The theory of mitigating risk:
Information literacy and language-learning in transition
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This qualitative study explores the information literacy practices of students who were learning a language overseas as part of their undergraduate degree. Constructivist grounded theory and situational analysis were used to examine the information activities of 26 English-speakers from Australia, Canada, the United States and the United Kingdom. Students were learning one of eight languages in 14 different American, Asian and European countries for a period of between four and 12 months overseas. Semi-structured interviews and photo-elicitation method were used to give each participant the opportunity to present an explanatory narrative of their time overseas and to explicate nuanced and contextual information that is hard to verbalise. The study is informed by a theoretical framework that includes practice theory and transitions theory.

The theory of mitigating risk emerges from the study’s analysis and provides a rich explanation of how an engagement with information supports language-student transition to new and culturally unfamiliar information environments. The theory illustrates how academic, physical and financial stress that is produced through participation within a new setting catalyses the enactment of information literacy practices that subsequently mediate student transition from acting like a language-learner to becoming a language-learner during their time overseas. From an educational perspective, the theory of mitigating risk broadens understanding about the shape that information literacy takes within transition to a new intercultural context while setting the scene for the design of educational interventions that recognise the fluid and generative possibilities of this period. From a broader social perspective, the theory of mitigating risk contributes to research that explores how businesses and communities can respond to and prepare for increasingly flexible global movement.
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moves the focus of student information activities from academic regulations to an emphasis on transition, which refers to the creation of a ‘sustainable fit’ (Hvid & Zittoun, 2008, p.123) within a new context. This question also leads to an interrogation of the role that information literacy, which refers to a ‘way of knowing the many environments that constitute an individual’s being in the world’ (Lloyd, 2007a, p.182), plays in structuring this period of change and upheaval. Centring attention on how transition is constrained and enabled as well as the ways in which students reshape their language-learning identity within a new setting, these questions will form the guiding focus of the study, which reframes residence abroad as an information problem rather than purely as a language-learning issue.

In responding to these questions, the research introduces the theory of mitigating risk, which provides a rich explanation of the ways in which student engagement with information helps them to mediate their transition into culturally unfamiliar contexts. The theory of mitigating risk illustrates how academic, financial and physical stress that is produced through student engagement overseas catalyses the enactment of information literacy practices that mediate student transition from acting like a language-learner to becoming a language-learner within the structure of their new setting. The theory subsequently positions transition as a period of transformative change while further drawing attention to the complex dynamics of this time.

The chapter situates the research by establishing the background for the study as well as the research aim and questions. An overview of the significance of the study and the thesis structure concludes the chapter.

1.1 Research problem and background

The research explores the information literacy practices of language-students who are engaging in work or study abroad as part of their undergraduate degree. Residence abroad is often interpreted as a highlight of the modern language degree, a chance to connect the classroom with ‘authentic’ activity. Yet, despite the acknowledgement that language-learning during this time is intricately linked to the development and modification of knowledge (Lantolf & Thorne, 2006, p.5), the role that information plays in helping students to mediate these changes in educational circumstances has rarely been considered. Insights from the research provide practical advice for educators working with students within intercultural settings, which refer to contexts where people from different cultures interact (Baldwin & Hunt, 2002).

In focusing on student relocation, the research draws attention to the concept of transition. Transition has not been addressed in great detail within information literacy research, despite the centrality of change and development to the field. However, given the changing nature and increased insecurity of the workplace as well as the continued need to migrate or to seek sanctuary, there is a growing call to address how individuals rebuild understanding within new information environments. Linked to questions of social and digital inclusion as well as to resettlement issues (Lloyd, Kennan, Thompson & Qayyum, 2013), transition is also increasingly important within a variety of everyday and academic scenarios as the practices that hold social life together unfold (Schatzki, 2002, p.72) and new inter-disciplinary traditions that depend upon indigenous or transnational ways of knowing emerge (Fenwick, 2013, p.356). In providing detailed insight into how language-students construct meaning within a new social and material environment, the research has a number of implications for thinking about transition within academic and everyday settings, including in the workplace as well as in relation to an individual’s health and wellbeing.

Residence abroad forms a major component of undergraduate modern language study. More commonly known as the ‘Year Abroad’ in the United Kingdom and ‘Study Abroad’ or ‘International Exchange’ in the United States, Australia and Canada, residence abroad programmes tend to last from six weeks to a year and encompass academic, workplace and volunteer opportunities (Coleman, 1997). These interludes, which are distinguished from general study abroad and European Union Erasmus programmes by the focus on language-learning, are driven by assumptions that a period of time overseas will improve language proficiency due to “the sheer number of hours students spend simply exposed” (Pellegrino-Aveni, 1998, p.96) to the target language and culture. In this respect, language is understood to form an “ever occurring part of the social experience of life” (Gilhooly & Lee, 2014, p.389) and language-learning is recognised as occurring through a person’s participation within sociocultural contexts rather than in isolation from a community’s activities. These ideas also position language-learning as a complex process of meaning-making that forms an integral part of a person’s construction of self and subjectivity (Kramsch, 2009, p.2).

Social and educational interest in residence abroad arises from the move to internationalise higher education, as well as in response to the growth of multicultural societies. Internationalisation, which refers to the incorporation of “global perspectives into teaching, learning, and research” (American Council on Education, 2012, p.3), is of increasing importance on higher education campuses (Ryan & Tilbury, 2013). While it is not
a new concept, an upsurge in travel opportunities as well as advances in communication technologies mean that ideas, students and scholars are increasingly mobile (Hudzik, 2011). Societies, too, are growing more diverse and multicultural. 60 million people (21%) in the U.S. (U.S. Census Bureau, 2013) and 4.2 million people (8%) in the U.K. (Office for National Statistics, 2011) speak a first language that is not English. Increasing rates of transnational movement, whether for political, economic or environmental reasons, mean that roughly 200 million people live outside their country of birth (Canagarajah, 2010, p.483). The growth in global commerce means that many more people work within international teams, for international companies or under international conventions and agreements (Hudzik, 2011, p.7). As a fluidity of language and culture becomes increasingly common within society (Canagarajah, 2005, p.xxiii), interest in how English-speakers adjust to non-English language contexts is important on educational, social and industry levels.

Information plays a key role in structuring the ways in which people build meaning within these new contexts. A complex concept, information has a number of different meanings depending on the context and the research approach through which it is theorised (e.g. Bates, 2006; Buckland, 1991). The everyday focus of overseas language-learning as well as the emphasis on the ways in which students make meaning within their new context means that the study will draw upon the work of Bateson (1972, p.459) who uses ecological theory to define information as “any difference which makes a difference.” Bateson’s definition, which echoes Case and Given’s (2016, p.6) recognition that information can be “any difference you perceive in your environment or within yourself”, positions information as constituted by whatever differences are perceived as meaningful by language-students as well as by their recognition of what difference this makes to their understanding of residence abroad. This definition of information further highlights that while information can be both tangible and intangible, it must always be recognised as subjective and situated rather than as forming an objective entity (Bateson, 1972, p.458). While this understanding of information may seem very broad, Bateson’s definition is expansive enough to align with the purposes and structure of the study while also resonating with both Bates’ (2006, p.1033-1034) and Buckland’s (1991, p.357) acknowledgement that almost anything can be understood as informative.

More specifically, the study recognises that language-students are engaging in new information environments, which are constituted by the “stable and established knowledge domains of a social site” (Lloyd, 2017, p.94). Shaped and constituted by a broad range of information resources, information environment is thereby used in the research to refer to the extent of potential information sources with which students could engage while they are overseas. As students start to interact with and draw upon these local ways of knowing, they start to build their information landscapes, which are defined as “intersubjectively created spaces that have resulted from human interaction, in which information is created and shared and eventually sediments as knowledge” (Lloyd, 2010a, p.9). Shaped by a person’s increasingly situated understandings of the forms of information that reflect these stable sites of knowledge (Lloyd, 2017, p.94), information landscape is consequently used in the study to refer to the sources of information that are recognised as valued and relevant by students.

In turn, language-students construct their information landscapes through the enactment of information literacy practices. Information literacy has been interpreted in many different ways (see 2.2) but is most simply understood as focused upon the interactions between learning, information and knowledge. In framing information literacy as a practice, the study purposefully builds upon these understandings to centre attention on the broader social context in which language-students find themselves as well as the material and embodied ways in which they develop connections to the information sources that are legitimised within a setting (Lloyd, 2011). Drawing upon practice theory (see 3.5), the positioning of information literacy as a practice facilitates a complex understanding of its shape within contested and complex social settings as well as its centrality to social life.

The emphasis on the production of shared understandings also focuses attention upon information activities that, from a practice theoretical perspective, combine or hang together (cf. Schatzki, 1996, p.188) to constitute information literacy practice. Comprising socially organised ways of doing things (Lloyd, 2010a, p.171), information activities refer, in the study, to the ways in which information is created, valued and organised within a specific context (Bonner & Lloyd, 2011, p.1218). A focus on activity emphasises how information literacy is shaped rather than how it is achieved as well as illustrating the purposeful role that students play in mediating their new information environments.

The focus on human development further foregrounds the idea of transition. Transition is another deceptively complex concept that has traditionally referred to a passage from one life phase, place or situation to another (Schumacher, Jones & Meleis, 1999, p.2). Within the study, transition could thereby refer to students’ physical moves from the language classroom to the language community, which is an event that brings the need for a new set of information activities. More subtly, however, and from a sociocultural perspective
transition centres on how learners build meaning within a new context or engage in processes of re-equilibration and restoration (Hviid & Zittoun, 2008, p.123). Seen in this way, transition becomes focused upon the ways in which language-students build what Wenger (1998, p.56) refers to as an “identity of participation” within their new setting. At the same time, the recognition that students build this sense of self and identity in relation to the shared meanings of a community highlights how student subjectivity is constituted through intersubjective understandings of practice rather than uniquely through a person’s self-determining agency (Fenwick, 2013, p.359). Accordingly, the study positions transition as mediated through language-students’ increasingly knowledgeable participation in the information environments of their new community (c.f. Rogoff, 2003).

1.2 Research aim and questions

1.2.1 Research aim
The aim of the study, which will be achieved through outlining and analysing the information activities in which students engage, is to develop knowledge about language-student information literacy practices during residence abroad. Situated within an interpretivist framework, the research is informed by a theoretical framework that includes practice theory and transitions theory and applies constructivist grounded theory as a method of inquiry.

1.2.2 Research questions
The research aim is addressed through two major research questions as well as several sub-questions, which are listed below:

1. How do language-students enact information literacy practices during residence abroad?
   a. What shapes language-student information landscapes within a new setting?
   b. What role do information literacy practices play during students’ intensive periods of language-learning abroad?
2. How do language-students make sense of, transition into and come to know their new information landscapes?
   a. What enables and constrains the ways in which language-students construct their information landscapes?
   b. In what ways does the enactment of information literacy practices shape language-student subjectivity?

These research questions, which serve to both focus and guide the study, were designed to provide qualitative insight into how English-speaking language-learners engage with and mediate their stay overseas. Given the sociocultural emphasis of the study, the first question centres more specifically on exploring the shape that students’ information literacy practices take within residence abroad. Its sub-questions are designed to examine these practices in more detail, including how students establish meaning from the ways in which they engage with information as well as the ensuing impact on student immersion within their target language and context. The second research question explicitly spotlights the question of transition and how students mediate the changes and upheavals of this time. Its sub-questions aim to unpack the broader shape of these transitional processes, including the influences that the social structures of a community have on student activity during this period as well as on the subsequent shaping of their language-learning identity.

1.3 Significance of the study
The study develops research within library and information science by broadening understandings of both the shape that information literacy practices take within a time of transition and the role they play in helping to mediate complex processes of change. The study’s focus on addressing international educational imperatives that are related to the increasingly globalised nature of campus means that it also contributes to the field of second-language acquisition and international education as well as demonstrating broader societal relevance.

From an information literacy perspective, the study advances theory by expanding the scope of research within intercultural contexts. Existing information literacy research (see, for example, Peters, 2010) has tended to focus almost exclusively on the activities of international students, refugees and immigrants within English-speaking countries, which means that the topic has become inextricably tied up with political questions of assimilation and socialisation. The research extends knowledge of intercultural information activities (cf. Bruce, Somerville, Stoodley & Partridge, 2013, p.225) by broadening research to examine the perspectives of English-speakers abroad. The emphasis on language-students further focuses attention on language, which tends to be perceived as a have/have not binary that must be internalised before a person can interact with the community rather than an ongoing process of meaning-making.

More generally, the study advances information literacy research by exploring the concept of transition in more detail. While transfer forms a common topic within information literacy research (e.g. Herring, 2011), transition has tended to form the context of research rather than the object of the study’s focus (e.g. Allard, 2015; Stutzman, 2011; Yeoman,
In extending theories of transition to information literacy research, the research provides a rich empirical picture of how people build understanding within new information environments, while further contributing to the ongoing theorisation of information literacy itself. The study’s detailed examination of how newcomers mediate transition to a culturally unfamiliar setting also has societal relevance. While acknowledging that a period of temporary residence abroad is very different from more permanent forced or economic migration, the emphasis on how people rebuild meaning overseas contributes to research that examines how international businesses as well as individual communities can respond to and prepare for changing global movement patterns.

From a practical perspective, the research will inform the provision of information literacy instruction and educational programming. As Cope and Kalantzis (2000, p.6) point out, the ability to deal with linguistic and cultural differences should be considered “central to the pragmatics of our working, civic and private lives” and the need to develop theories and educational opportunities that respond to the increasingly diverse nature of society provides evidence of both the importance of the study and the timeliness. At the same time, internationalisation is not just limited to the development of intercultural awareness. Instead, educators and organisations must also examine (and deconstruct) dominant pedagogical and societal frameworks that promote “singular worldviews” (Ryan & Tilbury, 2013, p.20). In other words, if librarians and the field of library and information science are to engage more than superficially with the internationalisation of higher education, there must be a detailed interrogation of existing educational practices and the values or traditions that are transmitted through them. The study provides a comparative perspective to existing research to facilitate an examination of current librarian practices and the implications of the beliefs that are embedded within these approaches. The need to submit information literacy practice to this type of examination provides further rationale for the research.

Lastly, from an international education perspective, the study offers new, qualitative knowledge about student activities during residence abroad. While some language-students find residence abroad to be enriching, others find it hard to adjust to the significant changes in role and status that they experience within a community, as well as to the practices of daily life (cf. Dockett & Perry, 2007, p.2). The intensity of these immersion experiences and the important role that they play within language-learning demonstrates the importance of understanding the perspectives of language-students as educators design meaningful learning opportunities for the future. The study will also be of interest to student exchange services and language education industries. Together, these industries form part of a market that has been valued at over $2 billion in the United States alone and which has recently been buoyed by a growth in student numbers, a recovering world economy and, in some settings, the implementation of residence abroad as a required component for graduation (Son, 2013; Witter, 2014). The study will help these companies to enhance their programming as well as staff training and support structures by providing a greater understanding of student activities during their time overseas.

1.4 Thesis structure
Following the introductory chapter, Chapter 2 sets the context for the study through an investigation of relevant literature. The review takes a thematic approach to examine how behaviourist, cognitive constructivist and social constructivist approaches to information literacy have characterised intercultural activities to date. Information behaviour literature that centres on intercultural contexts forms the secondary area of focus. The chapter concludes with a review of information-related studies from the field of second-language acquisition.

Chapter 3 outlines the study’s theoretical framework. The chapter begins by providing an overview of symbolic interactionism, which forms the ontological framing for the research, and constructionism, which provides its overarching epistemological structure. It then explores transitions theory and practice theory, which form two of the sensitising theories through which the findings of the study are analysed and explained.

Chapter 4 focuses on the research design of the study. The chapter starts by outlining the study’s constructivist grounded theory methodological framework, before presenting the interview and photo-elicitation research methods that were used to generate and collect data. It then summarises the constructivist grounded theory and situational analysis analytic methods that were employed concurrently with data generation and collection to explore findings from the research. The chapter finishes by demonstrating how credibility was ascertained and ethical standards were maintained in this qualitative study before reflecting on the limitations of this methodology.

Chapter 5 outlines the findings of the study. Examining how information literacy practices are made manifest during residence abroad, the chapter presents the two major categories and the overarching category that are produced through the grounded theory and
situational analysis of the study. The chapter starts by exploring the category of *Calibrating*, which is structured by four activities: sifting, observing, checking and noting. The chapter continues by exploring the category of *Repositioning*, which is constituted by the activities of: triaging, mediating and archiving. The chapter ends by sketching the overarching theme of *Mitigating Risk*, which forms the grounded theory of the study.

Chapter 6 explores the emergent theory of mitigating risk in relation to the theoretical framework as well as literature from within and outside of library and information science. The chapter starts by unpacking the theory of mitigating risk through risk theory and the theoretical constructs of uncertainty and time before using practice theory as well as the theoretical constructs of affordance and cognitive authority as a lens through which to examine how information literacy practices unfold during residence abroad. The chapter ends by using transitions theory to explore the complex processes of transition in which language-students are engaged while they are overseas.

Chapter 7 discusses the study’s research questions through the theory of mitigating risk. The chapter starts by exploring the theory of mitigating risk through the ways in which students establish meaning from information and mediate their immersion overseas to examine how information literacy practices are enacted during residence abroad. The second half of the chapter centres on transition with an emphasis on how social structures shape the ways in which students mediate change and the development of their language-learning identity.

Chapter 8 forms the conclusion of the study. The chapter examines the contributions of the research to library and information science as well as to language-learning research and transitions theory before outlining the recommendations of the study for librarians and second-language educators as well as for future areas of research.

Chapter 2: Literature review

2.1 Chapter overview

When people enter a new intercultural information environment they are faced with numerous challenges, including the need to access and interpret different forms of information as well as to build an understanding of the activities that will help them to develop knowing within a new context. Recognising the intensity of these experiences, researchers have employed a variety of research methods and paradigms to examine how adjustment to a new setting is mediated through a person’s engagement with information. The chapter reviews research that has been published within library and information science and second-language acquisition to situate the study. Literature related to the theoretical framework will be reviewed within Chapter 3.

2.2 Information literacy

Information literacy, which falls under what Bates (1999, p.1048) refers to as the social question within the field of Information Science or how people relate to, seek and use information, is a complex phenomenon that is further complicated by the array of understandings that scholars and librarians have used to conceptualise theory and practice in the field. Information literacy constitutes a field of research that centres on “theoretical understandings of information, learning and knowledge” (Limberg, Sundin & Talja, 2012, p.95) and is related to the areas of information behaviour (see 2.3), information seeking (Limberg & Sundin, 2006), and most recently, information practices (Lloyd, 2010b), rather than forming its own discipline. Within these parameters, information literacy has been interpreted through a variety of theoretical frames and research approaches, albeit typically implicitly rather than explicitly-defined (Lundh, Limberg & Lloyd, 2013), including phenomenographic, sociocultural or discourse analysis lenses (Limberg et al., 2012). The variety of theoretical approaches, which position information literacy as either a teaching or a learning object (Limberg et al., 2012, p.94), can further be summarised as taking either a professional practice approach, where information literacy is positioned as a goal for educational activity, or a research approach, where information literacy forms an object of study (Pilerot & Lindberg, 2011). The eclectic nature of research, which has framed information literacy in terms of its context or its materiality (Lloyd, 2017), as well as, most recently, through its pluralisation as both information literacies (Limberg et al., 2012) and
literacies of information (Lloyd, 2017), means that the field exists in a certain state of tension regarding both the shape and the purpose of information literacy.

The literature review builds upon various chronological surveys (Bawden, 2001; Bruce 1997; Rader, 2002; Virkus, 2003; Whitworth, 2014) to thematically examine how behaviourist, cognitive constructivist and social constructivist approaches to information literacy have characterised research within intercultural settings to date. This strategy, which focuses on the shape of information literacy rather than teaching interventions, facilitates a more complex understanding of the field.

2.2.1 Behaviourist approaches to information literacy

A behaviourist or functional approach to information literacy has most consistently distinguished studies of intercultural settings, particularly in the United States. A behaviourist approach, which emerges from attempts to explain, predict or control behaviour (Case & Given, 2016, p.179), as well as the idea that learning can be measured through behavioural change (Booth, 2011, p.38), characterises information literacy as either a series of fixed steps to be followed (e.g. Eisenberg & Berkowitz, 1990) or as a set of personal attributes (e.g. Doyle, 1994) and is generally exemplified through the various national standards and definitions of information literacy that have been developed since the 1980s (Association of College and Research Libraries (ACRL), 2000; Association of American Colleges and Universities (AACU), 2013; Australian and New Zealand Information Literacy Framework (ANZIL), 2004). These standardised definitions and measurements have helped to legitimise and popularise interest in the area by replacing the need to problematise situated understandings of information literacy and integrating information literacy into broader literacy studies research (Tuominen, Savolainen & Talja, 2005, p.331). However, the rigidity of this approach has led to an almost exclusive focus on instructional practice as well as a narrow understanding of information literacy within intercultural settings.

More specifically, studies of intercultural settings that employ a behaviourist perspective to information literacy have tended to either translate ‘universal’ or institutional conceptions of information literacy into the modern language classroom (e.g. Luly & Lenz, 2015; Nemchinova, 2014) or to assess individual behaviour, a perspective that is particularly common within studies of international students (e.g. Baron & Strout-Dapaz, 2001; DiMartino & Zoe, 2000). These studies, which position information literacy as either an ability to use the library or as a way to facilitate student acculturation into new academic environments, draw attention to the complexity of engagement within a new intercultural setting. However, the reluctance to engage with the shape that information literacy takes within an intercultural setting means that culturally hegemonic ideas, as illustrated by the Western values (Morrison, 2009) that are entrenched in the now rescinded Information Literacy Competency Standards for Higher Education (Standards) (ACRL, 2000), are embedded into understandings of information literacy. In turn, the presentation of information literacy as a single or fixed way of knowing (Morrison, 2009, p.39) marginalises alternative forms of literate knowledge (Street, 2003) and positions education as a way for international students to “rectify some aspect of a deficit that they have as a result of being from another culture” (Montgomery & McDowell, 2009, p.456) rather than forming an opportunity to engage with the questions of diversity that are valued in the mission statement of the ‘global’ university (Lillis & Scott, 2007, p.8).

This conception of information literacy is further limited by the methods that are employed in these studies, which, just as Church found in his 1982 survey of sojourner adjustment, still tend to rely on personal experiences (e.g. Badke, 2011; Giullian, 2009) or survey data (e.g. Baron & Strout-Dapaz, 2003; Bilal, 1989). While these approaches may establish correlation between ‘successful’ adaptation and individual demographics, they make it hard to explore dynamic processes of adjustment, including international students’ abilities to reflect and act on their own experiences (Kim, 2011, p.457). As Volet and Jones (2012, p.246) point out, it is ironic that so few studies into learning within intercultural settings focus on exploring key educational concepts such as self-regulation. Limited research design may further perpetuate stereotypes. The failure to see adaptation within the context of all student adjustment to higher education (Volet & Jones, 2012, p.252) is particularly problematic because studies that do compare international and domestic student information literacy rarely find evidence of widespread difference (e.g. Al-Muomen, Shaw & Courtney, 2016; Zhao & Mawhinney, 2015). The limitations of behaviourist approaches to intercultural information literacy illustrate the need for research that focuses on exploring rather than on measuring the information activities of newcomers. The overwhelming emphasis on English-speaking contexts within this literature further highlights the importance of broadening the scope of intercultural research.

2.2.2 Cognitive constructivist approaches to information literacy

Cognitive constructivist understandings of information literacy developed in direct contrast to the perceived limitations of these behaviourist visions (Sundin, 2008, p.30). Cognitive constructivism draws from the idea that learners construct knowledge by applying what they
already know to make sense of new experiences (Brandt, 1997, p.113) and is distinguished from behaviourism by its positioning of learning in terms of knowledge construction rather than in response to a stimulus. Simultaneously, the assumption that it is the individual mind that is at the centre of knowledge creation distinguishes cognitive constructivism from social constructivism, which views learning as emerging from participation in social practices (Talja, Tuominen & Savolainen, 2005, p.83). The focus on “universal cognitive structures” means that cognitive constructivism differs ontologically as well as epistemologically from the social constructivist perspective (Packer & Goicoechea, 2000, p.228). Within library and information science, the cognitive constructivist approach establishes information literacy as a learning process (Kuhlthau, 2004), or the creation of mental models (Talja et al., 2005, p.83), habits of mind (Addison & Meyers, 2013) and an awareness of one’s own process of using information to learn (Bruce, 2008). Most recently, a cognitive constructivist approach to information literacy has been used to structure the United States’ Framework for Information Literacy for Higher Education (ACRL, 2015), which has been implemented as a successor to the ACRL Standards. The Framework’s focus on the affective and attitudinal dimensions of the individual learner also reflects key ideas within the United Kingdom’s cognitive constructivist-inspired Seven Pillars of Information Literacy (SCONUL, 2011), and A New Curriculum for Information Literacy (Coonan & Seeker, 2011).

Cognitive constructivist understandings of information literacy have been particularly influential in Australian studies of intercultural settings, which, like behaviourist studies, have predominantly focused on international and English as a Foreign/Second-Language students (Bordonaro, 2006, 2010; Han, 2012; Hughes, 2005, 2010, 2013; Hughes, Hall & Pozzi, 2017; Johnston, 2014). The emphasis on individual experience, however, moves the focus of these studies from prescriptive behaviours to the international student’s understanding of their behaviour (cf. Sundin, 2008, p.22). In this vein, linguistic and cultural variables are seen to bring complexity rather than deficiency (Bordonaro, 2006, 2010; Hughes, 2004, p.2) to international student information literacy experiences: difference is not a personal failing (Hughes, 2013, p.142). Instead, researchers recognise that international students often develop creative strategies to work around unfamiliarity, including using a search engine to find synonyms (Hughes, 2005, 2009) or to establish an author’s gender (Han, 2012). Coupled with the understanding that common issues with lengthy lists of results are not unique to international students, Hughes and Bruce (2006, p.38) conclude that difference is related to “the degree of difficulty [rather than to] the nature of the difficulty itself.” These observations create a more centring approach to international student information literacy as well as a growing awareness of the need to understand “what constitutes information in different settings or contexts, in different disciplines, professions, cultures and communities” (Bruce, 2008, p.193). While these goals have not yet been addressed in detail, they have helped to foreground information as an object of research in information literacy studies (Bruce et al., 2013, p.4).

Nonetheless, although cognitive constructivist approaches to information literacy have played an important role in recognising and valuing the inherent diversity within intercultural experiences, the focus remains centred on individual processes within decontextualised settings. This understanding means that cognitive constructivist studies neglect to account for individual positioning and the active dynamics of a situation, including “the multidimensional tension and conflict students experience in a transnational situation” (Kim, 2011, p.457). The emphasis on the individual rather than on the broader context can further lead to naïve assertions that fail to disentangle existing social relations (O’Connor, 2006, p.204), such as claims that information literacy empowers the use of technology within intercultural settings (McMahon & Bruce, 2002). More specifically, cognitive constructivist approaches refrain from challenging traditional understandings of information literacy (O’Connor, 2006, p.238; Owusu-Ansah, 2003, p.225). In separating information from the very meanings and values that situate knowing, information literacy still forms an unproblematic, generic skill that is transferable to other settings. These problems can be seen more clearly in the ACRL Framework, where the use of threshold-concept theory positions information literacy as a set of truths that are universally applicable for all learners (Hicks & Lloyd, 2016, p.341). Thus, while cognitive constructivist understandings of information literacy shy away from idealising an exemplary student, as in behaviourist models of education, the failure to engage with broader contexts idealises the concept of information literacy in itself. These issues highlight the need for research that explores how information literacy is understood given the complex dynamics that structure engagement within a new intercultural context.

2.2.3 Social constructivist approaches to information literacy

Social constructivist approaches to information literacy have developed most recently, having predominantly arisen from the work of Australian and Nordic theorists over the last two decades (Sundin, 2008). A social constructivist approach builds upon Bruce’s (1997) early critiques of behaviourist models of information literacy to view information literacy as
embracing “historically shaped socio-cultural aspects, such as norms, conventions, and routines, the people acting in the site, material aspects, including the use of ICT tools, as well as the interaction between physical setting and the social site” (Pilerot, 2016, p.414). Positioning knowledge as constructed through dialogue and debate (Tuominen et al., 2005, p.337), social constructivist approaches to information literacy centre on the values, forms of learning and information modalities that are legitimised within a specific setting (Lloyd, 2007b) as well as a community’s understanding of competent practice (Talja & Lloyd, 2010, p.xii). In further highlighting that this meaning is negotiated within complex social and technological environments, social constructivist approaches to information literacy also emphasise the discontinuities and multiple perspectives (Tuominen et al., 2005, p.337) that are produced through the construction of situated ways of knowing. In effect, information literacy is reconfigured around a social ontology that conceives of an “acting being” (Lave, 1992) engaged in the world.

An emphasis on the complexity and dynamism of information literacy, which is positioned as “practised in a context” rather than existing in itself (Rivano Eckerdal, 2011), means that the social constructivist perspective shifts understandings of information literacy from generic skills to a focus on how people learn to “act knowledgeably” within a setting (Tuominen et al., 2005, p.340). The recognition that artefacts and activities take on different meanings within different contexts (Limberg et al., 2012, p.106) means that a social constructivist approach also highlights how information literacy centres on the interplay between people, tools and activities (Sundin & Francke, 2009). Collective agreements about “what counts as information and is agreed upon as knowledge” (Lloyd, 2011, p.278) further stress how information literacy encompasses implicit and embodied ways of knowing alongside the more easily recognised physical, social and textual sources. Importantly for the study, the realisation that knowing is situated and collectively-constructed puts the learner’s transition from personal understanding to an intersubjective or shared understanding of practice at the heart of information literacy research and teaching.

To date, only a small number of researchers have employed a social constructivist perspective to study information literacy within intercultural settings. These studies, which predominantly centre on international migration and displacement, include an exploration of the information literacy practices of refugees in Australia (Kennan, Qayyum, Lloyd & Thompson, 2011; Lloyd, 2014a, 2015; Lloyd et al., 2013; Lloyd & Wilkinson, 2016, 2017; Richards, 2015), Scotland (Martzoukou & Burnett, 2018) and Sweden (Lloyd, Pilerot & Hultgren, 2017); immigrants in Finland (Aarnitaival, 2010) and Sweden (Mansour & Francke, 2017); as well as Latinx students (Morrison, 2009) and bilingual workers in North America (Hicks, 2014). The recognition that a person’s engagement with information reflects the ways in which knowledge is sanctioned within a setting means that a social constructivist approach shifts the focus of intercultural information literacy research from a person’s ability to acquire specific skills to an exploration of how they develop understanding and awareness within their new information environments. The focus on building meaning, which highlights how a person’s established information practices may not work within a new setting, also foregrounds how people reconcile their understandings of information literacy within a new society (Lloyd, 2014a).

Like many of the behaviourist and cognitive constructivist studies of intercultural populations, early social constructivist work tends to centre upon barriers to information literacy or the constraints that inhibit how people build meaning within a new setting. Nonetheless, the recognition that obstacles may be social and situated as well as internal (Sligo & Jameson, 2000) means that a social constructivist approach recognises that difference should be understood as “information disjuncture” (Lloyd et al., 2013, p.122) rather than as evidence of deficit or cultural inferiority. These understandings call many previously stated assumptions about the perceived knowledge gaps of ethnic minorities into question (Case & Given, 2016, p.343). More specifically, studies demonstrate how one of the most problematic barriers for refugees and immigrants centres on the need to perceive and access the tacit or taken-for-granted information that is found in every community. Nuanced community information, which refers to conventions for daily living, such as the layout of a supermarket or the informal information that is distributed through social networks, such as employment (Kennan et al., 2011, p.200) and housing opportunities (Lloyd et al., 2017), is seen to be particularly hard to access as a newcomer. Unsurprisingly, language, too, is often perceived as a barrier for refugees and immigrants, both because it makes interactions slower and because local accents can impede understanding (Aarnitaival, 2010; Kennan et al., 2011, p.199; Richards, 2015, p.90). Language barriers, which may be compounded by a lack of cultural awareness in the receiving community, prevent refugees engaging with social, textual and digital sources, which causes a further fragmentation of knowledge (Lloyd, 2014a, p.55).

Another important characteristic of social constructivist studies is the emphasis upon the information activities that enable people to participate in their new environment. Observation, for example, which includes observing people as well as their actions, forms an
important way for refugees to mediate language barriers and engage with tacit community information, such as watching the street in order to establish when to put rubbish bins out for collection (Lloyd et al., 2013, p.134; Richards, 2015, p.84). Non-textual sources such as the images that are found in junk mail have also been found to help newcomers become oriented to daily life (Kennan et al., 2011, p.205). More recently, several studies have explored the role of socially-mediated information within intercultural adjustment. Collective coping strategies such as pooling, or the combining of fragmented information amongst groups of fellow nationals, draw from the idea that a community’s way of knowing is embedded in the networks that structure social life and have been found to help refugees develop a “more comprehensive picture” of their new information environment (Lloyd, 2015, p.1037). Similarly, everyday public and faith-based spaces have been seen to connect new arrivals to the informal or tacit information that structures social life as well as understandings about how to operationalise this knowing (Lloyd & Wilkinson, 2016, 2017; Richards, 2015, p.85). In turn, the refugee’s transition from having information shared with them to being someone who might act as a “reference point” for new arrivals (Kennan et al., 2011, p.202), has been seen to show settlement within a new environment (Lloyd et al., 2013, p.137).

These studies provide a useful starting point for exploring how information literacy is understood within transitional intercultural settings. However, the focus on permanent and often traumatic settlement means there is scope for further research. One area that is underdeveloped relates to the role of technology. While Lloyd et al. (2013) found that refugees tend to eschew digital information due to language and cost barriers, this will likely be very different within a study that examines Western student practices, as Lloyd and Wilkinson’s (2016; 2017) later work with refugee youth highlights. Similarly, linguistic barriers will be distinctive for students who, unlike many refugees, have some knowledge of the host country language. The study’s focus on language-learning as well as temporary rather than permanent settlement means that unlike with refugees, contact with fellow newcomers may further be considered as problematic rather than as facilitating adjustment.

2.2.3.1 New literacy studies

The emphasis on everyday contexts as well as on social practices means that social constructivist approaches to information literacy draw from and mirror developments from the broader field of literacy studies. A brief review of sociocultural approaches to literacy studies and their impact on research within library and information science will further situate the study. Sociocultural understandings of literacy, which were developed from work within sociolinguistics and anthropology and are characterised as a group of theories that emphasise the “social and cultural contexts in which literacy is practised” (Perry, 2012, p.51), emerged to challenge research that positioned reading and writing as a mechanism of civilisation and superior cognitive development (Goody & Watt, 1963). Since then, sociocultural approaches to literacy have developed in several different ways, including through a focus on literacy as social practice, which is known as New Literacy Studies, and in terms of multiliteracies, or New Literacies. Although the concept of multiliteracies, which reconceptualises literacy practices within changing technological environments, has important implications for participation in today’s societies (Coiro, Knobel, Lankshear & Leu, 2008), the study is focused on everyday practices rather than uniquely on the digital. For these reasons, New Literacy Studies forms a useful guiding concept for the study.

Literacy as social practice, or New Literacy Studies, is a multifaceted theoretical perspective that centres on people and their literacy practices, or more simply, what people do with literacy (Barton & Hamilton, 1998, p.6). Traditionally, literacy has been understood as the acquisition of functional reading and writing skills. Yet, as a series of anthropological studies into the role of literacy in people’s lives demonstrates, literacy is not formed of a set of ideologically neutral and universal skills that are developed through individual cognition. Instead, literacy is situated within social contexts (Brice Heath, 1983) and is used for many purposes (Street, 1984), while different literacies are practised in different domains (Scribner & Cole, 1981). Impacting what counts as knowledge within a specific community, the focus on human action situates literacy as complex and as emerging from the “delicate interplay of social, cultural, economic, political, and even geographic forces” (Brandt & Clinton, 2002, p.340) rather than as forming a decontextualised and decontextualising technology.

The recognition that literacy is situated in a specific time and place further means that school is acknowledged as only one setting where literacy happens (Pahl & Rowsell, 2012, p.24). The focus on social context reconceptualises literacy practices around the diverse forms and meanings that literacy “takes on” within an environment (Brandt & Clinton, 2002, p.340) and demonstrates how people engage in a variety of local, community-based and vernacular literacy practices as well as more formalised school-oriented activities. These vernacular literacy practices (Barton & Hamilton, 1998, p.10), which serve everyday purposes and arise from everyday settings, interests and concerns, highlight how literacy is linked to the embodied and layered resources, sounds, accents and smells of a neighbourhood rather than just to books and texts (Pahl & Rowsell, 2012, p.90). They also demonstrate how
literacy practices are shaped by a person’s interests and motivations as well as being closely
connected to the development of identity (Pahl & Rowsell, 2012). These understandings are
summarised by the following list of propositions:

1. Literacy is best understood as a set of social practices; these can be inferred from
events which are mediated by written texts.
2. There are different literacies associated with different domains of life.
3. Literacy practices are patterned by social institutions and power relationships, and
some literacies become more dominant, visible and influential than others.
4. Literacy practices are purposeful and embedded in broader social goals and cultural
practices.
5. Literacy is historically situated.
6. Literacy practices change, and new ones are frequently acquired through processes

New Literacy Studies facilitates a meaningful exploration of how literacy can be understood
from a social perspective by providing a rich and detailed perspective of how literacy is both
multimodal and vernacular. In further illustrating that literacy is used in context, New
Literacy Studies also provides a useful guiding frame for the study of language-student
information literacy practices.

