is important..... it is something I think about often... it is like a job I must work on constantly... it takes time regardless if it is going out and meeting people at conferences of sharing your work or ideas online.... I realise that doing this degree is more than publishing or having that title... these things in itself don't lead to overwhelming opportunities. if you want to get work you have to show who you are... I follow people on social media who I want to have a career like, and I see how they push themselves and put their work and what they believe in out-front...and so my plan is to imitate what they do. **Christine***

In the analysis, it became clear that most of the participants chose to highlight certain aspects of their lives that showcased their identity. Some of them shared that, even if they did not necessarily feel that they fully embodied the identity of an academic, they knew they had to 'fake it till you make it' by promoting this image on social media. The idea of having an online presence 'to stand out', as Max stated, and projecting a personal image was significant and became consistent themes throughout the interviews. In addition, there was a widely-held feeling that, while it was not mandatory to do so, there was an unwritten rule that it was important to have a strong social media presence. As Logan stated: 'it feels like it is expected that if you are not active on social media showing what you are about, you might miss out on great opportunities.'

4.3 What Issues (If Any) Do International Doctoral Candidates Encounter Between Performing Their Personal and Professional Selves on Social Media?

The second research question relates to the pressures doctoral candidates experience as they navigate between their personal and professional use of social media. The main themes emerging from the data were: peer pressure, perceptions of being viewed by others, context collapse, and privacy. This section highlights these themes regarding key findings from the observations and interviews.

Peer pressure

Based on her past experiences on social media, Jade was sceptical at first to add professional contacts to her Facebook network. She explained that she intended to not use her social media much during her studies, but she also did not want to add her professional contacts to the small circle of people in her network:

*I live a very private life.... When I first started, I was using Facebook just to keep in touch with my friends and family back home. Because I'm away from everyone, but now it's surprisingly my behaviour has really changed...I had an embarrassing situation before and I vowed to just keep it as friends.... As I started going to conferences and workshops, I began getting a friend request to join my Facebook page... I really didn't want to accept them at first but I just kept getting requests and figured some of these people are now my friends at university so it might be awkward if I keep ignoring them online...so maybe I should just go ahead and add them. **Jade***

This was echoed by Lea:

*Everyone wants to be part of each other's social media and I don't feel like I have anything to hide... but sometimes I just accept just because.... Some people I don't even engage with... I might have met them once but maybe because we are so excited especially when we start. **Lea***

This points to the peer pressure doctoral candidates felt in terms of how they should behave in these spaces. However, this also relates to issues of privacy and what they wanted to allow others to see. Christine showed a sense of frustration regarding the tension between having personal networks to stay connected to friends and family and having a professional network to meet the expectations of academic culture:

*For example, I drew the line when it came to my supervisor.... I know some people who have their supervisors as friends on their social media but that felt weird to me... I don't know that the relationship just feels different... in a way, I want to stay connected with them but still, I don't know if I want them to see that I've been out to a party and then I submit work and it is not good..... but still I feel jealous when others share how their supervisors are commenting on their post...maybe it is just me that's a bit weirded out by this. **Christine***

Throughout the interviews and observations, it was evident that the doctoral candidates used social media in a range of ways on a constant basis. However, when asked why they used social media, there was an underlying response throughout that if they were not active on social media they could potentially be missing out on opportunities.

*I had a Twitter page, but I never used to even open the app, but I felt I needed to start using it because everyone else seemed to be on Twitter with their research work. **Lea***

This was echoed by Jade:

*I only use Facebook and I was really reluctant at first...during my first conference I realised no one asks for your number or business card... everyone just wanted to get social media contact information and that's when I realised, I needed to start being open to it. **Jade***

This culture of professionals needing an online presence was understood to be driven by competitive job placement and the possibilities that online

networks afford. Logan shared how his fear of missing out changed his behaviour on social media:

*These days it is like if you are not pushing yourself out in social media.... there is a feeling that you can get left behind. Everyone kept telling me that all the experts in our field are online and it is good for me to engage.... So, I mean I don't want to be left out...so I do try by retweeting for now...eventually, I realised just how limited voices there are in sports engineering in general and I now get messages from people who are interested in the field. Especially in the US where there has been a slow uptake to this aspect of the field... I would love to work there and so I make sure to stay active in posting about my work and conferences that we are hosting to bring more people in the field together. **Logan***

Overall, the pressure the doctoral candidates felt about adding their professional networks to their personal ones was short-lived. As they began to develop their academic identities, they began to actively seek more relationships on social media.

Imagined audiences

The participants shared they had become increasingly concerned with how they were being perceived on social media. A common response to the question 'How do you want to be seen on social media?' often included answers relating to being viewed as mature and professional. However, it was still important for them to be 'normal', fun, and laid back. This awareness of the two aspects of their identity in part dictated how they behaved online, what they posted, and how they projected their identity:

*It was annoying especially at first when I started to add more people...I found myself thinking way too much if I should post certain things and what this or that person might think if they see it...I actually took a break from social media because I found it overwhelming... if you are posting public content online, you have to be careful because it stays online. **Celeste***

Logan, who was just out of an MA programme, felt that he was 'oversharing' at the beginning of his PhD.

*I was really putting any and everything out there.... Maybe oversharing way too much.... that was a free and exciting time then... I had most people from my MA and university friends and my family on my social media... the game changed once I started my PhD and I cut back on how much and what I post. **Logan***

As the doctoral candidates progressed in their study, it was evident that once their identities as academics began to develop, they became increasingly conscious of how they were being perceived. There was, according to Max, an increased pressure to project an intelligent persona:

*You would be surprised at how much I make sure everything I post even targeted towards my friends and family, I make sure it well is written... grammar, context everything.... I just feel like I don't want them to say that I'm doing a doctorate and can't even write a decent sentence on social media.... I guess I want to meet their expectations.... I'm not even sure what they think... I just feel like I should come across a certain way. **Max***

The belief that they should project a smart image was part of what they perceived studying at the PhD level required. This feeling that doctoral candidates have a reputation they must manage and protect was expressed by most of the participants, as was the understanding that anything that is put on social media remains there:

*I have deleted some of my old posts from undergraduate days.... Way too embarrassing to leave up.... Social media for me is basically a multi-dimensional resume...like a 3D resume..... if a person is serious about their career depending on what they do... they have to manage their social media in a responsible way.... that info remains and is accessible. **Ana***

There was also the dynamic of wanting to feel or be perceived as being authentic:

I am all of these things mixed into one and I don't mind showing this online. I don't know if it is because my work is part of my life.... And I have been in the working world... I feel like I want to be seen for who I am..... I always figure if I post something like an article I wrote and my friends are not interested they will just not read it... also if I post about politics or religion or anything in general, I make sure to be respectful and be an adult...but this is who I am.
Christine

There was a consistent message that people should be mindful of what they post on social media. The doctoral candidates believed this sentiment to varying degrees. These beliefs were rooted in the fear that their behaviour might ruin their chance of opportunities, but those fears were not limited to online behaviour.

Context collapse

Arising out of the issue of how participants believed they were viewed by others was the idea of the merging of audiences (i.e., when content is posted on social media intended for a specific audience and is consumed and accessible by varied different audiences). While some social media platforms have affordances in allowing users to choose intended audiences, there is inevitably some audience overlap that might occur. According to boyd, (2014, p.31) 'a context collapse occurs when people are forced to grapple simultaneously with otherwise unrelated social contexts that are rooted in different norms and seemingly demand different social responses.' Celeste noted the complexity of collapsing context and the merging of audiences in her social media. Both shared their experience with content collapse:

*All parts of your life end up being mixed together in one... I have so many people added to my Facebook now... teachers, former students, friends, family, professors and people I have met at conferences...some people I don't even know who they are...so if I post something indented for my friends...like a really silly joke now other people who I probably wouldn't share that joke with will have access to that part of my personality.....it is not a huge big deal to me... I still post what I want... I think what makes it a bit queasy for me is knowing that all these different people are getting to know me in a somewhat more intimate way.... it is just a bit of a different way to think on how different it was before social media when you just separate those parts of yourself fully. **Jade***

Context collapse is especially apparent in observing Celeste's and Ana's social media use, considering they mostly use Facebook only. Celeste shared an example of her experience:

*I got used to it after a while...I don't show every single thing about myself... I believe everyone has control over what they post on social media...and everyone can choose what content they wish to consume.... The issue that I have experienced posting an opinion about a hot-button topic and someone I worked with before became offended by what I said.... These are the issues I find difficult.....but I don't get too caught up in it... I try to treat every comment as part of the discussion... but I know I get judged allot especially I think from friends or family I haven't seen in a long time... because I feel like my thinking has changed over time and they are now realising it. **Celeste***

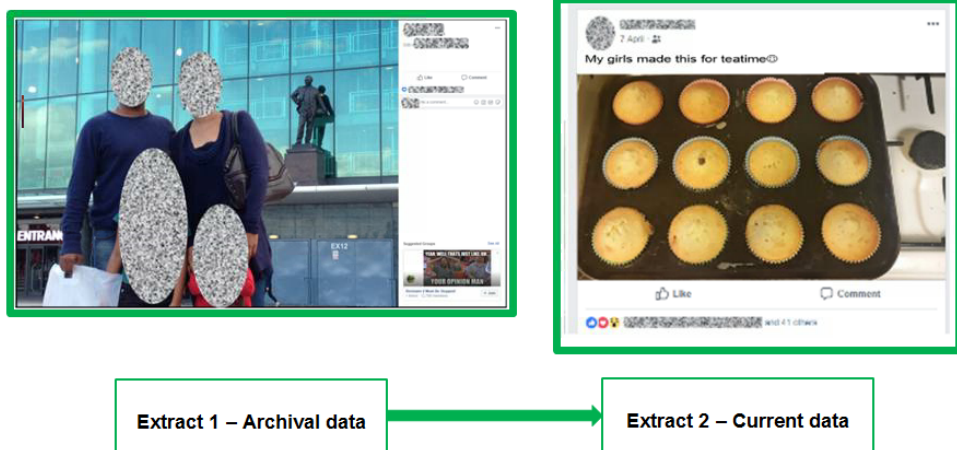
*I absolutely have to hide parts of myself.....and now I find myself just sharing content using Facebook messaging.... I absolutely regret adding so many people to my page... I plan to do a clean up one day..... what drives me crazy is the content that I have to see and I know I can adjust my setting but I never take the time out.... sometimes if I am procrastinating I just go on my Facebook and scroll.... I see so many random stupid things...I just need to get rid of some people and keep my valuable contact and close friends. **Ana***

The doctoral candidates were aware that sometimes when they shared content on social media their entire social context merged into one. Sometimes this led to them not saying as much as they would have liked to

say through censoring their content or creating a different social context to engage with specific audiences.

Privacy

Privacy was an important consideration for the participants when they were deciding whether, how, when, and with whom to connect and share on social media. Jade was worried about sharing images of her children on social media. A comparison of her archival and current posts showed that she had stopped sharing images of her children online. She addressed the issue in a post:



Since I'm studying for a few years now, I have added so many people to my Facebook page... I feel like I had to change the things I put on my page... and I sometimes feel a bit paranoid about different people having access to the images of my children... I try really hard to keep their identity private.

Extract 1 is from a post from early 2015, shortly after her children joined her in the UK. In it, she shares a picture of her family enjoying a trip to London. This is like other posts shared during 2015 where her children's images are shown. Extract 2 is an example of her more recent behaviour in terms of how she shared her experiences with her family. In this image, she was sharing

that her children baked muffins. However, she decided not to share the experience using images of her children and instead used an image with just the muffins. This negotiation in behaviour was also seen in how she presented herself on social media.

Privacy issues also affected the way the participants thought about access to their data. Max explained his concerns about how his data was used online:

*Nothing is for free... I know that everything I post not only anyone can access it but that these companies take this data and sell it...so for me I am really concerned not just content shared but making sure to not purchase anything through social media. I work in social media and I know that all of this is structured to draw people and information...that's how they make their money...so I know I have to be a smart user. **Max***

Based on interviews and observations, participants activated the Facebook location services add-on feature to share their personal travels, events, and conferences they were attending. Christine said: 'I made sure to turn off all location service from my mobile...I realised if I post something using my phone it was showing my locations and I didn't like that.' Christine expanded on her perspective:

*I love letting people know what I am up to, but what I do know is I would post my location after I've returned...I still might post events I am attending but location services are just such an invasion of privacy and it is so easy to buy into.... These Facebook people know that we love to show off our trips and that's why they added this feature....but when I think about it...how crazy is it to announce I am flying out of this airport to this other airport, what hotel I am staying in and what conference I will be attending...that is just crazy when you think about it...and you know the more people do it makes it seem so normal...but I don't think it is...if you stop and think about it. **Christine***

There were also privacy concerns relating to hacking and impersonations. Ana once had her Facebook account hacked. She found out someone was sending a new friend request in her name. It scared her. At the time of the interviews, she had become even more concerned that if she was hacked again someone could post negative content that could ruin her reputation:

*I don't want that feeling again of someone posting under my name and my image...that felt way too easy... I really think that can mess up a person's career... being a teacher and hoping to work in a university... these roles expect you to have a certain level of professionalism.... if for some reason someone hacks my Facebook again...when I think about all the people in academia I have...it can be hard to remove negative content from online...I guess because I had that happen and was able to report the account quickly...I know it is something that can happen. **Ana***

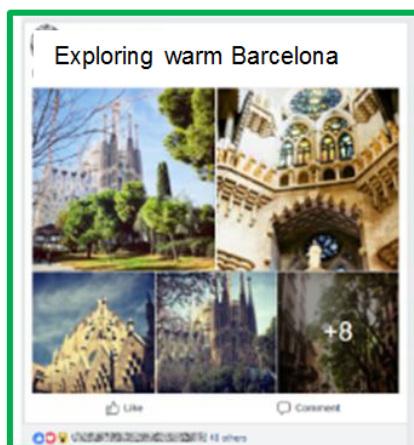
All the participants mentioned privacy as one of their main concerns when using social media. These quotes highlight the tensions they dealt with in having an online presence. This had become increasingly true as their network of online contacts had grown over the course of their studies. The participants thought about privacy and wanted to protect their private information; however, there was an acceptance that the risk was, to some extent, the price to pay for accessing the more important relationships they could form on social media.

4.4 How Do International Doctoral Candidates Negotiate Identity Tensions on Social Media?

The final research question seeks to understand how doctoral candidates negotiate and resolve identity issues on social media. The most prevalent themes from the interviews and social media data are highlighted in this section.

Compartmentalised identity

From the observation of social media data, it was apparent that doctoral candidates used various methods of separating their identity on social media. This was done to assert greater control over what content was shared with specific audiences. Although Max was generally comfortable with expressing all his personality throughout his social media output, when dealing with his Twitter he notes that 'Only people follow me on Twitter are those relating to my industry.... I think my friends realise all I do is talk about my thesis and conferences, so they avoid it.' This was echoed by Lea: 'I didn't use Twitter often before, so I had limited contacts there... I think I read something online and followed the link to a Tweet...from then I just started following anyone I could think of relating to my work and it grew from there'. While Max and Lea unintentionally began separating their identities, Christine shared that it was a deliberate choice to do so. She reflected on this choice here by explaining these excerpts:



Facebook



Twitter

I decided from the beginning that I would have a space dedicated to my thesis..... I feel like my friends don't want to read about my research work ...why would I bore them.... and I don't want my research acquaintances to see what I post about my personal life.... I mean I don't post anything crazy but still I feel better

*knowing it is separate... if you notice on my Twitter it would be hard to find anything at all personal... because I feel like Twitter is where I show that professional side.....I started Twitter at the beginning of my PhD and used it just for engaging with people at this level.... everything about my research, conferences I attend and academic groups I have there... Facebook and Instagram are more relaxed and light content. **Christine***

These social media excerpts demonstrate how Celeste compartmentalised her identity on social media. Both posts relate to her trip to Spain to present at an academic conference. However, while the content on her Facebook page did not specifically identify that this trip was based on anything regarding her doctoral identity, the post on her Twitter relating to the same trip reflected her academic identity at a conference in Spain.

Compartmentalising of identity reflects real-life identity management. Lea compared it going to work:

*It is like work for me.... I use my Twitter time as part of me working on my doctorate I know when I go there, I am still involved with my work.... To me, social media like Facebook and Instagram are just for fun and relaxed browsing.... I can't imagine scrolling through pages of memes, friends post, and images to look for content relating to my study..... just thinking about it makes me feel anxious.... **Celeste***

Logan reflected on how it paralleled real life for him:

*I think it makes sense like in real life to keep everything separated... still, there are some mixing because some of my research team are my friends...it hard to keep it strictly business on one site but I try.... My Instagram is on private and that means only my friends and family can see my crazy side..... they know that my personality when I am around them, so I needed a space just to express that side of me... Twitter and Facebook are more Sports Engineering content. **Logan***

Although Jade and Ana only used one social media site, they still shared ways of separating their identity. Jade used closed Facebook groups: 'I mainly post

links to articles and talk about my research in a closed Facebook group for people doing their doctorate'. Ana used privacy settings to share content with only specific people in her network: 'if I want to share something private for only certain people to see, I simply changed the settings of the post so that only that group of people can have access.'