2.2.3.2 New literacy studies and information literacy

To date, work from New Literacy Studies has rarely been used to frame information literacy
research. When New Literacy Studies research has been employed, it has typically been used
to argue for a more critical understanding of information literacy (Elmborg, 2012; Hicks,
2016a; Johansson & Limberg, 2016). Exceptions include Hillard (2009) and Papen (2013) as
well as Nicholson (2014) and Hicks (2016b), who use Lea and Street’s (1998, 2006) work on
academic literacies to argue for a social constructivist approach to information literacy
research and teaching. It is Buschman (2009), however, who engages the most meaningfully
with New Literacy Studies, which he uses as a frame to argue that the incorporation of Web
2.0 and gaming literacies within library instruction sessions has not yet led to a concomitant
reconsideration of the ways in which information literacy is conceptualised. In other words,
information literacy is still viewed and taught as a cognitive skill, despite the integration of
popular and community-oriented tools and technologies into teaching practice. Buschman’s
(2009) arguments demonstrate that New Literacy Studies plays an important if
underdeveloped role in expanding understandings about social constructivist approaches to
information literacy.

One area of New Literacy Studies research that is particularly relevant to the study is
how literacy is understood within intercultural contexts. The recognition that literacy
practices are shaped by the epistemologies and the social structures within which they are
embedded means that New Literacy Studies researchers reinforce the idea that literacy
education must be disentangled from dominant Western ideologies to acknowledge the
activities of people within intercultural settings (Pahl & Rowsell, 2012, p.21). The belief that
a single, universal literacy could be interpreted as the imposition of one community’s
conceptions of literacy onto another means that New Literacy Studies research highlights the
importance of questioning whose conception of information literacy is valued within studies
of intercultural contexts (Street, 2003, p.77).

Another area of New Literacy Studies research that is particularly valuable for the
study is the recognition that when literacy is situated within broader cultural practices,
multilingualism forms an asset for learning rather than a problem. From this perspective, an
ability to speak more than one language facilitates learner engagement with the various
values and beliefs that drive literacy practices and contributes to the development of dynamic
“dispositions towards inquiry, analysis, design and action” (Comber, 2012, p.xi) by
increasing the number of interpretive resources that people have at their disposal (Comber,
2012, p.x). Simultaneously, if literacy is something people do to make sense of their lives
(Barton & Hamilton, 1998, p.3), New Literacy Studies research highlights that multilingual
literacies must always be intricately linked to tensions between a learner’s varied values and
identities (Barton & Hamilton, 1998, p.186). New Literacy Studies research further
demonstrates the importance of engaging with questions of power and agency while
refraining from essentialising, over-romanticising (Moje, 2000, p.82) or over-determining
communities in isolation from global influences (Brandt & Clinton, 2002).

2.3 Information behaviour

Information behaviour is a concept that explores how people interact with, or purposefully
and passively seek, manage and utilise information (Bates, 2010). Represented by Wilson
(2000, p.49) as “the totality of human behavior in relation to sources and channels of
information, including both active and passive information seeking, and information use,”
information behaviour was expanded by Case and Given (2016, p.6) to encompass
“information seeking as well as the totality of other unintentional or serendipitous behaviors
(such as glimpsing or encountering information), as well as purposive behaviors that do not
involve seeking, such as actively avoiding information.” Together, these descriptions have inspired the development of theories, concepts and models that attempt to understand the relationships between individuals and information (Robson & Robinson, 2013).

The emphasis on human activity means that information behaviour and information literacy are closely related. Learning is one of the main elements that link the two fields; as Wilson (1994, p.24) notes, “all information behaviour is learnt, nothing is innate.” Other researchers note that the two fields overlap in highly complementary ways, with information behaviour giving theoretical grounding for information literacy and information literacy providing the institutional context for information behaviour (Limberg & Sundin, 2006). Nonetheless, the two fields have tended to be considered in isolation from each other (Shenton, 2010, p.9) and while several studies conclude that information literacy and information behaviour are “two sides of the same coin” (Limberg & Sundin, 2006), other researchers may see information literacy as subsumed within the field of information behaviour (Chelton & Cool, 2004, p.vii). Issues are further muddied by the scholar/practitioner divide, with most interest in information literacy emerging through the activities of practitioners and most information behaviour research being carried out by scholars (Julien & Williamson, 2011). As the discussion about the relationships between information behaviour and information literacy continues, Julien and Williamson (2011) conclude that research from both fields should be able to inform the other. However, in noting that the study’s focus on information literacy emphasises learning rather than behaviour, this review will centre on themes that have been underexplored within the field of information literacy rather than providing a comprehensive examination of information behaviour research.

Unlike information literacy, intercultural information behaviour research literature tends to take a social perspective. Emerging in the 1990s, the social approach focuses on the interpretation of meanings, values and contexts of information behaviour and has largely superseded cognitive approaches that centre on an individual’s actions (Pettigrew, Fidel & Bruce, 2001). More specifically, and just as with information literacy research, most studies of intercultural settings have tended to focus on immigrants and international students. Leading to the emergence of concepts as varied as information gatekeepers (Metoyer-Duran, 1991), information grounds (Fisher, Durrance & Bouch Hinton, 2004) and child mediators (Chu 1999), information behaviour studies have expanded intercultural research by concentrating on everyday life scenarios or health, business, leisure and employment activity as well as academic contexts. This section will start by providing a brief overview of cognitive approaches to intercultural information behaviour before examining social approaches to intercultural information behaviour in more detail.

2.3.1 Cognitive approaches to information behaviour
Early research into information behaviour within intercultural settings tended to see information behaviour as predominantly dependent upon individual attributes or cultural traits of race, ethnicity or nationality (Case & Given, 2016, p.343). Emerging from an attempt to diversify research, the belief that race or ethnicity can be used as a predictor of information behaviour nonetheless rests upon problematic assumptions about how race and other sociocultural indicators predict “what constitutes information, how people go about obtaining information, and what usefully predicts people’s information behavior” (Atwood & Dervin, 1982, p.549). In further highlighting that a focus on demographic characteristics obscures structural or systematic constraints (Atwood & Dervin, 1982, p.551), the cognitive approach has since largely been supplanted by interest in the social, cultural and affective aspects of information behaviour or the idea that context is not distinct from the object of study (Pettigrew et al., 2001). Notwithstanding, vestiges of the cognitive approach can still be seen in studies that link information behaviour to cultural style or dimensions of national values (e.g. Askola, Atsushi & Huotari, 2010; He, Wu, Yue, Fu & Vo, 2012). Studies that adopt this approach are often symbolised by the work of Hofstede (1980) and position cultural difference as a trait that is located within an individual rather than being a proclivity of “people with certain histories of engagement with specific cultural activities” (Gutiérrez & Rogoff, 2003, p.19). While recognising that ethnic minority groups are typically underserved in libraries, the focus on cultural ‘style’ runs the risk of denying individual agency, and, arguably, increasing inequity by reifying unsubstantiated disparities (Dervin, 1989). The recognition that national identity can be understood as forming a similarly imaginary (Anderson, 2006) or socially constructed community (Meadows, 2010) further highlights the importance of exploring alternative approaches to intercultural information behaviour research.

2.3.2 Social approaches to information behaviour
Social approaches to information behaviour move beyond demographics to engage with the “contextual, situational, and role variables” (Tsai, 2010) that affect a person’s engagement with information within intercultural settings. Just as in information literacy scholarship,
studies of international students form the major focus of research. The emphasis on context, however, means that these studies engage with the complexity of factors that affect information behaviour within intercultural situations. Thus, research highlights the ambiguity that students face in new educational contexts as well as the coping strategies that they may adopt, such as seeking help from local Canadian students (Ishimura, 2013; Ishimura & Bartlett, 2013) or using technologies such as GPS and social media sites to navigate their new setting (Oh, Butler & Lee, 2014; Sin & Kim, 2013). Equally, studies recognise that feelings of cultural alienation and emotion that students may feel within a new information environment are often heightened within intercultural settings (Mehra, 2007; Mehra & Papajohn, 2007) with Jeong (2004) highlighting how a sense of marginalisation can lead international visitors to take recourse in ethnic and faith-based enclaves that reinforce their sense of isolation. Interestingly, only a handful of studies have explored the information behaviour of international students within non-English majority countries, which forms a significant gap. Noting that language creates a barrier to participation in Danish universities, which echoes the findings of English-language studies (e.g. Tsai, 2010; Xie, 2012), Hyldegård and Hertzum (2016) also recognise the difficulties that many international students have in rebuilding support networks overseas.

The other main focus of research centres on immigrant information behaviour and encompasses activity within non-English majority countries such as Finland (Aarnitaival, 2008), Israel (Bronstein, 2017; Shoham & Strauss, 2007, 2008) Norway (Audonson, Essmat & Aabo, 2011) and Sweden (Maceviciute & Wilson, 2008), as well as English-speaking settings (see Caidi et al., 2010 for an overview). However, unlike cognitive approaches to information behaviour, social approaches tend to acknowledge that immigrant information activities are mediated through difference, whether this is through conflicts with cultural values or ways of knowing (Palmer, Lemo, Tham, Hakim & Biggs, 2009) or conceptually remote experiences (Cortinois, 2008). Labelled by Lingel et al. (2014) as leading to a form of “code-switching”, difference also highlights how immigrants may face problems accessing these new ways of knowing. Maceviciute and Wilson’s (2008) research, for example, demonstrates that difficulties in perceiving new cultural norms or the tacit structures of the workplace make it hard for international academics to read new situations and ambiguous behavioural signals, while Audonson et al.’s (2011, p. 224) study, which describes a new immigrant’s attempt to understand how birthday parties are arranged in Norway, demonstrates that these problems are not just limited to the professional sphere. Difficulties in perceiving tacit knowledge are also noted by volunteer tourists (Reed, 2009, p.50), who struggle to judge between contradictory opinions, as well as in Bronstein’s (2017) study of migrant workers, where language classes became information grounds in which local knowledge is shared. These studies move beyond the typical lists of information sources in which newcomers are interested (e.g. employment, education, finance and health) to highlight the dynamic shape of immigrant information activities.

Another theme within information behaviour research, albeit one that is less common, is the emphasis on corporeal experiences, with several studies describing how an immigrant’s first impressions of a new setting are mediated through the senses. Visual differences, such as seeing iron roofs instead of tiles (Goodall, 2013, p.126), olfactory differences, which include the smell of fish and chips (Goodall, 2013, p.126), haptic differences, for example, the Canadian weather (Allard, 2015), and auditory differences, such as the sound of motorbikes and geckos (Reed, 2009, p.55), provide a subtle marker of change. Research also demonstrates that immigrants may use their senses to become familiar with new settings. Visual strategies such as observing or monitoring local actions help people to develop a sense of appropriate activity as well as to adjust their information behaviour within a new setting; Goodall (2013, p.250) notes how newcomers mute the television and rely on images to keep up to date with the news as well as using religious objects to understand a church service. The body further helps immigrants to reorient themselves in society. Lingel (2011, 2015) notes, for example, how wandering forms a useful way to identify patterns of meaning in new surroundings. Migrants may further start to employ their body in new ways to make sense of the situation, including using gestures and charades to understand people and situations (Reed, 2009; Goodall, 2013). Notwithstanding, there has been little sustained examination of the role of the body as well as the implications for these findings within intercultural information behaviour research.

A final theme of interest within these studies of immigrant information behaviour is the focus on experience over time. One critique of research into immigrant information behaviour is the overwhelming emphasis on initial needs, which obscures the possibility of protracted or lifelong transitions (Dali, 2012, p.198). Thus, while Shoham and Strauss (2007) mention that migrants may eventually become a “source of information for other prospective immigrants,” there is little understanding of broader transitional processes. An exception is found in the work of Lingel (2011, 2014, 2015), whose study of transnational migrants in New York City explores how newcomers alter the ways in which they move through the city.
as they become more experienced. Another interesting exception is found in Reed’s (2009) study of volunteer tourists, which demonstrates how less well-travelled people prepare for their trip by gathering as much information as possible. In contrast, the “information hippies” of her studies purposefully ignore information because their past experiences give them the confidence to trust that “the universe would send them in the direction they were meant to go” (Reed, 2009, p.61). These findings provide evidence of the need to take an extended approach to both transitional and intercultural studies as well as to engage more concretely with the question of time within information research.

2.4 Second-language acquisition studies

Beyond library and information science, scholars from the field of second-language acquisition have carried out various studies that offer insights into language-student engagement with information during residence abroad.

The shape of social support networks is one of the most commonly researched areas within second-language acquisition research into residence abroad. Drawing on ideas of language socialisation (Schieffelin & Ochs, 1986), numerous studies have demonstrated that people with either online or offline support networks tend to have more successful transitional experiences. These studies illustrate how a network may offer students emotional support, such as dealing with uncertainty and stress (Lobburi, 2012; Tsai, 2006), as well as demonstrating that friends and family can provide considerable informational support, including details about the host culture (e.g. Lao, 2010; Ruble, 2011). Where research disagrees, however, is how these support groups should be constituted. Several studies have demonstrated that students who rely on support networks of local co-nationals, international students or friends and family at home adjust far less successfully to new environments (e.g. Deakin, 2012). The recommendation to avoid home contacts, which is linked to the idea that non-native groups lack the local experience necessary to help with survival in the new community (Ruble, 2011, p.398), may also have emerged from the perception that online support groups were initially associated with socially awkward people who were unable to construct face-to-face networks (Mikal & Grace, 2011, p.461) and share “an insider perspective about unfamiliar and/or problematic situations” (Ruble, 2011, p.398). Similarly, while friends and family at home may not be able to help on a practical level, the maintenance of these networks serves to “reduce anxiety by offering comfort and stability” and to ease the personal cost of being away from home (Lao, 2010, p.9). Research has also demonstrated that rather than limiting social contact, people use online communities to: meet local or international students and diversify their information networks (Mikal, 2011, p.17); to learn about new events or activities (Martin & Rizvi, 2014, p.1026); to feel more connected to a place (Polson, 2009, p.52); and to develop at their own pace (Pfeil, 2009). As Gilhooly and Lee (2014, p.389) point out, participation in online communities gives newcomers access to social experiences that may otherwise be denied to them because of “second-language limitations, rural isolation, and outsider status at school and within the host community.”

While materiality has not been broadly studied within study abroad research, use of the Internet proves to be as divisive as the question of social support. For many researchers, the Internet impedes the person’s adjustment to new surroundings by forming a “reduction in the number of hours spent engaging with students’ physical surroundings” (Mikal & Grace, 2011, p.300). For other scholars, Internet usage means that students prioritise the establishment of an efficient routine over intercultural interactions, thereby running the risk of living alongside local communities (Mikal, 2011; Weiskopf & Kissau, 2008). Nevertheless, these claims seem hard to substantiate, especially when locals use the Internet for everyday interactions (Mikal, 2011, p.26) and research in library and information science has demonstrated how the use of online search systems can contribute to language-learning (e.g. Bordonaro, 2010). Similarly, studies show that newcomers use the Internet to explore their new identities and experiences (Gifford & Wilding, 2013) as well as to engage more closely with the target community by looking for information about local cultural events (Mikal & Grace, 2011, p.294) or to avoid expensive or embarrassing cultural faux-pas (Mikal, 2011, p.26). In fact, as Martin and Rizvi (2014) point out, a binary here/there conception of place is particularly unhelpful because reliance on technology means that ‘here’ is always mediated by ‘there’. In other words, “the ‘here’ of the individual’s local life-world becomes less and less of a singular or self-present place and more and more of a node in a network of connections with ‘electronic elsewhere’” (Martin & Rizvi, 2014, p.1028). In effect, experiences in a new setting are mediated through technologies, devices and sharing
with family and friends left behind and it is through this reterritorialisation, or the situation of ‘here’ within the ‘there’, that the migrant’s experience of place is made. More expressly, these findings demonstrate the scope for research that explores questions of technology and social support from an information perspective.

2.5 Chapter conclusion
The chapter has reviewed information literacy and information behaviour literature as well as related research from the field of second-language acquisition to highlight the gaps in existing scholarship and create the warrant for the study. More specifically, the review demonstrates the need for studies that broaden the scope of international research. The recognition that global movement is multi-directional and complex highlights the need to examine questions of language and the activities of English-speakers abroad as well as the role of information during temporary stays overseas. Similarly, researchers’ tendency to focus on individual processes demonstrates the need for research that acknowledges how people interact within the dynamics of a culturally unfamiliar information environment rather than focusing on learner deficiency. While studies into forced or permanent migration have broadened the scope of intercultural research beyond its initial emphasis on international students, this review further illustrates the importance of continuing to explore questions of technology and social support in more detail as well as the impact of engagement within a new information environment over time. Having provided an overview of findings from previous research, the following chapter will present the theoretical framework that will be used to frame the study of intercultural transition.

Chapter 3: Theoretical framework

3.1 Chapter overview
The chapter provides an overview of the theoretical framework that is applied in the study to explore student information literacy practices during residence abroad. The chapter starts by describing symbolic interactionism, which forms the ontological framing for the study, before presenting constructionism, which provides its overarching epistemological structure. The chapter will then provide an overview of transitions theory and practice theory, which form two of the sensitising theories through which the findings of the study will be analysed and explained. Table 1 provides an overview of the purpose for each of these theories in the theoretical framework.

<table>
<thead>
<tr>
<th>Theory</th>
<th>Core concepts</th>
<th>Purpose within study</th>
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<tr>
<td><strong>Symbolic interactionism</strong></td>
<td>People act towards things through meaning that is interpreted and produced through interaction with self, environment and society (Blumer, 1969)</td>
<td>Frames study ontologically by highlighting the importance of shared meaning in the construction of student reality as well as reflexive action.</td>
</tr>
<tr>
<td><strong>Constructionism</strong></td>
<td>Knowledge and social reality is both socioculturally situated and constructed through language and shared social processes (Gergen &amp; Gergen, 2008)</td>
<td>Furnishes epistemological structure of study by emphasising how students construct meaning through their ongoing engagement with and negotiation of their new social worlds.</td>
</tr>
<tr>
<td><strong>Transitions theory</strong></td>
<td>People mediate change over time through participation in community activities (Rogoff, 2003; Chick &amp; Meleis, 1996)</td>
<td>Provides a lens through which to structure an examination of students’ transitional processes as they rebuild understanding within a new setting.</td>
</tr>
<tr>
<td><strong>Practice theory</strong></td>
<td>Social life is made and re-made in practice using tools, discourse and the human body (Nicolini, 2012)</td>
<td>Facilitates an exploration of the unfolding shape of students’ embodied and materially-mediated activities during residence abroad</td>
</tr>
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Table 1: Overview of the theoretical framework
3.2 Symbolic interactionism

Symbolic interactionism forms the ontological framing for the study. Symbolic interactionism, which focuses on the construction of reality, is a theoretical perspective that positions people as acting towards things through the (changing) meaning it holds for them (Fine, 1993, p.64). Some theorists claim that symbolic interactionism, which emerged from pragmatist traditions within the United States in the 1930s (Crotty, 1998, p.72), has largely been incorporated into contemporary sociological thought rather than standing as an individual theoretical perspective (Fine, 1993, p.81). Yet, the influence of symbolic interactionism on constructionism and nursing transitions theory (Meleis, 2010) as well as its focus on people who are both reflective and actively engaged in their environment (Charon, 2004, p.41) means that it is worth exploring this heritage in more detail.

Most simply, symbolic interactionism centres on the premise that:
- Human beings act towards things on the basis of the meanings that things have for them
- The meaning of such things is derived from, or arises out of, the social interaction that one has with one’s fellows
- These meanings are handled in, and modified through, an interpretive process used by the person in dealing with things he encounters (Blumer, 1969, p.2)

Derived from the work of Mead (1934) and later Blumer (1969), who devised the term of symbolic interactionism, the ‘symbolic’ part of the phrase represents the idea that people assign meaning to their worlds, while ‘interaction’ demonstrates that this meaning is assigned and transmitted through communication with others (Williams, 2008, p.849). Put another way, humans create “the worlds of experience they live in” (Denzin, 1992, p.25) through taking the acts of others into account as they, themselves, act (Charon, 2004, p.28). In this sense, meaning cannot be seen as shaped in direct response to context and culture (Birks & Mills, 2011, p.39). Instead, it is positioned as interpreted as well as continually unfolding as people actively engage in and reflect upon their activity in relation to the environment and broader social processes (Charon, 2004, p.28). In effect, meaning is viewed as fluid and situated as well as fundamental to understanding human activity (Patton, 2002, p.112).

Symbolic interactionism is particularly relevant for this study of people who are in the process of rebuilding understanding within a new context. Most importantly, the recognition that people act in response to the ways in which they interpret and define a situation moves the focus of information literacy research towards an acceptance of the important role that student agency plays in the determination of activity. The acknowledgement that communication depends on a person’s ability to understand and position themselves in relation to other people’s actions (Charon, 2004, p.112) means that a symbolic interactionist lens also illustrates the importance of social sources as students engage in and deal with the challenges and opportunities of their new context. At the same time, the emphasis on the present (Charon, 2004, p.29) and a person’s ongoing engagement within society also hints at how sociocultural tensions and dynamics both constrain and enable social interaction, while simultaneously highlighting a person’s ability to rethink, recast and redirect their actions (Charmaz, 2014, p.270). Beyond social interaction, the realisation that symbols have meaning for a person further draws attention to how people act towards information objects (Buckland, 1991) such as dictionaries or phones and the institutions that “interact” with individual experiences (Westbrook & Finn, 2012, p.807) as well as language. The emphasis on the unfolding shape of student meaning-making also illustrates how symbolic interactionism is well-suited to inductive and culturally sensitive research methods such as constructivist grounded theory (explored in Chapter 4).

3.3 Constructionism

Constructionism provides the overarching epistemological structure within the study’s theoretical framework. Constructionism positions human perception, knowledge and social reality as built and sustained through social processes (Burr, 1995, p.4) and complements the study’s symbolic interactionist ontological framework through its focus on language and interaction. Drawing epistemologically from the recognition that people construct accounts and meaning about the world through dialogue, constructionism illustrates that knowledge is produced communally rather than forming an individual possession (Tuominen & Savolainen, 1997, p.83). In further highlighting that knowledge is negotiated rather than found or revealed, constructionism demonstrates that ways of seeing the world are dynamic as well as time- and culture-bound (Burr, 1995, p.7). The emphasis on interaction also positions constructionism as an extension of constructivist traditions of scholarship, where knowledge is formed through an individual cognitive process and centres upon the creation of stable and isolated sense-making models (Schwandt, 2003, p.305; Talja et al., 2005, p.83).

Within the study, the adoption of a constructionist epistemological stance assumes that information, as well as information systems and activities are produced within contextually dependent “linguistic and conversational constructs” (Talja et al., 2005, p.90) rather than always being tangible or universal (Pickard, 2007, p.7).
More specifically, constructionism is centred on several core assumptions rather than being neatly summarised (Burr, 1995, p.2). An overview of three of its main tenets - social understandings of knowledge, its historical and cultural specificity, and the centrality of language to meaning-making - will help to situate the research. One of the major precepts of constructionism focuses on the social shape of knowledge or the idea that social processes sustain knowledge (Burr, 1995, p.4). Drawing from the recognition that “the mind constructs reality in its relationship to the world” (Tuominen, Talja & Savolainen, 2002, p.273), a constructionist framework posits that meaning is the product of dialogue as well as of sociocultural influences. The emphasis on social contact, which recognises that shared versions of knowledge are fabricated through everyday interactions, is in direct contrast to the traditional positivist emphasis on objective observation (Burr, 1995, p.4). It also draws attention to the idea that understanding is historically and culturally relative (Burr, 1995, p.4) and that knowledge is both a product of and specific to historically and culturally situated social processes (Crotty, 1998, p.54; Gergen & Gergen, 2008, p.817). Given that communities are actively engaged in the development of new meaning (Talja et al., 2005, p.90), knowledge must further be seen as both dynamic and limited because it forms part of ongoing conversations (Guba & Lincoln, 1989, p.44). These understandings are pertinent within the study because they recognise the plurality of meanings that characterise language expertise as well as problematising the notion of a ‘native’ speaker.

The focus on interaction between people means that another main tenet of social constructionism is language (Talja et al., 2005, p.89). As Schwandt (2003, p.307) points out, language is a range of activities “in which we express and realize a certain way of being in the world.” Yet, as with our understanding of knowledge, language cannot be conceived as neutral, abstract or as a purely functional way of conveying thought and information (MLA, 2007). Language is neither a tool to gain knowledge of the world nor an instrument by which we can order the world (Schwandt, 2003, p.307). Instead, language creates the conceptual frameworks that are embedded within sociocultural contexts, practices and conventions (Holland, 2006, p. 93) and which are produced and reproduced by people who share a culture (Burr, 1995, p.7). These ideas mean that language should be understood as both constitutive of meaning (Gergen & Gergen, 2008, p. 818) and a form of social action because it gains the capacity to mean through human interchange (Gergen, 1994, p.263). The emphasis on conversation is particularly relevant within the study where language-students engage with “historically shaped ways of language use” (Tuominen et al., 2002, p.277). If language is the core link between people, communities and cultures (MLA, 2007, p.2) then language-students are developing multiple understandings of social reality as well as the “symbolic resources” (Kramsch, 2009, p.124) through which they can give meaning to their activities. This adds an extra layer of complexity to this interpretive research that centres on the unravelling of multiple meanings of being and identity (cf. Schwandt, 2003, p.315).

### 3.4 Transitions theory

Transitions theory forms one of the sensitising theories that structures this theoretical framework. With its roots in anthropology and the idea of rites of passage (Kralik, Visentin & van Loon, 2006 p.322), transition has most comprehensively been examined in the fields of education and nursing. Within education, transitions are studied within the framework of human development and more specifically, as connected to questions of socialisation (Rogoff, 1996). This means that research has built upon work from psychology and sociology to centre on transition at an individual level, as the internalisation of adult skills and knowledge (Corsaro & Molinari, 2005, p.16), and on a broader sociocultural level, as interaction with broader collective processes (Corsaro, Molinari & Rosier, 2002, p.325).

Studies have more recently started to move beyond the predominant focus on early childhood to engage with adult transitions into professional work (Fenwick, 2013). Within nursing, research centres on transitions as they affect a person’s “health, well-being and their ability to take care of themselves” (Meleis, 2010, p.11). Although it has been said that all nursing phenomena encompass a type of transition (Chick & Meleis, 1996, p.238), research has most commonly centred on health-illness transitions, such as diagnosis and rehabilitation, as well as developmental or life transitions, for example, ageing or motherhood. Characterised by comprehensive theoretical development that draws on symbolic interactionism (Meleis, 2010), nursing transitions theory can, nonetheless, be critiqued for flattening “the complexity of social relations” (Fenwick, 2013, p.359). The recognition that the focus on power structures and individual agency within educational transitions theory complements the well-established theoretical structure of nursing transitions theory means that the study draws upon both sets of theories. The sociocultural underpinnings of both educational and nursing transitions theory mean that they align both ontologically and epistemologically with the study’s broader theoretical framework.
3.4.1 Approaches to transitions theory

The variety of perspectives and approaches that have been used to explore transitions means that major concepts have been examined in several ways. Traditionally, transition has been framed as a person’s movement between institutions or settings, for example between secondary and tertiary education (Hviid & Zittoun, 2008, p.122) or one life phase, place or situation to another (Schumacher et al., 1999, p.2). This approach, which is characterised by Ecclestone, Biesta and Hughes (2010, p.5) as the navigation of pathways, structures and systems, positions transition as standardised or linear and as occurring in relation to normative patterns and social expectations, for example, age-appropriate behaviour. More recently, the recognition that lifecourse is marked by non-uniform experiences (Field, 2010, p.xviii) means that researchers have focused on the processes of transition or the dynamics of development during this time (Hviid & Zittoun, 2008, p.122). Most famously exemplified by the ecological perspective, which draws from Bronfenbrenner (1979) and emphasises interaction within changing environments, transition has thereby further been characterised as a change in role as a person moves “between and across systems” (Dockett & Perry, 2007, p.6). Marked by a shift in identity and agency (Ecclestone et al., 2010, p.6), this approach recognises that transition is constituted by the relationships and connections that surround a person as well as individual experience (Dockett & Perry, 2007, p.8).

Although the ecological perspective has made many important contributions to research into human development, it can, however, be critiqued for treating individual and cultural processes separately (Rogoff, 2003, p.44) and for ignoring the power relations that produce the social contexts of transition (Corsaro et al., 2002, p.328). This means that a sociocultural approach is more frequently being used as an alternative theoretical perspective within transitions research (Perry, Dockett & Petriwskyj, 2014). A sociocultural lens draws from the work of Vygotsky (1978) as well as from Lave and Wenger (1991) to position human development in terms of “people’s changing participation in sociocultural activities of their communities” (Rogoff, 2003, p.52). Connecting change to involvement in a community, rather than locating it in a person or in their environment (Rogoff, 1996, p.273), transition has also been characterised as ‘becoming somebody’ in a personal, educational or occupational context (Ecclestone et al., 2010, p.7), although Fenwick (2013, p.362) warns that the suggestion of a unified subject is problematic. The focus on ‘becoming’ rather than ‘being’ may also position a person as incomplete or as characterised by a shortfall (James, Jenks & Prout, 1998, p.207), although Lundh (2011, p.35) points out that humans are always simultaneously being and becoming.

Given the ontological and epistemological structure of the study’s theoretical framework, a sociocultural perspective on transition provides the most appropriate lens for the research. The importance that is placed within sociocultural transitions theory on the activities in which people participate as well as how this participation changes activities over time (Dockett & Perry, 2007, p.9) moves the focus of information literacy to how people develop socially-situated knowing. In turn, the emphasis on participation in the social practices of a community reframes information literacy as produced by a community’s history of engagement rather than as constituting a variable that affects or influences transition (cf. Rogoff, 2003, p.50). Importantly, the use of sociocultural transitions theory broadens the scope of the study by highlighting how social structures can both constrain and enable student engagement in information activities (c.f. Corsaro & Molinari, 2005, p.20).

3.4.2 Change and time within transitions theory

Change and time are two of the tangled and complex concepts that characterise transitions theory. Change is often used indistinguishably from the concept of transition to describe the alteration in a person’s developmental process or life circumstances (Kralki et al., 2006, p.322). However, the two words are not synonymous. Instead, change is seen firstly, as an external event that sets transition in motion (Meleis, Sawyer, Messias, Im & Schumacher, 2000, p.12) and secondly, as the subsequent shifts that a person makes to integrate the disruption into their life (Schumacher & Meleis, 1994, p.121). Change cannot, therefore, become a transition until it incorporates “accompanying passages between different life conditions, statuses and phases, and the resulting self-deﬁnitions over time” (Messias, 2010, p.226). Accordingly, and from the perspective of the study, transition is constituted by student adjustment to the changes in their lives rather than in terms of their initial relocation overseas. A focus on acclimation rather than physical relocation also highlights how language-students may be going through several transitions at once, including, for example, the move towards adult independence, although, as Messias (2010) notes, the transition with the most pressing needs tends to be accorded higher consideration.

Time is another concept that plays an important role within transition. Drawing from the understanding that the beginning and end of a transition do not occur simultaneously (Chick & Meleis, 1986, p.240), transition is characterised as both a process (Schumacher & Meleis, 1994, p.121) and as flow and movement that occurs over time (Meleis et al., 2000,
In further recognising that change may involve considerable disruption for a person, transitional processes are also seen to “require time as people gradually disengage from old behaviours and ways of defining self” (Kralik et al., 2006, p.326). In this sense, and just as change is imbued with personal interpretation and experience, time cannot be portrayed as regulating a well-defined and self-contained event that stretches from anticipation of change to stability (Meleis et al., 2000, p.20). Instead, time is dependent on the meaning of change in a person’s life (Schumacher et al., 1999, p.4) and should be understood as “experienced time” (Chick & Meleis, 1986, p.239) that is ongoing and in flux rather than fixed and bounded.

Within the study, an emphasis on time highlights that student transition extends “from the first anticipation of transition until stability in the new status has been achieved” (Chick & Meleis, 1986, p.239) rather than forming a linear or a normative journey with distinct stages (Fenwick, 2013, p.362).

The focus on change and time additionally foregrounds the idea of movement. However, rather than seeing student engagement overseas as leading, unproblematically, to a positive acceptance of change or an altered sense of self (Kralik et al., 2006, p.324), transition is characterised as subject to a forwards and backwards movement (Kralik et al., 2006, p.325) that is neither continuous nor inevitable (Fenwick, 2013, p.362). A focus on movement further illustrates that student engagement in residence abroad is structured by an endpoint that is relative to the experience (Chick & Meleis, 1986, p.241), while highlighting how transition forms a socioculturally-mediated reorientation (Kralik et al., 2006, p.326) that is produced through student disconnectedness and loss of security within a new setting (Chick & Meleis, 1986, p.240) rather than forming a youthful rite of passage.

### 3.4.3 Personal meaning within transitions theory

Another important theme within transitions theory is the emphasis on the meaning that people accord to transition, which encompasses awareness, knowledge and preparation (Meleis et al., 2000). Personal meaning alters the way that people perceive and respond to change (Clingerman, 2007) and is seen to be particularly important within migratory transitions, where people have a wide variety of motives for relocation (Meleis et al., 2000, p.22). Meanings of migration are also understood to be shaped by a person’s community experiences (Clingerman, 2007, p.229), with the “strangeness” of a new environment (Chick & Meleis, 1986, p.252) affecting their engagement within a new setting. Within the study, a focus on personal meaning draws attention to the impact of students’ purposes and motivations for moving overseas, as well as underscoring the importance of understanding transition from the perspective of those experiencing it (Schumacher & Meleis, 1994, p.122).

Knowledge and preparation influence personal meaning, too, and an understanding of the new location in which a person finds themselves as well as expected conditions (Messias, 2010) form an important facilitator of transition. More specifically, knowledge about accommodation and related details such as social customs and expectations is seen to be particularly effective prior to relocation transitions (Rossen & Knafl, 2003, p.32). Notwithstanding, preparation forms a culturally specific concept. An immigrant’s experience with traditional healers, for example, may not prepare them to engage with health practices within their new society (Chick & Meleis, 1986, p.252). Alternatively, a person may never have had call to develop strategies for the new scenario, such as choosing a doctor (Messias, 2010), while the stress of a new situation may further render a person unable to make important decisions (Chick & Meleis, 1986, p.252). In effect, while the focus on preparation within transitions theory draws attention to the ways in which students in the study anticipate and ready themselves to participate in residence abroad, the recognition that knowledge is socially situated illustrates how a student’s pre-arrival activity cannot completely equip them for their time overseas.

### 3.4.4 Social and community conditions within transitions theory

The emphasis on the meaning with which people imbue transition also highlights how community and social conditions (Meleis et al., 2000) both facilitate and inhibit a person’s engagement in transition. In terms of community resources, the emotional and informational support that is provided by people who are similarly engaged in transition is seen to be vital (Clingerman, 2007, p.230), although, as Meleis et al. (2000, p.23) point out, the need to ‘keep face’ mean that fellow nationals may serve as inhibitors as well as facilitators of transition. The recognition that peers who share the same linguistic background and culture do not always form straightforward sources of support is especially important in the study of students who are learning a language overseas.

Societal conditions that tend to affect transition centre on the receptiveness of the new environment, including the presence of discrimination (Clingerman, 2007, p.230) and the existence of new support groups and structures (Messias, 2010, p.229). Stigmatisation of either the transition or the person, for example, affect how people are able to respond to change (Im, 2010, p.383). Similarly, structural factors such as class, race, gender, economic and occupational conditions impact a person’s engagement in transition by influencing the
opportunities to which they have access (Ecclestone et al., 2010, p.11). Within the study, the focus on broader societal structures draws attention to how students’ statuses as language-learners who may look and sound very different from a local or a native speaker impacts the ways in which they engage with information. Interestingly, both Fenwick (2013, p.359) and Ecclestone et al. (2010, p.10) warn how the effect of social and community conditions on transition are often downplayed through the “rhetoric of agency”, although practice theory has been suggested as a way to refocus attention onto the collective (Fenwick, 2013, p.363).

3.4.5 Human development within transitions theory
Another important theme within transition research is human development, which is frequently positioned as an indicator of transition. Process and outcome indicators are typically used in nursing transitions theory to assess a person’s progress towards health or wellbeing (Meleis et al., 2000). However, although these indicators provide insight into a person’s recuperation during health transitions, the notion of a successful outcome is harder to depict within educational transitions. A focus on success further risks “pathologising transitions” by establishing normative transitional milestones and infantilising managerial interventions (Ecclestone, 2009, p.23; Fenwick, 2013, p.363). In contrast, a person’s ongoing participation within the activities of their community forms a more useful marker of transition. Focusing on the connections that a person makes with professionals and caregivers, transition is also seen to be denoted by a person’s increasing sense of competence within a new setting, such as learning to find one’s way around as well as being able to locate sources of information (Johnson, 1999, p.57).

Within migration transitions, awareness is further seen to develop from an immigrant’s ability to integrate past and present experiences into their lives and to build a new, fluid identity. Positioned as the ability to overcome ambiguity as well as to come to terms with a transnational perspective (Baird, 2012, p.261) transition is characterised by an acceptance of multiplicity in a migrant’s new life, rather than by the subsuming of home identity (Messias, 2010, p.230). In effect, if people are “proactively modifying activities,” or engaged in preparation, planning and information seeking on a physical, emotional, social and an environmental level (Clingerman, 2007, p.222), they are said to be positively engaged in transition (Meleis et al., 2000, p.19). Within the study, the emphasis on interaction and being situated draws attention to the ways in which students construct their information landscapes, while the shift from individual indicators of transition to engagement with group and community processes further highlights the developmental and intersubjective dimensions of transition.

3.4.6 Transitions theory and information research
Transition and transitions theory have not previously been widely explored within information research. More commonly, transition has referred to events where people travel in one direction between two pre-existing and related activities (Beach, 1999, p.114), such as the move from secondary to tertiary education (Bent, 2008; Burhanna, 2013; Secker & Coonan, 2011) or as a transfer student between colleges (e.g. Ivins, Copenhaver & Koclanes, 2017; Nelson, 2017). However, a focus on individual actions frames transition as the navigation of static institutions and neglects to account for the structural forces that impact student engagement with change. These studies also negate the multiple and circuitous ways in which a learner mediates the impact of these upheavals in their lives by characterising transition as progressive and irreversible or as forming a type of culture shock (Ivins et al., 2017). An exception is found in Willson’s (2016) research, which uses transitions theory to demonstrate how the information behaviour of early-career academics is structured through institutional goals and the actions of colleagues.

While transition has not been explicitly explored within information literacy research, ideas of change have been touched upon within workplace information studies, where the passage from novice to expert is signalled by a shift between textually and socially mediated knowing of a landscape (Lloyd & Somerville, 2006) and the negotiation of meaning (Moring, 2012). Transition has further been alluded to within studies of refugee information literacy practices, where forcibly displaced people must reconcile their established ways of knowing with those of their new setting as part of their resettlement process (Lloyd, 2014a). In fostering information resilience, information literacy has also been seen to play an important role in helping to mediate these shifts and reorientations (Lloyd, 2014a, 2015). These studies demonstrate the important role that information literacy plays at a time when knowledge has been disrupted while nonetheless highlighting the need for further theoretically-driven explorations of transitions. The study’s use of transitions theory provides one way to explore the complexity and the implications of the ways in which people engage with information during periods of change and reorientation.
3.5 Practice theory

Practice theory forms the other sensitising theory within this theoretical framework. Practice theory positions “social practices as the central phenomenon in social life” (Schatzki, 1996, p.xi) and developed through the work of a number of influential scholars, including Schatzki (2002), Gherardi (2000) and Reckwitz (2002). While there is no single or unifying theory (Nicolini, 2012, p.1), most practice theories are recognisable by the inclusion of several core concepts, including the centrality of human activity; the importance of the body as well as of material objects; an emphasis on individual agency; a collective understanding of knowledge; and a foregrounding of power (Nicolini, 2012, p.3-6). These elements, which are explored in more detail later on in this section, move the focus of practice theory beyond individualism and abstract social structures (Schatzki, 2012, p.13) to establish practices rather than people as the “starting point for theorizing human affairs” (Nicolini, 2012, p.162). Nevertheless, the recognition that practices centre on the contributions of both humans and non-humans to the organisation and reproduction of social life also places questions of human subjectivity and meaning at the heart of practice theory (Schatzki, 2001, p.10).

Within the study, the focus on human coexistence means that practice theory provides a useful lens through which to explore the shape of language-learner information literacy practices. The recognition that human existence is “tied to the context in which it transpires” (Schatzki, 2005, p.467) highlights the situated nature of information literacy, while the emphasis on what people do draws attention to student perspectives and understandings of their activities. The focus on the learner is particularly important within information literacy research which has tended to stress what librarians think people do (or should do) rather than engaging with learner perspectives. The realisation that social life is constantly in flux also means that practice theory forms a useful lens for the study of transition within increasingly interconnected and boundary-less worlds (Nicolini, 2012, p.2).

Importantly, a practice approach also aligns with the study’s broader theoretical framework. While practice theory returned to the centre of discussion as interest in the linguistic turn within social theory started to diminish (Shove et al., 2012, p.6), a shared focus on action and social interaction as well as a similar pragmatist legacy aligns the study’s employment of symbolic interactionism with a practice theoretical approach (Nicolini, 2012, p.41). In turn, the positioning of language as a social phenomenon (Schatzki, 2017) means that practice theory is compatible with the study’s use of constructionism. While language “coexists uneasily” (Rouse, 2007, p.515) or becomes less prioritised (Reckwitz, 2002, p.255) with the focus on the body within practice theory, the recognition that speech and writing involve bodily know-how as well as a practical engagement with the broader social environment (Rouse, 2007, p.535) highlights the interwovenness of linguistic and non-linguistic activity within the sayings and doings of practice (Schatzki, 2017, p.127). A practice theoretical approach also creates a warrant for the study’s research methods (see 4.3). The acknowledgement that practices are uncovered rather than perceived (Schatzki, 2012, p.24) underscores the study’s use of interviews while the focus on materiality within practice theory also supports the employment of visual research methods.

3.5.1 Approaches to practice theory

Similar to transitions theory, practice theory has been explored through a variety of different perspectives. Constituting what Schatzki (2012, p.14) refers to as a “domain,” practice theory can most simply be understood as taking either an empirical approach (Feldman & Orlikowski, 2011; Corradi, Gherardi & Verzelloni, 2010), where practices are positioned as the object of study, or a theoretical and a philosophical approach (Feldman & Orlikowski, 2011) where practice is positioned as a “way of seeing” (Corradi et al., 2010) and an analytical concept (Pilerot, 2014b, p.43). The recognition that information literacy practice is nuanced according to the social affordances of a setting means that practice theory is employed in the study to explore language-students’ information activities from both an empirically-driven practice-based standpoint (cf. Corradi et al., 2010, p.269) or in terms of what students do, and an analytically-focused practice-theoretical lens (cf. Corradi et al., 2010, p.273), in terms of how student activities are theorised and explained.

Practice theory can also be explored through either an ontological or an epistemological approach to practice (Mahon, Francisco; Kemmis & Lloyd, 2017, p.4). Given the focus on how language-students make meaning, the study takes an ontologically-driven perspective to practice, which centres attention on how practice is organised and shaped rather than how people know, which is explored through an epistemological orientation to practice (e.g. Lave & Wenger, 1991; Nicolini, 2012). An ontological approach also emphasises the site of practice which, in the study, is constituted by language-learning (cf. Schatzki, 2005). A focus on the site in which human coexistence transpires draws attention to community ways of knowing while, in forming a bridge between individual and societist ontological perspectives (Schatzki, 2005), further reflects the rejection of mind/body, cognition/action and subject/object dualisms (Feldman & Orlikowski, 2011, p.1242; Schatzki, 2012, p.14) that are characteristic of practice theory. Within the study, emphasis on
the site of practice highlights the situated shape of information literacy as well as the importance of exploring local activities and ways of knowing in order to make information literacy practice visible (Lloyd, 2010, p.253). At the same time, a focus on the context of information literacy does not preclude an engagement with individual students as well as the complex social forces with which they engage during residence abroad.

3.5.2 Practice
Practices forms the central concept of practice theory yet the way in which practice is conceived is subject to a variety of interpretations. For both Gherardi (2009, p.356), who sees practice as “recurrent patterns of socially sustained action” and Reckwitz (2002, p.249) who positions practice as a “routinized type of behaviour,” the emphasis of practice is on continuity. In contrast, Schatzki (2001, p.11) refers to practice as an interwoven array of open-ended and spatiotemporally-dispersed activities where activity is constituted by “bodily doings and sayings” (Schatzki, 2002, p.72) that hang together. Schatzki’s definition, which positions activities as continually unfolding (Schatzki, 2002, p.72) while also taking place in or over objective space and time (Schatzki, 2012, p.5), further highlights how practice is both dynamic and coordinated rather than merely being constituted by predictable or routinised patterns of activity. The recognition that language-learning centres on meaning-making and identity rather than on the replication of stable and “commonly-agreed-upon reality” (Kramsch, 2009, p.2) means that Schatzki’s definition of practice will form the basis of the study’s practice theoretical approach.

The study also draws upon Schatzki (2002) to position information literacy as a dispersed social practice that happens within other integrative practices (Lloyd, 2010b, p.246). Dispersed practices are recognised as coursing through a variety of sectors and arenas and as concentrating on a single action rather than combining multiple projects and goals, as is the case with integrative practices (Schatzki, 2002, p.88). Nevertheless, the recognition that dispersed practices can look very different within distinctive contexts highlights how they reflect the social, historical and political features of the integrative practice in which they circulate rather than forming a generic and decontextualised skill (Schatzki, 2001, p.88; Lloyd, 2010, p.249). Constituted by a constellation of interconnected activities (Lloyd, 2010c), information literacy is thereby positioned in the study as forming a dispersed practice that connects people with the information activities and the forms of knowledge that constitute a knowing of a broader, integrative practice (Lloyd, 2012, p.777). In turn, the recognition that dispersed practices are widespread focuses attention on how the site of practice shapes information literacy practice.

3.5.3 Activity and its organisation within practice theory
The centrality of human activity forms the first of the key concepts that Nicolini highlights as underscoring these descriptions of practice. Activity, which is understood as an event that is accomplished by the performance of action (Schatzki, 2013, p.xv), plays a central role within practice theory; although social structures appear durable, they only exist through the “performance of material activities” (Nicolini, 2012, p.3). Notwithstanding, while activities incorporate the purpose or ends for which people act (Schatzki, 2012, p.15), they cannot be conceived as the possession of a specific person. Instead, activities emerge and are produced through an individual’s engagement in the world (Feldman & Orlikowski, 2011, p.1247) as well as, in additionally determining the shape of others’ engagement in practice, belonging to practice (Schatzki, 2003, p.193). In this sense, activity must be seen to encompass both physical action and reflexive deliberation (Gourlay & Oliver, 2018). Within the study, the emphasis on activity shifts the focus of information literacy towards complex understandings about the hanging togetherness of social worlds.

In turn, the recognition that the sayings and doings that constitute activity are linked highlights how activity is organised rather than being pre-determined and forming part of a fixed set of collectively agreed-upon entities (Schatzki, 2012, p.19). In other words, activities compose a practice if they “express… one of the understandings, rules or teleoffective elements that organise that practice” (Schatzki, 2012, p.15). Schatzki’s focus on organisation and how doings and sayings hang together further illustrates how practices are continually unfolding rather than being normalised (Schatzki, 2010, p.129) by acknowledging that these structural features can change over time (Schatzki, 2001, p.61) and may not be complete (Schatzki, 2010, p.145). For dispersed practices, however, Schatzki (1996, p.91) highlights how activities are uniquely structured or oriented through what he refers to as understanding, which is constituted by a person’s (shared) abilities or knowing how to carry out, identify and respond to actions. Dispersed practices are consequently positioned as being organised by a knowledge of which “of the doings and sayings of which one is capable” (Schatzki, 2002, p.78) would constitute the practice rather than by the rules or teleoffective elements that additionally structure integrative practice. Within the study, the acknowledgement that the activities of a practice are connected as well as learned through participation in practice
(Schatzki, 1996, p.132) moves the focus of information literacy towards an exploration of the ways in which ‘knowing how’ guide and shape student information activities.

3.5.4 The body and knowledge within practice theory

Schatzki’s definition of practice also draws attention to the importance of the body, which constitutes the second of Nicolini’s core practice theory concepts and is positioned as forming the meeting point of mind, activity and society (Schatzki, 2001, p.12). The focus on the body, which could be interpreted as a direct response to historical distinctions between and dominance of the mind over body (Reckwitz, 2002, p.251), highlights its centrality to the capturing of knowledge (Gherardi, 2009, p.354) and the making and remaking of social life. In turn, the recognition that actions are only understood within their practical contexts demonstrates how practices constitute bodies as well as activities (Schatzki, 2001, p.11). An emphasis on the corporeal also draws attention to embodied understandings that are rarely articulated, such as tacit cues and sensitivities (Wenger, 1998, p.47) as well as explicit physical activities by illustrating how practices both make and are made visible through a person’s body. These ideas are particularly important within the study of language-students because they suggest that language alone cannot capture the understanding that undergirds undergirds practice (cf. Nicolini, 2012, p.165) while also highlighting how an emphasis on the “whole person” (Lloyd, 2010b, p.249) is crucial to an understanding of information literacy practices.

The prominence of the body also means that practice theory reframes the concept of knowledge in terms of knowing or as a collective activity that “unfolds over time” (Gherardi, 2009, p.353). Knowledge has commonly been viewed in cognitivist terms as know-what or as an object that is carried in the head of a person (Reckwitz, 2002, p.254). In contrast, the recognition that people know through their bodies highlights how knowledge espouses know-how and ways of wanting, feeling and understanding (Reckwitz, 2002, p.253) as well as know-what. The acknowledgement that social life forms an ongoing production (Feldman & Orlikowski, 2011, p.1240) further highlights how knowledge constitutes a situated and embedded activity rather than an object that can be possessed (Gherardi, 2009, p.357). Within the study, the recognition that knowing is emergent and negotiated in-situ draws attention to language-students’ active participation in the shared activities of their setting. An emphasis on shared interpretation also highlights how student knowing centres on understanding oneself and others in a culturally understandable way rather than merely what to say and do (Reckwitz, 2002, p.254).

3.5.5 Materiality within practice theory

Materiality forms the third important concept within Nicolini’s summary of practice theory. Drawing from the understanding that practice theorists “conceive... of practices as embodied, materially mediated arrays of human activity centrally organized around shared practical understanding” (Schatzki, 2001, p.11), materiality, which encompasses “tools, technologies, bodies, actions and objects” (Fenwick, 2010, p.69), is bound up with the enactment and structuring of practice. At the same time, materiality, like practice itself, is subject to a variety of interpretations within practice theory. For Gherardi (2009, p.354), who builds upon Orlikowski’s (2007, p.1437) premise that “there is no social that is not also material, and no material that is not also social,” materiality constitutes “a form of distributed agency” that anchors practices through the knowledge that is embodied in objects, tools and artefacts. In contrast, Schatzki (2010, p.132) affords materiality “compositional significance” rather than agency in his discussion of practice. Schatzki’s (2010, p.134) understanding of materiality, which recognises that “understanding specific practices always involves apprehending material configurations” (Schatzki, 2001, p.12), highlights how nature and non-human organisms as well as humans and artefacts form an ingredient of social practice rather than constituting an individual actor or agent. This study’s emphasis on how people build understanding within a new setting grants primacy to human rather than to nonhuman activity and means that Schatzki’s understanding of materiality will be employed in the research.

At the same time, the study will also draw on concepts that have typically been associated with Gherardi and Orlikowski’s portrayal of materiality as a way to broaden understanding about the role of things within students’ information literacy practices. More specifically, practice theory draws attention to material objects or what Knorr Cetina (1997) initially labels as objects of knowledge and later renames as epistemic objects (Knorr Cetina, 2001, p.190). In referring to artefacts that are perpetually in the process of being materially-defined (Knorr Cetina, 1997, p.18), an awareness of epistemic objects provides a way to interrogate the “object relations on which expertise depends” (Knorr Cetina, 1997, p.13) while also highlighting the changing properties of an object as well as the purposes to which they can be put. Boundary objects, which refer to the artefacts that act as an anchor or a bridge between different worlds (Star & Griesemer, 1989, p.414), form another way to explore how people act towards and with artefacts. An emphasis on the arrangements that enable different groups to work together “without consensus” (Star, 2010, p.602), which demonstrate how an object’s materiality is produced through action rather than an inherent
“thingness” (Star, 2010, p.603), further helps to make visible the “sociotechnical contexts within which people seek, retrieve, use, share, and curate information” (Huvila, Andersen, Jansen, McKenzie & Worrall, 2017, p.1817).

Within the study, an emphasis on materiality draws attention to the important and unfolding role that common objects such as mobile phones and social networks play within everyday student life as well as the role of artefacts that are traditionally associated with travel such as souvenirs and guide books (cf. Morgan & Pritchard, 2005). Materiality further helps to challenge the assumption that, to paraphrase Barad (2003, p.801), language, discourse and culture matter more in the study of language-learning than matter itself and creates the warrant for the use of the visual research methods that provide an entry-way into the tangible aspects of language-student engagement with information.

3.5.6 Agency and power within practice theory
The recognition that practice is produced through embodied and materially-mediated human activity additionally means that the concept of agency, which is the fourth of Nicolini’s core theoretical concepts, is centred within practice theory. While the basic units of analysis within practice theory are practices rather than practitioners (Nicolini, 2012, p.7), the foregrounding of the body and material arrangements, as well as Schatzki’s (2001, p.15) emphasis on the non-routine nature of practice, illustrates how human agency or a person’s enactment of practice is the “central motor” (Schatzki, 2002, p.189) to the ordering and perpetuation of social life. The centrality of human agency is also recognised through the positioning of people as carriers of practice, which illustrates how practice is kept “alive” (Shove & Pantzar, 2007, p.155) through human agency rather than remaining constant. The recognition that non-humans, which include objects and artefacts, have compositional influence within practice (see 3.5.5) further highlights how agency is not solely a human characteristic, although the study stresses the primacy of human agency in alignment with Schatzki’s (2002) understanding of practice. Accordingly, a focus on agency draws attention to the active shape of student participation within their new setting as well as to their creativity and initiative (Nicolini, 2013, p.4) as they act according to what makes sense for them to do (Schatzki, 2001, p.55).

Simultaneously, the recognition that a person’s enactment of practice takes place and is only intelligible “against the more or less stable background of other performances” (Rouse, 2007, p.505) illustrates how human agency “makes the future within an extant mesh of practices and orders that prefigures what it does- and thereby what it makes- by qualifying paths before it” (Schatzki, 2002, p.210). In other words, social life is constituted through the site of practice (Schatzki, 2005) rather than being produced through human agency alone. More specifically, Schatzki (2012, p.16) highlights how sites are shaped by arrangements or set-ups of material objects that channel, prefigure and facilitate practices. The recognition that arrangements are tied to practices in what Schatzki (2012, p.16) refers to as practice-arrangement bundles illustrates how a person’s possibilities for action are bound in materiality. An acknowledgement that the relationships between people and the “organisms, artifacts and things through which they coexist” (Schatzki, 2001, p.51) both limit and promote activity also emphasises the need to explore the material conditions of social life as well as a person’s capacity for autonomous activity within the study.

In turn, a focus on agency foregrounds the concept of power within the construction of social reality, which forms the fifth of Nicolini’s (2012, p.6) core practice theory concepts. Both giving and denying a person the ability “to do things and to think of themselves in a specific way” (Nicolini, 2012, p.6), power is a complex concept that expresses how one person’s actions structure another person’s possible actions (Schatzki, 2005, p.478). Demonstrating that actions impact a person’s access to the possibilities that practice-arrangement bundles provide (Schatzki, 2005, p.479), power is positioned as brought into existence through the historically and socially situated shape of practice (Wenger, 1998, p.47) rather than constituting a fixed and stable force within society. The recognition that the human body forms a frequent target for “social normalization and exercise of power,” (Rouse, 2007, p.514) further illustrates how human action reconfigures “what is at issue and at stake” (Rouse, 2007, p.533) or how a person participates in the world. Within this study, the concept of power draws attention to how student engagement with information is prefigured and shaped through power as expressed through practice-arrangement bundles. Nevertheless, the recognition that power both constrains and enables activity also draws attention to the opening of possibility as well as to the broader concept of resistance and the role that subverting or taking advantage of hierarchy and authority plays within learning.

3.5.7 Practice theory and information research
The desire to ground information activity within its sociocultural context has been one of the major driving factors behind research into practice theory within library and information science. Often used in contrast to the concept of information behaviour, an information practice approach encompasses a broader range of activities than is usually implied by traditional information studies (McKenzie, 2002, p.38) and creates renewed emphasis on the
“continuity and habitualization of activities” (Savolainen, 2007a, p.126). This description, which has led to the outlining of information practices as “a set of socially and culturally established ways to identify, seek, use and share the information available in various sources such as television, newspapers, and the Internet” (Savolainen, 2008, p.2), nonetheless limits the concept of information practice to discrete activities (Cox, 2012, p.185) as well as risking positioning practice as the container or the context for activity rather than the site.

Most recently, library and information science researchers have employed a number of different ontologically-focused practice theoretical approaches to explore the information practices of various groups and individuals. The growth in the use of a practice theory lens as well as the different scholarly traditions that lie behind each practice theoretical approach (Nicolini, 2012), which complement earlier interest in Lave and Wenger’s (1991) epistemological approach to practice theory, explains the range of approaches within the literature. The role of the body forms one of the major emphases of recent library and information science research. Both Lloyd (2010b, 2010c, 2012) and Veinot (2007) draw upon the work of Schatzki (2002) to highlight the important role that corporeal modalities of information play within the development of knowing. In contrast, Haider (2011) and Pilerot (2014a, 2014b, 2016) focus more concretely on questions of materiality. Seeing the variety of practice theories as a strength rather than as a disadvantage, Pilerot (2014a, 2014b, 2016) draws from Knorr Cetina (1997) and Barad (2003), among other practice theorists, to illustrate how material artefacts coordinate the enactment of information practices. Haider (2011) as well as Schreiber (2014) further draw upon Reckwitz (2002) to respectively explore the routine shape of everyday and academic information practices. The ongoing and emergent ways in which practice theory has been applied to studies of information literacy (e.g. Lloyd, 2010b, Pilerot, 2016, Schreiber, 2014) highlight that there is not just one practice-theoretical strand in library and information science literature, while establishing the need for ongoing research in the area.

3.6 Chapter conclusion

The chapter presented the theoretical framework for the study. The chapter started by exploring symbolic interactionism, which provides the study’s ontological framing and highlights how students accord meaning to the information activities and objects with which they engage, before continuing with an overview of constructionism, which forms the epistemological structure for the study and acknowledges that students create meaning through their dialogic engagement with information that is, in itself, historically, socially and politically-situated. The chapter then provided an overview of the guiding theories that frame the study of language-student information literacy practices during residence abroad; transitions theory, which provides a lens through which to explore how students’ transitional processes are mediated through their engagement in the activities of their community, and practice theory, which is employed to examine how students connect with information and the ways of knowing that are valued within their new setting. In turn, this theoretical framework informs the study’s methodological approach, which will be presented in the following chapter.

Various other theories will be used in Chapter 6 to extend this theoretical framework in accordance with the study’s use of constructivist grounded theory (see 4.2). More explicitly, risk theory (Douglas, 1992) as well as the theoretical constructs of uncertainty (Kuhlthau, 1993) and time (Schatzki, 2013) will be used to explain core concepts within the study’s emerging theory of mitigating risk while the theoretical constructs of affordance (Gibson, 1977) and cognitive authority (Wilson, 1983) will be used to explore the shape of student information literacy practices in more detail.
Chapter 4: Methodology and methods

4.1 Chapter overview

The chapter presents the research methodology and methods that were used to explore the information literacy practices of language-students during residence abroad. The chapter starts by presenting the constructivist grounded theory methodological approach that was employed within the research. The research design, which was shaped by the study’s theoretical framework, correspondingly informed the selection of semi-structured interviews and photo-elicitation as the methods that were used to generate data. After exploring how data were produced and analysed, the chapter concludes by presenting the study’s participants as well as examining the limitations of these methods and how ethics and data quality were ascertained. This approach addresses the following research questions:

1. How do language-students enact information literacy practices during residence abroad?
   a. What shapes language-student information landscapes within a new setting?
   b. What role do information literacy practices play during students’ intensive periods of language-learning abroad?

2. How do language-students make sense of, transition into and come to know their new information landscapes?
   a. What enables and constrains the ways in which language-students construct their information landscapes?
   b. In what ways does the enactment of information literacy practices shape language-student subjectivity?

4.2 Methodological framing

Constructivist grounded theory provides the methodological framing for the study. Constructivist grounded theory refers to “systematic yet flexible guidelines for collecting and analyzing data to construct theories from the data themselves” (Charmaz, 2014, p.1) and employs simultaneous, comparative data collection and analysis to build theoretical understanding about an event or experience in question. In further constituting a set of guidelines and strategies rather than a prescriptive procedure (Charmaz, 2008), constructivist grounded theory is also distinguished by the focus on constructing theory that is ‘grounded’ in data rather than using theory as the impetus for research. Importantly, the researcher is consciously grounded within the construction of meaning in a constructivist grounded theoretical approach. The emphasis on the interplay and the sense of reciprocity between researcher and participant acknowledges power imbalances while respecting stories and biographies (Mills, Bonner & Francis, 2006, p.9). In turn, the recognition that all knowledge is negotiated, and that interaction is constrained and enabled by the historical and social conditions of its production (Charmaz & Bryant, 2008, p.376) means that constructivist grounded theory also moves research away from abstract conceptualisation, hypotheses and a fixed set of questions (Pickard, 2007, p.157) to centre upon everyday realities and the specific situation or site that is being studied.

Constructivist grounded theory builds upon the early work of Glaser and Strauss (1967) as well as Strauss and Corbin (1998) and developed in the early 2000s from the work of Charmaz, Bryant and Clarke, notable among others. Rooted in theories of symbolic interactionism, constructivist grounded theory aims to resituate original understandings of grounded theory from a constructivist perspective (Charmaz, 2014, p.13). While grounded theory as exemplified by Glaser and Strauss (1967) and Strauss and Corbin (1998) enjoyed considerable popularity, scholars were growing increasingly critical of its positivist roots, which positioned the researcher as a neutral observer who uncovered objective social relationships (Herring, 2013, p.205). In response, Charmaz (2002a) and Clarke (2003; 2005) reconfigured constructivist grounded theory around the assumption that “both the research process and the studied world are socially constructed through actions” (Charmaz & Bryant, 2008, p.376). An emphasis on incorporating the “relativity of the researcher’s perspectives, positions, practices, and research situation” (Charmaz, 2008a, p.398) into analysis and theory building means that constructivist grounded theory is consistent with the interpretive understandings that frame the study.

A grounded theoretical approach has not typically been applied within information literacy research, which has tended to be dominated by measurement and description rather than by the analysis of human activity (see 2.2.1). Furthermore, the few studies that have employed a grounded theory approach to mediate a lack of prior theorisation (Bury, 2016) or to explore how “the construct of information literacy [is] manifest” (D’Angelo, 2012, p.642) have stopped short of explicit theory-building (e.g. Comstock, 2012; Elmore & Stordy, 2015; Maybee, Carlson, Slobodnik & Chapman, 2015). Exceptions are found in the work of Lloyd (e.g. 2005, 2009, Lloyd et al., 2013; Lloyd & Wilkinson, 2016) and Herring (2011), who adopt a constructivist grounded theory research design to conceptualise how information literacy is understood within a specific community. Within this study, the use of constructivist grounded theory draws attention to multiple realities as well as to the diversity, complexity and situatedness of student information activities. The emphasis on meaning also
helps to move the focus of information literacy beyond descriptions of skills and procedures to generate understanding that is situated in participant statements and activities. The lack of existing theory about information literacy within transition and intercultural contexts, provided further rationale for the study’s employment of constructivist grounded theory.

Constructivist grounded theory is guided by various precepts, which include the need to “analyze actions and processes rather than themes and structures” (Charmaz, 2014, p.15) as well as the use of data rather than pre-existing theory to develop conceptual categories (Charmaz, 2014, p.15). Each of these precepts, which prioritise the interactions between the participant and researcher as the site where knowledge is constructed (Kvale, 1996, p.2), is underscored by the desire to create theory that is grounded in both the participant’s and the researcher’s activities. Accordingly, data generation (which was carried out concurrently with data analysis) formed the first step of my process within the study. These data were then subjected to analysis, which consisted of an initial and a subsequent focused coding process that helped me to summarise and ask analytic questions about the data (Charmaz, 2014, p.111). These early analyses uncovered new or follow up areas of interest for successive data collection. Notwithstanding, the desire for theorising that is ‘uncontaminated’ by the researcher’s prior familiarity in the field can be seen as untenable as well as reliant on what Thornberg (2012, p.7) labels as “naïve empiricism.” Accordingly, while the sensitising theories that I used lay “fallow” (Charmaz, 2014, p.307) until after my codes and categories were established, my analysis can nonetheless be seen to have been influenced by my prior engagement with transitions theory (3.4) and practice theory (3.5) as well as by my previous experience as a teaching librarian. In turn, the desire to ensure that this analysis is grounded in participant experiences acknowledges that the use of theory necessarily moves this work beyond students’ direct interpretations of their time overseas to facilitate a student-aligned construction and deconstruction of their social realities (Charmaz, 2014, p.232).

The writing of memos, which provided a way for me to record abstract thinking and developing meaning, further extended data analysis (Mills et al., 2006, p.10). These memos were grounded in the wider context of both the participants’ and the researcher’s lives (Mills et al., 2006, p.11) and later started to form the core of the grounded theory. The grounded theory was also developed through theoretical sampling, or the purposeful selection of data according to the developing categories and emerging theory (Goulding, 2002, p.66). Theoretical sampling, which was employed after key categories emerged from the data, and subsequently, saturation, focuses on obtaining data to “address specific theoretically interesting facets of the emergent analysis” (Clarke, 2003, p.557) and to elaborate categories further. While the grounded theory process has been critiqued for fracturing individual experiences (Bailey & Jackson, 2003, p.58), others believe that the purpose of analysis is to render experience usefully rather than to replicate it (Charmaz, 1995, p.55). Consequently, coded data, analytical categories, comparisons and memos were combined to create the grounded theory or the “abstract theoretical understanding of the studied experience” (Charmaz, 2014, p.4).

### 4.3 Research methods

Qualitative research methods, which assume social constructions of reality (Pickard, 2007, p.13), were employed in the research in accordance with the theoretical and methodological stances that guide the study. Used to gather and analyse data (Crotty, 1998, p.3), qualitative research methods were particularly well suited to the study, which engaged with the various ways in which participants give meaning to and interpret information during residence abroad. More specifically, semi-structured interviews and photo-elicitation methods were used to generate data. These two methods were selected because they complemented the open-ended goals of the study as well as each other, with the interview generating spoken reflections at both the beginning and the end of residence abroad and photo-elicitation facilitating concrete and situated representations of information activities between interviews, as illustrated by Table 2.

<table>
<thead>
<tr>
<th>Method</th>
<th>Strengths to focus issues, as well as to follow new trains of thought.</th>
<th>To allow the interviewee to reflect on and present their narrative of events; to gain a sense of meaning for participants</th>
<th>-Flexibility to focus issues, as well as to follow new trains of thought.</th>
<th>-Facilitates collaborative meaning-making between researcher and participant</th>
<th>-To explore explanations, affective responses and linguistic dimensions of activities</th>
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<tbody>
<tr>
<td>Semi-structured interviews</td>
<td>-Flexibility to focus issues, as well as to follow new trains of thought.</td>
<td>To allow the interviewee to reflect on and present their narrative of events; to gain a sense of meaning for participants</td>
<td>-Flexibility to focus issues, as well as to follow new trains of thought.</td>
<td>-Facilitates collaborative meaning-making between researcher and participant</td>
<td>-To explore explanations, affective responses and linguistic dimensions of activities</td>
</tr>
<tr>
<td>Photo-elicitation</td>
<td>-Allows people the chance to explore explanations, affective responses and linguistic dimensions of activities</td>
<td>-To access contextual data “on-the-go” and to gain a more elaborate sense of everyday life</td>
<td>-Flexibility to focus issues, as well as to follow new trains of thought.</td>
<td>-Facilitates collaborative meaning-making between researcher and participant</td>
<td>-To explore explanations, affective responses and linguistic dimensions of activities</td>
</tr>
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Table 2: Overview of research methods
4.3.1 Interviews

Initial and follow-up semi-structured interviews were used to generate reflective data about language-student information literacy practices during residence abroad. Semi-structured interviews are positioned as the site of knowledge construction (Kvale, 1996, p.2) and form a useful way to access “what was in, and on, the interviewee’s mind” (Pickard, 2007, p.172) as well as reflecting different conceptions of meaning and reality. Differentiated from structured and unstructured interviews by the presence of the interview guide or a list of topics and issues that are explored within the interview (Patton, 2002, p.343) (See Appendix 2), the in-depth interviews that were employed in the study consisted of open-ended questions that were used to gain an understanding of participants’ activities, to explore meanings that may have been hidden from view, and to gain multiple perspectives on a specific event (Johnson, 2002, p.106). The use of semi-structured interviews further permitted participants to reflect on and to present their narrative within their own “linguistic parameters” (Pickard, 2007, p.172) as well as allowing the flexibility to follow issues or “unanticipated areas of inquiry, hints and implicit views and accounts of action” (Charmaz, 2014, p.56) as they arose. The use of interviews also aligned with the practice theoretical framework that structured the study. The recognition that interviews reflect “participants’ temporal journeys through series of bundles and constellations” (Schatzki, 2012, p.25) meant that interviews provided a useful entry point into practices as well as to the arrangements that structure a person’s activities (cf. Pilerot, Moring & Hammarfelt, 2017).

The open-ended nature of semi-structured interviews meant that they were particularly suited to constructivist grounded theory research design. The flexibility of the interview facilitated an engagement with ideas that were based upon participant responses rather than on preconceived notions (Charmaz, 2014, p.85) while further providing the freedom to explore and refocus conceptual categories from the coding process as analysis progressed (Charmaz, 2014, p.108). Accordingly, the study scheduled sequential interviews to provide an opportunity to address emerging questions as well as to facilitate independent checks and to create a “nuanced understanding of social process” (Charmaz, 2002b, p.682). Interview questions, which were modified and developed through ongoing interaction with participants, focused on exploring typical everyday activities in which information was expected to play an important role, including choosing a supermarket, opening a bank account and establishing leisure activities (see Appendix 2). Questions also specifically centred on student preparation for their time overseas, as well as their use of technologies. The follow up interview additionally explored themes that emerged from the first interview.

A desire to collect data while participants were engaged abroad meant that all interviews were held over Zoom (n.d.) or Skype (n.d.), two online video conferencing services that offer video or audio calls as well as instant messaging and an app for mobile use. While Skype is more well-known, the inbuilt audio-recording capabilities as well as the elimination of the need to create an account meant that Zoom was selected as the primary interviewing software. The use of video conferencing tools further allowed participants the convenience of choosing their own setting for the interview as well as the possibility of using their own laptop or mobile device. During the interviews, three students used Skype due to difficulties accessing Zoom from their computers, while two students used the mobile version of Zoom on their smartphones. Interviews tended to be carried out in participants’ own apartments, with three interviews taking place in a cafe.

Interviews were programmed between two and six weeks after each participant’s arrival date aboard to allow them time to settle in overseas. While I tried to be flexible with potential interview times, the broad geographic reach of the study meant that interview schedules were often constrained by time-zone restrictions. Follow up interviews took place under very similar conditions, two to three weeks before the end of the participant’s scheduled academic activities. This time frame was flexible in recognition that residence abroad programmes differ by institution, but interviews were spaced far enough apart to allow time for participants to engage within their new settings. After the interview was scheduled, I sent each participant a unique Zoom meeting room link that would be used to access the interview. Ten minutes before each meeting time, I logged into the meeting room and started the recording feature within Zoom. Participant interviews lasted from between 24 minutes and 94 minutes, for an average of 56 minutes. There was little difference between the length of the first and the second interviews.

Given that video interviews have often been criticised for damaging rapport between participants (Deakin & Wakefield, 2013), my immediate priority within the initial interview was to establish a sense of connection with participants. Beyond practising self-disclosure and highlighting my enthusiasm for the topic (cf. O’Connor & Madge, 2001), I employed a range of verbal and non-verbal cues to make up for the lack of other visible signs of interest, including over-emphasising my facial expressions and incorporating the participant’s own words into my comments to demonstrate engagement (cf. Seitz, 2016, p.231). These activities
put participants at ease and contributed to the smooth running of each interview. Interviews were further facilitated by the overall absence of technological issues, which have often negatively affected data quality in video interviews (Seitz, 2016). However, while interviews were occasionally marked by time lags or interruptions due to slow Internet speeds, connection issues were surprisingly rare given the broad range of countries in which the research took place, as well as the use of bandwidth-heavy video. In this sense, the use of Zoom was seen to have been highly successful and to have directly contributed to interview and data quality. In facilitating what Kazmier and Xie (2008, p.259) refer to as contextual naturalness, Zoom may also have provided access to activity and objects that are not always visible within a face-to-face interview. The use of a second interview meant that I often noticed and could ask about changes to participants’ surroundings such as new maps on the wall behind them.

Each interview was audio recorded using the inbuilt system within Zoom as well as a backup service, Audacity, before being saved in a password protected file space. I then transcribed the interviews to capture the rich, situated detail of each conversation (Birks & Mills, 2011, p.76) and to facilitate the in-depth analysis that is called for within constructivist grounded theory studies (Pickard, 2007, p.178). Each interview (initial and follow up) was transcribed in full, where full refers to the transcription of every word. However, in recognising that the primary focus of the study was participant meaning rather than linguistic discourse, I removed distracting features of spoken talk such as ums, errs and pauses from transcripts, while adding in punctuation. These choices, which produced the readable transcripts that are suitable within a constructivist grounded theory approach, acknowledge that transcription is an interpretive rather than a mechanical process (Davidson, 2009).