Controlling the narrative

Many of the participants in this study spoke about the importance of establishing an online presence through building a brand or engaging with their network. For Ana, being responsible for her behaviour on social media was something she saw as important. She stated:

*I think about what I post because I know it reflects me.... I know I am picky about it but I don't want people misinterpreting my words... social media content is even quoted in real news these days... so if I am discussing a controversial topic... I always think about my business and if anyone tries to quote it.... It at least comes off sounding intelligent. **Ana***

Ana is a business owner and shared that she has written articles in newspapers and in other media. She often expressed that she sometimes can talk about topics that are controversial and, in her culture, social media data is sometimes used in the wrong context. She said she tries to mitigate being misrepresented by trying to properly represent her brand when she engages on social media. According to Lea, being cognizant of how one is presented on social media is helpful in maintaining a positive personal and professional identity:

*Google... I Google myself every once in a while..... I don't want to be blindsided because you never know what is on the internet. **Lea***

Max shared the benefits of telling his own professional story through his social media:

*I get to manage my image, my achievements, the work I do, and what I believe in. Even my personal post...I make sure it reflects me... I don't even think about it.... just the way I am... I am conscious of my brand and so I treat everything posted as public content and behave accordingly. **Max***

Other participants used methods such as editing the content they posted. Jade noted that this behaviour intensified once she started her doctorate: 'I sometimes write and re-write my comments on social media... sometimes I even write it in Word and make sure it is what I want to post.... There are times I just never posted it because I am not sure of how it would be received.... same with selfies'. Lea shared that she did it more with her professional-related posts: 'it drives me crazy a bit... I don't want to second guess what I post. I sometimes think it is my self-esteem issues, but I also feel it is how I want them to think about my knowledge and work'. Jade and Lea both described the process of self-censoring their social media content. Self-censoring is part of a reflective process of practising control over what is said to avoid conflict. For all the participants, this was an evident aspect of how they controlled their identity on social media and how they engaged in general.

4.5 Results and Findings: A Summary

This chapter has reported the findings of the semi-structured interviews and online social media observations of the seven participants. Data collection sought to find out how international doctoral candidates use social media to support their professional identity development, what issues they face when

engaging on a personal and professional level, and how they manage the challenges they encounter with their identity online.

From the evidence collected, the seven international doctoral candidates used social media in different ways to engage in practices that would support their sense of self as emerging professionals. The candidates, despite coming from varied backgrounds and life experiences, interestingly shared a self-directed and purposeful approach to the use of social media to support their doctoral process. They approached the use of social media to gain a professional presence and as a means of networking which could potentially open the door to future career opportunities. The findings indicate that this was the driving force behind their agency of using social media from early in their doctoral study. In addition, they also found that social media was important for their sense of belonging and mentoring, as highlighted in the literature review in Chapter 4. For the reasons highlighted – such as the structure of their programme, the times they were at university, or because they were parents and could not be on campus often – these situations resulted in the doctoral candidates feeling isolated and in some instances on their own. Joining social media communities and support groups were vital for addressing this.

Having to navigate social media also presented some challenges for international doctoral candidates. They shared concerns regarding their privacy, how they were being perceived by their audiences, and tensions around the pressure to be online for fear of missing out on potential opportunities. What was interesting in their negotiation of identity was that not only did they have to think about their personal and professional audiences in

the UK, they were also concerned with how their friends and family back home were perceiving their behaviour online. Some of them shared cultural, religious, and family reasons that made their personal use of social media incredibly difficult. To balance these issues, they found ways to compartmentalise their audiences, such as using specific platforms for certain groups or using private groups and chats.

Ultimately, the international doctoral candidates in this study shared a positive uptake of using social media and wanted to keep developing their profiles and networks beyond their doctoral studies. In the next chapter, a discussion of these key findings in relation to the relevant literature and conceptual framework will be presented.

Chapter 5 Discussion

The purpose of this qualitative digital ethnography study was to explore how international doctoral candidates use social media to support their professional identity development. This chapter includes a discussion of major findings as related to the literature review on the experiences of international doctoral candidates, socialisation in doctoral education, professional identity development and social media in doctoral education. The discussion is also framed through the conceptual lens of transnationalism (Vertovec, 1999) and the networked society (Castells, 1996). The chapter concludes with a discussion of the contributions of the study and a summary. This discussion helps answer the following research questions:

(RQ1) How is social media being used by international doctoral candidates to support professional identity development?

(RQ2) What issues (if any) do international doctoral candidates encounter between performing their personal and professional selves on social media?

(RQ3) How do international doctoral candidates negotiate identity tensions on social media?

5.1 Interpretation of Findings

While their country of origin, doctoral path and experiences may include variations for each international doctoral candidate, each of the common themes were prominent factors in how they use social media to support their professional identity development.

5.2 Social media use to support professional identity development

This study's conclusion that agency and reflexivity are essential to how international doctoral candidates use social media, agrees with past literature that indicates self-agency and reflexivity are primary contributors to identity development and transitional processes (Ye and Edwards, 2017, Herman and Meki Kombe, 2018, Cotterall, 2015). Agency relates directly to the self-generated actions a person takes to shaping their experiences. Whereas reflexivity is the process a person takes to examine their feelings, reactions, and motivations and how these beliefs can influence what he or she does or thinks in each situation.

Many of the participants in this study acknowledged that they decided to use social media as part of their professional identity development because they were aware of its potential for advancing their careers and developing professional networks that could be beneficial to their future paths. Previous studies undertaken referred to doctoral candidates being sceptical and cautious users of digital tools due to lack of time and disruption of conventional research norms (Carpenter et al., 2012, Dowling and Wilson, 2017). However, in contrast to past literature, most participants' felt that the benefits of using social media to develop professionally were more important.

Five of the seven international doctoral candidates relied on social media to feel a sense of belonging. Notably, Jade who moved to the UK with her family including two children shared the impact of social media on her sense of belonging. She states:

“I don’t think I have ever really felt fully confident as long as I have been here..... At first, I felt so confused and intimidated talking to my supervisors and even other PhD students who seemed to have it all figured out.... I used to go on Twitter and just read [to] try to engage a little at a time with others in my field. Even there it was so scary to me at first but I started out just engaging a bit and I think eventually just learning from everyone else gave me a bit more confidence as I started to really get a bit deeper into my research.”

In Jade’s case, the ability to find support and development from online peers was important in supporting her sense of belonging to the academic community. She actively sought out relationships online because of her lack of time spent on campus. Similarly, Logan discussed being in that space where his family back home could not understand his challenges and doing independent work from home.

*I do my research work at home and so when I am stressed sometimes, I would post about it because my family doesn’t want to hear about it and plus they just don’t get it.... So I post about it... like when I didn’t pass my upgrade...I felt like such a failure and although I was told this happens and I am not a failure by my supervisor ...it was only when I shared what happened on Facebook and I got some sympathy and empathy from others in my cohort or other PhD students who had the same thing happened.... That’s when I began to feel ok about it. **Logan***

Similarly, other international doctoral candidates highlighted proactively developing mentoring relationships on social media in addition to their supervisors. They also stressed the importance of strategic networking on social media from the perspective of creating professional opportunities during and after their doctoral education.

Having safe spaces is important. It is important for international doctoral candidates who often endure more multifaceted transitional experiences to have a place where they can feel seen and heard (Phelps, 2016). Colbeck

(2007) referred to the challenges of avoiding a 'culture of silence' in international doctoral candidates whereby there are no opportunities for candidates to express themselves.

The findings of this study imply that social media provided the safe spaces international doctoral candidates created outside of their universities. For example, they made use of #PhDchat and Facebook groups as outlets that are readily available at any time for open communication with peers. As one participant stated, 'it was having access to other PhD students for a good moan that made me realise that the struggles are all part of the process'.