4.3.2 Photo-elicitation
Photo-elicitation, which is a form of visual research, was used to gather participant-created photo representations of students’ everyday information activities. Visual research methods refer to “the use of images to learn about the social world” (Hartel, Lundh, Sonnenwald & Foster, 2012, para. 1) and emerge from work in visual anthropology (Collier & Collier, 1986) and visual sociology (Harper, 2012), as well as from feminist theory and the emancipatory work of Freire (Wang & Burris, 1997, p.370). Encompassing data as varied as illustrations, cartoons, multimedia and diagrams, as well as the more typical photographic images (Hartel et al., 2012), visual methods can most succinctly be characterised as taking either a participatory (emic) or a non-participatory (etic) approach to data collection (Pollak, 2017).

Since expanding to include video alongside still images, visual methods are becomingly more widely used within various disciplines, including psychology, geography and health education (Pain, 2012, p.304) as well as library and information science. The important role that photographs typically play within travel activities (Andersson Cederholm, 2004; Pachmayer & Anderek, 2017), as well as the study’s emphasis on materiality (see 3.5.5), meant that the use of photo-elicitation also aligned with both the context of the research and its practice theoretical approach.

Specifically, the study employed photo-elicitation method. Photo-elicitation is described as a “research method whereby photographs chosen by the researcher or the respondent are presented in an interview situation” (Pachmayer & Anderek, 2017) and was originally envisaged as the means to create consensus between researchers and to provide construct validity within a study of public housing (Prosser & Loxley, 2008). A recognition of the potential for photographic methods to explore participants’ understandings of a specific situation (Collier & Collier, 1986) as well as to create a bridge between different experiences of reality (Pink, 2005, p.69) meant that researchers swiftly adapted the use of photos for interviews with research participants. Since then, health researchers have further modified photo-elicitation to create the photovoice method, which is the means through which “people can identify, represent, and enhance their community through a specific photographic technique” (Wang, Cash & Powers, 2000, p.81). Often confused with photo-elicitation, photovoice differs through its focus on the promotion of critical dialogue and the desire to realise change within a community (Wang & Burris, 1997). As community action would be hard to effect in the study of language-learners’ information literacy practices, photo-elicitation was selected as more appropriate for the research.

More specifically, photo-elicitation provided a useful way to extend data collection. Supplementing participant interviews, photo-elicitation facilitated access to ideas, viewpoints and settings that might otherwise have been overlooked by recording issues that were important to the student rather than to me as the researcher (Meo, 2010). The emphasis on positioning participants as experts within their own settings, as well as playing an active role in research (Clark-Ibáñez, 2004) meant that photo-elicitation further connected me to the tacit or nuanced information that structures a setting (Pain, 2012). As Lloyd (2014b, p.2) points out, while information literacy research often captures normative or institutionally sanctioned aspects of practice, it is much harder to capture situated ways of knowing within a setting. Accordingly, photo-elicitation provided a simple and effective way to portray the subtleties...
of participant information activities without having to rely on verbal descriptions. In further allowing a snapshot of “practice as it happens” (Nicolini, 2012, p.14) rather than merely relying on after-the-fact accounts of activity, the use of photo-elicitation also aligned with the practice-based focus on “what people ‘actually’ do rather than on what they say they do or on what they ought to be doing” (Schultze & Boland, 2000, p.195). At the same time, the constructionist lens of the study highlights that visual data were constructed between the participant and the researcher rather than providing an objective representation of reality (Croghan, Griffin, Hunter & Phoenix, 2008, p.346). The requirement that students only discuss the most meaningful photos to them (examined later on in this section) further meant that visual images provided insight into rather than a comprehensive picture of practice.

Photo-elicitation was also used to enrich interview processes (Harper, 2012, p.14) by prompting communication (Hall & Mitchell, 2008) and building rapport (Nykiforuk, Vallianatos & Nieuwendyk, 2011, p.119). The ability to break the ice was particularly important within the research because participants were both unknown to me and located at a distance. Photo-elicitation was also seen to afford a more critical consideration of events (Pain, 2012, p.307) by allowing participants the opportunity to reflect upon their activities. Considering that many residence abroad programmes ask language-students to complete a final report of their experiences, the ability to create a multimedia journal provided a benefit of participating in the research (cf. Van Auken, Frisvoll & Stewart, 2010, p.384).

Photographic visual research methods have not been widely used within the field of library and information science despite the potential to engage with everyday information practices, contexts and spaces (Hartel & Thomson, 2011, p.2214; Pollak, 2017). While various researchers have created their own images for use within research (e.g. Rivano Eckerdal, 2013; St Jean, 2014), the employment of photographs to gather feedback about the use and design of library spaces (e.g. Foster & Gibbons, 2007; Gabridge, Gaskell & Stout, 2008; Given, 2007) means that participant-driven photography is gradually becoming more prevalent within information studies. Barriage’s (2016, 2017) use of the Pixstori mobile app with three to five-year olds further demonstrates how mobile technologies can be used in conjunction with photo-elicitation to facilitate communication with the researcher. Photovoice is also increasingly popular within library and information science. Concluding that the use of this participatory action research method enables the exploration of hard-to-capture experiences, Julien, Given and Opryshko’s (2013) examination of photovoice has since catalysed its employment in various studies of immigrant and refugee information activities, where it provides a way to work across languages (Khoir et al., 2014, 2015a, 2015b, 2015c; Lloyd & Wilkinson, 2016, 2017) and to give a voice to participants (Vannini, Gómez & Guajardo, 2016). However, despite the recognition that information literacy centres on multimodal information activities, there have been very few information literacy studies that draw upon visual methods beyond Lundh’s (2011) study in a primary school as well as Lloyd and Wilkinson’s (2016, 2017) studies with refugee youth.

Participants’ location overseas meant that they were offered the option of participating in photo-elicitation in two ways; either through using a smartphone app or through email. The first option relied on the use of the participant’s own personal mobile device and the EthOS Ethnographic Observation System (n.d.), which is a proprietary iOS and Android application (app) for smartphones or tablet computers. Described as a mobile ethnographic research platform, EthOS is a simple-to-use project management application that enables participants to record, keep track and share photos. Making data accessible to both the researcher and the participant, EthOS also allows a researcher to send prompts and updates to the participant, although that feature was not used in the research. High levels of smartphone and tablet ownership among college students (Pew Research Center, 2013), the popularity of image social networks such as Snapchat, Instagram and Facebook (Pew Research Center, 2015) and evidence that many students travel with their technology devices (Mikal, 2011) meant that a mobile app formed an appropriate way to research the information literacy practices of language-students during residence abroad. The second option asked participants to email photographic images to me. Designed for students who may not have had a personal mobile device or a data plan abroad, this option produced very similar data. In the end, the study was split almost equally between participants who used the EthOS app and those who emailed pictures.

The use of participants’ own devices benefitted the study in several ways. The move from print to transmission oriented photographic practices (Rubinstein & Sluis, 2008, p.9) has already been seen to create more spontaneous personal photography, as well as enabling a greater focus on the everyday and the mundane. The design of a mobile device added an additional layer of intimacy, both in terms of the topic of the photograph and the handheld touchscreen, which introduces an “embodied visual intimacy” (Palmer, 2012, p.88) to the photographic process. The ability to tell personal stories as well as to make everyday activity more visible was particularly valuable within the study. More pragmatically, the use of a mobile device removed barriers to data capture by allowing participants to take and share
media through the devices with which they were already comfortable. The ubiquity of personal mobile devices also meant that participants were likely to provide data from “on-the-go” as they engaged in everyday life (Absar, Halbert, O’Brien & Trumble, 2013).

The visual components of the research were explored after the first interview. When the participant chose to use EthOS, I emailed them a link to download the app as well as simple directions about how to set up an account and use the app (See Appendix 4). When they chose the email option, I asked them to email photos directly to me. At this stage, I engaged each participant in a discussion about privacy issues and the ethics of capturing people’s faces and actions as well as questions of personal safety, harm, fairness and justice. This information was also sent to the participant by email (See Appendix 3). I further reminded participants that photos would only be used in the context of the study and that each participant would retain full ownership of all images.

Participants were instructed to capture photos of anything that characterised their engagement with information overseas, including anything that had helped them to settle in or to learn more about their target language and its broader community. These instructions were deliberately kept very broad, but I checked participant comprehension of the task by offering examples of what this could involve. Media were then reviewed by me prior to the second interview. During the second interview, images were presented through Zoom’s screen-sharing capabilities and participants were invited to tell me about the five most meaningful images to them, including each image’s significance, what it represented and why they recorded it. These questions were designed to provoke reflection on the changing shape of their information activities during residence abroad. Participants were also asked if they saw any themes emerging from their media capture. These reflections were transcribed as part of the follow up interview and integrated into my memos. By the end of the research, I had collected 160 photos with an average of about seven per participant. All but three of the participants submitted photos before their second interview; two because they did not have access to a camera and one because his computer crashed, and he lost all his photos. However, he described the photos that he had taken during the interview in lieu of showing them to me. Participants indicated that they enjoyed taking the photos and that the exercise made them reflect on their activities during residence abroad.

4.3.3 Incentives
Participants were offered nominal incentives in compensation, due to the financial costs (for example using a mobile phone Internet data plan) as well as the time and effort involved in gathering visual data. Participants were offered a USD$40 (GBP£25/CAD $50/AUD$50) iTunes or Amazon gift card in exchange for participation in the research. These sums are commensurate with compensation that is typically offered for participating in usability studies in North America (Blakiston, 2014, p.11). Gift cards were emailed after the second interview. Due to the lack of Amazon gift card options in Australia, a gift card to Coles, a local department store, was selected as a replacement option.

4.4 Participants
The study purposefully chose to explore the activities of English-speakers who were temporarily residing in a non-majority-English environment due to the tendency to focus on non-English speakers within library and information science research, as well as the entanglement of these studies with political questions of assimilation and socialisation (see 2.2). For these reasons, participants were recruited from Australia, Canada, the United Kingdom and the United States, which form four of the largest English-speaking nations. Having studied and worked in three of these countries, I was also familiar with the undergraduate modern language degree structure as well as the system of residence abroad. While there are differences of nomenclature and degree length within the four different systems of higher education, the basic structure wherein students spend time abroad to improve their language skills is the same in each country.

4.4.1 Sampling
The study’s sample comprised 26 participants, who were each interviewed twice for a total of 52 interviews. In keeping with a qualitative research approach, participants in the study were selected through a maximum variation purposive sampling strategy that helped to “purposefully inform an understanding of the research problem and central phenomenon in the study” (Creswell, 1998, p.125). The use of maximum variation purposive sampling, which is designed to confirm that participants “cover the spectrum of positions and perspectives in relation to the phenomenon one is studying” (Palys 2008, p.699), ensured that the study explored multiple transitional experiences, including variations in home and host country background, language of study and occupation. After the first round of recruitment, I engaged in theoretical sampling to focus my data collection (Charmaz, 2014, p.205) by purposefully recruiting respondents who were likely to have different experiences. This was achieved by combing the spreadsheet of potential participants for people located in different settings or engaged in different activities and continued until theoretical saturation was
reached and no new information was being added to the research (Pickard, 2007, p.65). While I originally planned to engage in snowball sampling, the success of the first recruitment method meant that this was not considered necessary.

4.4.2 Inclusion criteria
Inclusion criteria for the study focused on language of study, degree programme and length of time abroad and was ascertained through the recruitment form (see Appendix 1). The emphasis on degree programme ensured that only Australian, Canadian or US students who had a language major or minor or British students who were studying a language in a single or joint honours programme were included in the study. While students were excluded if their global programme had no language component, these screening criteria included students who were enrolled in area studies programmes such as Latin American Studies as well as more traditional language and culture courses. In terms of residence abroad, students who were engaged in a study, work or volunteer placement as an integral part of their undergraduate degree were included. Students whose placements lasted for less than three months were excluded to focus on interactions that went beyond a purely tourist experience. No language or country of residence abroad was excluded.

4.4.3 Recruitment
Participants were recruited through the website that I had established to provide details of the study (see Appendix 1). This website URL was sent to my professional connections and colleagues in the United States, the United Kingdom, Australia and Canada who were expected to have contact with language-students. This included librarians, teaching faculty and language education listservs, as well as international education programme directors, staff and institutes. Emails were also sent to study abroad directors or year abroad coordinators at 190 universities throughout North America, Australia and the UK. These names and addresses were found through intensive web searching. Recruitment took place immediately preceding the Northern hemisphere academic year, with most participants recruited in September 2015, which is when British, North American and European study and work programmes typically start. The choice of September also gave access to participants who were abroad for the whole year as well as students who were engaged in shorter stays. A second, smaller round of recruitment took place in February 2016 to sync with the Southern hemisphere academic calendar. This choice of dates connected me with Australian participants as well as students who were travelling to South America.

4.4.4 Demographics
Demographics of the 26 language-students who were interviewed for the study are presented in Table 3. In terms of home demographics, all but one were undergraduates, with the other participant having graduated a couple of months previously. Most participants came from the UK (12, with nine from England, two from Wales, and one from Scotland) or from the US (eight), with three each from Australia and Canada. 18 universities were represented, characterising a variety of private and public universities in the US, as well as Russell Group and Red Brick universities in the UK. In terms of their location overseas, participants were studying eight European and Asian languages (French, German, Icelandic, Italian, Japanese, Mandarin, Russian, Spanish) within a total of 14 countries, which covered seven European locations (Austria, Belgium, France, Germany, Iceland, Italy, Spain), four in the Americas (Bolivia, Canada (Quebec), Chile, Guadeloupe), three in Asia (China, Hong Kong, Japan), one in Eurasia (Russia) and one in Africa (Melilla). Participants were located in a variety of urban and rural regions, including in major cities as well as in small villages and on islands. While most chose the country in which they wanted to be located, students who were participating in official schemes such as the British Council’s teaching initiative had less input about the specific city or region in which they were placed. In terms of occupation abroad, most participants spent their time abroad studying (17), both through private and non-profit exchange programmes as well as through the European Erasmus scheme. A significant proportion of participants (nine) were employed during this time, including taking a private internship or position (four), participating in the British Council teaching assistantship scheme (four) and volunteering (one).

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1 The Russell Group refers to the 24 universities that are typically seen to be the most prestigious institutions in the United Kingdom. Red Brick universities refer to institutions that were founded in the nineteenth century.
Table 3: Participant data

<table>
<thead>
<tr>
<th>Participant</th>
<th>Country of Visit</th>
<th>Language Studied</th>
<th>Occupation Abroad</th>
<th>Origin Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alex S</td>
<td>Germany</td>
<td>German</td>
<td>Study</td>
<td>U.K. (Wales)</td>
</tr>
<tr>
<td>Alex W</td>
<td>Hong Kong</td>
<td>Mandarin</td>
<td>Study</td>
<td>United States</td>
</tr>
<tr>
<td>Ben</td>
<td>China</td>
<td>Mandarin</td>
<td>Study</td>
<td>Canada</td>
</tr>
<tr>
<td>Charlotte</td>
<td>Italy</td>
<td>Italian</td>
<td>Work</td>
<td>U.K. (England)</td>
</tr>
<tr>
<td>Chloe</td>
<td>China</td>
<td>Mandarin</td>
<td>Study</td>
<td>Australia</td>
</tr>
<tr>
<td>Chris</td>
<td>Germany</td>
<td>German</td>
<td>Teaching</td>
<td>U.K. (England)</td>
</tr>
<tr>
<td>Eli</td>
<td>Iceland</td>
<td>Icelandic</td>
<td>Study</td>
<td>United States</td>
</tr>
<tr>
<td>Evelyn</td>
<td>Austria</td>
<td>German</td>
<td>Work</td>
<td>U.K. (England)</td>
</tr>
<tr>
<td>Fiona</td>
<td>France</td>
<td>French</td>
<td>Study</td>
<td>Canada</td>
</tr>
<tr>
<td>Genevieve</td>
<td>Russia</td>
<td>Russian</td>
<td>Study</td>
<td>United States</td>
</tr>
<tr>
<td>Helen</td>
<td>Guadeloupe</td>
<td>French</td>
<td>Work</td>
<td>U.K. (England)</td>
</tr>
<tr>
<td>Holly</td>
<td>Canada (Quebec)</td>
<td>French</td>
<td>Study</td>
<td>Australia</td>
</tr>
<tr>
<td>James</td>
<td>Japan</td>
<td>Japanese</td>
<td>Study</td>
<td>U.K. (Wales)</td>
</tr>
<tr>
<td>Jemma</td>
<td>France</td>
<td>French</td>
<td>Teaching</td>
<td>U.K. (England)</td>
</tr>
<tr>
<td>Julia</td>
<td>Melilla/Spain</td>
<td>Spanish</td>
<td>Teaching</td>
<td>U.K. (Scotland)</td>
</tr>
<tr>
<td>Kamila</td>
<td>France</td>
<td>French</td>
<td>Study</td>
<td>Canada</td>
</tr>
<tr>
<td>Laura</td>
<td>Bolivia</td>
<td>Spanish</td>
<td>Volunteer</td>
<td>U.K. (England)</td>
</tr>
<tr>
<td>Laurel</td>
<td>Spain</td>
<td>Spanish</td>
<td>Study</td>
<td>United States</td>
</tr>
<tr>
<td>Luan</td>
<td>Belgium</td>
<td>French</td>
<td>Work</td>
<td>U.K. (England)</td>
</tr>
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<td>Matt</td>
<td>France</td>
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<td>Teaching</td>
<td>U.K. (England)</td>
</tr>
<tr>
<td>Mckenna</td>
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<td>United States</td>
</tr>
<tr>
<td>Niko</td>
<td>Japan</td>
<td>Japanese</td>
<td>Study</td>
<td>United States</td>
</tr>
<tr>
<td>Patrick</td>
<td>Russia</td>
<td>Russian</td>
<td>Study</td>
<td>United States</td>
</tr>
<tr>
<td>Stuart</td>
<td>China</td>
<td>Mandarin</td>
<td>Study</td>
<td>U.K. (England)</td>
</tr>
<tr>
<td>Tiffany</td>
<td>Chile</td>
<td>Spanish</td>
<td>Study</td>
<td>United States</td>
</tr>
<tr>
<td>Timothy</td>
<td>Canada (Quebec)</td>
<td>French</td>
<td>Study</td>
<td>Australia</td>
</tr>
</tbody>
</table>

2 While Cantonese is more widely spoken in Hong Kong, Alex W studied Mandarin Chinese.
3 Melilla is a Spanish enclave located in North Africa.

4.5 Data analysis

The study employed two methods of data analysis; grounded theory analysis and modified situational analysis. Data analysis was carried out in conjunction with data generation in an iterative process in accordance with constructivist grounded theory method.

4.5.1 Constructivist grounded theory analysis

Coding was the first step of the analysis process. Constructivist grounded theory analysis employs the constant comparative method, which is a strategy that compares each piece of data to develop analytic conceptualisations and distinctions (Pickard, 2007, p. 241). Within this framework, coding, which is understood as the “process of defining what data are about” (Charmaz, 2014, p.111), names and categorises the data before establishing a relationship between the data and participants (Star, 2007, p.80). These codes are used to make responses or meanings visible and later form the preliminary elements of the theoretical statements that create the grounded theory (Herring, 2013, p.208). I carried out initial line-by-line coding of data by hand using print-outs of participant transcripts and a highlighter pen. The study’s emphasis on activity meant that coding was structured through the language of action (gerunds) and focused on what participants were trying to achieve through their undertakings and accomplishments. This approach helped me to start analysis from the participant’s activities, rather than from preconceived concepts (Clarke, 2003, p.558). As conceivable codes started to emerge, I listed and mapped potential concepts in an ongoing and dynamic comparative process. These methods gradually contributed to the emergence of the categories that make up the grounded theory of the study by helping me to visualise the emerging theoretical structure as well as to review various permutations and ideas.

Focussed coding formed the second phase of the coding process. A more selective process, focussed coding was my first step in the identification of patterns that emerged from the initial coding (cf. Herring, 2013, p.209). These codes were then used to analyse larger sets of data and to establish categories as I moved from individual transcripts to broader and more overarching analysis. The shift from data to codes to categories and back again in a recursive, comparative process meant that focussed coding helped me to ensure that the grounded theory emerged from participant data rather than from pre-existing theories (Charmaz, 2014, p.115). More conceptual than the codes that arose from initial coding, focussed codes centre on analytic significance (Charmaz, 2014, p.19). This meant that coding formed an interactive process where all coding reflected and was derived from both the
Situational analysis, which is rooted in constructionist epistemologies and characterised as an analysis technique that builds upon grounded theory to integrate postmodern implications such as researcher situatedness (Clarke, 2003, p.556) into data analysis. Providing a way to visually represent data, situational analysis moves the focus of research beyond the person to facilitate an exploration of the connections and relationships between themes as well as the key “elements, materialities, discourses, structures, and conditions that characterize the situation of inquiry” (Clarke, 2005, p.xxii). Nevertheless, the recognition that context is constitutive of a situation and action rather than a frame (Clarke & Friese, 2007, p.364) means that situational analysis further encompasses the instabilities and the contradictions of social life rather than purely focusing on commonality and basic social process. In this sense, situational analysis forms a useful way to render the invisible, visible (Charmaz, 2014, p.220) and to open up data to new means of analysis. The emphasis within situational analysis on the key elements that situate student engagement within residence abroad further mirrors the practice of theoretical emphasis on the site as the context in which social life transpires (Schatzki, 2005).

Situational analysis has not been widely adopted within the field of library and information science despite its potential for exploring difference and broader processes of meaning-making (Vasconcelos, Sen, Rosa & Ellis, 2012, p.133). As Vasconcelos et al. (2012, p.141) point out in one of the few information studies that has used situational analysis, research into information practices is not purely focused on the situation in question. Instead, it must also consider the wider context, or the “information and knowledge exchanges, the social context, communication issues, relationships, and tensions experienced” (Sen & Spring, 2013, p.642) that are especially visible when people are learning to participate in a new setting. The emphasis on accounting for a range of worldviews as well as processes of negotiated interaction (Sen & Spring, 2013, p.64) within the structural and environmental elements of a social world (Charmaz, 2014, p.220) means that situational analysis is particularly valuable for studies of information literacy, which have tended to simplify rather than to engage complexity. Situational analysis also facilitates the exploration of dynamic situations and complex interactions (Vasconcelos et al., 2012, p.142) by moving beyond the use of maps for data collection (e.g. Sonnenwald, 1999) to provide a method of analysis that is flexible enough to draw attention to the “sites of silence” within data (Clarke, 2003, p.561).

The situational analysis processes that were used in the study developed from Clarke’s work within the fields of Medicine and Life Sciences and centred on the creation of situational and social world maps. Together, these visual representations of coded data, which were accompanied by memoing, formed a way to uncover assumptions or preconceptions rather than constituting a part of the final research (Clarke, 2005, p.83). For this reason, photos of data analysis are included here to illustrate the contributions of situational analysis.
to my findings rather than forming part of the grounded theory. The situational map was the first step in the situational mapping process. The creation of the situational map served to elicit, order and alert me to the major concepts that mattered within the study (Clarke, 2005, p.88) and involved the production of an abstract or messy version that was followed by a more ordered or structured representation of concepts. Starting from the question ‘who or what is in or matters in this situation?’, I used an oversized post-it pad to write down human, non-human, material and symbolic elements that had emerged from my analysis to date. After exhausting these ideas, I turned to Clarke’s sensitising categories of discursive elements, silent actors, and temporal and spatial elements to add in extra detail that occurred to me (See Figure 1). I then transcribed the messy map into more legible typed categories.

At this point, I also engaged in relational analysis where I thought more carefully about the relationships between elements. I circled each human, non-human, collective and discursive element with a different colour pen and drew lines between elements and the other elements to which it was related, linking transport, for example, to travel apps, phone, screenshots and safety (see Figure 2). As the map quickly became quite complex, I also mapped core elements on a separate page, and transcribed these notes into a typed format. Both maps were accompanied by extensive memoing as I reflected on my data.

Mapping out my research onto one sheet of paper and in a less structured manner proved to be extremely helpful for analysis. The visual juxtaposition of seemingly unrelated elements opened up my thinking to a number of new possibilities, while the focus on silent and discursive elements broadened and expanded the scope of my analysis. Situational analysis also provided a flexible way to handle the wide range of textual, visual, interview and memo materials that were created within the study (cf. Clarke, 2003, p.559).

The subsequent social world map focused on the analysis of social action or how “individuals become social beings… through their actions of commitment to social worlds, and their participation in those worlds’ activities” (Clarke, 2005, p.110). The social world map centres on the identification of collective areas or arenas of commitment (Clarke, 2003, p.554) and forms a way to identify groups as well as theoretical concepts, such as shared ideologies, to discover how people organise themselves within a situation (cf. Clarke, 2005, p.112). Drawing on my abstract situational map, I started to organise all the collective groupings in terms of the key social worlds that influence student participation in residence abroad (see Figure 3). This mapping exercise, which focused on what participants hoped to achieve as well as how they directed their participation, helped to open up my analysis to the
tension in language-students’ lives overseas or to the constraints and the opportunities of residence abroad.

Figure 3: Social world map

Clarke also includes a positional map in her original representation of situational analysis. The position map, which is used to represent positions that have been taken in the data (Clarke, 2005, p.126) and organised around issues that have been discussed within the studied site, disentangles people and organisations from their stated standpoints and enables the researcher to explore positions in discourses or the effect of power and control within a situation (Clarke, 2005, p.136). Nonetheless, although situational analysis moves beyond the person to encompass social process, Mills, Chapman, Bonner and Francis (2007) caution that the focus on discourse within a positional map decentres a person’s agency by moving research away from the codes and categories that emerge from the research data and which form the basis of situational and social world maps. This distinction, which is seen to distance grounded theory from its constructivist roots (Mills et al., 2007), drove my decision to focus on creating situational and social world maps within the study.

4.6 Credibility in qualitative research

Concepts of credibility, transferability, dependability and confirmability replace traditional positivist measures of quality, which include internal and external validity, reliability and objectivity, within qualitative research (Denzin & Lincoln, 2005, p.24). In the study, credibility and dependability were achieved through methodological congruence, which is the accordance between theoretical and methodological frameworks, as well as through the procedural position, which was achieved through memoing and the maintenance of an audit trail (cf. Birks & Mills, 2011, p.38). Study confirmability was linked to the depth and the scope of the data, or the understanding that data is both suitable and sufficient to give a full view of the study (Charmaz, 2014, p.32). Data sufficiency was established by investigating whether it enabled me to portray participants’ stated and unstated views and actions over time, as well as the multiple complexities within their lives (Charmaz, 2014, p.33). It was also examined by asking participants to confirm and criticise emerging observations in the second interview (Goulding, 2002, p.89). The credibility of the study was thereby ascertained through checks that data captured a variety of contexts and perspectives as well as detail about the views and actions of all the participants.

Credibility was also evaluated within the study’s final grounded theory. Few grounded theory studies explicitly explore the credibility of research, preferring, instead, to rely on the concept of category saturation as a symbol of rigour (Charmaz, 2008b, p.230). Yet, as Charmaz (2008b, p.230) points out, this can lead to questionable claims of sufficiency that fail to take contextual complexity into account. To this end, she encourages researchers to use the criteria of credibility, originality, resonance and usefulness to evaluate a study (Charmaz, 2014, p.337). In the study, credibility was established through the correlation between data, observations and categories and was assessed through the findings that are discussed in Chapters 5, 6 and 7. Originality was determined through the significance of the work and an exploration of how the theory extends the field of library and information science in Chapter 8. The resonance of the research, which centres on the meaning of the study within research participants’ lives, was established through participants’ critiques of the study’s emerging findings. The potential usefulness of the research was established in Chapter 8 through an examination of the grounded theory’s practical implications.

4.7 Ethics

The research was approved by the research ethics committee in the School of Information Studies at Charles Sturt University, Australia, where the study took place. Data collection finished before my transfer to the University of Borås. While the research qualified as low risk because neither the topic nor the procedures provided more than a risk of discomfort
beyond what participants would encounter in their everyday lives, research participants were often living abroad for the first time and at a significant distance from family and friends. This meant that participants could have been displaying heightened senses of vulnerability or insecurity (Im, 2011, p.284) as well as simultaneously engaging in other significant life transitions, for example, between childhood and adulthood (Rew, Tyler, Fredland & Hannah, 2012). These potential issues meant that I took several steps to minimise discomfort.

Most importantly, I provided language-students with a copy of the Participant Information Sheet (see Appendix 1) before the first interview took place so that they could take an informed decision about whether to take part in the research or not (Marzano, 2012, p.443). The Information Sheet provided full details about the nature, scope, duration and methods of the research as well as explaining procedures of privacy and confidentiality, which covered what could be done with participant data. In terms of privacy, the low risk that was inherent within the research design, as well as the desire to allow participants the opportunity to “own” their contributions (Canadian Institutes of Health Research, 1998), meant that participants were able to choose whether they wished to be identified by their own name or by a pseudonym. In the end, 25 out of 26 participants chose to be identified by their name and I selected a pseudonym for the remaining participant. In terms of confidentiality, participants were informed that data, which included interview data as well as any photos that they captured, might be quoted or analysed in my thesis as well as presented at scholarly conferences and published in journals. This further included the understanding that their data would be kept as computer files in a password-protected file storage system for a minimum of five years following publication of results. The Information Sheet also outlined the incentives that I offered each participant. While ethical questions are raised when incentives are used due to the risk of causing a coercive effect, incentives were considered appropriate in the study because of the financial costs associated with the participants’ use of mobile phone Internet data plans, as well as the time and effort involved in gathering visual data.

The recognition that the use of photo-elicitation methods raises additional ethical questions related to media capture in public contexts meant that I engaged each participant in a discussion about the ethics of capturing people’s faces and actions. This discussion took place over Skype or Zoom, and written guidelines that participants had to follow with regards to personal safety and questions of harm, fairness and justice were also emailed to each participant (See Appendix 3). The use of media also raised questions of data ownership, especially related to research dissemination. Participants were informed that they would own their data, but that they would allow me to access these data as per the study ethics and the participant information sheet. Data that were generated using the EthOS app were stored at a secure, access-controlled data centre that provided a high level of network, host, physical and environmental security. Data and file attachments were encrypted, and EthOS employees could not have accessed this data unless they had been required to do so by law, a provision that is comparable with other digital tools, for example Dropbox (see Appendix 5). In addition, I downloaded all data from the EthOS project management system to my file storage systems before permanently deleting it from the EthOS servers. Participants were also given instructions about how to export their own data from EthOS.

Lastly, I sought and audio-recorded each participant’s oral consent to take part in the study during the first interview. The recognition that in-depth interviews elicit potentially sensitive information as well as personal feelings meant that I took steps to minimise potential discomfort during the interview by monitoring the conversation and reading the participant’s verbal and non-verbal cues (Charmaz, 2014, p.68) for signs of unease. Participants were reminded that they did not have to discuss topics that could cause distress, and that they could withdraw from the project at any time for up to two weeks after the final interview without giving a reason. No participant withdrew from the study.

4.8 Limitations

The context, as well as the methodological choices that have been made in the study means that it is subject to several limitations. One of the primary limitations relates to the fact that the research took place at a distance and principal contact was made through a video-conferencing service rather than taking place in-person. While both initial and follow up interviews were carried out successfully, this format may have made it harder to establish a rapport or to gather details about participant activities. Another limitation refers to the choice of interviews as research methods. The use of interviews, which have been critiqued for forming a retrospective narrative or performance rather than a record of experience (Charmaz, 2014, p.78), may additionally have downplayed negative influences, particularly by participants who wished to save face with an unknown researcher (Miczo, 2003, p.480). Photo-elicitation methods caused another limitation. While participants indicated that they understood the instructions for participating in the photo-elicitation aspects of the research, the complexity of information as a concept as well as the extended time frame for the
research may have meant that they found it hard to both photograph and to remember to photograph their everyday engagement with information.

To counter the inherent limitations of interviews, I emphasised my own residence abroad activities as well as allowing sufficient time to break the ice with participants. I further considered the interview questions carefully, asking for examples and explanations that were situated within participant activities to understand varied cultural contexts. Similarly, I aimed to make it easier for participants to reveal their perspectives to a stranger by embedding questions within more mundane trains of thought (Charmaz & Belgrave, 2012, p.353). The realisation that photographs can be used to misrepresent as well as to represent activities meant that I also used the second interview to explore the meaning that participants attached to photographs and move beyond a superficial interpretation of the image.

In terms of the limitations in research methods, I gave participants the opportunity to critique my emerging analysis, which provided a way to reveal the “narrative constructions” within detailed stories and to balance participant statements with analytical details (Charmaz & Belgrave, 2012, p.350). It also ensured that meaning emerged from interactions between myself and the participant, rather than from my own prior residence abroad activities. Furthermore, the realisation that all researchers bring their own assumptions to and are personally located within the research process meant that I used memos (see 4.5.1) to reflect on each interview. To address the potential issues within participant demographics, I used theoretical sampling after the first round of recruitment to purposefully recruit respondents who were likely to engage in different activities.

A final limitation relates to the narrowness of the sample. While no host country or language was excluded from the research, most potential participants were studying French, German and Spanish in Europe. As the most popular languages that are studied within North American higher education (MLA, 2013), these figures were expected but it meant that it was much harder to find potential participants from locations with less well-developed language study infrastructures such as Africa. In terms of occupation, the popularity of study abroad or exchange activities in North America and Australia meant that it was almost impossible to find participants from these countries who were planning to work or volunteer abroad. This meant that working students were uniquely represented by participants from the United Kingdom. In terms of home institutions, it was harder to recruit British students from outside Russell Group and Red Brick universities. While emails were sent to the more recently established Plate Glass and post-1992 universities in the United Kingdom, there tend to be fewer students studying languages at these institutions (HESA, 2014).

4.9 Chapter conclusion

The chapter has outlined the methodological choices that were made within the study’s research design. The chapter started by demonstrating how a constructivist grounded theory methodological framework provided the flexibility to explore and analyse the complexity of language-students’ information literacy practices during residence abroad. The chapter then illustrated how semi-structured interviews and photo-elicitation research methods provided a useful entry point to the uncovering of language-students’ information activities. The findings that were produced through these methods of data generation and analysis are presented in the subsequent chapter.

4 Other terms used to refer to British universities. Plate glass institutions tend to have been established in the 1960s onwards. Post-1992 universities refer to former polytechnic institutions.
Chapter 5: Findings

5.1 Chapter overview
In the chapter, data that were produced from semi-structured interviews and photo-elicitation methods, and analysed through constructivist grounded theory and situational analysis, are used to explore the information literacy practices of language-students during residence abroad. This analysis, which examines how language-students construct their new information landscapes as they transition into their host communities, identifies seven information activities that configure two categories, Calibrating and Repositioning. These categories subsequently establish the overarching theme, Mitigating Risk, which constitutes the grounded theory. Focused on how language-students portray both the shape and the meaning of their information activities, the chapter starts by providing an overview of students’ information environments. It then explores the Calibrating category, which is structured by four activities: Sifting, Observing, Checking and Noting, before examining the second category, Repositioning, which is characterised by Triaging, Mediating and Archiving. The chapter finishes by presenting the overarching theory of Mitigating Risk, as depicted by Figure 4. The presentation of the findings draws upon excerpts from the empirical data and is interwoven with connections to relevant literature from the fields of library and information science and second-language acquisition.

5.2 The information environment
As students start to engage within residence abroad, they encounter various new information environments, which are constituted by the stable and established knowledge of a social site (Lloyd, 2017, p.94). Forcing language-students to both map and situate themselves within their new setting, student participation overseas also produces various new information-related challenges and opportunities for engagement as they build meaning within their new context. One of the most visible changes centres on students’ new responsibilities and obligations. The importance of making a new home overseas and complying with the legal and institutional requirements that govern their stay abroad means that language-students face considerable pressure to fulfil various time-sensitive tasks, such as finding accommodation as well as legally recording their presence abroad and other registration procedures. They must further get to know local services, from learning how to open a bank account and setting up telephone or internet access to working out how to use transportation systems and finding their way around their new location. The cultural side of their new setting is important, too, as language-students attempt to establish shops, brands and local shopping customs as well as to ascertain leisure and travel opportunities. Given the purpose for which they moved overseas, language-students are also constantly engaged in learning more about their target language even as they continue to mediate local idiosyncrasies such as new currencies and different weather systems. The recognition that this period is both exciting and frustrating means that language-students engage in various information activities to meet these new challenges.

5.3 Calibrating
Calibrating refers to the adjustments that language-students make through comparison to local practices and is constituted through four activities: the sifting of information to identify the core characteristics of a setting; the observing of others and of oneself to become aware of local practices; the checking of information to validate students’ activities within a setting; and the noting of information to regulate their performance over time. Calibrating forms a way for language-students to build and evaluate their new understanding against the standards of local and expert practice. Creating a mechanism through which language-students orient themselves to local values and expectations, calibrating is both preparatory and reflexive as well as stabilised through a variety of technologies. In this sense, calibrating, which is contextualised and explored through participant quotes below, is seen to provide
both an effective and an efficient way for students to mediate the pressures that are produced through their engagement within an unfamiliar information environment.