Many participants in this study shared experiences of uncertainty and the reality of the independent structure of their doctoral programme. Given that international doctoral candidates struggle with issues of isolation and loneliness, often without a support network (Twale et al., 2016), the use of social media may be salient to the development of their professional identity because it supports their need for community and acceptance. This supports the finding of Kuo et al. (2018), who suggested that family interactions and support help to facilitate personal growth as well as perseverance when international doctoral candidates are studying abroad. From this result, confidence is also important to developing a professional identity. Smith and Hatmaker (2014) found that developing confidence was beneficial to doctoral candidates' professional identity and overall performance. These findings are also consistent with studies on international students' experiences, such as Sleeman et al. (2016), who found that social media provides a non-intimidating way for international students to engage with lecturers and other peers, thus

functioning as a means of breaking the ice before communicating more face-to-face.

Mentorship has been identified as an important component of professional identity formation in doctoral education (Smith and Hatmaker, 2014). The analysis of this study found that international doctoral candidates pursued mentors in their field of research on social media. Mentors provided an additional source of support and critique from an experienced scholar, to supplement the support traditionally provided by supervisors. Participants shared an intentional engagement with mentors whom they valued as like-minded peers or advanced scholars, as forming such mentor relationships helped in renewing their sense of confidence, commitment, and identity development. These findings concur with Castells (2013), who found that international doctoral candidates embraced the value of social networks for providing access to mentors and networks that exist outside of their supervisory relationships on campus. One participant explained: 'I follow and engage with people on social media whom I want to have a career like... my plan is to imitate how they utilise social media'. This quotation speaks to the centrality of (internal and external) mentors in shaping doctoral candidates' professional identities as researchers. It further implies that, upon completing doctoral study, international doctoral candidates can maintain these relationships as mutual sources of ideas, collaboration, and resources. Interestingly, while some of the participants did share positive experiences with faculty and advisors, the participants generally shared that they felt more 'at ease' with mentors online.

Researchers have extensively studied the impact of relationships on professional identity development (Shacham and Od-Cohen, 2009, Fenge, 2012, Lahenius, 2012, Sweitzer, 2008), though not in a social media context. In a traditional sense, doctoral candidates can access and develop these relationships through attending workshops, mentoring, supervisory relationships, and conferences. The current study builds on these findings by emphasising the value of digital technology to advance the reach of doctoral candidates by providing robust spaces for developing valuable networks, knowledge, and opportunities globally that might otherwise be unattainable.

The international doctoral candidates in this study expressed that developing a personal brand on social media could open potential opportunities for their professional careers in academia. These findings align with the work of Schmidt and Hansson (2018) regarding the competitive job placements of new doctoral graduates and the constant pressures to stand out. Most of the participants voiced that, after completing their doctorates, they hoped to stay in the UK to further their careers or to eventually return later in their careers. They were enthusiastic and optimistic about finding opportunities in the UK and hoped that their extensive networking on social media would assist in these goals. Some of the participants shared early successes by describing opportunities to work with other researchers and interest from potential employees based on their social media interactions and networking. However, many participants found that maintaining a social media presence takes time and effort. Some of the participants described just how time-consuming managing their professional brand on social media felt. For example, Max likened it to 'having a second job without pay'. Other participants described

actively 'Googling' their names to ensure only positive information was available online. These findings might suggest that, even with the constraints that using social media may have on their time, international doctoral candidates are still willing to integrate social media into the development of their professional identity and career.

5.3 What issues (if any) do international doctoral candidates encounter between performing their personal and professional selves on social media?

O'Regan et al. (2018) argue that social media can be a difficult space to navigate for professionals with modern challenges such as the shrinking barriers around privacy and negotiations around fragmenting of identity. The findings of this study support this outlook as international doctoral candidates encountered different issues between performing their personal and professional selves on social media.

An important finding in the understanding of how international doctoral candidates negotiate their identity on social media was that many participants reported that their expanded social media networks made it difficult to determine who would be consuming their posted content. They shared that their imagined audience consisted of friends, family, peers, and many new people they had met since starting their doctoral studies. They shared that they did have certain groups of people in mind when posting specific content, but it had become more challenging to determine the boundaries between personal and professional audiences. In this regard, the doctoral candidates' online engagement was intentional and thoughtful (Veletsianos and Shaw, 2017). With both known and unknown audiences, they had a clear

understanding of how the conceptualisations of their audience would affect their expression of self.

Particularly, there were many concerns about their imagined audience and how they were viewed by personal and professional peers. Christine, Celeste and Max found it incredibly frustrating the tension they were experiencing between having personal networks to stay connected to friends and family and having a professional network to meet the expectations of academic culture:

*I drew the line when it came to my supervisor.... I know some people who have their supervisors as friends on their social media but that felt weird to me... I don't know that the relationship just feels different... in a way, I want to stay connected with them but still, I don't know if I want them to see that I've been out to a party and then I submit work and it is not good..... but still I feel jealous when others share how their supervisors are commenting on their post...maybe it is just me that's a bit weirded out by this. **Christine***

*It was annoying especially at first when I started to add more people...I found myself thinking way too much if I should post certain things and what this or that person might think if they see it...I actually took a break from social media because I found it overwhelming... if you are posting public content online, you have to be careful because it stays online. **Celeste***

*You would be surprised at how much I make sure everything I post even targeted towards my friends and family, I make sure it well is written... grammar, context everything.... I just feel like I don't want them to say that I'm doing a doctorate and can't even write a decent sentence on social media.... I guess I want to meet their expectations.... I'm not even sure what they think... I just feel like I should come across a certain way. **Max***

This is the typical dilemma between the constant pressure of the imagined audience on social media and one's perception of self. Marwick and boyd (2014) argues that this constant awareness of one's own imagined audience occurs in every mediated conversation on social media. Similarly, Ritzvi

(2010) found that negotiating challenges of navigating not just personal and professional but at time cross-cultural issues such as religion and ethics.

All the participants expressed frustration in having to protect their privacy and character as they shared and engaged with content online. These findings were consistent with previous studies of domestic and international doctoral candidates (Smith and Hatmaker, 2014, Hildebrandt and Couros, 2016, Mu et al., 2019). Being cognizant of these tensions in identity resulted in the participants carefully curating their image and how they wanted to be represented. Overall, these findings emphasized that international and domestic doctoral candidates have similar ideas of how they want to perceive within these two distinct facets of their lives and the importance of finding strategies to preserving their professionalism.

A new and unexpected finding was that the participants were aware of their cultural identity and how that blurred with managing their personal and professional identity on social media. Many participants described the pressure of having to avoid offending others back home because of religion and other societal pressure. This often led to them restricting the personal content they posted, for example. One participant eventually deleted all past personal images from social media. Binsahl et al. (2015) found that undergraduate international students were also concerned with how they were perceived back home but felt less pressure because their networks were made up mostly of their peers. However, in the current study, international doctoral candidates were navigating between their personal, professional, and cultural identities. Considering international doctoral candidates may return to

their home countries to work, these findings suggest another reason to preserve their cultural identity on social media. Celeste shares how her thinking has changed since moving to the UK and how that has added pressure to how she engages online:

*I got used to it after a while...I don't show every single thing about myself... I believe everyone has control over what they post on social media...and everyone can choose what content they wish to consume.... The issue that I have experienced posting an opinion about a hot-button topic and someone I worked with before became offended by what I said.... These are the issues I find difficult.....but I don't get too caught up in it... I try to treat every comment as part of the discussion... but I know I get judged allot especially I think from friends or family I haven't seen in a long time... because I feel like my thinking has changed over time and they are now realising it. **Celeste***

All participants in this study expressed that protecting their professional image was a top priority when it came to their use of social media. Participants curated content that would project an image of professionalism. However, some participants shared that, while they still wanted to be perceived as authentic, they needed to balance between being relaxed and laid back with their social friends and still being observed as a professional. This frame of thinking supports the work of Marwick and boyd (2011), who found that social media behaviour is often targeted with an imagined audience in mind and that social media users imagine who will consume the content they are sharing.

The study found that international doctoral candidates were hyper-aware of their previous social media content and how it might shape their image. Brandtzaeg and Lüders (2018) refer to this as 'time collapse'. They suggest time collapse as an extension to the spatial approach to content collapse in which past content is archived and easily retrievable. Some of the participants

of this study described seeking out their archived social media data to ensure there was no potentially damaging content. These practices seem to highlight a disruption of the stability of their identity (Vivekananda-Schmidt et al., 2015), Once they experience this shift into their new role as doctoral candidates they begin to re-evaluate their self-perception in relation to other doctoral candidates (Erikson, 1980) and how they want to be perceived by others online.