Faced with the prospect of spending significant time overseas, language-students often have little experience and sense of what to expect from their new surroundings. Uncertain about the scope of local practices as well as the shape of their own activity within this new space, language-students turn to the understandings of knowledgeable others to mediate their initial forays within a new setting. The achievements and the visible successes that these knowledgeable others have in mediating the settings in which language-students find themselves means that they provide coherence within the uncertainty and confusion of students’ initial attempts at building meaning overseas. In further providing an insider’s view that language-students perceive as adding both credibility and validity to activity, knowledgeable others become positioned by students as the carriers of practice (Reckwitz, 2002; Shove & Pantzar, 2007) or the significant others (Charon, 2004) against whom their understandings of a new setting can be judged. One of the most obvious carriers of practice is the local or native speaker, whose highly desirable linguistic and cultural fluency means that they are immediately associated by language-students with expertise (Piller, 2002, 2008; Siskin, 2003). Evelyn, who is a British student working in Austria, purposefully turns away from the English sources of information that she had been using towards the German sources that her new colleagues recommended to her:

Before I came, I was still very much looking through Lonely Planet things, looking through TripAdvisor, kind of going through the more touristy stuff... and then as, I think, as I settled here, I've been kind of like, I'm starting to count myself more and more as a Viennese citizen and whatever and because of that I have been looking at the sites that... people look at when they live here.

Representing student fascination with language as well as their desire to connect to everyday ways of knowing, local and native speakers are seen to characterise both information competence and a reliable gauge of appropriateness within a new setting as language-students scrabble to establish the sources of information that the speakers of their target language use and consider relevant (cf. Hock, 2007).

Local and native speakers do not, however, form language-students’ only sources of expertise. Instead, students who have returned from their time abroad are seen to provide similar authority, both because they represent knowledge derived from experience and because they make residence abroad seem achievable, which mirrors the findings from Anderson (2003) and Szabo’s (1996) studies of residence abroad. In effect, prior student stories, which have been seen to play an important role in the support of learning (Lave & Wenger, 1991, p.108; Lloyd, 2011, p.291; Smith, Pedersen & Burnett, 2014; Elmore, 2018, p. 152), demonstrate that there is a field for the legitimate and “mature practice” of what recently arrived students will be doing (Lave & Wenger, 1991, p.110) while further helping them to start envisaging their future stay overseas. The affirming nature of these experiences is particularly meaningful for language-students who may be unsure about their language abilities, as Mckenna, an American student studying in Italy, and Kamila, a Polish-Canadian student studying in France, highlight:

I think because it … reassures you that … you'll be able to figure [the move to another country] out yourself and hearing from … students our age that went and did it and them telling us… things to go see, or go eat at this place, so …it is kind of reassuring. (Mckenna)

We had people talk about the exchange and stuff, and I remember I was really impressed with the people because they seemed so worldly, they seemed like they'd been to a lot of places, had experience and I thought this is really cool, this is how I want to be when I come back. (Kamila)

Valued for their accessibility as well as for their accomplishments, experienced students are, like local and native speakers, positioned by language-students as both a reliable and trustworthy guide to local practices. However, recently-returned students also reconcile incoming student uncertainty about a new setting by serving as a source of inspiration and imparting hope (Lindh, 2015, p.130). The important motivational role that people who are in similar circumstances play within transition is also noted in studies of health information practices (e.g. Lloyd, Bonner & Dawson Rose, 2014; McCaughan & McKenna, 2007; Veinot, 2009) while refugee and immigrant dependence on fellow co-nationals provides a comparable demonstration of how newcomer activity is often modelled on the activities of peers (Caidi et al., 2010, p.507).
Identification with people who are already connected to local information environments exposes language-students to new means of accessing and using information within their setting. In other words, it is through calibrating themselves against the knowledgeable carriers of local practices (Reckwitz, 2002; Shove & Pantzar, 2007) that language-students map their understandings of the new information environment. In turn, knowledgeable others expand language-students’ frames of reference by opening up possibilities that may not have previously been available to them. Knowledgeable others help language-students to start envisioning themselves within their new setting by providing information that helps language-students to build connections and meaning that stretches beyond their immediate setting, which is similar to what Allard (2015) found in the pictures that experienced Canadian migrants painted for those left at home. Engagement with local experiences also sets the activities that orient students towards residence abroad in motion, as Evelyn demonstrates quite literally through her use of mapping software:

I was just on Google Maps quite a lot saying, look, this is where I will be living, and most people are like, ‘oh it's a map;’ but for me it was kind of, like, ‘I am actually going to be in this space very soon, and this sort of topographical representation of the space will very soon actually be where I am going to be.’ So, it was very exciting.

In effect, calibrating helps language-students to construct both a representation of their new social context and an awareness of their physical presence within it. At the same time, calibrating adapts to language-students’ changing needs rather than functioning as a simple initial mapping exercise of the local environment. Before students leave home, their calibrating mostly draws upon visual and textual sources of information that they can easily access from home as well as conversations with returned students; as Allard (2015, p.74) points out in her study of new Canadian immigrants, these stories provide powerful “associations and impressions of a place.” However, once students arrive and engage within their new setting, their calibrating activities pivot to focus on the locals and native speakers who provide students with alternative sources of information as well as a different focus for their learning. The recognition that the role of knowledgeable others becomes less important as language-students build their own situated understandings means that calibrating changes over time rather than remaining constant.

Language-students further depend upon knowledgeable others to calibrate their own performance or to assess and adjust their developing understandings within a new setting. The unfamiliarity of their new context means that students may have had few previous opportunities to start building their new information landscapes. In gauging their activity against the performance of experienced others, language-students directly and indirectly pursue the feedback that will contribute to their understanding about the shape of competent activity within a setting. Substituting for more customary classroom-based means of formative assessment, feedback has the potential to limit as well as to enable language-student performance within a new setting. Yet, the confirmation that calibrating engenders often encourages additional effort and investment in learning, as Jemma, a British student teaching in France, demonstrates regarding the native-speaker videos that she watches to improve her language-learning:

Videos of like, slang and different things like that and I check with my flat mates [who are fluent in the language] and it's fairly accurate so I'm going to keep reviewing [these types of videos].

Creating the means through which language-students reflect on their own activity, calibrating helps students to structure the uncertainty of their experiences through engaging recursively with the activities and actions of others. While reflection has long been seen as key within transition (e.g. Kralik, 2002) and in the teaching of information literacy (e.g. Hughes, Bruce & Edwards, 2007), calibrating demonstrates how reflexivity also plays an important role in helping students to mediate the pressures of engagement within new and culturally unfamiliar information environments.

The chapter will now explore how the four information activities of sifting, observing, checking and noting facilitate language-student calibrating within a new setting.

5.3.1 Sifting
Unsure about both the shape and physical appearance of their new setting, language-students construct an initial sense of the information environment that surrounds them as well as their place within it by sifting through the information that is available to them. Sifting is an activity in which students build meaning by sorting through and drawing upon experience that is represented in advice and recommendations from their social connections as well as from collectively-produced forms of information such as travel review websites. Helping
language-students to bring their new context to life pre-departure, sifting also provides a way for students to mediate their new environment in situ by reducing a new setting to its seemingly core characteristics and a more manageable size. In this sense, sifting shares many similarities with the idea of browsing (Bates, 2007), which centres on acquiring glimpses of information objects, foraging (Pirolli & Card, 1999), which represents the efficient maximisation of information seeking, scanning (Choo, 2001), which facilitates the ongoing analysis of an environment, and filtering (Miller, 1960), which forms a response to information overload. However, in focusing on building a multimodal picture of a new setting rather than being aimless or serendipitous, as is often implied by browsing (e.g. Boyce, Meadow & Kraft, 1994), sifting forms a structured yet exploratory information activity that helps language-students to prepare for the challenges of their time overseas.

Sifting first occurs in the pre-arrival stages as students plan for their time abroad. Functioning as a way to survey the information environment that surrounds them, sifting provides language-students with the means through which they can engage with key practical information about a setting as well as to build an initial understanding of their new context. In this sense, sifting depends on the tools and the resources that are both accessible and trusted by students rather than focusing on the evaluation of the information itself. The simplest and most literal way through which language-students start to construct this knowledge is by sifting through images to create a visual representation of a new context, as Helen, who is British and working in Guadeloupe, illustrates:

I guess I did a lot of google imaging, you know, you look at all the pretty photos of it all and things like that.

Labelled as pre-visiting (Brown, 2012), Helen’s attempts to build an initial picture of her new setting is structured through her trust in Google’s ability to establish the most relevant and authoritative images of her new location (cf. Sundin, Haider, Andersson, Carlson & Kjellberg, 2017). The same focus on established or well-known information tools is also seen through student engagement with social media. In sifting through search results on Pinterest, Fiona, a Canadian student who is studying in France, is able to grasp or start building a vision of the core cultural and historical features of her new setting:

You can just type in like travel tips in Nice or things to do in Nice and Pinterest kind of shows you… and so that's where I found out about some of the things that I did in Nice.

Demonstrating the important role that the construction of what Graham (2010, p.434) refers to as a “virtual representation of the non-virtual” plays within the development of knowing, Fiona’s comments illustrate how she plans for her future stay overseas as she unquestioningly repurposes a tool that she trusts and with which she is familiar (cf. Sundin et al., 2017) to sift through information about her new setting.

Beyond images, language-students also sift through their personal contacts to see who could provide them with the tips and advice for their time overseas. Demonstrating how many language-students embark on residence abroad with considerable mobility capital (Brooks & Waters, 2010; Waters & Brooks, 2011), sifting through this socially-situated information enables students to connect to the tacit ways of knowing that structure their new setting and to align themselves within their new information environment. Luan, who is British and working in Belgium, and Stuart, who is British and studying in China, discuss how contacts from home help them to mediate unanticipated surprises and build an awareness of what to expect overseas:

My step-dad works for [manufacturing company] and they have an office out here, so he… emailed one of the women that worked here and said, ‘my step-daughter’s going to Brussels, do you have any websites or areas that she should stay away from, that she should go for?’ (Luan)

I had a couple of meetings with people who had been here before, the two people I know. And so, the two of us who came, from [his university], went to the pub with them and talked to them about what to expect, what to bring, what to be worried about, that kind of thing. (Stuart)

Demonstrating that sifting helps students to add details to the picture that they are creating of their new location, this engagement with knowledgeable others also serves to recognise and legitimise students’ identities as language-students who will be travelling abroad. In effect, it is by sifting through the information that is produced within these social encounters that
language-students start to situate themselves within a new environment, as Kamila asserts regarding her interactions with returning students:

Like, you see numbers, you see all the information, ok, that's cool… but then seeing a person, a real live person who did it, went there, saw things, went through all the problems, and that makes it more real, and that makes you more excited.

Enabling language-students to move beyond their own vision of what local practices entail, sifting additionally allows them to create an image of their place within it.

Beyond helping to represent a new location, sifting is further used to narrow down and limit information once students arrive abroad. Similar to filtering (Savolainen, 2007b), which helps to weed out what is not needed, sifting allows language-students to decide what to focus on in a new setting. Alongside the advice of contacts, travel websites such as TripAdvisor represent a considerable source of guiding authority for inexperienced students. Providing numeric ratings that are used to indicate quality, these websites also enable students to draw upon the reviews and interpretations of previous travellers as a way to focus the information that is available to them. Student reliance on recommender systems is also extended to their use of guidebooks, as Fiona, who is a Canadian studying in France, mentions, and Laura, who is British and volunteering in Bolivia, demonstrates in Figure 5:

I used these books called the Lonely Planet and it’s kind of travel books that tell you about the places that you travel to. So, in terms of travelling to other places to see things, I’ve used those books for restaurants that people have recommended, or places and hostels to stay in. (Fiona)

Figure 5: “That was in my guidebook again, literally it’s been my main source of information since I’ve been here.” (Laura)

This indiscriminate use of both books and online sites, which represents an implicit judgment of value, demonstrates student focus on taking advantage of the insider knowledge that is portrayed in these sources (Brown, 2012) or what McKenzie and Davies (2010, p.801) refer to as “the socially organized competencies associated with a particular setting,” in whichever format they can find. Similarly, prior experience lends both credibility and relevance to the recommendations of local contacts. Laurel, who is an American studying in Spain, positions her Spanish professor as a physical embodiment of the information that is found in a guidebook or a travel review website as she sifts through travel options:

So, our professor, right now in the intensive study, he was telling us about different places, ‘oh you should go here for this’, or ‘you should go here for that.’ And he mentioned Villajoyosa… I Facebook-messaged a couple of friends, ‘hey I’m going out, I don’t really want to go by myself, so who wants to come and eat chocolate with me?’

Demonstrating how local experience accords information both credibility and trustworthiness (Rieh, 2010), sifting could also be seen to draw upon Metzger, Flanagin and Medders’ (2010) endorsement heuristic, which demonstrates how trust in an information source is often derived from the validation and recommendations of others. In relying on digital tools, students also place considerable trust in the “significance production” of a search engine’s algorithms (Sundin & Carlsson, 2016, p.1005) as they set their sights on accessing the ‘authentic’ local knowledge and values with which they are anxious to engage.

While sifting forms one of the preparatory activities in which students can participate pre-departure, the situated nature of knowing (Gherardi, 2009) means that it can never be an entirely isolated activity. Consequently, while students carry on sifting through information after their arrival abroad, local conditions as well as their growing experience means that this activity also changes shape as language-students develop an awareness of their new setting. Julia, who is British and teaching in North Africa, adjusts the way she looks for housing when she realises that newspapers form a far more rewarding and appropriate resource for sifting through accommodation options than websites:

For my flats, I’ve just remembered, it was really helpful to look at newspapers because they actually have information. You get so much more information in the
newspaper than you do online, which is probably the only place in the world where this is still the case.

At other times, it is the web application itself that adapts to students’ changes in circumstances. Holly, who is an Australian studying French in Canada, notes how the adverts change through her use of Facebook to sift through information about local events:

I think what Facebook does, which is slightly creepy but also kind of useful, it works out your location and it just kind of works out what events are happening in the area, so it's all Montreal events, when I was in Perth it was all Perth events, and sometimes if I'm with my friends and we want to go out and do something and we’re not too sure what to do, we go on Facebook and see if there’s anything close by, and check it out.

Other language-students notice differences in whom they would ask for advice and recommendations as they engage with more people in their new context, including local host family, flatmates, colleagues or fellow travellers, as Laura points out:

It's mainly word of mouth really, talking to, recommendations from my host family or my work, my, the exchange organisation, or other tourists so, yeah, just like listening to other experiences that people have had.

Emphasising how student activities change as they settle in and build more connections within their setting, sifting provides further evidence of the important role that reflection, which helps language-students to gauge whether the sources and the ways in which they sift through information are both relevant and effective, plays in the development of situated knowing. Notwithstanding, the focus on shared social connotations means that reflection is socially produced rather than constituting an individual process that translates (bodily) activity into (cognitive) knowledge.

5.3.2 Observing

Observing, which refers to becoming aware through careful attention, forms another one of the ways in which language-students calibrate their understandings within a new setting. Occurring more frequently towards the beginning of students’ stays, observing focuses on the bodies of knowledgeable others as well as on students’ own bodies as they look to experienced activity as a way to minimise potential problems within a new setting. Essential for the development of practical understanding when working across languages, observing is used by language-students to connect to the nuanced, tacit and contingent ways of knowing that are learned through participation within local practices.

5.3.2.a Observing of others

Observing of others fulfils the very practical aim of facilitating understanding when students need to work across languages. As language-learners, students arrive abroad with considerable capacity to engage with local linguistic norms. However, these capabilities do not always extend to the technical vocabulary and the informal ways of communicating that are often used in everyday situations; similarly, many language-students are challenged by the different accents or speed of conversation that they encounter. In these situations, observing supplements students’ linguistic comprehension of a situation, as Holly points out regarding the difficulties of understanding instructions in her Taekwondo class:

Most of the time, when you're actually in there training, our instructor is kind of like yelling at us, and you kind of just follow along. So yeah, even if you don't fully understand what she's saying, you kind of like, see what's she's doing, like, you know, a kick or whatever, and you're like, ‘oh that's what it is.’

Emerging from students’ attempts to tune their ears into local speech patterns, this type of observation is often employed near the beginning of student time abroad as they work to reconcile their classroom and institutional linguistic proficiency with the locally produced features of language that surround them. The observing of local and native speakers, which bears some resemblance to the gesturing that Elmore (2018, p.200) noticed in her study of ESOL learners, is also important in second-language acquisition research (e.g. Jackson, 2005).

Beyond facilitating linguistic understanding, observing helps to make local practices visible to language-students by enabling access to the everyday non-linguistic and intangible information that emerges from experience and structures local performances. The newcomer status of Genevieve, who is an American studying in Russia, meant that her attendance at a local church service was fraught with potential missteps as she neither understood nor knew who to ask about local religious rites. Observing helped her to understand the scope of the service that she attended as well as the shape that her contributions should take:
I would kind of stand in the back of the church and watch what everyone else was doing and by the end of the service when we would go up for communion, at that point I was much more like familiar, I would get to the end of the line, so I could do whatever anyone else did. Like did they kiss his hand, or did they... I have been doing that because every church seems to be a little bit different in what they do and so just by standing in the back, watching the proceedings I'm more comfortable by the end of it to actually start engaging in the service myself.

Enabling her to recognise both the sanctioned activities of a community and the nuances within the stylised actions of each participant, observing facilitates unique insights into the ways of doing and knowing that mark local experience. Constituting a form of what Lave and Wenger (1991) label legitimate peripheral participation, which describes how learning is shaped through a person’s gradual engagement with the activities of their community, interactions between experienced and newcomer bodies have also been noted as important within studies of firefighters (Lloyd, 2007a) and sales assistants (Moring, 2012).

Observing further enables language-students to evaluate a local situation, whether this is choosing somewhere to eat or using the authority of observed local activity as a proxy for quality as Eli, who is an American studying in Iceland, and James demonstrate in Figure 6:

> 'Oh, there's something here, there's a lot of people at the side of the road, what's here?'
> (Eli)

Observing subsequently helps language-students to reconcile and rebuild their sense of what is appropriate, as Fiona points out about conversations between French speakers:

> I would pick up on mannerisms in that way, so something that may sound rude or may sound inappropriate in Canada, may actually be just a normal conversation and how people talk to each other.

Beyond serving as a positive reinforcement for activity, observing also signals what not to do within a new setting. It is through her observation of a waiter’s body language that Laura realises that video chatting is not permitted in her favourite cafe, even though she eventually ignores his strictures:

> They give you evils sometimes, I haven't been told off, I think it's because since then I try and be really subtle, so if the waiter comes, I normally like, stop talking or just gesture, so it's fine.

Both simple and inconspicuous, observing provides the means through which language-students engage with the affordances of their new setting and reflect upon the shared meanings that are produced through local practices. A similar focus has been noted in studies of refugees where observing is seen to facilitate participation in local activities (Lloyd et al., 2013; Lloyd & Wilkinson, 2017; Richards, 2015, p.84).

Language-students are further drawn into local practices through social intermediaries’ attempts to show them the information that they are missing, as both Richards (2015, p.84) and Lloyd (2007b) note in their respective studies of refugees and firefighters.

Matt, who is British and teaching in France, turns his body towards the teachers in his school to facilitate his understanding of the new school routine:

> Basically, I just sort of followed the teachers around and did as they did, in the staffrooms, during break, going to lunch and that sort of thing.

Just as experienced firefighters use knowledge of their own bodies to identify issues with novice performances and draw newcomers into practice (Lloyd, 2007a, p.189), knowledgeable locals also employ their own bodies to mediate gaps in students’ experiences. Recognising that Laurel was not accustomed to public transport, her host mother physically walked her through the route to school to orient her to local practices:
Our homestay madres [mothers] walked us to the train station, it was like the first day of school, of kindergarten all over again, it was cute. So, they all walked us to the train station on that first day and showed us to swipe our passes and go through the gates and where our tram and stuff like that.

Other times, the linking of experienced and inexperienced bodies becomes more forceful, as Fiona found out when she was swept up into French greeting rituals:

When I went to meet them they just kind of did it, so for me the first one was a shock, because I was kind of going in for a handshake, but then the guy was like ‘no, no, we don't do handshakes here, we do bisoux [kisses]’!

The surprise that Fiona displays at being unexpectedly kissed can be interpreted as evidence of the considerable gap that exists between local and newcomer activity as well as important differences in the ways that bodies are employed across settings. Yet, while being manipulated in this manner may come across to language-students as surprising or childlike, the physical orientation and positioning of students within their information landscapes also forms a type of attunement where experienced and inexperienced bodies start to act in tandem rather than in opposition to each other.

5.3.2.b Self-observing

As language-students continue to engage within their new setting, they also turn their attention to their own bodily responses. The recognition that the body forms an important information source as well a rich site of learning that facilitates the construction of situated and nuanced knowing (Lloyd, 2010c) means that self-observing or awareness reflects students’ attempts to engage with information in spaces that are sensorily very different from home. It also represents students’ efforts to understand and harness the information cues that emerge from their own bodies, particularly when their comprehension is restricted. Stuart, for example, relies on taste to help him establish what food he does and does not like when he is unable to translate or understand what he is eating:

Since we couldn't really read the menus that well or it took way too long to translate everything on the menu just using the dictionary, I had a couple of dodgy choices which I didn't really appreciate.

The same focus on the body can be seen in the example of Ben, a Canadian student studying in China, who decides whether or not to return to a restaurant based upon the effects of its food on his digestive system:

So yeah, we've tried a few places... and we do the three hours test, if we're not sick three hours after that... it's good, we can go back there. Then, with the roommates’ [use of this method, too] we've got now around 10 places that are safe!

As both Kinginger (2008, p.15; also see DuFon, 2006) and Elmore (2018, p.153) point out, taste and food play an important role in helping to build local understanding.

Beyond helping language-students to develop knowledge about their new setting, self-observing is used by students to reflect upon and to adjust their own activities. Niko, who is an American student studying in Japan, illustrates how listening to herself and comparing the sounds she makes to how a Japanese person talks helps her to develop her speaking abilities:

You can still tell when I talk that I'm not a Japanese person just from my word choice or the intonation of some of my words, just things like that it doesn't sound the way the Japanese person would say it... but I just kind of do my best when speaking Japanese, I guess, and try to like, make it sound like what I think it's supposed to sound like.

Highlighting that language-student information landscapes are constructed through whole body activities, self-observing also demonstrates how students use their bodies to inform and shape their ongoing construction of understanding. The importance of being able to perceive information cues from one’s own body has also been noted within running (Gorichanaz, 2015), acting (Olsson, 2010), grocery shopping (Ocepek, 2017), and browsing online pornography (Keilty, 2016).

Self-observing also forms a way through which students build self-awareness or recognise and locate themselves within their new setting. In observing where their own bodies are in relation to visual landmarks (rather than merely observing the physical buildings), Genevieve and Kamila (see Figure 7) demonstrate how being able to situate
themselves within their new physical environment helps them to navigate an unfamiliar setting:

There's landmarks that help for finding out and orienting yourself, the cathedral of Christ the Saviour is pretty high and very recognisable so the point, the tallest point of the Kremlin is also really useful. So, there's kind of landmarks for if I don't know where I am in the city, I turn a corner and I can see the Kremlin in the distance then I kind of orient myself, I know where I am myself. (Genevieve)

Similarly, knowledge of a physical setting is further enhanced by the auditory cues that language-students use to locate themselves within their information environments. Charlotte, who is British and working in Italy, acknowledges the Italian notion of *campanilismo* as she points out how observing where her own body is in relation to the sound of church bells helps her to locate herself within a new setting:

There’s basically a church near me, but there’s not many other churches nearby, so if I can hear that, I’m kind of in that rough direction.

At the same time, students’ observations of their own bodily reactions may also distance them from their physical environment, as Helen found when she arrived at her mouse-infested accommodation.

Knowledge of an environment can be further complicated for female language-students when local responses to their presence and activity means that they are compelled to observe their own bodies in different ways, as researchers have highlighted within study abroad literature (e.g. Coleman, 2013; Fryer & Wong, 1998; Polanyi, 1995; Twombly, 1995). Spanish reactions to her typical North-American attire, for example, forced Laurel to observe the appropriateness of her own body within a new space rather than merely what clothes she should or should not wear:

I wore shorts the other day and every single person that I walked past that was Spanish stopped and stared! It was awkward, I haven't worn shorts since then.

Similarly, local responses to gender cause Jemma to question her ability to participate within a new setting by compelling her to observe and become aware of her own body:

The way in which some men here behave is quite different to England so literally I would be walking down the street, completely appropriately dressed and you'll get numerous comments and like, little things that initially made me feel quite uncomfortable.

Self-observation thereby both pulls language-students into and pushes them away from local practices as they become aware of the fragility of their status overseas. In making students re-assess or become self-conscious about their own bodies, self-observing also changes the ways in which they present themselves within a new setting, as Fiona illustrates:

Here the girls they wear high heels and they have little purses, they don't have a backpack, so a lot of us have kind of just tossed, a lot of us came with backpacks, and we just haven't used them because once you walk into a classroom you're the only one with a backpack they automatically know that you're not from France.

Highlighting how clothing plays an important role within the development of situated knowing, as both Veinot (2007, p.166) and Baker (2004) point out in their studies of the workplace, students’ introspections further demonstrates how the body serves as an important site for exploring and reconciling collective ways of acting and being in the world. While research has noted the value of welcoming safe spaces for immigrants (e.g. Fisher et al., 2004), there has been little exploration of how local reactions to a person’s physical presence can affect how they engage with information.

5.3.3 Checking

*Checking*, which is understood within the study as a means of validating or determining the accuracy of information against the authority of local experience, plays an important regulatory role within the intense period of time that language-students spend abroad.
Centred upon the assessment of students’ own activities, rather than forming an evaluation of the people who guide their learning, checking forms a pragmatic safeguard against misunderstanding that helps to make the scope and shape of local practices visible. In further connecting language-student performances across time, checking also forms a reflexive feedback mechanism through which students calibrate and adjust their own activity within a setting. Bearing a resemblance to the verifying stage of Ellis’ (1989) model of information behaviour, checking moves beyond the typical focus on feedback loops that structure models of information behaviour (e.g. Savolainen, 2017) and user engagement with information retrieval systems (e.g. Kelly, 2005) to illustrate how language-students reduce their leeway for errors that could threaten their goals for this time overseas.

Most concretely, checking forms a highly practical and targeted way for language-students to establish the accuracy of something in their new context. The challenges of limited vocabulary as well as different accents and conversational speeds means that checking helps students to confirm whether they have understood something correctly, as Holly points out:

A lot of the time you just can't be too safe if you just want to double check, triple check just to make sure you got the place and time right and that you haven't misunderstood a word that they have brought up in the conversation that didn't seem useful but that turns out is a key word which can change the sense of the entire sentence.

Similarly, the absence of familiar support mechanisms such as smartphone data, which is often either too expensive or too hard to set up, means that checking is frequently used to assist student decision-making and to avoid financially and temporally costly errors. Luan (Figure 8) and Fiona (Figure 9) demonstrate their reliance on a variety of navigational checking mechanisms to ensure their safe arrival at a destination:

I used to ask the bus driver just to make sure, because I didn't want to end up on the other side of Brussels, but I used to ask him like, ‘this is definitely going to this place, isn't it?” kind of thing. (Luan)

Checking emerges from student inexperience within a setting yet forms a way to mediate the uncertainty that is produced through their engagement overseas.

At the same time, the inherent emphasis on appropriateness means that checking also relates to students’ own performances within these new settings. With no prior experience to serve as a template against which they can gauge their understanding of local practices, checking provides a way for language-students to receive instant and localised feedback on their activity and to adjust their performance for the future. In this sense, Holly and Luan’s questions above also represent an attempt to calibrate their activity or to discover what it means to act appropriately within their new setting. Checking thereby helps students to regulate their understanding of local practices by validating their interpretation of knowledgeable activity as well as their own performance within this setting. These ideas can most clearly be understood through Laura and Kamila’s attempts to verify the legitimacy of the textual information that they encounter:

I read about the wrestling in my guide book. As for the location, it explained how to get there in my guidebook and I double checked with my host mum. (Laura)

I think I just started looking and I think I just realised this website had the most offers and I just found it off of Google, and when I mentioned it to a friend in Nice, who actually studies here permanently, he said ‘oh yes, that website's a good place
In checking whether the information that they found is considered valid in the eyes of their local friends and host family, Laura and Kamila’s questions are designed to corroborate whether their own information activities constitute acceptable local practices rather than merely forming queries about the accuracy of the information that they have found.

The importance that language-students place upon acting knowledgeable in relation to local customs and procedures is further seen through the more intensive forms of verification in which students occasionally engage. Kamila becomes involved in a desperate quest to check her understanding of the French housing benefit system:

Everyone, honestly whenever I try and talk to anyone, I ask, ‘oh how are you dealing with this?’ and I try and get their perspective; so, my classmates from Canada who are here, but also, I have French roommates, who also go through some of the same problems, and the French people I’ve met at school as well.

Intensified by the legal implications of her concern (as well as the infamous complexity of French bureaucracy), this exhaustive triangulation of perspectives illustrates student attempts to work around missing information rather than emerging from a surplus of information as in Greyson’s (2018) study of young parents. In further bringing past, present and future performance together over time, checking also demonstrates how students’ information landscapes are both tentative and continually developing.

5.3.4 Noting

Noting builds upon and complements sifting, observing and checking activities to play an important role in helping language-students to maintain their developing understandings of local practice. Identified in the research as the capturing of information for a temporary purpose rather than for posterity, noting extends student memory spatially and temporally by helping them to remember the valuable yet unfamiliar information that is produced in place. More specifically, noting supports students’ ongoing calibrating as well as their goals for this period of time overseas through regulating their consistent performance over time. Centring upon action-oriented and point-of need information creation (McKenzie, Davies & Williams, 2014), noting represents a physical and multimodal embodiment of remembrance while also illustrating the vital role that technology plays within the enactment of practice.

The demands of a new context as well as the frequently overwhelming volume of new stimuli means that forgetting, or the inability to remember information, characterises much of students’ early activities abroad. Focused on everyday information and highlighting student unfamiliarity within a setting, forgetting is a minor frustration that can, nonetheless, be highly discouraging, as Jemma points out:

Sometimes with the supermarkets it’s a little bit irritating because I can't remember the hours that the different places are open.

Providing a practical way to extend the limits of memory, noting helps students to coordinate and manage their day-to-day life as well as the larger project of language-learning during residence abroad (cf. McKenzie & Davies, 2010, p.789).

More specifically, noting maintains language-student access to the tacit knowledge that characterises their new community. Typically perceived visually or aurally, the contingency of this information means that not only can it be hard to distinguish, but also to remember and to recreate. A physical record helps to negotiate this ephemerality by translating it into a more permanent notation, as Genevieve and Helen (Figure 10) demonstrate:

Our programme had pointed [a church] out while we were getting a tour of Moscow… so, I took a picture of their hours, and just walking around I would notice a church, I would go up to it and see if they had their hours posted anywhere, and so I have like, seven churches’ hours on my phone right now. (Genevieve)

Figure 10: Helen’s annotated list of transport options
Facilitating language-student entry into everyday life, noting stabilises the situated information that structures local practices, which is similar to what Marshall (1997) and Winget (2008) found in their studies of annotation practices. Noting also helps students to reflect upon and stabilise their learning by recording local instances of practice, as James, who is a British student studying in Japan, explains regarding his vocabulary lists:

Any word that I find, oh that will be really good, I’ll write it down, and take it in, so that can be all life vocab, it could be stuff which I find in the readings or, if I’m with my girlfriend, and I’m like, ‘what's that?’, or ‘how do you say that?’, things like that, then I’ll write it down. I write in my iPhone notes programme.

Beyond enabling the spontaneous capture of everyday information, noting is further used by language-students to prepare for their participation within new activities. Most frequently employed to support way-finding and to mitigate the risk of getting lost, noting centres upon the creation of maps and directions and tends to be effected through screenshots and photos that are subsequently displayed on students’ phones. Noting further supplement students’ developing ways of knowing by providing them with both an element of control over their activities and a sense of comfort. For Alex S., a British student who is studying as an Erasmus student in Germany, noting helps him to plan for and avoid making costly mistakes:

Say I’m going to go somewhere where I haven't been before, and I need a map of the place, I take a screenshot of the map before I leave my place… and I haven't needed data.

Physical notes also help language-students to facilitate communication or to prepare for and negotiate oral interactions when there is a risk of misunderstanding, as Stuart explains in relation to his travel activities:

Having a screenshot of a map or something to show the taxi driver where we want to go, along with an address in Chinese.

In forcing language-students to engage recursively with the nuances of daily activity, noting inscribes students into their new information landscapes by drawing from local conventions to contribute to the “persistence of larger infrastructures” (McKenzie & Davies, 2012, p.456), which refers to the intense period of time they spend overseas.

Producing idiosyncratic yet tangible representations of memory that language-students carry upon their person, noting is coordinated through the use of various technologies. However, although students occasionally employ analogue tools such as pen and paper, noting is most commonly carried out on mobile phones, which are also positioned by McEwen and Caidi (2013) as playing a vital role in mediating newcomers’ transitions to university. While noting may have previously been most commonly associated with textual information practices such as annotation, the portability and ubiquity of the smartphone means that noting is now more likely to take the form of photos or screenshots. The mobile phone provides a convenient way for language-students to record and incorporate the practical activity and experience that is born of movement into their reflective activity while also enabling them to keep a reliable record of performance within a new space. Connecting past, present and future interactions abroad, noting, like checking, can thereby also be seen to play a key role in making time through coordinating the ongoing reproduction of consistent activity.

The chapter will now turn to explore the second category of Repositioning.

5.4 Repositioning

Repositioning refers to how language-students situate themselves within and in relation to an information environment and is constituted through three activities: the triaging of information questions and interactions to channel student engagement overseas; the mediating of information to validate their expertise within a setting; and, the archiving of information to uphold their credibility as a language-student over time. Taking place concurrently with calibrating, which orients students to surrounding information sources and activities, repositioning forms the means through which students manage their participation within a new social context. Directed towards both the negotiation and the alignment of the ways in which students participate in information activities, repositioning forms a purposeful response to the linguistic, cultural and physical barriers that limit their opportunities to engage with information within a new setting. In turn, repositioning, which is contextualised and explored through the following participant quotes, also illustrates students’ growing confidence and expertise within a setting as they use a variety of communication technologies
and other material artefacts to redefine themselves in terms of collectively-agreed upon ways of engaging with information.

As language-students interact within a new setting, they become increasingly aware of how the sociocultural environments that surround them shape and mark their information activities. While being able to speak the language of their setting affords them a valuable opportunity to engage with local ways of knowing, their status as a student who may look and sound very different from a local or a native speaker also affects how they are regarded and treated within a new setting; as Elmore (2018, p.209) highlights, newcomers both observe and are observed. Illustrating how their bodies make them a target for the exercise of power (Rouse, 2007, p.514), prevailing social norms often restrict students’ abilities to situate themselves within an information environment. Niko’s non-typically Asian appearance, which represents a material dimension of practice, means that her possibilities to interact with locals and native speakers and to engage with the social opportunities of her setting are constrained by the reluctance of her fellow commuters to communicate with her:

If they're Japanese they would probably ask a Japanese person and looking at them, they wouldn’t think I was Japanese.

Attempts by locals and native speakers to subvert the language of conversation into English play a similarly inhibiting role by limiting student access to a community’s tacit and contingent ways of knowing, as Alex S. points out:

A lot of the guidelines and sheets were in English but then they didn't tell us the German words… so when we go to actually enrol, everything is in German, I had no idea what was, it was a bit difficult to be honest.

Information seeking also draws student attention to their outsider status. In discovering that she was not eligible for a resident travel card, Tiffany, who is an American studying in Chile, became distanced from her local setting:

Students normally get a discount of 200 pesos but apparently, we're not necessarily considered students for some reason. I think it's just because they don't want to give us the discount, it's really stupid so we have to pay the full price.

Illustrating how locals position language-students in ways that are at odds with students’ own understanding of themselves and their goals as residential language-learners, Niko, Alex S. and Tiffany’s comments also demonstrate how these interactions lead to what Hodges (1998) labels as non-participation, where students are excluded from being able to identify with practice. In further demonstrating how identity disconfirmation results in negative emotions (Fenton-O’Creevy, Dimitriatis & Scobie, 2014, p.37) and disempowerment (Lave & Wenger, 1991, p.36), as students are kept from engaging more fully in their new setting, these comments also echo the frustration that has been noted in Second Language studies when language-students feel when they are positioned as an outsider (e.g. Siegal, 1996, p.360; Peirce, 1995). Revealing how social interaction both complicates and facilitates language-student engagement with everyday ways of knowing, the willingness of locals and native speakers to afford access (or not) to useful information mirrors the activities of gatekeepers who decide who, how and when people engage with information (e.g. Metoyer-Duran, 1991). Similar frictions have been noted by Latin American migrants who perceive that they are more isolated from their community under the Trump presidency (Adkins, Moulaison Sandy & Derpic, 2017), as well as by mature students, whose age is seen to minimise informational opportunities in the classroom (Given, 2002).

Notwithstanding, the recognition that an exclusion from practice risks impacting their goals for this time overseas means that students engage in repositioning as a way to push back against these constraints. As Fenton-O’Creevy et al. (2014, p.37) go on to point out, identity disconfirmation can also lead to changes in activity as people seek “confirming responses” as well as to convince others of their legitimacy. Providing the means for students to re-establish themselves as competent participants within their new setting, repositioning forms an active assertion of agency as students respond to the ways in which they are positioned by the attitudes and activities of their local community. Achieved through adjusting and reconciling their own information activities to the expectations and values of their new location, repositioning enables students to mediate their ongoing engagement overseas by framing their participation in relation to their community rather than as isolated and disconnected from local customs and values. Language-students also purposefully engineer their ongoing contact with social practices by acting in ways that are both recognisable and acknowledged by others in the community (Lloyd, 2006, p.576). Holly and
Fiona, for example, highlight their Australian and Canadian nationalities to defuse the threat of their “foreignness” and to connect with locals and native speakers:

You kind of just start a conversation and you're like, ‘from Australia’ and they’re like, ‘Australia?’ ‘I'm on exchange here’ and then you slip that in as soon as possible, so they'll be nice to me! I wish I was exaggerating, but literally that's one of my strategies here. (Holly)

I’ve had experiences where I would go into the French office or the office at school or the administration and I would ask something and they would turn me away right away, or at the bank you would try to open a bank account but after that like, having a conversation with them but I'm like, ‘I’m just a student from Canada, I'm having a little hard time trying to get things going;' when you build up that rapport, they change that no into yes. (Fiona)

In centring on the adoption of the ways of knowing that exclude them from the system in the first place, repositioning illustrates how language-students play an active role in helping to ensure their ongoing access to an information environment; similar diversionary tactics, where students take the initiative to maintain their engagement within a specific setting, have also been noted in Ross and Dewdney’s (1998) study of reference desk consultations. More importantly, however, Holly and Fiona’s actions demonstrate how repositioning marks a transition from individual to collective knowing as they start to think of themselves and their activities in terms of their connections and relations to others.

Students also reposition themselves through their growing sense of expertise. Validating the understanding that is constructed through their embodied engagement overseas, repositioning becomes entwined with students’ growing confidence within a new setting as well as the increasingly situated shape of their knowledge. James’ lack of compunction in deleting the earthquake warning application from his phone, for example, illustrates his developing alignment with and understanding of everyday life within Japan:

I stopped using this app because it was telling me about every earthquake like, ever, around Japan and Japan is maybe one of the most earthquake hotspots in the whole world so you’d hear loads and loads, earthquake there, earthquake there and it doesn't really affect you at all and so I just didn't bother.

James’ self-assured judgement and deft handling of the situation highlight how he draws from his locally produced understandings of risk to situate himself as knowledgeable within a setting while further demonstrating how repositioning centres upon his ongoing critical reflection and his active recontextualisation of local practices rather than upon passive assimilation. A similar focus upon the ways in which people use their (embodied) experience to reconfigure the ways in which they are positioned within an information environment has also been noted in studies that explore how women negotiate relationships with health care providers (McKenzie, 2002, 2004; Rivano Eckerdal, 2011).

The chapter will now turn to explore how repositioning is facilitated through the triaging, mediating and archiving of information.

5.4.1 Triaging

Triaging refers to the means through which language-students sort and prioritise the various information-centred tasks and obligations that they face within a new information environment. Triaging forms a way for language-students to determine both the importance and the urgency of the large number of demands that require their consideration and sequences student activity at a time when they may be feeling overwhelmed or unsure about the best course of action. In further providing a way for students to channel their attention towards information that will help them to meet their goals for this time overseas, triaging also helps language-students to reposition themselves within and in relation to broader community ways of knowing. Incorporating what many researchers in the field of health have referred to as information avoidance (e.g. Barbour, Rintamaki & Brashers, 2005; Case, Andrews, Johnson & Allard, 2005; Narayan, Case & Edwards, 2011; Sairanen & Savolainen, 2010) and queueing (Miller, 1960), triaging mediates the stress and anxiety of information overload (Allen & Wilson, 2003; Savolainen, 2007b) while facilitating language-student alignment with collective ways of knowing.

From finding accommodation to fulfilling bureaucratic requirements and figuring out a myriad of other unexpected and everyday necessities, student participation within a new setting creates a wide array of critical information-centred tasks and responsibilities. Given that these burdens tax students’ capacities to manage and pressure their emerging ways of knowing, triaging provides the means through which they sequence these demands in a
period when they may be feeling especially challenged by what Shove et al. (2012, p.65) refer to as the colonisation of their time and energy. For some language-students, triaging helps them to prioritise and direct their engagement within a new setting. Holly’s relocation from and to a technology-rich city, for example, means that she focuses her initial energies on re-establishing a vital internet connection:

One of the first things I did when I came here was make sure I got a prepaid phone plan, just so I could have data.

For other language-students, triaging means that they defer activity until they have the time and the emotional capacity to deal with these demands. Having latched onto the first functional route to work that she had found, Evelyn deprioritises exploring more efficient transportation options until she can plan an alternative journey:

There were multiple opportunities to get to work, but I think I visited work before I started my internship just to say ‘Hi,’ and took one specific route and then I stuck to that for about two weeks.

In contrast, it is spatio-temporal distance or the perceived remoteness of her upcoming exchange visit that underscores the reasons for which Chloe, an Australian student studying in China, triages her information questions:

Yeah, they sent the information pack a couple of months before we got here, that’s why I had forgotten, I forgot to check where I was staying or anything like that.

Demonstrating what Hultgren (2009, p.178) refers to as the timeliness of information, which refers to the opportune relevance of information, triaging forms both an active and a purposeful way to segment and order activity within time and space as well as helping language-students to evaluate the relative importance of their information questions and interactions. The need to prioritise pressing demands has also been recognised as important within refugee information research (Martzoukou & Burnett, 2018).

Recognising the time pressures and the intensity of this period, triaging also enables language-students to mediate the affective dimensions of their time overseas or the stresses and strains that characterise and are produced through their participation within a new information environment. Triaging affords students a breathing space to figure out new systems and responsibilities (cf. Poirier, 2012, p.282) as well as helping them to filter and buffer the ways in which they interact within a new setting. Evelyn and Helen (Figure 11) engage in triaging when they physically remove themselves from their new information environment:

I quite enjoy weekends retreating and really having my own space. (Evelyn)

Helping them to mediate the stress and anxiety of a new situation, Evelyn and Helen’s purposive retreat, which constitutes what Savolainen (2007b) labels as an affectively-oriented withdrawal strategy, forms an assertion of their agency in the face of demands on their time and energy. The recognition that students avoid information to minimise the frustration of information overload (Allen & Wilson, 2003; Sairanen & Savolainen, 2010) means that triaging additionally forms a coping strategy that emerges from students’ time-constraints and current capacity to deal with new information rather than an attempt to disregard things with which they do not agree (Barbour et al., 2005; Case et al., 2005).

At the same time, triaging also helps language-students to reposition themselves more favourably within an information environment by connecting them to the information activities and sources that they perceive as most relevant for their goals. As Wenger (1998, p.164) highlights, people define themselves through the practices that they do not engage in as well as the ones in which they do. In purposefully focusing his attention upon expatriate websites and ignoring the advice that his host university provides, Alex S triages the information with which he chooses to engage to reposition himself within the information landscape of a (more desirable) worldly young professional rather than that of a student:
I've also used just websites for expats in Berlin I just found on Google and those were really helpful, other people who'd been in similar situations could speak less German than I could, very clear instructions on what to do to register.

Similarly, in rejecting the local tourist information office, Charlotte triages the information that she chooses to look at as a way to situate herself as a long-term resident rather than as a holiday-maker, even as she must then work around this loss of assistance:

There is a kind of tourist information, but I haven't actually used that because I figured I'd wander and find out.

A similar emphasis on fitting in has been noted by Lingel (2014, p.758) who highlights that recently arrived transnational migrants would often slyly use technology to find their way around New York City rather than opening a paper map that would signal their outsider status.

Triaging also provides a way for language-students to maintain their position within a setting as well as to contest it. In refusing to think about the rabbit that she is offered to eat, because it is something that she would never dream of eating in the United States, Laurel’s triaging of information helps her to preserve and protect her desired immersion in and engagement with Spanish culture, where eating rabbit is more typical:

I think there might have been rabbit in something I ate, I'm not really sure because we're generally, unless we're brave, people recommend that we don't ask what we're eating.

The recognition that repositioning is structured by the information with which students engage as well as by that with which they do not means that triaging also highlights how language-student information questions and interactions can neither be viewed as static nor as pre-determined. Instead, as Lundh (2010) highlights, they must be recognised as both negotiated and as co-constructed through students’ everyday activities within a new setting. In further illustrating that students assert and take control of the ways in which they engage within a new information environment, triaging also highlights the active role that students play in rebuilding understanding within their new setting.

5.4.2 Mediating

Mediating refers to how language-students reshape and interpret information about their time overseas for others. Providing language-students with the means through which they share elements of their new activities overseas, mediating helps students to address their friends’ and family’s inexperience by drawing them in and situating them in relation to their new setting. In further forming the link through which students build and maintain their relationships with others, mediating information also enables students to foster the vital emotional support that they may need to mitigate the challenges of their new context while ensuring their continued presence and place in their friends’ and families’ lives. In this sense, mediating enables students to reposition themselves in terms of their own knowing as they recognise and become recognised for their growing expertise within a new setting. Achieved through information sharing (Pilerot, 2014b), mediating arises through everyday interactions and relationships and is additionally afforded through information technologies that mediate spatial and temporal distance.

One of the primary reasons for which language-students mediate information about their activities overseas is to situate and draw their friends and family into their new context. Characterising their relatives’ prior attempts to assist them as “not really relevant” (Chris) or as dating from “the Soviet era” (Genevieve), students realise that the advice they receive from home is rarely borne out of current or direct experience overseas. In mediating information about their activities in a new setting, students draw upon their ongoing and embodied engagement overseas to orient their relatives towards an understanding of their everyday realities. Laurel mediates information about her unexpected discoveries overseas as a way to create a narrative about her life abroad and to connect and make her new setting accessible to her blog readers:

I use… my blog for these are the new foods I'm trying every single day, and these are the things that I've found, and I've shared pictures of things that I've ended up doing, like there's a fast food restaurant here that they serve French fries but they also give you a two-pronged wooden toothpick fork because you eat with forks, that blew my mind.
Providing another reminder of Lave and Wenger’s (1991) concept of legitimate peripheral participation where newcomers are drawn into practice, mediating helps to establish common ground (Wenger, 1998, p.186) and coordinate understanding when loved ones are unable to fully participate in students’ activities overseas. People with chronic health conditions are similarly seen to mediate information as a way to situate and align their family and friends to their medical conditions (Lloyd et al., 2014; Veinot, 2009).

In turn, mediating information to others helps students to build and maintain the emotional support that they may need to meet the demands of a new setting. Genevieve and Jemma (Figure 12) foster the relationships that are crucial for their ongoing participation overseas by constructing a shared narrative about their time abroad:

I Skype with my mom usually once a week and just kind of update her on the things moms care about like how life has been. (Genevieve)

Genevieve and Jemma’s actions could also be interpreted as an attempt to mitigate the threat of being forgotten about as they work and study multiple time zones away from their family. In effect, while mediating forms a common activity, these comments illustrates how it becomes more resonant when students are deprived of an easily accessible and familiar support system; family and friends often become more rather than less important while they are overseas. Mediating information, which occurs within the general flow of everyday conversation rather than forming a strictly purposeful information activity, has also been seen to build vital emotional connections for both cancer patients (McCaughan & McKenna, 2007) and people with HIV (Veinot, 2009).

At the same time, mediating information to people who may not have direct experience within students’ new settings raises a number of questions related to power. While

Fiona’s decisions about which photos to share is partly driven by the structure of Instagram, which is uniquely oriented around photo-sharing rather than textual updates, her focus on selection emphasises how students have certain power to control others’ access to and understanding of information, particularly when they are working across languages:

I think for Instagram I have to be a lot more choosy with the photos I put on, whereas with Facebook, you can kind of just put on a full 100 photo album whereas with Instagram, you have to pick your favourite one or the coolest one to put up because I think it's more catered towards the quality of the picture rather than just your full experience.

Illustrating how students position both themselves and the friends and family with whom they share information, mediating highlights how student engagement overseas as well as the authority that is produced through their linguistic expertise accords them the power to negotiate and shape the ways in which they define themselves (Wenger, 1998, p.175). In turn, student license to portray their activity illustrates how participation within a setting both disempowers and empowers, as students move towards a more knowledgeable position about and within their new setting (Lave & Wenger, 1991, p.36). A similar emphasis on power is also seen in studies of immigrant and refugee resettlement (Chu, 1999; Lloyd & Wilkinson, 2017) where the need to engage with different information systems raises a number of questions about what information is and can be shared.

Technology plays a vital role in helping to coordinate student mediating. It is through video chatting applications such as Skype or FaceTime, for example, that language-students mediate information about their time abroad for friends and family who may be located at a distance as well as several time zones away. The ephemerality of instant messaging applications such as Snapchat further highlight the importance of connection rather than content to student mediating activities, as Genevieve points out:

I sent so many people pictures of the -15F when I was in St Petersburg because I thought it was unbelievable, I had never been in weather this cold and I don't think you have either, so I tended to send many a Snapchat about that.
More concretely, it is the mobile phone and the durability of communication that is afforded through messenger tools that facilitates student mediating activities by coordinating both the capture and the transmission of the everyday moments that language-students share with others, as Eli points out:

I send a lot of pictures to my friends and parents every day… I have a data plan here that's really, really, cheap… so anywhere I am, I’m in touch with anyone that has an iPhone which is a lot of people, or I use Facebook message, so yeah, so, I'll send my parents pictures in the moment.

Beyond situating others, technology also helps language-students to reflect upon their new landscapes and to authenticate their new position overseas. Evelyn starts to construct her own sense of home through creating and sharing videos to mediate information about her new apartment to others:

There has been quite a lot of Skyping and showing apartments and stuff like that.

Facilitating what Martin and Rizvi (2014, p.1023) refer to as telepresencing, mediating information demonstrates how the ‘there’ of back home conditions the ‘here’ of Evelyn’s engagement within a new context. In further helping language-students to signify information in relation to a setting, technology can be seen to facilitate their entwinement within an information environment rather than inhibiting their participation or representing their passive consumption of a new physical environment, as many studies of second-language acquisition imply (e.g. Mikal, 2011; Mikal & Grace, 2011; Weiskopf & Kissau, 2008).

Beyond friends and family back home, language-students also mediate information to fellow students. Providing another means through which knowledge can be produced, co-located peers are also valued because they constitute a resource that exists outwith local power structures (cf. Lave & Wenger, 1991, p.93) and with whom students can engage without worrying about the conventions and rules that are inherent within their local settings (cf. Fenton-O’Creery, Brigham, Jones & Smith, 2014, p.58). For some students, mediating information to others is a precursor to mutually beneficial information exchange with peers who share similar embodied experiences abroad, as Julia points out:

I guess maybe selfishly, if you tell someone something, they'll tell you something?!

For other students, mediating facilitates the creation and maintenance of the emotional support that lubricates their adjustment to a new setting, as Chris, who is a British student teaching in Germany, illustrates regarding the other teaching assistants with whom he socialises:

We're all in exactly the same boat. When we arrived, we were all 20 years old, we were all in our third year of university, we were all doing the same teaching programme, so... it's easy to relate to each other because... we're all doing very similar things... obviously, I'd try to make other friends as well, but I always wanted to make sure I had a group of English teaching assistants to help me.

These findings confirm the important role that peers play within international transitions (e.g. Allard, 2015; Hyldegård & Hertzum, 2016; Ishimura, 2013; Lingel, 2011, 2015) as well as in transitions to parenthood (e.g. Bartholomew, Schoppe-Sullivan, Glassman, Kamp Dush & Sullivan, 2012) and to college (e.g. Woodley & Meredith, 2012).

More importantly, however, these findings demonstrate that mediating information helps language-students to reposition themselves in terms of their own expertise. Tiffany’s understanding of her own learning and development, for example, is reinforced by her ability to mediate information about Chilean life to other travellers:

People will be ok 'where are you from?, what are you doing?', and I'll be like, ‘oh Santiago’, and they'll be like, ‘oh I'm planning to go there next week, can you help me?’, and I'll be like ‘oh yeah,’ explaining the metro system, and explaining stuff like that, so that's been kind of cool, because it's nice to teach people- you realise how much you've learned when you're like, explaining things and you can get off here and see this and get off there and see this.

Students also become recognised as experts through interpreting and mediating information environments for others and this acknowledgement of their proficiency helps them to reposition themselves in relation to their new setting. Both Laura and Kamila highlight the sense of achievement that they feel when they can mediate information for others:
So, I’m like, an expert in all the buses, so we normally meet so I can show them what bus we need to take. (Laura)

Yeah, I was at the bus stop, and there was a family of tourists, and they just started asking me for directions to where this place was… it made me feel kind of like they thought I was a local, so I must kind of fit in to the society here, which was kind of interesting. (Kamila)

A similar emphasis can be seen in Kennan et al., (2011, p.202), who found that refugees become a “reference point” for newcomers as well as in Willson (2016, p.263) who argues that this change of status symbolises the end of an early career researcher’s transition. In this sense, mediating also marks student growing awareness of and alignment with collective ways of knowing as they locate themselves within their new setting and in relation to others.

5.4.3 Archiving

Archiving refers to the construction and storing of information in written, photographic or material form for the purposes of posterity. Differentiated from noting by the emphasis upon durable memories rather than upon short-term recall, archiving involves the future-oriented creation and preserving of information objects that record and will later mediate language-students’ fears of forgetting about their activities during residence abroad. Channelling and encapsulating student understandings within a new setting, archiving is afforded through a variety of written and photographic genres as well as through the materiality of students’ digital and physical souvenirs. Archiving also helps students to reposition themselves as experienced as well as to portray this knowledgeability over time by creating a representation of their time overseas.

Worried that future geographic distance as well as the passage of time may render their activities inconceivable, language-students archive or create and capture information about their time abroad to pre-empt a loss of connection to their current information landscapes. For some students, their focus is on practical details, as they document specific information that they can use to guide their future visits, as Ben illustrates:

I realised I’m not remembering exactly what I did last week, I should note that down, it is kind of like to remember when to go, what did I do, also if I come back I want to, I think I did cool stuff so I want to do cool stuff again if I can, I want to have in that way, so what should I do, what should I not do, it’s to remember.

For other students, archiving centres on creating information objects that will later help them to revivify their time abroad. In intentionally recording information about her activities throughout the year, Kamila’s multimodal posting on social media is designed to provide her with an entry back into her time abroad after she has left:

I’m posting a lot more pictures from my trip, I’m updating statuses about what’s going on in my life right now, and even for myself, I’m kind of too lazy to run a blog, I don’t have the willpower to write every single day, but I feel that someday I can go back and look at old pictures, at the things that I’ve written, even the short little bits and just have little souvenirs of my life here.

Focusing on what language-students perceive to form the most meaningful aspects of their stay overseas, archiving, which corresponds to the keep segment of Whittaker’s (2011) information curation lifecycle, helps students to mark a significant period in their lives. Archiving also facilitates the construction of a stabilising sense of continuity about and within students’ lives by helping them to build a personal narrative of this time abroad; as Bowker (2005, p.9) points out, documentation enables “both the creation of a continuous, useful past and the transmission sub rosa of information, stories, and practices from our wild, discontinuous, ever-changing past.” Refugees are also seen to engage in archival practices to memorialise their journeys overseas (Lloyd et al., 2017).

Simultaneously, archiving helps language-students to mediate their return home by forming a representation of their expertise; as both McCullough (2009) and Parkin (1999) point out, the symbolism and stability of objects means that they play an important therapeutic role within transitional processes. Archiving helps language-students to reposition themselves as experienced by furnishing tangible evidence of their stay and corroborating the very existence of their time overseas. The focus upon artefacts that are produced through student embodied participation abroad means that archiving also repositions students in terms of their situated understandings and competence. As Pahl and Rowsell (2012) indicate, artefacts play an important role in defining a person’s identity as well as their aspirations, values and beliefs. In this sense, archiving helps students to prepare for their return home by
reinforcing their own credibility as a language-student, as both Tiffany and Genevieve highlight:

I'll keep plane tickets, park entrance tickets, stuff like that definitely, and most of that stuff's for scrapbooking so when I'm 80 I can look back and be like, 'hey kids, I was cool at one point in life!' (Tiffany)

The focus on everyday objects that function as a souvenir once their "reminding function has been fulfilled" (McKenzie & Davies, 2012, p.444), draws further attention to students’ desires to substantiate their activities overseas; the irreproducibility and the contingency of mundane ephemera such as paper newspapers or tickets emphasises their expertise within a new setting. Archiving also confirms student command within and over a new situation by providing “proof of discovery” (Shankar, 2007, p.1457) and transforming the unfamiliarity of a new setting into the intimate. Fiona demonstrates her authority over a physical environment by reducing her information landscape into something that she can both hold and remove:

I just go to the beach and put a bit of sand in a Ziploc bag and label it and when I’m home, I put the sand in a little Mason jar.

The physical solidity as well as the personal involvement that is inherent within the selection and use of material objects provides an important cue for reminiscing and facilitates students’ abilities to inform and direct future memory-making (Jacucci & Wagner, 2007). As Kamila points out:

I feel like once I get back it will be so surreal and here I feel like it's going to be a dream so, it'll be really nice to have something tangible to hold and think back to the things that happened.

The durability and visibility that is afforded by the tools that language-students use to document information about their time abroad means that technologies play an equally important role within the production of memory. The written format of Ben’s diary, for example, fixes and stabilises his understandings of this time abroad. Similarly, Facebook’s “On This Day” memory feature, which features algorithmically-driven recollections of specific days or events, helps students to bring the past into the present, which is similar to what Brubaker, Hayes and Dourish (2013) note in their research into memorial sites on Facebook. Social media also serves as a living archive of the social connections that students have made during their time overseas (Richardson & Hessey, 2009).

Notwithstanding, memory must always be understood as constructed rather than as retrieved (van Dijck, 2007). Although the objects that language-students use to document their time away represent their activities overseas, these artefacts do not always provide stable anchors of recollection, as the well-travelled Niko points out:

I think that like, that kind of stuff is fun if it’s in a scrapbook or a journal or something but if it’s not then it ends up just being a bunch of random papers, so I've tried doing that in the past, but I never ended up taking the initiative to put them all in a scrapbook and I just kind of thought, ‘why do I have all these papers lying around my house?’

Niko’s reluctance to engage in archiving, which illustrates how the passing of time impacts her engagement in information activities, also demonstrate how knowing is enacted through student participation in their new setting rather than being static or fixed in time.

The chapter will now turn to explore the overarching theme of mitigating risk that is produced through this analysis.

5.5 Mitigating risk

Connecting students to the shape of local practices and driving the construction of their information landscapes, language-student information activities are drawn together through
the overarching theme of *mitigating risk*, as illustrated by Figure 5. Mitigating risk, which refers to student attempts to negotiate the pressures that are produced through their participation abroad is constituted through: the *calibrating* of student activities in comparison to local practices; and the *repositioning* of students within their information landscapes. Recognising that the uncertainty that is produced through student engagement within a new information environment and intensified by the brevity of their stay overseas leads to the establishment of academic, financial and physical pressures, mitigating risk forms the catalyst for student engagement in information activities. Shaped by student unfamiliarity with the information sources of their setting, mitigating risk highlights how student engagement within a new information environment is structured through their varying goals and motivations for this time overseas. In further highlighting the broad range of information sources and activities in which students engage whilst they are overseas, mitigating risk also demonstrates the complexity of building new information landscapes.

![Figure 14: Calibrating, repositioning and mitigating risk](image)

When language-students enter a new setting, their inexperience means that they are forced to cope with the uncertainty that is produced through their engagement within a new information environment. This uncertainty, which is intensified by students’ relative transience, as well as by their aspirations for their time overseas, coalesces to create a series of risks that threaten student engagement within a new information environment, including risks of physical safety, financial hardship and academic failure. Students attempt to mitigate these risks, which both organise and shape their time abroad, through their engagement in a variety of information activities. One of the biggest risks that language-students face within a new setting relates to the various formal requirements to which they need to adhere. Potentially impacting students’ academic performances as well as their legal right to be abroad, the absence of information about legal regulations and academic guidelines muddies students’ understandings about their responsibilities within a new situation while also raising the stakes of non-compliance. For Alex W., who is an American student studying in Hong Kong, a lack of information about the registration system of his new university increases the risk that he will be unable to enrol within the classes that he needs to graduate and, consequently, to fulfil his academic goals for his time abroad:

> There was nobody there to teach us how to use this add-drop system. Apparently, there's a waitlist but I didn't, nobody told me how to put myself on the waitlist, I actually did not even know that it existed, so yeah, the first one and a half weeks I was just going to all of these different buildings...just going all over campus trying to find information that I need.

In contrast, it is the partial nature of the legal information available to Kamila and Luan that impacts their ability to comply with official regulations and increases the risk of being unable to maintain their legal status overseas:

> I've been really struggling to find the proper documents to give them and when I went to the office to find out some information, they say 'oh this isn't the right office, we don't give information here, you have to go somewhere else.' (Kamila)
>
> It was a bit iffy online as to... what I needed to bring. It was translated literally from French, so it wasn't very good English, and it was a bit confusing because I was doing an internship. ‘Was I a student or was I working?’ So, I never knew what documents I actually needed. (Luan)
As students attempt to establish what information they need as well as how to access and understand it, these risks are further complicated by the complex bureaucracy that is involved in a move to a new country (Khoir, 2016, p.107; Lloyd et al., 2013, p.131), as well as the need to reconcile partial and conflicting information (Peirce, 2000, p.92).

Threats to their own safety and wellbeing form another common risk that language-students face within a new setting, as Anderson (2003) and Pellegrino-Aveni (2005) note in their studies of residence abroad. These risks, which are produced through students’ unfamiliarity within their physical environments, are exacerbated by their problems accessing the embodied and contingent information that structures local ways of knowing. Inexperience about the security of unknown accommodation and public transportation, for example, increases the sense of physical risk that many female language-students feel within a new setting, as Charlotte illustrates:

Going back at night on the tube sometimes just because you’re, it's dark and you're on your own and you don't know about that.

The unusualness of a new setting can also jeopardise student daily welfare abroad. Misunderstanding about exchange rates as well as cultural traditions such as tipping, which Kendrot (2011) found to be equally problematic in her study of residence abroad, creates a number of financial risks, as Kamila points out:

France is very expensive, so it's [the grocery store] the cheapest in France I would say. I think it's really tough to stay in budget because the price differences are quite high, I mean things like bread and cheese and wine, of course, are cheaper than in Canada, but the rest, it's much more expensive, I find.

The various shapes and meanings that these pressures take confirm that threats to student participation overseas go beyond physical danger. They also demonstrate that risk is produced through students’ time-constrained unfamiliarity within a new information environment rather than forming a natural outcome of an increasingly risk-averse society. In helping students to mediate uncertainty, information activities play a vital role in helping language-students to mediate these threats to their engagement overseas. Noting that “information is power,” Reed (2009, p.63) found that inexperienced travellers shared a similar preoccupation with safety during their time overseas while refugees’ (Lloyd et al., 2017) and ESOL learners’ (Elmore, 2018, p.158) need to feel secure within their new environment further echoes students’ concerns about the risks of participating in residence abroad.

Calibrating, or the adjustment of information activity through comparison to local practices, forms one of the primary mechanisms through which language-students mitigate risk abroad. As students start to engage within their new setting, their interactions within a new information environment highlight how unfamiliarity with new information resources intensifies threats to their academic and social goals for their time overseas. In establishing knowledgeable others as a trusted template against which they can calibrate their information activities, language-students mitigate the risks of their new settings by orienting themselves towards the people whom they perceive to form the most reputable guide to local ways of knowing. In other words, students mediate the insecurity of a new context through engaging with and becoming connected to local information environments. Calibrating helps Jemma to mitigate the risk of failing to improve her language proficiency by enabling her to access the information that will orient her to local ways of speaking:

[The native-speaker video is] targeting people in France that want to sound more French, so this stuff just makes you fit in more and to actually have more connection with French people rather than, you may have perfect vocabulary, grammar, but if you're speaking like that, they're going to know, they're not going to have a proper connection with you for all that you're fully prompt, grammar and everything.

Calibrating also provides language-students with access to the nuanced local knowledge that will mediate many of the physical threats that they face abroad, which mirrors the warnings that a local gave Nielsen (2014) about sectarian pubs in Ireland. Calibrating enables Charlotte to mitigate risk by helping her to build a physical awareness of her new setting:

When I was looking for an apartment I went to one area and the mother of the family was like, ‘Don't go there, that's kind of infested with drugs’ and things like that.

Similarly, in facilitating student engagement with the taken-for-granted knowledge that structures local understanding, calibrating helps to mitigate financial risk by providing
language-students with advice about how to keep their costs down while travelling abroad, as Niko demonstrates:

I had a friend that studied abroad in Japan a couple of years ago and he said that when he was in Japan he would always go to the grocery store at night to get the special deals on the *bentos* [single portion meal] and stuff, the prepared foods, so I was like 'oh maybe my grocery store has that' and I noticed that they do at night-time, they have special prices.

In effect, while risk may magnify the authority of knowledgeable others, calibrating helps students to mediate the hazards and opportunities of international transition by providing access to the nuanced ways of knowing that structure a new setting.

*Repositioning*, which refers to how language-students situate themselves within and in relation to local practices, forms the other means through which students mitigate the risks that are produced in the construction of their information landscapes. While calibrating facilitates an understanding of local practices, students’ outsider statuses can also isolate and impact their participation within a new information environment. Repositioning mitigates the risk of remaining detached from a new setting by helping students to resituate themselves within local information environments. In enabling James and Alex S. to purposefully engage with the information landscapes of local and native speakers rather than those of their English-speaking compatriots, repositioning helps students to mitigate the risk of failing to improve their language proficiency:

I avoid as much as possible to just be talking in English to a lot of the people because you then just become this English person and you lose your, as a personality you’re just there to help their English. (James)

I think maybe I have avoided making other friends from England... I don't want to hang around English people, I have an aversion to it, it's like xenophobia, but with people from your own country, I don't know if there is a word for that! (Alex S.)

Highlighting the tensions between the use of peers for emotional support and the consequent effect on language-learning (Deakin, 2012; Mikal, 2011; Mikal & Grace, 2011; Weiskopf & Kissau, 2008), repositioning helps language-students to mitigate risk by maintaining their access to surrounding information environments. Creating information, which repositions students as competent, also forms a way of mitigating the risks that are produced through student engagement overseas. In taking control and constructing a list of the information that she needs to open a bank account, Fiona mitigates the risk of failing to comply with the official rules and procedures of her new setting:

At first, they would tell me you don't have one document but then I would go back and they said, ‘oh you don't have that document,’ but they didn't tell me that the first time when I went, so... after a couple of times, I sat down and said, ‘why don't you list out every single document that I need so I don't have to come back a third or a fourth time.’

Demonstrating her understanding of how knowledge is shaped within the community, Fiona’s comments also illustrate that mitigating risk shaped through students’ reflexive and reflective considerations of their overseas activities.

5.6 Chapter conclusion

Presenting the findings from the study, the chapter has explored how language-student time overseas is characterised by the construction of their new information landscapes. The chapter identified seven different information activities that configure two major categories, *Calibrating* and *Repositioning*, before presenting how these activities contribute to the overarching theme of the study, which is the grounded theory of **Mitigating Risk**. Examined in the chapter through students’ accounts of their activities in a new context, the theory of mitigating risk will be explored through the study’s theoretical framework in the following chapter.
Chapter 6: A grounded theory of mitigating risk

6.1 Chapter overview

The theory of mitigating risk emerges in response to the pressures that structure language-student time overseas. In the chapter, the theory of mitigating risk is explored in relation to the study’s theoretical framework as well as to literature from within and outside library and information science. The chapter starts by applying theories of risk (Douglas, 1992) and the theoretical constructs of uncertainty (Kuhlthau, 1993) and time (Schatzki, 2013) to unpack the key categories that form the grounded theory of mitigating risk and examine how the demands of residence abroad are mitigated through the construction of students’ new information landscapes. The chapter then employs the lens of practice theory (see 3.5) to examine how mitigating risk catalyses information literacy practices. Focusing on how the information literacy practices of language-students are enacted during residence abroad, the chapter also uses the theoretical constructs of affordance (Gibson, 1977) and cognitive authority (Wilson, 1983) to explain how student engagement with the people and the opportunities of their new setting shapes their understanding overseas. The chapter finishes by using transitions theory (see 3.6) to explore the complex processes of transition in which language-students are engaged. The emerging shape of student transition is presented in Figure 6, which will be used throughout the chapter to provide a visual representation of information literacy practice within residence abroad.

6.2 Mitigating risk: A grounded theory

While residence abroad affords language-students a unique opportunity to improve their language skills, the uncertainty that is produced through their engagement within a new setting coalesces with the short time frame in which they must improve their language proficiency to form a series of risks that impact students’ academic objectives for travelling abroad as well as their physical and economic well-being within a new setting. Mitigating risk demonstrates how students negotiate these pressures by connecting to the information sources and activities that facilitate their access to and engagement within their new community. Focused on the calibrating of their activities in comparison to local practices as well as their attempts to reposition themselves within local information environments, mitigating risk is marked by the construction of student information landscapes, as Figure 7 illustrates.
6.2.1 Risk

Risk forms the core guiding concept behind student engagement in information activities. A complex phenomenon, risk has, arguably, most commonly been understood in terms of the risk society (Beck, 1992) or the highly-critiqued health and safety-driven audit culture of blame and responsibility that is perceived to structure everyday life in the West (Tulloch & Lupton, 2003). Beck’s (1992) characterisation of a society that is fettered by unmanageable catastrophe, which takes what Zinn (2009, p.7) labels as a critical realist perspective, has positioned risk as both objective and an inevitable hazard within an increasingly individualised and globalised late modernity. In further reducing risk to a calculated probability (Boholm, 2003, p.160) that is mediated through moral judgment about a person’s sense of personal responsibility (Tulloch, 2009), structural and political framing means that risk has typically been seen as both measurable and something to be avoided. However, while acknowledging the importance of health and safety regulations within society as well as the widespread influence of Beck’s (1992) ideas, these theories of risk can also be critiqued for taking an institutionally-centred and objective approach to risk (Zinn, 2010, p.107) that ignores both cultural differences and the ways in which risk is constructed and experienced in everyday life (Tulloch & Lupton, 2003, p.6). Accordingly, the study builds upon the work of Douglas (1992; Douglas & Wildavsky, 1982) and Lash (1993) to position risk as a sociocultural construction that is produced through the meaning and significance that residence abroad holds in students’ lives rather than seeing them as pawns within narratives of risk management. This sociocultural approach emphasises how language-students build meaning rather than engaging in calculated predictions and recognises that both risk and students’ responses to risk are localised, contextualised and produced through a cultural and historical lens.

While risk theory has emphasised risk-taking rather than its mitigation, information has tended to be positioned as both causing risk (when information is lacking) as well as the means through which people can, as responsible citizens, “ward off” potential dangers and hazards (Tulloch & Lupton, 2003, p.77). As both Tulloch and Lupton (2003) and Beck (1992) point out, engagement with specialist sources of information, including magazines, the internet and colleagues who work in scientific communities help people to make the “invisible visible” (Tulloch & Lupton, 2003, p.5) and build judgment by throwing light onto expert claims. Echoing the ways in which language-students calibrate their activities against those of knowledgeable others, the emphasis within risk theory on hidden structures further reflects the important role that student engagement with tacit and contingent ways of knowing plays in helping them to mediate risk within their new setting. The understanding that knowledge gaps restrict a person’s ability to recognise the most effective actions and choices that they can take within a new setting means that information is also positioned as helping people to expand alternative courses of action (cf. Purcell, Clarke and Renzulli, 2000, p.72). In this sense, sifting and observing, which provide the means to envisage a new setting as well as new ways of being, mediate risks by helping students to construct new ways of dealing with issues. Nevertheless, the positioning of risk as needing to be avoided and as ‘resolved’ through the addition of information illustrates how risk theory presents a limited perspective of the role that information plays at this time.

A comparable emphasis is noted within library and information science, which has not typically engaged with the concept of risk in any great detail. Burkell (2004) and Nara (2007), for example, position risk as both objective and problematic when they emphasise how people need ‘more’ information to perceive and counteract the dangers of everyday life. Similarly, Choo (2017) views risk from an organisational perspective as well as untouched by the dynamics of social life when he draws upon the Risk Information Seeking and Processing Model (Griffin, Dunwoody & Neuwirth, 1999) to suggest that hazards and threats are mediated through affective and situational precursors such as social norms. In contrast, Houston and Westbrook (2013) hint at the inherent complexity of risk by illustrating how people mitigate intimate partner violence through controlled non-use of information. Correspondingly, while they do not phrase their findings in terms of risk, Allen and Wilson
(2003, p.38) demonstrate how people engage in both the hoarding and the over-sharing of information or what they term as “pathological information behaviour” to guard against losing their job. These studies highlight how individual perceptions of the (objective) risks of everyday life cannot be linked, simplistically, to a lack of information, while further illustrating how the connections between risk and information are underexplored within library and information science.