Analysis of observation data showed the shift in how content was shared from the start of doctoral study to current content. There seemed to be a clear difference based on their awareness of the change of audience viewing their content. During the observation period, all participants shared content that illuminated their academic identity and aspects of their personal lives. Some shared significantly more academic work that was predominantly related to research areas or to current issues in popular culture or higher education. It was evident that while personal content was shared, it was limited to 'safer' content such as travel, cultural events, and other safe topics. Markus and Nurius (1986) concluded that a person self-presents within two categories: the 'now self', an identity established to others, and the 'possible self', an identity unknown to others. Social media users can achieve the latter state by withholding information, hiding undesirable features, and role-playing (Yang et al., 2017).

Participants reported that they experienced feelings of anxiety around seeing peers' academic success on social media. This fear of missing out (FOMO) made them feel pressured to stay engaged in academic spaces online. One

participant shared that viewing a friend's post about collaborating with another scholar on Twitter resulted in feelings of missing out on potential opportunities. These findings are consistent with previous research on FOMO in undergraduate students (Alt, 2016, Beyens et al., 2016, Rifkin et al., 2015, Przybylski et al., 2013). These studies argue that consuming social media content results in the feeling of missing out on social events. However, FOMO for international doctoral candidates manifested in feelings of missing out on potential opportunities relating to academia, not necessarily socially.

The ongoing consequences of FOMO can potentially lead to burnout from the constant need to stay updated to avoid missing out. Participants in this study spoke of carving out 'research time' on social media to balance the time spent engaging on social media. However, as social media was the primary method of communication used by the participants of this study to connect with home, the timed approach may have led to a lack of overall engagement with social media. For example, Jade started to allocate one hour a day to social media shared that her family at home became concerned about her wellbeing because they were not seeing regular updates on social media.

Participants described the management of professional and personal identity and content as a constant challenge. This negotiation raises issues around privacy and the merging of personal and professional content in one space. Several researchers have examined the interplay between users and the blurring context of social media, often referring to the concept of 'context collapse' (Marwick and boyd, 2011, Litt, 2012, Fox and Bird, 2017). This 'context collapse' is described as a social or spatial collapse in which

individuals must meet the expectations of multiple and diverse audiences simultaneously, which can ultimately complicate self-performance. However, for most of the international doctoral candidates who participated in this study, their having had prior professional experiences on social media before starting their doctoral study had led to a heightened awareness of how they managed their new and archived social media content.

Cultural and religious beliefs can also play a role in the challenges of content collapse. For example, participant Jade described her need to hide her social experiences while studying in the UK from her friends and family back home. She mentioned that they were disappointed and concerned with viewing one of her posts on Facebook that showed her drinking wine. She shared that this practice was not acceptable in her culture and so she was constantly aware of what she posted, where it was posted, and who had access to the content. As professionals navigating different and multiple identities on social media, content collapse is an issue that international doctoral candidates actively manage to keep their personal and professional boundaries from overlapping. Another, potentially more serious, issue was international doctoral candidates' concern about privacy on social media. As described in the findings (see Section 4.5), the issue of privacy was the undercurrent to most of the international doctoral candidates' social media decisions. In fact, concerns about the issue of privacy was a central theme throughout this study. These findings extend the work of boyd and Hargittai (2010), who contend that technological knowledge and familiarity have affected the ways different people approach the privacy settings in social media. All participants reported

that they had been using social media for several years before and knew the capabilities of adjusting privacy settings to protect their identity and image. For example, one participant drastically changed the way she used social media after moving to the UK for doctoral study. She was particularly worried about sharing information about her children with her newly increased audience on social media. In addition to limiting how much content she shared about her children, she used Facebook privacy settings to allow only family and specific friends to access that content.

As Quinn (2016) has found, professionals on social media are cognizant of their reputational vulnerability but are not willing to sacrifice participation on social media and its perceived benefits. This may be the case for international doctoral candidates who are aware of the consequences of potentially damaging their reputation on social media, but who nevertheless focus on the positive aspects. They assume that the benefits outweigh the risks.

5.4 How do international doctoral candidates negotiate identity tensions on social media?

This section focuses on the third research question, which explores how international doctoral candidates negotiate and manage the tensions outlined in the previous section.

In reference to this research question, the study found that international doctoral candidates managed their identity by using different strategies to manage how they are perceived on social media. These findings are consistent with previous studies on the need for creating boundaries on social

media (Tsouroufli, 2015, Yang and Liu, 2017, Paliszkievicz and Madra-Sawicka, 2016, Rosenthal-Stott et al., 2015).

As seen in the findings (in Section 4.2), due to the motivation of presenting their best selves online, international doctoral candidates endure a level of self-consciousness and anxiety around their image and the need to impress others. In accordance with a recent study by Lee and Jang (2019), these findings indicate that, as international doctoral candidates increasingly perceive their professional relationships on social media as important and valuable, they focus more attention on producing content that will impress others.

In addition to being concerned with impressing others on social media, the international doctoral candidates' awareness of their audiences seemed to influence how they used the different functionalities of social media networks. As described in the findings (see Section 4.4), international doctoral candidates compartmentalise their identities by assigning specific groups to different social media platforms and by engaging in private social media groups. They may, for example, use Facebook for friends and acquaintances only, Twitter for all professional connections and content, and Instagram for immediate family and close friends. Cho and Jimerson (2017) similarly found that academic teachers also compartmentalise their identities on social media, in part through 'self-censorship'. In the case of the current study, the results indicate that exercising control over what content was shared on social media was a way for international doctoral candidates to avoid criticism and manage their identity. Participants shared experiences of writing and re-writing posts

and even deleting content after a few minutes of posting. Some of them highlighted the challenge of constantly having to think about and refraining from expressing their authentic feelings and ideas on social media.

As Gerhart and Sidorova (2017) have suggested, the reality of managing one's reputation online and its potential impact on opportunities is important for anyone using social media. Predicting how others will react to what is shared is at times difficult. Similarly, Ollier-Malaterre et al. (2013) suggest that online interactions offer few of the physical and social cues that normally guide face-to-face social interactions, thus the need for managing boundaries and negotiating identities on social media. Furthermore, international doctoral candidates can navigate the boundaries of their identity on social media by being cognizant of their social media practices. They have developed strategies that they use to seamlessly manage their image online while maintaining healthy boundaries between their personal and professional networks.

5.5 Implications for Theory

Chapter Two included descriptions of transnationalism and network society frameworks several conceptual frameworks. How the findings in this study fit with these models are discussed in the following section.

The Network Society

Castells (1996) Conceptualisation of the network society includes the suggestion that inclusion and exclusion of different digital networks are driven by power which is viewed as having control or influence in shaping one's own

social networks. In this study, the agency international doctoral candidates used to seek out and develop strategic networks on social media are closely linked to the idea of the power that exists within the network society. The results of this study also aligned with Castells view the network society is also influenced by cultural, economic and political factors. The results of this study confirmed that international doctoral candidates' social media use is shaped by religious, professional status, social status and cultural upbringing. International doctoral candidates were highly concerned about the imagined audiences of some of their social groups having access to their content. To negotiate these experiences, they engaged in practices such as self-censorship and compartmentalization to manage how they used social media.

Transnationalism

Vertovec (1999) conceptualization of transnationalism includes the suggestion that existing in a state of transnationalism includes 'as a social morphology, a type of consciousness, as a mode of cultural reproduction, as an avenue of capital, as a site for political engagement and as a reconstruction of "place" or locality.' These in-between spaces provide critical social contexts in which relationships, integration, imagination and identity work take place. The result of this study aligned with transnationalism that in these spaces between home and abroad, international doctoral candidates develop a type of consciousness and way of thinking. Through self-reflexivity and agency, international doctoral candidates curate relationships and networks on social media that transcends their location. In transnational spaces, the imagination informs the trajectory of ordinary people in various ways, allowing them to

believe in the possibility of shaping their stance in society. For example, they might “consider migration, resist state violence, seek social redress, and design new forms of civic association and collaboration, often across national boundaries” (Appadurai, 2000, p.6). The international doctoral candidates in this study seemed to proactively imagine their future career goals based on the network. The network society and transnationalism are closely intertwined in this study. The use of social media by international doctoral candidates functions as the ‘social glue of transnationalism’ (Vertovec, 2009). Social media creates space for candidates to engage in the cross- border networks building system of relationships, ties, connection, and mobility that digitally spans across the world.