Accordingly, the sociocultural focus of the study emphasises that the risks with which language-students engage during residence abroad are far more complex than has previously been assumed. In illustrating how risk is mediated through the development of skilled performance and knowing within a setting, the related construct of edgework, which refers to voluntary risk-taking (Lyng, 1990; 2009), provides a way to explore how language-student activity cannot uniquely be conceived as reactive or as a perpetual struggle that is marked by fear. Edgework is a theoretical construct that emerged from studies of how risk is understood in the practice of extreme sport, dangerous occupations and other frequently stigmatised activities to explore purposeful engagement in unpredictable and risky activities. Drawing upon the idea that risk-taking straddles edges or boundaries between “life and death, consciousness and unconsciousness, and sanity and insanity” (Lyng, 1990, p.855), edgework highlights how an engagement with risk can also lead to pleasure and self-fulfilment as people push their bodies towards the limits of uncertainty. Seen in this light, student engagement with risk is interpreted as rewarding as well as problematic; while student participation in residence abroad is not as physical as sky-diving, the thrill that they demonstrate when they reposition themselves in terms of their expertise illustrates how risk can be affirming as well as distancing.

Most importantly, however, edgework demonstrates how risk can be seen as an opportunity for language-student growth rather than as purely something to be avoided. In rehearsing their jump as well as checking their equipment and the sequence of their formations, skydivers are seen to “spend more time preparing for a jump than they do making it” (Lyng, 1990, p.874). The recognition that edgework is linked to a person’s effort or preparation for activity rather than being connected to luck or to “mental toughness” (Lyng, 1990, p.859) illustrates how language-students mediate risk through planning as well as through the development of expertise and situated ways of knowing. The recognition that driving appears to form less of a risk as a driver becomes more proficient (Purcell et al., 2000, p.69) further demonstrates how increasing knowledgeability helps language-students to become more adept at anticipating and managing risk in their lives. Growing understanding, for example, both initiates and facilitates student efforts to reposition themselves within their new information landscapes and mitigate the risks of remaining isolated from the opportunities of their new setting. Similarly, the realisation that edgework provides the opportunity to create and extend alternative notions of authenticity, self-hood and agency illustrates how language-student mediate risk through the development of subjectivity. In demonstrating that triaging, mediating and archiving contribute to students’ sense of control over their new information landscapes as well as the boundaries of their own body (Lupton & Tulloch, 2002, p.122), risk can be seen to play an important role in helping students to establish their language-learning identity within a new setting. Travellers similarly use stories of risk as a way of asserting their identity within a foreign setting (Elsrud, 2001; Reed, 2009).

Accordingly, while transition has been highlighted as particularly important for people whose minority economic and social status is considered to make them particularly vulnerable (e.g. Ecclestone, 2009), edgework stresses that risk is mediated through student agency rather than curtailing it (Thesen, 2014, p.16). In turn, while growing political interest frequently positions transition as inherently risky or as needing to be managed (Ecclestone, 2009), edgework focuses attention on student growth rather than subscribing to the ongoing pathologisation and flattening of transitional processes (Fenwick, 2013, p.363).

6.2.2 Uncertainty

Uncertainty, along with time (see 6.2.3), forms one of the two major influences that combine to produce the risks that structure student time overseas. As students participate in the activities of their new settings, the unfamiliarity of a new information environment coupled with the loss of familiar support structures means that their engagement overseas produces considerable uncertainty. Leaving students unsure about social arrangements, such as when supermarkets are open, uncertainty also impacts students’ understandings about how to act within a new context, for example, while attending a church service. Further intensified by students’ need to fulfil new responsibilities while operating among the unfamiliar sights, smells and tastes of a new setting, uncertainty also creates anxiety (Kuhlthau, 1993) as well as irritation and frustration (Nahl, 2004), as evidenced by student attempts to mediate the stress of their time overseas through triaging and mediating. Most famously explored within library and information science through Kuhlthau’s Principle of Uncertainty (1993) as well as in Wilson’s uncertainty project (1999; also see Wilson, Ford, Ellis, Foster, Spink, 2002), uncertainty is positioned as “endemic” to transitional processes (Mikal et al., 2013, p.A51).
where it has been recognised as interfering with a person’s ability to make judgements (Chick & Meleis, 1986, p.252) and to assign values, predict outcomes or to make sense out of experience (Johnson, Morton & Knox, 1992, p.300).

The recognition that student engagement within a new setting is structured through uncertainty, which has been characterised as emerging from a lack of understanding, a gap in meaning or a limited construct (Kuhlthau, 1993, p.347), illustrates the important role that information plays in helping to mediate ambiguity. In positioning doubt as reduced by information (Kuhlthau, 1993; Wilson, 1999), uncertainty both initiates and guides language-student engagement with information. Student uncertainty about what to expect before they leave for their time overseas, for example, prompts them to start sifting through information resources to build a picture of their new setting. Similarly, checking illustrates how uncertainty encourages language-students to engage with knowledgeable others to mediate the unfamiliarity of their new setting. Mirroring Schumacher and Meleis (1994, p.122) as well as Johnson et al.’s (1992, p.300) recognition that unfamiliarity emerges from and is resolved through encounters with new knowledge and information during transition, uncertainty is thereby recognised as playing an important role in both shaping and subsequently driving student attempts to mitigate the risks that structure their engagement overseas.

However, while recognising the importance of Kuhlthau’s (1993) and Wilson’s (1999) contributions to the development of user-centred information perspectives, the constructivist and cognitivist approaches that have typically been used to explore uncertainty also limit broader understanding about its role within library and information science. Most importantly, a constructionist lens illustrates that responses to uncertainty are more wide-ranging than may otherwise have been assumed. Engagement in triaging, noting and archiving, for example, demonstrate that student uncertainty is mediated through a wide range of organisational and creative information activities rather than uniquely through information seeking and searching, as Kuhlthau (1993) asserts. Similarly, the intertwined and cyclical shape of calibrating and repositioning illustrates how uncertainty facilitates a “shaping, expanding, refining and reforming” (Anderson, 2006) of activity rather than triggering the start of a linear and straightforward mediation process. Uncertainty is further understood to be negotiated through social exchange; the important role that repositioning plays within student engagement overseas develops Kuhlthau’s (1993) recognition of the important role that experienced teachers and librarians play in the information search process to illustrate how uncertainty is produced through language-students’ ongoing interactions with co-located peers and family as well as with the more obviously expert local and native speakers. The recognition that students already have some competence in their target language further highlights how uncertainty is created through their engagement within a new setting rather than emerging from an internal deficit or a personality trait (e.g. Hyldegård, 2009).

A constructionist lens also highlights how uncertainty is employed in various ways during residence abroad. Although the alleviation of uncertainty has always been assumed to form the goal of an active information user (Sairanen & Savolainen, 2010), language-students attempt to sustain and expand uncertainty during transition. In triaging information, for example, students purposefully maintain uncertainty to protect themselves from a sense of information overload and the pressure of decision-making. Similarly, students knowingly increase their uncertainty when they avoid engaging with English-language or tourist information to reposition themselves within their information landscapes. Helping students to respond to the emergent shape of information (cf. Genuis, 2012) as well as to the dynamics of their interactions overseas, the maintenance and extension of uncertainty has also been recognised as a useful strategy when people are faced with illness (Barbour et al., 2005; Brashers, Neidig, Haas, Dobbs, Cardillo & Russell, 2000; Sairanen & Savolainen, 2010). A similar emphasis on increasing uncertainty is seen in Lingel’s work (2015, p.1245), where transnational migrants avoid using technology that would help them to find their way around to ensure that they “learn” their new city. The recognition that “the desire to reduce uncertainty is assumed to be only one of several possible responses to events and circumstances marked by unpredictability, ambiguity, or insufficient information” (Brashers et al., 2000, p.64) means that findings from the study reinforce the understanding that uncertainty, like risk, is not uniquely undesirable (Cole, 1993).

6.2.3 Time and temporality
Time, coupled with uncertainty, forms the second of the two major influences that combine to produce the risks that structure language-student activities overseas. Time plays a complex role within residence abroad. Linked to the understanding that the more time language-students spend overseas, the more they will learn (cf. Compton-Lilly, 2016, p.87), time, which structures the academic calendar to which students are subject, delineates the length of students’ stays overseas. Producing a fixed deadline by which students must have improved their language skills, time is consequently positioned as creating what Savolainen (2006,
p.116) refers to as a “temporal constraint”, as evidenced by students’ dilemma about whether or not to engage with English speakers as they try to improve their language. Time consequently combines with the uncertainty that is produced through engagement within a new setting to intensify what students perceive to form a one-off opportunity to improve their language skills before final exams and create the risks that structure their time overseas. The measurable time of clocks and calendars (McKenzie & Davies, 2002, p.2) thereby generates a sense of urgency and “harriedness” (Southerton, 2003) that is further impacted by the loss of a neat and timetable-delineated understanding of when students are and are not language-students, as their need to engage in triaging demonstrates. Pressures of chronological time have been seen to similarly qualify individuals’ decision-making and other information behaviour (e.g. Allen, 2011; Dahm, 2012; Higgins, 1999; McKenzie & Davies, 2002, 2010) although this focus has not yet translated into an exploration of the effect of time on the production of risk.

Time, however, does not just indicate chronological time. Instead, time is also understood in terms of temporality, which refers to the “past-present-future dimensionality of activity” (Schatzki, 2012, p.18). Temporality draws upon Heidegger’s (1928, trans. 1962, Int. II: 18) assertion that time forms the “horizon of the understanding of being” or the means through which human existence is united and emerges from the premise that a person’s activity is mediated through the past-present-future aspects of time rather than through successive and objective “clock time” (Blattner, 2005, p.311). Positioning people as acting through their possibilities of being (Heidegger, 1928, trans. 1962, II.4: 336) or their projection of what they understand themselves to be, which constitutes the future, Heidegger highlights how human existence is also structured through what is important to a person (Heidegger, 1928, trans. 1962, II.4: 340), which constitutes the past, as well as the equipment or the material objects that accompany these goals and concerns (Heidegger, 1928, trans. 1962, I.3: 69), which constitute the present. In other words, risk is a simultaneous expression of past and present activities as well as future goals; students act towards an end or for the sake of something as well as because of something that matters to them (Schatzki, 2012, p.19). The fear of academic failure, for example, is constructed through student prior engagement with language-learning and their home university’s expectations for time abroad as well as through their current encounters overseas and their motivations for future linguistic fluency and expertise.

Temporality also shapes the ways in which students engage within a new information environment. The desire to make the most of their short time overseas means that students engage in future-oriented preparatory information activities such as sifting to facilitate a smooth transition upon arrival. Similarly, archiving helps students to make future time (cf. Gourlay & Oliver, 2018, p.113) by capturing and recording their activities overseas. At the same time, temporality can also magnify the risks that language-students face within a new setting. The important role that triaging plays during residence abroad highlights how risk that is produced through the past-present-future dimensions of student activity intensifies their responsibilities near the beginning of their stay overseas. Triaging further demonstrates how students need to create what McKenzie and Davies (2002, p.9) refer to as a “window of opportunity” in which they have the capacity to cope with these demands and sequence what has variously been termed as time famine, poverty or fatigue (Bossaller, Burns & VanScoy, 2017, p.12). Like the “time sinks” that limit graduate student engagement with information resources (Sadler & Given, 2007, p.127) or the speed with which refugees are expected to resettle (Lloyd et al., 2013, p.136), these pressures demonstrate that “when an individual seeks information is as important as what he or she seeks” (McKenzie & Davies, 2002, p.4).

While a focus on temporality centres students’ goals for their time overseas, the interwoveness of activity illustrates that past-present-future dimensions evolve socially through student participation overseas rather than being linked to instantaneous or isolated choices, as Hultgren (2009, p.86) points out in her study of school leavers. The recognition that language-student current and future engagement within a community can be disrupted through the ways in which they are received overseas also demonstrates how temporality is entwined with complex questions of power, as student engagement in repositioning demonstrates. At the same time, student engagement in activities that help them resist being situated in a specific way, such as triaging, illustrate how they can also refuse to accept these temporal exclusions (Schatzki, 2013, p.96). Students’ growing knowledgeability and expertise within their new setting illustrates their increasing power over and claims on their peers’ as well as their friends’ and family’s temporal activities, as their engagement in mediating illustrates (cf. Schatzki, 2013, p.94). Mitigating risk thereby brings the past and future together into “a decision that needs to be taken in the present” (Thesen, 2013, p.16) to illustrate how time makes (Shove, 2009, p.17) or plays a constitutive role within language-student activity rather than forming an abstract container in which activities occur (Savolainen, 2006, p.113).
The complexity of this period also means that language-students use a variety of material objects to coordinate and direct their temporal engagement; as Shove, Trentmann and Wilk (2009, p.5) point out, things give time “meaning, order and personal as well as collective qualities and characteristics.” The creation of reminders and prompts that are both action and forward-looking (McKenzie & Davies, 2016, p.152) and which further allow students to see time as something to be managed (McKenzie & Davies, 2010) help students to anticipate activity while also coordinating their engagement throughout their time overseas. In turn, and just as the reports and forms that constitute boundary objects (Star & Griesmer, 1989) within vault inspection (Veinot, 2007) and midwifery (Davies & McKenzie, 2004) coordinate the work of diverse people, the creation of information artefacts such as scrapbooks help language-students to materially synchronise and ensure the coherence (c.f. Anderson, 2007) of their activities beyond the temporal boundaries of residence abroad. Material objects additionally enable language-students to coordinate their activity across time zones; students’ needs to maintain networks of emotional support means that they use a variety of synchronous and asynchronous tools (such as FaceTime) to mediate and organise their interactions with friends and family who are often located several hours away. Helping students to uphold the rhythm (Jarrahi & Thomson, 2017, p.1082) of their information activities as well as “to stretch out, outline a trace, and give shape to the temporal dimension of practice” (Pilerot, 2014a, p.2012), material objects, which also unfold over time (Ewenstein & Whyte, 2009, p.12), both bind and structure students’ temporal engagement within a new setting.

The study’s emphasis on transition (see 6.4) provides a further illustration of the importance of time and temporality within the theory of mitigating risk. The recognition that language-student activity alters as they act “toward, with, and amid” entities encountered in the world (Schatzki, 2013, p.28) illustrates how student subjectivity is shaped through and in relation to their temporally-mediated goals and motivations. However, although information literacy has been viewed as a transformation from novice to expert (Lloyd, 2005, p.85) as well as, more frequently, in terms of transfer and the sequencing of learning, there have been few studies that have explored questions of time and temporality in detail within information practices research. While research, for example, has noted that a person’s information activities change as they become more experienced, time is positioned as chronological rather than as linked to broader questions of human existence (e.g. Greyson, 2016; Kuhlthau, 1988, 1999; Solomon, 1997; St Jean, 2012). Alternatively, time is positioned as forming developmental and chronological stages (e.g. Beheshti, Cole, Abuhimed & Lamoureux, 2015; Kuhlthau, 2004) rather than as shaping student information activities. There has additionally been little exploration of the future within information practices research beyond a recognition that what Greyson, Cunningham and Morgan (2011) refer to as “time sensitivity” can cause tensions as people juggle competing information activities.

6.3 Information literacy practices

In facilitating the construction of language-students’ new information landscapes, mitigating risk consequently catalyses the enactment of information literacy practices. Information literacy practices, which are explored in this section through the lens of practice theory as well as through the theoretical constructs of cognitive authority and affordance, help language-students to mediate the risks that are produced through their engagement within a new setting. In coordinating the broader integrative practice of language-learning, information literacy practices scaffold students’ reflexive understandings of how knowledge is situated within a new information environment as well as the activities that will facilitate their ongoing interactions within their new community. In further being shaped by the local conditions that constrain and enable how information is accessed and used within a setting, information literacy practices are also characterised by language-student reflective engagement within the socioculturally-mediated and intersubjective dimensions of their new setting. Enabling the development of nuanced and flexible ways of knowing that support the reconstruction of understanding within a new setting, the unfolding shape of information literacy practice is summarised in Figure 8.
In exploring how individuals rebuild understanding within a new setting, mitigating risk illustrates that language-student information literacy practices are constituted by a series of situated information activities rather than through homogenous information skills (e.g. AACU, 2013; ACRL, 2000; ANZIL, 2004) or derivative knowledge practices, competencies and dispositions (e.g. ACRL, 2015; SCONUL, 2011). The seven information activities identified in the study, which focus attention on what is happening rather than on what is accomplished by actions (Schatzki, 2013, p.xv), connect students with both the sites of knowledge and the related sources of information that are valued within their new setting. At the same time, the recognition that these activities incorporate the mundane (Pilerot, 2014b, p.43) as well as being interwoven into the everyday (Haider, 2011; Lindh, 2015; Veinot, 2007) demonstrates that they are produced through student engagement with intersubjectively agreed-upon understandings of a setting. Highlighting how information activities are constrained and enabled by the context in which they are produced, these seven activities subsequently hang together (Schatzki, 1996, p.188) to shape language-student information literacy practices during residence abroad.

In affording student access to the ways of knowing that are sanctioned within their setting, information activities are also structured through the ways in which information literacy practice is organised. An emphasis on the organisation of practice illustrates how these information activities are linked by mutual or shared understanding about how to carry out, identify or respond to actions (Schatzki, 1996, p.91) and further moves the focus of information literacy beyond the individual. In observing how locals and native speakers engage within a setting, for example, student information activities are shaped by shared or taken-for-granted understandings that are made visible through the bodies of others, such as ways of practising religion. Students’ doings and sayings are also fashioned in response to understanding about what constitutes acceptable local practice. In checking the credibility of the information sources that they propose to use against the opinions of locals and experienced others, students mitigate risk through identifying local understandings of competence in both their own and others’ actions. Similarly, in helping students to filter out information that they perceive as either irrelevant or as unsuitable, triaging is regulated by student understandings about what is valued within their new setting. This emphasis on organisational structures is particularly important for information literacy research, where, despite recent attempts to acknowledge the impact of collaborative spaces on information literacy practices (e.g. ACRL, 2015), activity continues to be positioned as a solitary academic practice (Harris, 2008; Hicks, 2018).

In constituting the actions of others, bodies play an important role within information literacy practices (cf. Schatzki, 1997, p.44). The need to work across languages, for example, demonstrates how language-student mitigate risk through observing the sayings and doings that are reflected in the bodies of others, such as ways of practising religion. Students’ own bodies also influence the shape of their information activities overseas by referencing the doings of others. Centred, as could be expected in a study of language-students, upon listening to pronunciation, accent and intonation, as well as recognising the shape and the effect of their own body within a new space, self-observing highlights how students mitigate risk through their increasingly dexterous bodily performances. Their bodies subsequently become a site of information or an affordance for themselves and for others (cf. Lloyd, 2014b, p.95; Schatzki, 1997, p.44) as they mediate information that is recognised by people in similar circumstances, including fellow students and tourists.

The emphasis on bodily activities also demonstrates how language-students rely on informal and non-normative sources of information such as workarounds and ‘tricks of the trade’ as well as more formal information sources, such as rules and regulations, to mitigate the risks that are produced within a new setting. Informal sources reference local knowledge that is both nuanced and contingent and are particularly valued within residence abroad
where language-learning takes place within everyday spaces (cf. Lloyd & Wilkinson, 2016; 2017) rather than in the structured surroundings of the classroom. However, the lack of formal recognition that external authorities accord these sources (Lloyd & Wilkinson, 2017) means that students must create their own ways of taking advantage of the learning opportunities within their new setting to mitigate the risks that are produced through their participation overseas (see 6.3.1). The emphasis on information that only comes from being present in a setting reframes information literacy as a vernacular literacy (Barton & Hamilton, 1998) that is produced through everyday experiences for an everyday purpose and highlights student reflectivity and creativity (Barton & Lee, 2012, p.283). It also speaks to the importance of recognising non-standardised information literacy practices in both teaching and research (Reyes, Hicks & Maxson, 2018).

Beyond facilitating an exploration of how information literacy practices are shaped within residence abroad, a practice theory lens also recognises that, as a dispersed practice, information literacy scaffolds student knowing of the broader practice of language-learning. However, in acknowledging that student activities during residence abroad are very different from those in which they engage in the classroom (see 6.4), language-learning during residence abroad is positioned in the study as forming a project (Schatzki, 2002, p.73) in the larger practice of language-learning rather than as constituting its own separate practice. The project of language-learning during residence abroad is implemented through the doings and sayings that compose the activities in which students engage and hangs together to form part of the increasingly complex organisation of language-learning practice. In further emerging from the sake for which people act, the project of language-learning is also linked to student intentions for their time overseas or the particular ends (Schatzki, 2012, p.16) for which they move abroad in the first place.

### 6.3.1 Cognitive authority

The important role that calibrating plays within mitigating risk demonstrates how students’ information literacy practices also centre on how they rebuild trust and judgment within a new setting. The theoretical concept of cognitive authority (Wilson, 1983), which recognises that people construct understanding through their own first-hand experience as well as through the second-hand interpretation and hearsay of people who are deemed as “knowing what they are talking about” (Wilson, 1983, p.13), provides a useful way to explore how students decide whether a source against which they calibrate their activities is authoritative for them within a new context. More specifically, cognitive authorities help to mitigate risk by forming both a credible and an accessible guide to a new information environment as well as a standard against which students can check and validate their own activity. The recognition that cognitive authorities proffer information as well as useful advice about “how to treat certain pieces of information” (Wilson, 1983, p.18) further illustrates the important role that these knowledgeable others play in helping students to access the tacit and collective ways of knowing that will enable them to negotiate shared understandings. In this sense, the establishment of cognitive authority plays a key role in the shaping of information literacy practices. Developed from social epistemology, Wilson’s 1983 theory of cognitive authority has since been critiqued by McKenzie (2003, p.262) for its constructivist epistemological viewpoint, which positions knowledge as dependent upon a person’s prior activities rather than as being produced through engagement within a community’s dialogic meaning-making. Accordingly, while recognising that Wilson (1983, p.150) acknowledges the role of collective agreement, cognitive authority is viewed in the study as an outcome of embodied expertise (Lloyd, 2012, p.780) and as produced through discursive action (McKenzie, 2003, p.262) rather than as uniquely focused on the cognitive.

Given their physical proximity as well as their perceived authentic and insider knowledge, locals and native speakers form one of students’ most obvious sources of cognitive authority whilst they are overseas. Although they cannot be considered as authoritative due to what Wilson (1983, p.21) terms “occupational specialization,” a local or native speaker’s cultural heritage and long-term exposure to a target language means that their expertise is perceived to be both justifiable and highly recognised within students’ new settings. This mastery may be especially prized by language-students (and teachers) who position native speakers as both an object of desire and an ideal to be emulated (Kramsch, 2013; Piller, 2002, 2008; Siskin, 2003) despite the problematic concept of who possesses or what constitutes linguistic fluency (Kramsch, 2003). The same focus on native speakers is recognised by Hultgren (2013, p.279) who notes that young Swedish immigrants place more weight on local informants because they belong to a socially-approved group in which newcomers both participate and wish to participate. The credibility that people accord to fluent speakers of a language is also acknowledged in Mansour and Francke’s (2017) study of an immigrant mothers’ Facebook group as well as in earlier work on gatekeepers (Metoyer-Duran, 1991) and child mediators (Chu, 1999).

However, just as McKenzie (2003, p.283) notes in her study of women who are pregnant with twins, authority is not just limited to these more obviously ‘expert’ or
institutionally sanctioned sources. In positioning recently returned language-students as authoritative by virtue of their achievements or their “index of special competence” (Wilson, 1983, p.23), students also establish trustworthiness by drawing upon the anecdotal and situation-specific experiential information (Jordan, 1997) that is produced through their peers’ histories of engagement overseas. Both relatable and communicated in ways that are easy to understand, insider ways of knowing, or what Mansour and Francke (2017) describe as “life experience,” also play an important role in Chatman’s (1987) work on opinion leaders in low income environments. Coupled with the understanding that this authority of local experience is transferred (Wilson, 1983, p.22) to the guidebooks and travel websites through which students sift, students can be seen to create “flexible and versatile descriptions of cognitive authority to suit the needs of the interaction” (McKenzie, 2003, p.283). In further highlighting that students calibrate their activities against a different range of people as they settle in and build connections within their setting, the designation of cognitive authority is also positioned as temporally structured through students’ motivations for their future (Wilson, 1983, p.147) rather than forming “a discrete evaluation event” (Rieh, 2010, p.1342).

The recognition that knowledgeable others are positioned by language-students as credible guides to local practices means that the concept of cognitive authority also overlaps with Shove and Pantzar’s (2007, p.154) notion of carriers of practices, who are defined as a group of practitioners whose more or less faithful enactment of practice facilitates its ongoing reproduction. Both carriers of practice and the concept of cognitive authority illustrate the important role that experienced others play in shaping student understanding overseas. However, although McKenzie (2003, p.283) demonstrates that the establishment of cognitive authority is highly reflexive, the notion of carriers of practice extends the reach of cognitive authority by demonstrating how an engagement with knowledgeable people creates a route through which participants are “recruited” (Shove & Pantzar, 2007) or drawn from the periphery into practice (Lave & Wenger, 1991). In other words, the establishment of cognitive authorities does not merely help students to ascertain the credibility of information. Instead, it is in engaging with these knowledgeable people that language-students start to become what Harvianen and Savolainen (2014) refer to in their study of gamers as “being in the know” and, subsequently, a reliable cognitive authority for others. Mediating, for example, demonstrates how student engagement within a new setting facilitates the development of expertise that positions them as an authority for others. Students’ positioning as cognitive authorities further highlights that expertise resides “not in the master but in the organization of the community of practice of which the master is a part” (Lave & Wenger, 1991, p.94) while demonstrating how local knowing is produced through participation in practice rather than forming an innate quality of native speakers.

6.3.2 Affordance
The recognition that students actively work to reposition themselves in relation to an information environment further demonstrates how student information literacy practices are shaped by the affordances within a setting, which refer to participatory possibilities for action. The concept of affordance, which was coined by Gibson (1977) and originally referred to what a physical environment “offers animals, what it provides or furnishes for good or ill” (Gibson, 1977, p.68), has been adopted in the field of design and educational technology to describe the potential and perceived uses of an object or how design enables and constrains activity (Norman, 1988). Since then, Billett (2001) has explored affordance in terms of learning, which he positions as facilitated and inhibited through the opportunities that a workplace structure offers to participate in its activities. Highlighting how language-student activity is mediated through the social conditions of a site rather than purely through student readiness or preparation for time abroad, the theoretical concept of affordance has also been seen to provide a more holistic (Sadler & Given, 2007) perspective of a person’s material and social interactions within a specific context. Accordingly, while language-students may struggle to engage with the unfamiliar design of a new environment, such as a supermarket layout, their ability to mitigate risk is also shaped by the “invitational qualities” (Billett, Barker, Hernon-Tilling, 2004, p.233) of the communities that surround them. During residence abroad, language-students mitigate the risks of their new setting through learning to perceive and then repositioning themselves to take advantage of the context-specific affordances that enable them to construct their new information landscapes. The emphasis on interaction and the negotiation of collective understanding highlights that information literacy practices are shaped through and in relation to the affordances of a setting while recognising the important role that the opportunities of an environment play in the development of intersubjective ways of knowing.

Locals and native speakers furnish language-students with some of the most meaningful affordances during residence abroad. Student engagement with knowledgeable others facilitates access to what have been termed as the “unintended” (Billett, 2001, p.211) or the “hidden” (Gaver, 1991) learning opportunities of a setting and illustrates how participation in indirect activities such as observing function as an entryway to the tacit and
contingent ways of knowing that structure local practices. These social affordances subsequently form a type of pedagogy (cf. Fenwick, 2006, p.694) that facilitates student knowing of their information landscapes and encourages language-students to become both reflective and reflexive about their practices. Checking and observing, for example, provide the immediate feedback that language-students need to maintain their participation overseas. Nevertheless, affordance also depends upon perception; students must be able to perceive as well as to possess the dexterity or the physical and cognitive ability (such as listening) to utilize or deploy an affordance (cf. Davis & Chouinard, 2017, p.5). Similar to the theoretical construct of edgework (Lyng, 1990), mitigating risk demonstrates that students’ abilities to recognise affordance changes in line with the development of understanding. In facilitating a more complex understanding of what is valued within local practices, the affordances that local and native speakers offer must also be seen as produced through students’ interactions within their new setting rather than as constituting an inherent feature (Evans, Pearce, Vitak & Treem, 2017), or the “social rules of the game” (Nagy & Neff, 2015, p.4).

Beyond social interaction, the affordances that are offered by tools and material objects provide various ways for language-students to connect to and engage with a new information environment. The ability to capture images and create textual or auditory records of everyday practice with their phones, for example, enables students to interact with the physical know-how that structures a setting as well as to receive the feedback that they use to calibrate their activity. Similarly, the possibilities of sharing images and connecting with friends and family through video-conferencing and social media platforms affords language-students the ability to mediate information to others and build the emotional support that they need to mitigate the risks that are produced through their participation in residence abroad (see 6.2.3). The visibility (through memory features such as Facebook’s On This Day) and searchability of social media platforms as well as the physical durability of the memory objects that language-students create through archiving further facilitate students’ continued engagement with their time overseas (cf. Evans et al., 2017). Demonstrating how these opportunities emerge through everyday practice in the moment of action (Haider, 2016, p.484), a focus on affordance also highlights how students’ participatory possibilities for action are not just limited to their immediate physical environment.

The affordances of a setting can also constrain language-student access to information; as Gibson (1977, p.77) points out, “some offerings of the environment are beneficial, and some are injurious.” While the structure of residence abroad affords language-students the opportunity to engage with the people who furnish what Gibson (1977, p.75) terms as “the richest and most elaborate affordances of the environment,” locals and native speakers can also provide what Nagy and Neff (2015, p.1) refer to as an imagined affordance or an expectation that may not be fully realised. Student repositioning, for example, demonstrates how local reactions to and judgements on students’ perceived competence and personal characteristics such as physical appearance (cf. Billett, 2001, p.210) limit the quality and type of information to which students have access abroad. Local and native speakers’ reluctance to engage with students demonstrates how affordance is affected by “cultural and institutional legitimacy” or through the power structures in which it is produced (Davis & Chouinard, 2017, p.6). Their involvement also emphasises the active role that bystanders play within transition (see 6.4) while hinting at the need for what Gibson (1977, p.76) refers to as reciprocity to recognise what is afforded in an environment.

At the same time, learner agency means that language-students are in the position of being able to make decisions about how and what they learn overseas (cf. Billett et al., 2004); learning is affected as much by students’ reactions to the constraints that limit their participation overseas as it is by their engagement with a setting’s affordances. Repositioning, for example, forms a purposeful response to the barriers that limit students’ abilities to engage with the information affordances of a new setting. Accordingly, the recognition that risk could potentially affect their goals for time overseas mobilises student responses to these limitations and restrictions. Evelyn and Helen’s “self-preservation” (Billett et al., 2004, p.235) or (temporary) withdrawal from their new settings further demonstrates how student engagement with the weak affordances (cf. Billett, 2001, p.6) of their setting is mediated through their emotional responses as well as through the assertion of their knowledgeability. As such, a focus on affordance emphasises how language-student learning is negotiated through their participation within a new setting rather than through “a unidirectional process of socialisation or enculturation...[and] the mere reproduction of situational values and practices” (Billett et al., 2004, p.237).

While it is not couched in terms of affordances, the same proactive negotiation is seen in the work of McKenzie (2002) and Ross and Dewdney (1998), who explore how people employ a variety of “counterstrategies” (McKenzie, 2002) in the face of barriers that prevent them from accessing information. The deployment of active scanning and seeking information activities, for example, illustrates how, similarly to pregnant women (McKenzie, 2002), language-students engage in a variety of information activities to remain connected.
with the affordances of an information environment. Similarly, both Sundin (2002, also see Johannisson & Sundin, 2007) and Bonner and Lloyd (2011) demonstrate how nurses use a variety of approaches to negotiate their continued engagement to medical information environments. Trace’s 2008 study of informal literacies further demonstrates how language-student engagement with information helps them to redirect their learning towards their own purposes. These studies suggest that students play an active role in shaping information literacy practice during residence abroad rather than seeing the refusal to submit to local expectations as negatively impacting learning.

6.4 Transition

Language-student transition, which emphasises the creation of a “sustainable fit” (Hviid & Zittoun, 2008, p.123) within a new environment, is consequently mediated through the enactment of information literacy practices. Demonstrating how students negotiate the rebuilding of meaning through the development of nuanced and socially situated ways of knowing, transition becomes positioned as a time of learning and growth rather than as merely being precipitated by student movement across national borders and between institutional settings (cf. Meleis et al., 2000, p.15). In further highlighting that the enactment of information literacy practices facilitates the reconstruction of language-learning identity as students situate and redefine themselves in relation to collective ways of knowing, transition is also reconstituted as a time of formative change as students negotiate the local environmental conditions that facilitate and enable their participation abroad. Language-student transition is explored in this section through nursing and educational transitions theory (see 3.4.1) and illustrated in Figure 9.

Figure 18: Transition during residence abroad

Preparation for the future forms one of the most important ways in which students mediate transition. Allowing students to anticipate what to expect within a new setting as well as their role within it, preparing, which is manifest in the study through sifting and archiving, helps students to develop both the knowledge and the strategies (Meleis et al., 2000, p.22) to rebuild meaning when they move into and return from a new setting (Johnson, 1999; Meleis et al., 2000). Preparation also helps students to legitimise their language-learning activity overseas as they leave the familiarity of the classroom behind them as well as to manage expectations about the forthcoming changes in their life (Schumacher & Meleis, 1994). In this sense, preparation constitutes what Corsaro and Molinari (2000, p.17) refer to as a priming event that facilitates students’ abilities to envision and engage in the collective activities of their new setting. Most succinctly, preparation creates a framework from which students produce and interpret sociocultural knowledge (Corsaro & Rosier, 2002, p.138).

Nevertheless, students cannot be prepared for every eventuality. As Clingerman (2007, p.228) points out in her study of migrant farmworkers, there may be differences between “anticipated and actual migration experiences”, including the existence of unrealistic expectations (Schumacher & Meleis, 1994, p.122). Just as language-students alter their sifting techniques or the people against whom they calibrate their activities to meet the realities that they encounter, transition is mediated through students’ dynamic engagement in
their new setting rather than through the application of fixed skills. Accordingly, while planning plays an important role in helping language-students to manage the uncertainty of this time, the inseparable nature of learning, practice and performance (Kilminster, Zukas, Quinton & Roberts, 2010) as well as the emerging shape of students’ information landscapes means that preparation can never fully scaffold student transition.

More concretely, transition is negotiated through what nursing transitions theory refers to as social and community conditions or the environments that “constrain, support or promote healthy transitions” (Meleis & Trangenstein, 1994, p.257). Social and community influences impact both the conditions under which transitions occur and a person’s actions within a setting (Fenwick, 2002) by isolating language-students from the local information environment as well as from the groups who could help them to mediate their transition overseas. Niko’s perception that Japanese people were reluctant to talk to her because of her foreign accent and appearance, for example, demonstrates how her physical characteristics limited her access to both the contingent and the nuanced knowledge that structures her setting. Similar issues were noted in a study of new African-American mothers that shows how transition is impeded by “the hassles of being stereotyped, facing negativity from others, or being treated like ‘public property’” (Meleis et al., 2000, p.23).

Social and community conditions also enable language-student transition by facilitating engagement with the people who will provide meaningful social support. Mediating information for friends and family back home, for example, helps students to build the emotional connections that they need to feel supported during their transitions overseas. In providing both learners and patients with useful practical help and advice, social contacts have also been seen to help manage the uncertainty of a new situation within nursing and educational transitions (e.g. Dockett & Perry, 2005; Johnson, 1999). Similarly, the ability to mediate information to co-located peers plays an important role in helping to situate and reposition students within their new information environment. While Meleis et al. (2000) found that immigrant transitions could be constrained by a reluctance or inability to trust fellow nationals, findings from the study illustrate how fellow students provide both emotional and practical assistance during residence abroad. Similar emphasis on supportive peer-to-peer information sharing has also been noted in studies of people living with chronic health conditions (Lloyd et al., 2014; McCaughan & McKenna, 2007; Veinot, 2009) as well as in Willson’s (2016, p.262) exploration of early career researcher transitions, where physical proximity to colleagues facilitates helpful information “flow.”

A recognition of the important role that social interaction plays in structuring change means that a focus on conditions also highlights how bystanders play an active rather than a detached (Davies, 2005, p.664) role within transition. Student involvement in mediating upheaval upholds Davies’ (2005, p.664) critique that nursing transitions theory has failed to acknowledge the interplay between the different stakeholders who are involved in transition by demonstrating that support is multidirectional and that students, just like patients and other interested people (Davies, 2005), are not merely passive recipients of assistance and interventions. Nevertheless, there is little evidence for student engagement in the faith-based and community health groups that support immigrant and refugee transitions (e.g. Adkins et al., 2017; Khoir, 2016; Lloyd, 2014a; Lloyd & Wilkinson, 2016). While two students, Timothy and Julia, drew considerable support from their local churches, the relative brevity of residence abroad may have impeded broader student participation in their communities.