5.6 Conclusion

The main findings of this study have shown that international doctoral candidates appeared to be supporting the development of professional identity through belonging, strategic networking, mentoring, and professional branding on social media. Negotiating social media between cross-cultural communities led to complex issues of privacy, content collapse, imagined audience, and collective pressure. These issues were alleviated through compartmentalisation and controlling the online narrative.

The findings also highlighted the self-directed approach to social media through self-reflexivity, agency, and imagined-selves as motivating factors in developing their professional identity in online social spaces. International doctoral candidates demonstrated a favourable approach towards immersion

and engagement in social media as a transnational space in which borders, identities, and notions of imagination become more fluid.

In addition, data from the research revealed the variations in the adequacy of support that international doctoral candidates receive in enculturating into their university programmes. There were also variations in terms of the cultural intelligence and understanding the candidates received from their supervisors that would support their doctoral study. A lack of support is likely to make progress even more complicated and frustrating for international doctoral candidates. This is because, as part of socialisation into doctoral education, support and relational connections are vital to learning the skills, practices, behaviours, attitudes, and identity of academia.

In this chapter, the main findings of the research were discussed considering the research aims, the literature review, and the contextual factors of social media. International doctoral candidates used social media in various ways to develop their professional identity and to shape their professional image, which would, they believed, ultimately have an impact on their future goals.

This chapter has discussed the complexities associated with international doctoral candidates developing their professional identity within the context of the study. The first section of this chapter discussed how and why international doctoral candidates used social media to develop their professional identity. The relevant factors were: belonging, mentoring, strategic networking, and personal and professional branding. The second section of the chapter discussed the challenges of negotiating personal and professional identities on social media. The final section discussed how international doctoral

candidates could mitigate the tensions they faced on social media. Next, the conclusion chapter of this thesis will outline the limitations and contributions of the study and recommendations for future research.

Chapter 6 Conclusion and Recommendations

This final chapter concludes the thesis by assessing the implications and limitations of the study, by providing recommendations for future research, and by sharing some final thoughts.

6.1 Limitations of the Study

This study is subject to several limitations that are highlighted in this section.

Firstly, the results of this research cannot be generalised to the entire target population of the study, like that of a quantitative investigation. However, this study was exploratory, given the current under-researched status of the research topic. Therefore, this study's focus on providing an in-depth understanding of the phenomenon is justified. To support this, the findings have been cross-checked through methodological triangulation and further matched with an iterative literature review.

In addition, time limitation resulted in a small sample size of the population (i.e., seven international doctoral candidates from various academic institutions in the UK). However, this size of the population allowed for collecting rich and in-depth data from online observation of current social media, archived social media data, and two rounds of interviews. This resulted in a rich, in-depth understanding of the seven international doctoral candidates' experiences.

Given that the study utilised a digital ethnography methodology, observations of participants in the field were more efficient. Collecting data in a digital space resulted in overcoming the temporal and spatial barriers typically found in

traditional ethnography. Therefore, access to data was available without the time constraints of having to travel to the field location. In addition, Skype was used for most of the interviews due to most of the participants being geographically distant.

6.2 Contributions of the Study

The limitations above notwithstanding, the current study represents a contribution to the existing literature on digital technology use in doctoral education. Over the years, the use of social media in the lives of international learners has attracted considerable research interest but, hitherto, most studies have investigated the experiences of international undergraduate learners. Using the concepts of transnationalism and networked society this study contributes an in-depth understanding of international doctoral candidates' experiences use of social media as a transnational space to as they engage in the cross-cultural spaces they inhabit in their personal and professional lives. It highlights the ways social media can be used in doctoral education to help support doctoral candidates' professionalism.

This work highlights the formal and informal relationships, inside and outside of academia, that are vital to the development of international doctoral candidates' senses of self as they advance through the doctoral process. In addition, it has determined that professional identity is felt in 'ebbs and flow': sometimes it is there and sometimes it is not. In the case of international doctoral candidates, they felt it especially in moments when they felt confident in social media. Thus, the findings of this study give voice to the experiences and practices of international doctoral candidates' professional identity

development on social media, how they navigate these spaces, the challenges they face and how they mitigate these issues.

6.3 Implications for Practice

International doctoral candidates in the UK consists of approximately half of the doctoral student body population. As universities continue to attract international learners, it is evident that international doctoral candidates endure a transitional experience that permeates beyond academic work and into all areas of their lives. The overall findings of this study indicate that international doctoral candidates' use of social media to support their professional identity is influenced by their self-reflexivity, agency, and imagined-selves. Based on these findings, I have several recommendations for higher education, and doctoral programmes to address the needs of international doctoral candidates and support their professional identity development.

- According to the research on the pedagogy of doctoral education, success in completion requires a level of self-direction and agency. Although international doctoral candidates have a strong sense of agency towards their use of social media to create spaces for connection and development, they are less confident and trusting in their approach towards taking initiative in their on-campus practices. The data showed an overwhelming surprise towards just how independent doctoral study can be and the challenges associated. This indicates that there is a need to foster trust, celebrate success and maintain motivation.

- The functionalities of social media are efficient in supporting doctoral candidates' professional identity. The findings of this study show that social media needs to be considered a legitimate and valued space for learning and professional identity development in doctoral education. Although international doctoral candidates were avid users of social media and in part relied on it for maintaining their personal relationships, the data showed that social media was also integral to their academic development. The step taken towards these opportunities should encourage and include the use of social media as a valued way of learning in addition to face-to-face engagement.
- There is a need for graduate education to shift focus from the acquisition of skills and competencies and more towards an approach of growth and development of doctoral candidates as whole beings. The data shows that international doctoral candidates felt a disconnect with superiors and faculty on campus and felt that they were viewed as a homogenous group. Taking on an approach of growth and development would require more staff and faculty to develop cultural sensitivity when designing practices for international doctoral candidates.

6.4 Recommendations for Further Research

There is much more to learn about international doctoral candidates' professional identity and social media practices. There are three recommendations for further research that would help to address some of the limitations of this study.

First, future research should explore international doctoral candidates' social media mentoring relationships and their impact on their professional identity. For example, in this study, the international doctoral candidates discussed their need to reach out to leaders in their field and other academic peers for guidance. Mentoring is an important facet of professional identity, so further studies that focus closely on mentoring on social media would be valuable.

Secondly, the research questions of this study could be extended to cover new but closely related issues to deepen scholarly understanding of digital technology in doctoral education. For example, research should focus on the use of social media by other underrepresented populations such as part-time doctoral candidates and candidates with children.

Thirdly, further research should make use of different methodological approaches, such as comparative research to contrast international doctoral candidates with home candidates in terms of their experiences and practices of digital technology in doctoral education. Additionally, a mixed-methods approach would capture additional evidence and support for the findings of this study.

6.5 Conclusion

In raising the voices of international doctoral candidates in respect of their perceptions of continuing professional development, I have set out to develop 'intersubjectivity' (Usher, 1996). Throughout this project, I have maintained a 'self-reflexive' stance, being alert to how prejudices and allegiances might influence my practice (Usher, 1996). Thus, as argued by Usher, it is my view that 'far from being a distorting influence, [my] experience [was] ... an asset'.

This investigation, in essence, also explores my professional journey of learning and career development, through the narratives of 'fellow doctoral candidates', those who participate in the research, their journeys and constructions. Thus, through undertaking this work, I have furthered my understanding and interpretation of my personal learning trajectory. I have found, as Scott states, that 'educational research is itself educational. The researcher is as much a learner as those who form the subject matter of the research' (Scott 2000, p.2).

'Almost all good writing begins with terrible first efforts. You need to start somewhere'

— Anne Lamott, *Bird by Bird: Some Instructions on Writing and Life*

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List of Abbreviations

AI:	Artificial Intelligence
CMC:	Computer-Mediated Communication
CoP:	Communities of Practice
DCT:	Digital Communication Technology
FOMO:	Fear of Missing Out
KBE:	The Knowledge-Based Economy
MOOCs:	Massive Open Online Courses
NPS:	Networked Participatory Scholarship
OECD:	Organisation for Economic Co-operation and Development
RSS:	Really Simple Syndication
SM:	Social Media
SMS:	Short Message Service
STEM:	Science, Technology, Engineering, and Mathematics

Appendices

APPENDIX 1: Ethics Review Approval

Research and Innovation Service
Level 11, Worsley Building
University of Leeds
Leeds, LS2 9NL
Tel: 0113 343 4873



UNIVERSITY OF LEEDS

Email: ResearchEthics@leeds.ac.uk

Tracey Flax
School of Education
University of Leeds
Leeds, LS2 9JT

**ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee
University of Leeds**

14 February 2016

Dear Tracey

Title of study: **The Flow Between Spaces: Social Media, Education and Instant Gratification Culture**

Ethics reference: **AREA 16-058**

I am pleased to inform you that the above research application has been reviewed by the ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee and following receipt of your response to the Committee's initial comments, I can confirm a favourable ethical opinion as of the date of this letter. The following documentation was considered:

Document	Version	Date
AREA 16-058 Ethical_Review_Form_TNF (2).doc	1	01/12/16
AREA 16-058 (Response 1) Ethical_Review_Form_TNF (amended).doc	2	31/01/2017

Committee members made the following comments about your application:

- We would pass on the suggestion to review the information sheet for participants again. We would suggest that you look at the length, and language. Can it be made more straightforward and less technical?

Please notify the committee if you intend to make any amendments to the information in your ethics application as submitted at date of this approval as all changes must receive ethical approval prior to implementation. The amendment form is available at <http://ris.leeds.ac.uk/EthicsAmendment>.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited. There is a checklist listing examples of documents to be kept which is available at <http://ris.leeds.ac.uk/EthicsAudits>.

We welcome feedback on your experience of the ethical review process and suggestions for improvement. Please email any comments to ResearchEthics@leeds.ac.uk.

Yours sincerely

Victoria Butterworth
Research Ethics Administrator, Research & Innovation Service
On behalf of Dr Kahryn Hughes, Chair, [AREA Faculty Research Ethics Committee](#)

APPENDIX 2: Participants Information



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INFORMATION SHEET FOR PARTICIPANTS

Ethics Reference Number: (AREA 16-058)

The Flow Between Spaces: Doctoral Study, Identity and Social Media

1. What is the purpose of the study?

This study uses a multi-modal digital ethnography approach to explore the experiences of international doctoral candidates' use of social media. The study will focus on the management and development of doctoral candidates' identity (professional and personal), their sense of belonging and how these experiences are influenced by their experiences as international scholars living in the United Kingdom.

2. What will you have to do if you agree to take part?

1. You will be asked to sign a consent form and return it to the researcher.
2. We will arrange an initial meeting (Skype or face-2-face) at a time and location that is convenient for you.
3. **Observations:** Observation of your social media use will involve the following formats:
 - a. I will request to join your social media networks and observe your social media behaviour for four weeks.

This observation will focus on viewing your social media communication, profile pages, and any text, images or videos posted. I will take snapshots of selected data that relates to the research objectives. These visual snapshots of data will be used to gain an understanding of your social media behaviours and practices. This data will also be used in the face-2-face interviews phase to elicit discussions to gain a deeper understanding of your social media use. During the publication of any articles or conference presentations, all facial images and personal information obtained in these visual snapshots will be pixelated or burred to protect the identity of participants and any other individuals involved.

4. **Interviews:** There will be a total of two interviews (one initial and one follow-up) held via (Skype or face-2-face) at a time and location that is convenient for you. Interviews will last no longer than one hour each. Each Interview will be semi-structured in nature with open-ended

questions relating to the research topic and follow-up questions based on data obtained from observation periods. All interviews will be audio recorded for the purpose of capturing an accurate summary of the interview.

5. Are there any possible risks from participation in this study?

There are no known risks or disadvantages of taking part, as the researcher will strive to protect your confidentiality and anonymity at all times.

7. What if I change my mind during or after the study?

You are free to withdraw your consent to participate without an explanation of up to a month after the last data collection contact.

8. What happens at the conclusion of the study?

The results of the research will be published in the form of a dissertation. In addition, results will be published in peer-reviewed journals, academic conferences, and other publications.

10. How will my confidentiality and anonymity be maintained?

All information obtained will be anonymised to ensure the confidentiality and anonymity of participants in the publication or dissemination of any findings from this research. In the event that social media observation data such as images or screenshots are used during publications or conference presentations, all facial images and personal information will be pixelated or blurred to protect the identity of participants and individuals involved. All raw data will be held by the University of Leeds, School of Education, for a period of ten (10) years from the publication of the study results, and will then be securely destroyed. All data will be accessed only by the researcher.

11. Who do I contact if I have questions about this study?

Contact details are:

Researcher: Tracey. N. Flax
Tel: 0755 2200 787
Email: ed13tnf@leeds.ac.uk

Supervisor: Dr Aisha Walker
Tel: 0113 3434 633
Email: S.A.Walker@leeds.ac.uk

APPENDIX 3: Participants' Consent Form



UNIVERSITY OF LEEDS

PARTICIPANT CONSENT FORM

Consent to take part in:

The Flow Between Spaces: Doctoral Study, Identity and Social Media

Please initial the statements you agree with and sign at the bottom	
I confirm that I have read and understood the information sheet explaining the above research project and I have had the opportunity to ask questions about the project.	
I understand that my data will be stored securely and confidentially and that I will not be identifiable in any reports or publications.	
I understand that the researcher may wish to publish this study and any results found, for which I give my permission.	
I understand that the research will involve: online observations and interviews.	
I agree with my interviews to be audio-recorded and for the data to be used for the purpose of this study.	
I understand that you will be discussing the progress of your research with others at the University of Leeds.	
I understand that my participation is voluntary and that I am free to withdraw from the study up to a month after the last data collection contact.	
I agree to take part in the above research project and will inform the lead researcher should my contact details change.	

Name of participant	
Date	
Participant signature	
Name of researcher	Tracey N. Flax

APPENDIX 4: Interview 1 Schedule

Research Question	Interview Questions
<p style="text-align: center;">RQ1: How is social media being used by international doctoral candidates to support professional identity development?</p> <p style="text-align: center;">RQ2. What issues (if any) do international doctoral candidates encounter between performing their personal and professional selves on social media?</p> <p style="text-align: center;">RQ3. How do international doctoral candidates negotiate identity tensions on social media?</p>	<p>Key Interview Questions:</p> <ol style="list-style-type: none"> 1. Tell me about your use of social media? Which sites do you use and for what purpose? 2. Do you have “social media routines” (using a certain time of the day...) how many hours a day? 3. How is your use of social media different from starting your doctoral degree? 4. How do you use social media for your research work? (What type of content do you share?) 5. Do you perceive any benefits of using social media while in doctoral study? Why/Why not? 6. How do you view the difference between your personal and professional use of social media? 7. Do you experience any challenges with using social media? If yes/no why? Explain the issues you encounter? 8. How much do you think about your role as a doctoral candidate when you are on social media? 9. How much do you think about who is viewing your content? 10. What was the most challenging issue for you?

APPENDIX 5: Interview 2 Schedule

Interview-Plus Protocol

Date: _____

Interviewee (Title and Name): _____

Interviewer: _____

Interview-Plus Overview

Introductory Protocol

In order to ensure proper documentation, I would once again like to record our conversation today. Here is another release form and if you have any questions or hesitation about the study please let me know. I will record this session and after transcription will keep all files in a password protected file so that I meet the Institutional Review Board protocols.

This document states that your participation today is voluntary, all your information will be kept confidential, and that if you wish you may drop out at any time. The interview should take no more than 20 minutes. I have a list of several questions to ask you about some of your posts and if we run out of time I may interrupt you in order to complete the remaining questions.

Introduction

I have now followed your social media sites for the past semester and have several questions about the themes that I found in your posts. Once again, my research project focuses on the experience of international doctoral candidates' use of social media to support their professional identity development.

The extracts I have for you today represent what I believe to be your social media practices regarding your identity, community, and social life at the school. I am still keeping all of your information confidential and have learned a lot about your social media practices over the last several weeks.

1. Probing Questions about Social Media Extracts:
2. Why did you post this (these) picture(s), video(s), link(s)?
3. Why and when did you connect with this person on social media?
4. Did you talk more in English or Korean speakers when you messaged others?
5. Why did you (did you not) follow this school organization on social media? Did you prefer connecting using Facebook or Kakao Talk? Why? What about English speakers who don't have access to social media?
6. Why did you post more about your social life than school life?
7. Why did you post more about school and academics than your personal life?
8. Why did you post this very personal picture/video/comment?
9. Why did you respond in Korean when the person wrote in English?
10. Why did you post in English when the person wrote in Korean?

APPENDIX 6: Pilot Study Report

Pilot Study Report

Aims of the pilot study

The pilot study was conducted to test the proposed research design of the main study. Piloting the study would afford an opportunity to identify any potential issues with the design of the research instrument. This will effectively allow for any refinements and adjustments of the design before the commencement of the main study. In addition, piloting would help me to gain some familiarity with using the data collection methods and tools and a chance to consider if the data produced would answer the research questions outlined. The pilot study conducted included the recruitment of participants, online observation of their social media sites, semi-structured interviews, testing of the tools, data analysis and self-reflection.

Pilot study methodology

Three University of Leeds PGR students were recruited for the pilot study. Though the main study focuses on undergraduate students, I felt the research process could be equally trailed well with postgraduate students. Online observation of participants' social media sites was conducted for three consecutive days before the scheduled interviews. The semi-structured interviews were conducted at the School of Education Hillary Place with each interview lasting approximately 1 to 1.5 hrs. Additional observation data of participants' social media use on their mobile phones were collected during the interview process. Interviews were audio-recorded, transcribed and analysis was completed with the use of NVivo 11 software.

A brief discussion of pilot study findings

Data collected from observations and interviews were transcribed and then transferred into NVivo software to help with the data analysis process. Some of the key findings are outlined below.

Mobile Technology

Mobile technology specifically mobile phones are at the heart of the everyday lives of students and their social media experiences. As this group of PGR students told me, their mobiles are in constant use from waking up in the morning to going to sleep at night. The majority of this activity is based on the use of social media. The ritualistic checking of their social media apps first

thing in the morning, lastly at night and all throughout the day hints at the profound bonds people have with the combination of these two technologies. As one of the participants puts it, 'My phone is my social media. I rarely use it for anything else but social media'. Another said, 'With apps like Facebook and WhatsApp on my phone, I feel always close to my family and friends. In a different way than with a phone call. Like if one of my friends thinks on a quick joke, I can know immediately, even if I am in a meeting or class. There is no wait for a good time to call. I am always available in a way.' The constant connectivity provided through mobile phones has decreased and blurred the lines of the idea of being online and offline. People don't feel the need to go online because there is this feeling that they are already online. One participant said 'the only time I think about anything to do with offline is if I am in an area where the signal is weak or there is no Wi-Fi'. The idea of being connected in different ways to the various social groups in the lives of the participants is highly dependent on the use of their mobile phones. Observing their mobile phone interface showed that through instant notifications they can always know what is happening in their networks wherever they are and this is an important aspect of how they view being connected.

The attractiveness of intimate social groups

When using social media messaging apps like Snapchat and WhatsApp participants seemed to feel more at ease with being themselves. The participants expressed that they felt more of a real-life connection to their smaller list of followers while using these apps. Snapchat was especially very popular in that it allows for a space for users to curate stories and share their life experiences with the people whom they feel closest too. It was evident in this pilot study that there is a shift from more popular apps like Facebook and Instagram. Identity and how they are perceived is very important to these participants. It was expressed that on sites like Facebook and Instagram you are always considering how you will be perceived based on the content you share. As one participant states 'I like using Facebook, but I feel like I have to be a certain way with the things I post. The people in my network are family members, friends, past students, political figures, religious people, etc. so some things I want to post that are for example a bit harsh or funny, I think some of these people would be shocked to see me posting it'. This is not such an issue on Snapchat because participants 'followers' list is deliberately formed of people within their intimate social groups with whom they feel already know them in a truer more intimate way.

In addition, Snapchat provides instant connectivity to the content users want to see from the people they want to see it from. Once notified of new content, users have to view it before it self-destructs within hours of being posted. This function seemed to satisfy the participants' need for instant connection with their close friends and family. As one participant puts it 'Snapchat is addictive because I always want to check up on what my friends have posted as soon as they snap it, I want to see it especially my friends back in my home country'. When asked why it was so much more important to see from friends back home, he responded 'it makes me feel like I am right there in a way when it is happening at the same time'.

Shifting ideas of information and knowledge

Considering all of the participants in the pilot study are PGR students, it was interesting to learn how they used social media in regards to learning. While social media is limited in use in a formal sense in their academic experiences, the participants shared that social media has helped to enhance their learning in an informal way. Using special interest group chats, following other researchers on social media, using YouTube videos to help clarify concepts and reading blog posts are some of the ways the participants shared how they use social media in a self-directed way to learn. They are also using social media to share their ideas and knowledge to people within their network. One participant posted several videos of her doing book reviews connected to her area of study. I observed that on her Facebook page these videos got many likes and were shared by others in her network. When asked about this she stated 'I find myself using Facebook allot more now to share my views and ideas about teaching in my country. I have other colleagues and also parents that are friends or follow me and they are interested in what I have to say. They encourage me because they enjoy learning from my reviews and discussions on these topics'. Another participant talked about using YouTube in his academic experience 'I can't tell how many times I have had to use YouTube to help me understand concepts that I have read about on modules or while researching. YouTube videos are so very helpful to my experience as a student. I have actually thought about starting to make my own videos so that I can maybe do the same to share content in areas where I feel confident and maybe be able to help other students where they are confused and need help with learning concepts that are hard to understand'.

Reflection on the pilot study

REFLECTIONS	LESSONS LEARNT
<p>Recruitment: I approached a total of four persons to participate in the pilot study. I sent each person a short outline of the aims of the study and the process of the pilot study. All four of the persons approached agreed to participate in the pilot study. However, at the time of the study, only three were available.</p>	<ul style="list-style-type: none"> • Recruitment for the pilot study was fairly easy. However, I think it will be important to make sure the information sheet sent to interested participants for the main study clearly states the dates of the study to ensure participants are aware of this information and the dates they will need to be available for the study.
<p>Data Collection Tools</p> <p>Online Observation: A friend request was sent to all volunteers to be added to their networks. Observation of their most actively used sites was done for three days. It was easy to access and capture archived data from platforms such as Facebook and Instagram. It was more challenging to collect data from 'disappearing messages' apps such as Snapchat.</p>	<ul style="list-style-type: none"> • I will need to make sure I understand the functionalities of the SM sites I will be observing before the observation phase starts. • Some social media sites such as Snapchat do not create an accessible archive of the post so it will be important to set notifications for when participants post to access the data. • I will have to be prepared to take 'field notes' of the data as it is only accessible for a certain amount of hours before it is automatically deleted from the site.
<p>Interviews: Interviews were held in a quiet space at Hillary Place. The length of the interviews ranged between approximately 1 hr and 1.5 hrs. The interviews flowed well and participants were very open and at ease answering the questions. However, I realised that interviews can be challenging in that they must be controlled to a point so that the necessary data is collected.</p>	<ul style="list-style-type: none"> • I will need to learn how to better develop my Interviews skills • Areas such as avoiding the interviews running off into unnecessary topic areas. • Allowing for adequate time for participants to answer the question before prompting. • Being adequately prepared to provide any clarification for ambiguity in any of the questions. <p>• I found that having the participants demonstrate some of their social media behaviours using their mobile devices during the interview to be an effective way to observe them in the experience. For example: using an archived picture of one of the participants' images that included the use of a 'flower crown' filter. The question was asked: <i>I: Can you tell me why you decided to use a filter?</i></p> <p>Using her mobile phone the participant opened her Snapchat app and demonstrated taking a selfie with the app with and without the filter. She proceeded to show me the difference and responded to the question by identifying her reasoning: <i>P: I just love filters I can't take snaps without filters they make me beautiful. Look it lightens my complexion and my eyes. Makes my nose thinner it makes me look flawless.</i></p>

	<p>I found that exchange to be a great prompt to delve into more questions about social media and identity.</p> <p>However, I will need to consider more effective ways of capturing that data.</p>
<p>Interview Topic Guide: I created a topic guide with questions and probes to help guide the interview to flow naturally.</p>	<ul style="list-style-type: none"> • After the first interview, I examined the taped recording to examine whether the participant was responding to the questions adequately and made a few adjustments to some questions that I thought could be more open-ended. And in addition, there were a few questions that were very similar and gained repetitive data so those were edit and/or removed.
<p>Tools used: Digital tape recorder, tablet to access observation notes.</p>	<ul style="list-style-type: none"> • Transcribing data is very time-consuming so it would be best practice to transcribe as the interviews are finished.
<p>Data analysis: NVivo 11 software was used in the data analysis process.</p>	<ul style="list-style-type: none"> • More training and practice is needed in using the NVivo software.