6.4.1 Acting and becoming

Transitions theory also draws attention to the outcomes of transition or the complex and socioculturally mediated consequences of change. In illustrating that transition is mediated through the enactment of information literacy practices, mitigating risk highlights how one of the most important outcomes of student transition is the development of the ways of knowing that are valued and shaped by a specific setting. The recognition that students alter how they sift through information, for example, illustrates how language-students demonstrate an understanding of the sources of information that are most relevant to them overseas. The entire category of repositioning, which is a reflexive response to student distancing and isolation from local information environments, provides further evidence of students’ growing grasp of and abilities to operate in their new context. Students’ awareness of an information environment as well as their own possibilities within it, which represents what Meleis et al., (2000, p.26) refer to as role mastery or the “skills and behaviors needed to manage their new situations or environments,” means that transition is marked by their increasingly comprehensive sense of situated “care, judgment and dexterity” (Ingold & Kurttila, 2000, p.192). The emphasis on redefinition and renewal also positions transition as a “critically intensive learning period” (Kilminster et al., 2010, p.556) rather than as a site of transfer.

The recognition that mastery of a situation cannot be separated from a shift in self-identity (Krakly et al., 2006, p.324) further hints at how transition is entwined with both the formation and the re-formation of subjectivities within a new setting. Before students
participate in residence abroad, their conception of what it means to be a language-student had been fabricated in relation to a classroom-based information landscape, as evidenced by students’ initial difficulties understanding technical vocabulary and informal ways of communicating. Mediated through the legitimised values and information sources of the academy, student subjectivity is produced through their engagement with their teacher and their fellow English-speaking students. In contrast, residence abroad provides a very different learning experience, as students’ attempts to map and orient themselves to their new setting demonstrates. Focused upon both the dynamism and the tensions that are inherent within an everyday setting as well as the informal and vernacular sources of information that structure local ways of knowing, the different shape of language-learning means that students must develop their language-learning identity to renew their prior successes and accomplishments. Drawing from the idea that the different roles and responsibilities produced through transition both cause and necessitate a subsequent reconfiguration of self or what Lave and Wenger (1991, p.51) refer to as a “change in person,” the development of students’ language-learning identity is thereby positioned as mediated through student participation in their community and the construction of their information landscapes.

More specifically, students’ new language-learning identities are marked by the development of intersubjective understandings of practice. As language-students calibrate and reposition themselves in relation to the sites of knowledge and the ways of knowing that are valued by locals and native speakers, they situate themselves within and in relation to socially constructed or intersubjective understandings of their new information landscapes (cf. Lloyd, 2007a, p.191). Facilitating new ways of being and doing, student engagement within a new setting can thereby be seen to mobilise student transition from acting like a language-student to becoming a language-student within the context of residence abroad. Seen, most clearly, through the changes that students make to the way that they dress and talk as well as through their attempts to forget or unlearn language-learning strategies that have previously been successful for them, the transition from acting to becoming is further characterised as a transition from engaging with information to learn about practice to engaging with information to enhance practice (Lloyd, 2006, p.576). Both situated and temporally unfolding, processes of acting and becoming further reference Lave and Wenger’s (1991) emphasis on how newcomers are recruited into a community.

The focus on transformative development also emphasises that transition forms a “multiple, complex, non-linear pathway” (Fenwick, 2013, p.364) rather than a chronological (Kralik, 2002, p.153) or neatly partitioned entry-passage-exit trajectory (Meleis & Trangenstein, 1994, p.256) with an identifiable endpoint. In effect, the recognition that time is actively configured rather than forming a universal and continuous given (Barad, 2013, p.28) demonstrates that transition is complex; as Meleis et al. (2000, p.20) point out, migration may feel temporary even in its permanence. The recognition that calibrating and repositioning form cyclical and recursive activities means that transition is also positioned as ongoing as students both participate within and draw back from the complex ecology of practice (cf. Fenwick, 2013, p.364). Accordingly, becoming can neither be seen in terms of a congealing subjectivity (Fenwick, 2013, p.364) nor as forming a conventional story of progress “punctuated with discoveries that lead the way out of the swamp of ignorance and uncertainty to the bedrock of solid and certain knowledge” (Barad, 2013, p.18). Instead, the dynamism and fluidity of student engagement overseas means that transition unfurls within a broad structure of challenges and opportunities.

6.5 Chapter conclusion
The chapter used the study’s theoretical framework to explore the grounded theory of mitigating risk. Demonstrating that mitigating risk catalyses the enactment of information literacy practices, the chapter highlights how language-students participate in a temporally mediated and situated process of transition as they develop subjectivity within their new setting. In further indicating that student information activities are enabled and constrained through their participation overseas, the chapter illustrates both the shape and the complexity of student engagement within residence abroad. These understandings will be discussed in relation to the study’s research questions in the following chapter.
Chapter 7: Discussion of research questions

7.1 Chapter overview
In this chapter, the theory of mitigating risk that emerged from the data analysis is used to discuss the study’s research questions, which are represented below. The theory of mitigating risk demonstrates that student attempts to mediate the pressures that are produced during residence abroad catalyse the enactment of information literacy practices, which subsequently mediate language-student transition within a new setting. Focusing student activity on the construction of their new information landscapes, the theory further illustrates how these activities are held in place by the affordances of students’ new settings as well as their goals for this time away. The chapter starts by discussing how language-students enact information literacy practices during residence abroad, including how their information landscapes are shaped as well as the impact on language-learning. It continues by discussing language-student transition with a focus on how change is enabled and constrained during residence abroad as well as how students develop subjectivity as they engage within their new setting.

1. How do language-students enact information literacy practices during residence abroad?
   a. What shapes language-student information landscapes within a new setting?
   b. What role do information literacy practices play during students’ intensive periods of language-learning abroad?

2. How do language-students make sense of, transition into and come to know their new information landscapes?
   a. What enables and constrains the ways in which language-students construct their information landscapes?
   b. In what ways does the enactment of information literacy practices shape language-student subjectivity?

7.2 How do language-students enact information literacy practices during residence abroad?
The first research question centres on how language-students enact information literacy practices during residence abroad. The theory of mitigating risk suggests that, as a practice, information literacy is enacted or takes place “in the act” (Mol, 2002, p.33) rather than as is more typically assumed, achieved or attained (Lloyd, 2017, p.96). The emphasis on enactment draws upon Weick’s (1988, p.306) understanding that “when people act, they bring events and structures into existence and set them in motion” to highlight that language-students’ information literacy practices centre on their active engagement in and interpretation of their new setting rather than on pre-established skills and competences. In further indicating that enactment references a specific environment, or what Weick (1988, p.307) refers to as a bracketed field of experience, language-student information literacy practices are also enacted through their growing understanding of “what it is people do every day to get their work done” (Orlikowski, 2002, p.249) or the information tools, activities and sources that are valued and legitimised within their new setting. In this sense, information literacy practices are positioned as both situated and collectively-produced as well as shaped by historically and socioculturally-mediated ways of knowing.

At the same time, language-student information literacy practices are enacted in relation to their goals and motivations for their time overseas; as Weick (1995, p.37) points out, “action can affect meaning other than by producing visible consequence in the world.” The emphasis on student objectives for their time overseas, which bears some resemblance to what Niemelä, Huotari and Kortelainen (2012, p.213) label as the activating effect that information has on a person, means that the theory of mitigating risk illustrates how the past-present-future dimensions of language-student activity play an equally important role in shaping how information literacy practices are enacted. In highlighting that student information activities are both temporally and socioculturally mediated, the focus of information literacy is extended beyond the information sources that are valued and legitimised within a social site to centre students’ goals and motivations for this period. The recognition that the enactment of information literacy practices connects language-students to “a community of actors who are co-located and co-participating in the performances of a site” (Lloyd, 2012, p.777) rather than to a set of static disciplinary conventions further extends understandings about the situated shape of information literacy (e.g. Farrell & Badke, 2015; Hillard, 2009; Nichols, 2009). Information literacy practices are consequently reframed as bringing both practices and people into being (cf. Lloyd, 2017, p.95) as well as being produced and reproduced through language-student unfolding participation overseas.

The recognition that noting, mediating and archiving enable language-students to both reflect upon and engage with the everyday norms and values that structure their new information landscapes means that the theory of mitigating risk also highlights the importance of information creation within information literacy practice. Information creation, which differs from the ‘Information Creation as a Process’ frame of the ACRL Framework (ACRL, 2015), refers to how people record information to provide continuity for everyday activities (Trace, 2007, p.143) and is seen, within the study, through the various ways in
which students create and employ material objects to structure their engagement within a new information environment. Constituted through archiving, in terms of the scrapbooks that students produce as well as the souvenirs that they save to memorialise their stay overseas, and mediating, through the stories that students produce and share, information creation also encompasses noting, where students construct and use temporary photos, annotations and screenshots as memory aids to support the ways in which they build meaning within a new setting. These informational objects are ephemeral yet highly personalised and fulfil a range of individual purposes and needs rather than constituting formal outputs. However, in illustrating the important role that these objects play in helping students to manage their participation in an unfamiliar setting, the theory of mitigating risk demonstrates how information creation is centred within language-students’ information literacy practices.

Most importantly, the theory of mitigating risk demonstrates how information creation focuses student attention on local representations of knowledge and competence. Information creation has previously been recognised as helping scientists (Shankar, 2009) archaeologists (Olsson, 2016, p.417) and patients with chronic kidney disease (Lloyd et al., 2014, p.212) to develop a more meaningful sense of a setting by enabling individuals to engage with “the content and form of the discipline, what is worth remembering and what can be forgotten” (Shankar, 2009, p.161). In centring upon the collection and storing of newspapers and tickets, which represent local cultural knowledge, archiving engages students with the norms and values that structure a setting as well as the production of cultural narratives (cf. Trace, 2007). The recognition that the tangibility of these artefacts produces a reassuring sense of security (Trace, 2007, p.152) and control (Alaszewski, 2006; Lupton, 2014) over daily activities further stresses how information creation plays a part in situating students within their new context rather than merely functioning as the final product of information literacy or as a way to present content (e.g. Fulton, 2017; Koh, 2013).

The theory of mitigating risk also demonstrates how information creation stabilises and sustains the enactment of information literacy practices. Like the tourist who uses notes to “botch” or work around his lack of internet access in Haider’s (2017) study of search practices, noting and the production of temporary memory aids such as screenshots highlight how information creation helps language-students to coordinate the enactment of information literacy practices within and throughout their new context. In illustrating that annotations and photos of important signs enable language-students to reliably reproduce their information activities over time, information creation also facilitates an ongoing monitoring and adjustment of activity, as Cox, McKinney & Goodale (2017) found with the production of food logging diaries. In effect, the recognition that the construction of personal information artefacts facilitates both continuity and students’ active engagement within their new setting rather than merely helping them to organise activity (e.g. Fulton, 2016; Hartel, 2006) illustrates how information creation plays a vital role within the enactment of information literacy practice.

7.2.1 What shapes language-student information landscapes within a new setting?
The shaping of information landscapes forms the focus of the first sub-question. More expressly, the theory of mitigating risk highlights that language-students construct their information landscapes with reference to relevant local sites of knowledge (Lloyd, 2017, p.94) as well as to the values, activities and practices that structure and sustain their new setting. At the same time, the recognition that students are entering a context in which they are forced to direct their own language-learning stresses the important role that non-normative or institutionally-sanctioned sources of information (Lloyd & Wilkinson, 2016) play in the development of situated knowing. In further highlighting that language-students weave their growing understanding into everyday life (cf. Ingold, 2004, p.333), information landscapes are also understood to be constantly under development as students continue to engage with the learning affordances of their setting and draw meaning from their participation within the broader information environment.

More specifically, mitigating risk underscores the important role that social information sources play in the construction of language-student information landscapes. Just as studies of refugees and immigrants point out (e.g. Chu, 1999; Lloyd et al., 2013; Lloyd & Wilkinson, 2016, 2017; Metoyer-Duran, 1991), the accessibility of locals and native speakers demonstrates how they play a vital role in connecting students to the tacit norms and values of their community. At the same time, the important role that checking plays within a new setting demonstrates how knowledgeable others also promote student growth by providing a sounding board against which students can assess their understanding of a community’s activities, as well as their own performance within a new situation. As a consequence, social sources are positioned as helping to align student activity rather than merely enhancing the visibility of local practice. The recognition that friends and family back home as well as co-located others play a valued role in orienting and resituating students in relation to their new activities further underscores how, as both Lloyd et al. (2014) and Veinot (2009) found in
their studies of chronically ill patients, student information landscapes are constructed both digitally and physically as well as across time.

Bodily activities play an equally important part in the construction of language-students’ information landscapes. Drawing from the understanding that language-learning engages a person’s “emotions, their bodies, and the most intimate aspects of themselves” (Kramsch, 2009, p.2), the theory of mitigating risk highlights how the ability to listen (to objects, others and to oneself) as well as to taste and smell helps students to build knowing within a setting, as Bonner and Lloyd (2011) found in their study of renal nurses. In turn, the recognition that information landscapes are heard and touched as well as seen (cf. Ingold, 1993; Schatzki, 2013, p.98) stresses how language-students access sites of knowledge through material artefacts as well as through language and bodily performance. The importance of objects that students bring overseas with them, such as mobile phones, as well as the ordinariness of the souvenirs with which they return home illustrate how language-student information landscapes are constructed through a range of vernacular tools and sources as well as through the unfolding shape of epistemic objects (cf. Knorr Cetina, 2001) such as annotations.

Most importantly, the theory of mitigating risk draws attention to the temporal dimensions of language-student information landscapes (cf. Schatzki, 2013, p.100). On the one hand, the recognition that student information landscapes are built through the meaning that sources and activities take on through ongoing social interaction illustrates how student knowing is constructed through a reflexive engagement in the present. On the other hand, the ways in which students rebuff the sources and activities that helped them to succeed as classroom learners illustrate how student information landscapes are also built in reaction to the past or through their attunements with what matters (and mattered) to them. In turn, the realisation that language-students engage in activities with their final year of undergraduate study in mind demonstrates how language-student information landscapes are further constructed through their engagement with the future or what they are coming towards. Information landscapes may subsequently take on new meanings when language-students transition home and their activities during residence abroad become the informational understandings against which they react as they rebuild their classroom-based information landscapes. A focus on temporality also highlights that student knowing is “perpetually under construction” (Ingold, 1993, p.162) and accentuates how information landscapes are produced through movement and action rather than forming static or natural entities (cf. Schatzki, 2013, p.97).

7.2.2 What role do information literacy practices play during students’ intensive periods of language-learning abroad?

The second sub-question concentrates on the role that information literacy, as a dispersed practice that happens within other practices (Lloyd, 2010, p.249), plays in supporting students’ intensive periods of language-learning overseas. Most simply, the theory of mitigating risk highlights how student engagement with information impacts the ways in which students immerse themselves within their target language. Facilitating student engagement with the learning affordances of their setting as well as providing them with ways to assess their own speaking, listening and reading performance in comparison to others, the enactment of information literacy practices enables students to continue developing their understandings of the linguistic forms and structures in their target language. More importantly, however, information literacy practices enable language-students to walk the walk as well as to talk the talk (Gee, 1990, p.246). Drawing upon the understanding that language-learning involves engagement with “the body, cultural-historical artifacts, the physical surroundings, in short, all the affordances that the physical, social and symbolic worlds have to offer” (van Lier, 2008, p.599), information literacy practices facilitate language-student knowing of the broader elements that characterise engagement with language. These findings resonate with Elmore’s (2018, p.227) recognition of the important role that the ESOL classroom plays in developing newcomer understanding of a new setting.

The theory of mitigating risk further demonstrates how the enactment of information literacy practices mediates language-student transition between the classroom and residence abroad. Noting that information within the language-learning classroom is shaped, afforded and interpreted by professional teaching staff and in relation to institutional norms and values, student participation in residence abroad means that they are forced to rebuild the ways in which they interact with information in order to learn from and within their new context. Information literacy practices provide the means through which language-students are able to rebuild meaning within their new setting by facilitating engagement with everyday and informal ways of knowing. At the same time, the recognition that language-students reorient themselves towards intersubjective understandings of local practices through their engagement with non-normative sources of information (Lloyd & Wilkinson, 2016) illustrates the important role that vernacular and local literacies (Barton & Hamilton, 1998)
play in shaping students’ language-learning identities overseas. Accordingly, transition is positioned as mediated through language-student ability to recognise and engage with what can often form opaque forms of knowing rather than, as Lloyd (2005, p.85) found in her study of firefighters, through the reconciliation of textually and socially-mediated ways of knowing. A similar emphasis on the important role that informal and first-hand knowledge plays within information practices has also been noted by Mansour and Francke (2017) in their study of transnational mothers on Facebook.

Significantly, the theory of mitigating risk also highlights the crucial position that social support holds in helping students to mediate this intensive period of language-learning overseas. While earlier studies within the field of second-language acquisition assert that the “umbilical cord” (Kinginger, 2011, p.67) of friends and family disincentivises language-overseas. While earlier studies within the field of second-language acquisition assert that the “umbilical cord” (Kinginger, 2011, p.67) of friends and family disincentivises language-learning, the information lens of the study highlights how fellow language-learning students and home contacts provide the emotional support that language-students may need to cement and maintain their engagement overseas during a new information environment. More importantly, the recognition that language-students use conversations with friends and family to mediate information about their stay overseas suggests that communication with home increases student engagement during residence abroad by providing them with a way to process their activities and reflect upon their learning. Similarly, it is in mediating information to others that language-students start to recognise their newly developed expertise and to reposition themselves as participants within their new setting. In this sense, and just as Gilhooly and Lee (2014, p.389) point out in their study of refugee resettlement, engagement with English-speakers is understood to supplement rather than to detract from language-student activities overseas.

7.3 How do language-students make sense of, transition into and come to know their new information landscapes?

The second research question centres on how language-students make sense of, come to know and transition into their new information landscapes. The theory of mitigating risk positions transition as a period of change and upheaval in which the enactment of information literacy practices facilitates the building of meaning within the complexities of students’ new language-learning contexts. More expressly, the recognition that language-students’ increasing knowledgeability enables them to continue refining and adjusting how they engage with the ways of knowing that are valued within their setting means that transition is further positioned as a cyclical process that is extended over time as students build up the skills and knowledge to situate themselves in relation to new information environments.

Language-student adjustment to a new setting is, nonetheless, complicated by what Greyson (2016) labels as the “accelerated change” of transition. Linked to the brevity of students’ stays overseas, the process of mitigating risk can thereby be seen as a project management strategy that enables language-students to organise transition and meet their objectives for residence abroad. Emerging from students’ visions or images of their activities, which as McKenzie and Davies (2010, p.799) point out, drives the management of wedding projects, language-student time overseas can consequently be seen as coordinated through the artefacts that allow them to document and keep on track with their goals (cf. McKenzie & Davies, 2012). The recognition that language-student engagement overseas is limited by the presence of their ticket home, which, as in pregnancy (Davies & McKenzie, 2004) and wedding planning (McKenzie & Davies, 2010) establishes a specific time frame for action, as well as representing what students are coming toward, additionally highlights the temporal shape of language-student transition.

Nevertheless, language-students’ stays overseas is not meticulously planned, unlike Hultgren (2009, p.169) found in her study of school leavers’ post-graduation plans. Instead, student transition is mediated through continued reflection as they interpret and adjust how they participate during residence abroad. The theory of mitigating risk subsequently extends Hultgren’s (2009, p.178) concept of the timeliness or opportune relevance of information to demonstrate how transition is structured through reflexivity or students’ abilities to transcend the immediate and to “think about the past, in the present for the future” (Carroll, 2009, p.43). Reflexivity enables language-students to develop a “historical self-consciousness” (Kemmis, 2010, p.158) of themselves as a learner and facilitates student knowing by helping them to develop meaning about their interactions with others (cf. Charon, 2004, p.29) as well as to make connections between social and cultural understandings (Fook & Gardner, 2007, p.28). In further enabling students to position themselves in relation to others, reflexivity also allows students to become more specialised (Kemmis, 2010, p.158) as they engage with and continue to shape their engagement overseas. Reflexivity has long been seen to play an important role within information literacy teaching practices (see Corrall, 2017; Poirier, 2012). In facilitating language-students’ temporal engagement overseas as well as helping them to push back against the time pressures of their stay, reflexivity is positioned as playing a vital role in the mediation of transition.
The focus on reflexivity, or what Charon (2004, p.65) refers to through the lens of symbolic interactionism as symbolic interaction with the self, also demonstrates the active role that language-students play in structuring their time overseas. Both nursing (Meleis et al., 2000) and ecological educational transitions theory (Dockett & Perry, 2007; Dockett, Petriwskyj & Perry, 2014) tend to position people as passive recipients of expert assistance during transition. In contrast, the emphasis on language-students’ ongoing engagement in a variety of information activities means that the theory of mitigating risk positions transition as produced through a person’s active participation within their new setting rather than as occurring to people who have little control over their destiny. The study’s focus on a transitional context in which there is no active mediator, such as a nurse or a librarian, further highlights how language-students construct their own (socioculturally-mediated) ways of negotiating transition. In emphasising private means of constructing meaning, which are often less visible than the more easily observable active methods of engagement within a community, an emphasis on reflexivity also broadens understanding about the broad gamut of ways in which students participate in the activities of their community.

7.3.1 What enables and constrains the ways in which language-students construct their information landscapes?

The first sub question centres on how student transition, which is mediated through the construction of information landscapes, is promoted and prevented during their time overseas. Given that residence abroad is designed as a learning opportunity that facilitates language-student engagement within the everyday practices of a target language community, student transition must be seen to play out through the unfolding complexity of social interaction. As the site of practice, language-learning is composed of a nexus of practices and arrangements that structure and connect human coexistence (Schatzki, 2005). The recognition that these practice-arrangement bundles moderate student engagement in activity means that the theory of mitigating risk indicates how the construction of student information landscapes is both constrained and enabled by set-ups of material objects that channel and facilitate practices (Schatzki, 2012, p.16). A focus on arrangements prefigures the enactment of information literacy practice by qualifying the possible paths that a person’s activity could take (Schatzki, 2002, p.44) and highlights how actions, as well as artefacts, organisms and things impact potential courses of activity in which students may engage. Accordingly, student information landscapes must be seen as built in relation to these conditions rather than uniquely through their goals and investment as a language-learner (cf. Peirce, 1995).

More expressly, the theory of mitigating risk demonstrates how the arrangements of a site limit the ways in which students construct their information landscapes. In illustrating that local actions position students as outsiders within their new setting, which echo the learning dynamics that are found in the concept of legitimate peripheral participation (Lave & Wenger, 1991), social arrangements constrain student access to the sayings and the doings of a site or to the knowledge and the material objects that are recognised and valued in their new setting (cf. Lloyd, 2012, p.776). While they are not referred to as such by the authors, the provision of digital materials (Lloyd et al., 2013) and university managerialism (Willson, 2016) could be interpreted as emerging from and forming similarly constricting arrangements by restricting individuals’ access to relevant information.

At the same time, the arrangements of a site do not preclude more positive connotations, as both Mahon et al. (2017, p.16) and Schatzki (2002, p.216) point out. In inhibiting student access to locals and native speakers, social arrangements also enable the construction of information landscapes by channelling student engagement towards peers and family back home whose support helps them to mediate their time overseas. Accordingly, the arrangements of information literacy practice can be seen to complicate student engagement overseas rather than to uniquely limit or obliterate possibilities of action (cf. Schatzki, 2002, p.226). Illustrating how transition forms a “site of contestation, contradiction, tension and struggle” (Mahon et al., 2017, p.20), a focus on arrangements further highlights the active role that students play in the enactment of practice.

The impact that other people’s actions have on activity means that the theory of mitigating risk also illustrates how students’ possibilities for action are shaped by the complex interdependency and interrelatedness of material arrangements (Schatzki, 2010, p.141). Just as an educator’s teaching practices enable and constrain how student learning practices unfold within a specific setting (Rönnerman & Kemmis, 2016, p.96), local and native speaker practices order student engagement with information even though student transition centres on the enactment of language-learning practice rather than on the initiation into the unreachable goal of becoming a native speaker (cf. Kramsch, 2009, p.28). However, in structuring the ways in which students engage within a new information environment, the arrangements that structure local and native speaker practices are eventually fed into the ways in which students enact information literacy practices as they situate themselves in relation to local activity and understandings. In turn, student activities may become part of the arrangements that structure the transition of the following year’s cohort of language-students.
as current students provide information to and act as cognitive authorities for soon-to-depart students at study abroad orientations. Indicating how students represent themselves in the arrangements that structure their time overseas (cf. Kemmis, Wilkinson, Edwards-Groves, Hardy, Grootenboer & Bristol, 2014, p.38), student information landscapes are thereby constructed through an enmeshing with the arrangements that constrain and enable their engagement overseas.

7.3.2 In what ways does the enactment of information literacy practices shape language-student subjectivity?

The development of language-student subjectivity forms the focus of the second sub-question. Recognising that a constructionist perspective moves the focus of research from what is learnt to what students are becoming (Packer & Goicoechea, 2000), the theory of mitigating risk highlights how information literacy practice is marked by the development of subjectivity rather than by the acquisition of skills. In further highlighting that this shift in identity is negotiated through language-students’ increasingly competent participation in a community’s shared ways of knowing (cf. Lindh, 2015, p.181; Moring, 2012, p.17), the development of subjectivity is also positioned as a function of, or as emerging from intersubjectivity (Biesta, 1994, p.301), which refers to a reliance upon “common symbols, as well as common definitions of situations” (Veinot & Williams, 2012, p.855). The positioning of language-student subjectivity as engagement in the shared procedures of a community as well as its understandings (cf. Billett, 2014, p.207) also illustrates how subjectivity constitutes what Lave and Wenger (1991, p.53) refer to as “an evolving form of membership,” rather than a one-way process of acculturation (Biesta, 1994, p.311).

The recognition that identity reflects “both how a learner sees the world and how the world sees the learner” (Brown & Duguid, 2000, p.200), which refers to how learners perceive and are perceived within society, means that the theory of mitigating risk highlights how social connections play a key role in the development of language-student subjectivity. Knowledgeable others help students to both build and validate their intersubjective understandings of a new setting by providing a template or a model against which they calibrate their understandings of information sources and activities. As Pilerot (2014b, p.69) points out in his study of design researchers, participation in shared (and sharing) information activities allows people to construct and maintain a sense of belonging within a community as well as their own individual identity as a member of a professional network. Students also build their language-learning identity through their ongoing interactions with others. Just as an engagement with information affects how new mothers (McKenzie, 2003) and sexually active teenagers (Rivano Eckerdal, 2011) conceive of themselves, language-student subjectivity is constructed through the ways in which students work to reposition and situate themselves in relation to the unfolding activities and practices of their new setting. In this sense, the development of subjectivity is both dynamic and intricately connected to the past-present-future of language-student time overseas.

Mitigating risk demonstrates how bodies, too, ground the development of language-student subjectivity (cf. Lloyd, 2007b). The bodies of experienced others attune students to community practices through the demonstration and modelling of collective ways of knowing and are particularly important when working across languages. The recognition that language-learning encompasses the need to engage with “a wide variety of environmental affordances, including speech, gesture, and movement” (Kinginger, 2008, p.15) means that local and native speaker bodies also orient language-students to non-linguistically mediated understandings of local practices. While residence abroad does not rely on the “shared intuition” (Billett, 2014) that is necessary in contexts such as healthcare or the emergency services, contact with the shared bodily understandings that are generally inaccessible in the language-learning classroom often forms an additional motivation behind student decisions to engage in residence abroad. An emphasis on identity also situates information literacy as a meaningful practice (cf. Burnett, Merchant, Pahl & Rowsell, 2012).

7.4 Chapter conclusion

The chapter has discussed the theory of mitigating risk through theoretical and empirical literature from the fields of library and information science and second-language acquisition as well as from related areas. Demonstrating how mitigating risk explains both information literacy practice and transition, which form the central concepts of the study, the chapter draws attention to the complexity of language-student activities during residence abroad as well as to student development and growth as they learn to participate within their new settings in increasingly knowledgeable ways. The implications of these ideas will be discussed in the next chapter, which forms the conclusion to the study.
Chapter 8: Conclusion

8.1 Chapter overview
The thesis set out to explore the information literacy practices of language-students during residence abroad. Recognising that previous studies have presented a move overseas as characterised by individual deficit, the research highlights that students are, instead, engaging in an ongoing process of building meaning within a new setting. Given this initial guiding structure, the chapter explores the theoretical, methodological, societal and practical contributions of the study. The chapter starts by examining the contributions of the research to library and information science with a focus on the implications and the limitations of the study’s findings before exploring the contributions of this work to second-language acquisition as well as to transitions theory. The chapter concludes by outlining various practical recommendations before indicating directions for future areas of study.

8.2 Theoretical contributions
The theory of mitigating risk forms one of the primary contributions of the study to library and information science. Providing a detailed exploration of how language-students recognise and engage with difference within a new information environment, the study establishes mitigating risk as a theory of transition and change that illustrates how an engagement with information helps learners to mediate the complexity of building meaning within culturally different contexts. Demonstrating that language-student time abroad is organised by their temporal goals for this period as well as by the sociocultural conditions that produce their new setting, the study draws attention to the range of risks that characterise a person’s engagement in transition. In further illustrating that these pressures catalyse language-student enactment of information literacy practices, mitigating risk also signals how a person’s transition to a new setting is mediated through an increasingly knowledgeable engagement with local information sources and activities. In this sense, mitigating risk provides a detailed understanding about the shape of both transition and a person’s engagement with information during a time of change and upheaval.

As the central concept of the theory, risk forms an important contribution of the study. While the component concepts of uncertainty (e.g. Kuhlthau, 1993) and time (e.g. Savolainen, 2006) have already been established as playing an important role within information research, risk has only been explored peripherally within library and information science (e.g. Burkell, 2004; Choo, 2017; Nara, 2007). By identifying that risk is both produced through language-students’ temporally-mediated uncertainty within a new information environment and mitigated through the enactment of information literacy practices, the study emphasises the importance of the concept within information research. In further recognising that student time overseas is driven by a variety of social pressures, the study also extends the concept of risk beyond physical danger to demonstrate how student academic and financial wellbeing is threatened within a new setting. At the same time, the related theoretical concept of edgework (Lyng, 1990; 2009) stresses that risk is multifaceted. Highlighting that risk enables students to build a complex understanding of an information environment rather than purely threatening to derail their activities, the study moves beyond a focus on the risk society (Beck, 1992) and the health and safety culture to illustrate the everyday role that risk plays within a person’s engagement with information.

The study’s exploration of uncertainty forms another significant contribution to the field. Most importantly, the use of a sociocultural lens positions uncertainty as produced through language-student participation overseas rather than forming an internal information deficit. In highlighting that students maintain or even increase their unfamiliarity as they develop subjectivity, the study also demonstrates that uncertainty plays a generative role within student development rather than purely being seen as something to be reduced. In turn, the recognition that an engagement with unfamiliarity provokes a wide range of responses means that the study further illustrates how uncertainty is mediated through a variety of social and creative information activities rather than uniquely focusing on information seeking. In this sense, the study’s sociocultural approach extends understanding about the shape of uncertainty within information research.

A recognition of the important role that time and temporality play within information practices forms another contribution to library and information science. Moving beyond the understanding that information practices happen within a chronological time-period, the study draws attention to temporality or the idea that language-student participation overseas is produced through their past and current activities as well as in terms of their future motivations. Demonstrating that student engagement with the past-present-future accords meaning to both the information with which they engage and to their information activities, the study underlines the importance of adding a temporal dimension to the more spatially-focused idea of an information landscape (cf. Schatzki, 2013, p.97). Importantly, the emphasis on temporality or the meaning (Blumer, 1969) that an event holds for a person also
extends information research beyond the immediate material environment. Highlighting the need to explore the reasons for which people engage with information, the study underscores how a teleological focus broadens understanding about both the purpose and the shape of a person’s engagement with information within a specific context.

8.2.1 Information literacy
The study’s socio-cultural approach means that it makes a variety of contributions to information literacy research. Most importantly, the study highlights the centrality of transition to information literacy research and practice. In demonstrating that language-student transition is mediated through the construction of their new information landscapes, the study illustrates the important role that information literacy practices play in scaffolding processes of change within a time of upheaval. At the same time, the focus on student subjectivity or what students are transitioning from and to means that the study also highlights how information literacy forms a transformative practice. While the value of thinking like an historian or a lawyer is often espoused within information literacy literature (e.g. Fister, 2015; Jackson & Mogg, 2005), research has rarely explored the shaping of identity in detail. In contrast, findings from the research illustrate the central role that the shaping of subjectivity plays in the development of knowing. Coupled with the understanding that information literacy practices are enacted through the simultaneous past-present-future dimensions of student activity, the focus on transition further disrupts the assumption that information literacy constitutes a sequential and chronological narrative of progress. The emphasis on temporality also highlights the need to explore learner perspectives within information literacy research.

In positioning information literacy as a research object rather than as a teaching practice, the study further broadens scholarship that explores the shape that information literacy takes within an academic context. While higher education forms the site of information literacy teaching innovations (e.g. Accardi, Drabinski & Kumbier, 2010), there has been little corresponding exploration of how information literacy is understood within an academic context beyond a scholarly model of research and communication. The study’s employment of an ontological rather than an epistemological lens to practice extends understanding by exploring information literacy in terms of how it is produced and enacted with reference to local ways of knowing rather than solely centring on how it is taught or mediated through official standards and frameworks (e.g. AACU, 2013; ACRL, 2000, 2015; ANZIL, 2004; SCONUL, 2011). The focus on residence abroad, which plays a key yet non-typically research-oriented role within higher education means that the study also draws attention to the need to broaden understanding about the scope of information literacy practice within academic settings as universities start to engage with high-impact practices (Kuh, 2008) and alternative teaching and learning initiatives.

The emphasis on students who are enrolled in higher education broadens practice-based approaches to information literacy. Demonstrating that use of practice theory is not limited to exploring what Deitering (2015) labels as “after-college” issues such as community and leisure based contexts (e.g. Cox, 2012; Haider, 2011; Lloyd et al., 2013) or the workplace (Cavanagh, 2013; Jarrahi & Thomson, 2017; Olsson, 2016), the study’s focus on residence abroad, which forms a key part of students’ language-learning activities within higher education, stresses both the viability and the appropriateness of extending practice theory to research that explores information literacy within academic contexts (e.g. Pilerot, 2016; Schreiber, 2014). At the same time, the study problematises situated understandings of information literacy by examining an academic practice that takes place within an everyday setting and which neither maps neatly to a discipline nor to a bounded community of practice (Wenger, 1998), as is often the case with workplace information literacy studies. Describing a context that is both fluid and structured by instrumental and academic goals (MLA, 2007), the research builds upon Gulbekk’s (2016) and Pilerot’s (2016) studies into the similarly unstable shape of interdisciplinary settings to challenge and extend understandings about the situatedness of academic information literacy practices.

In terms of intercultural information literacy practices, the study facilitates a complex understanding of language-student information activities overseas. A focus on the enactment of information literacy practice widens the scope of intercultural information literacy research, while the emphasis on language-learning as well as students who are visiting non-English-speaking countries provides a more detailed understanding of how people adjust to a new information environment. More specifically, the study both illuminates and develops understanding about the barriers that are often cited as impeding the enactment of information literacy practices within a new intercultural setting. Highlighting the range of pressures that are produced through student engagement within a new environment, the study demonstrates that information literacy practices are constrained and enabled through students’ receptions overseas rather than through their individual cultural deficiencies. The focus on interaction further demonstrates how transition to a new intercultural setting is
dynamic and negotiated rather than centring on a person’s passive assimilation and socialisation.

8.3 Methodological contributions

The study’s use of constructivist grounded theory provides one of the most important methodological contributions of the study. While a handful of information literacy studies have used a grounded theory approach to explore community perceptions of information literacy (see 4.2), this study is one of the first (although see Lloyd, 2017) to use a grounded theory approach to engage in theory building from an information literacy perspective. The study’s focus on theorising provides detailed insight into the shape and meaning of information literacy for language-students who are engaging in residence abroad as well as providing a basis for the production of future information literacy theory in a field that typically emphasises teaching practices. Beyond widening the scope of information literacy research, the study’s use of visual research methods within a grounded theory framework provides another significant contribution of the study. While constructivist grounded theory has typically emphasised participants’ words, or their understandings and interpretations of their interactions, the use of visual research methods enables a simultaneous focus on participant actions as well as their reflections on a specific event or happening. Facilitating a more complex understanding of participant lives, the use of visual research methods also brings additional richness to the study’s final grounded theory.

Outwith the grounded theory framework of the research, the use of photo-elicitation methods forms a key contribution in itself to library and information science. Providing a detailed examination of how photo-elicitation is employed in practice, the study extends understanding about both the viability and the role of visual research methods within library and information science. Most importantly, the study demonstrates how the use of photo-elicitation expands understandings about information practices by offering people the opportunity, on their own time, to establish an alternative past-present-future or a non-researcher focused understanding of the information activities in which they engage. This approach creates a complex picture of how information is understood from a participant’s perspective and highlights how the simplicity of photography, which contrasts with the complexity of verbal descriptions, facilitates the capture of data at times and in spaces to which a researcher may not have access. In further enabling access to information that may have otherwise seemed inconsequential, the study also moves library and information science beyond the typical engagement with formal and institutionally sanctioned understandings of information to offer insight into the ephemerality of information literacy practices (cf. Burnett et al., 2012, p.97) and the informal and contingent aspects of everyday life.

8.4 Societal contributions

The study’s detailed exploration of the ways in which newcomers build understanding within a new setting means that it also makes a number of contributions to society more generally. On the one hand, the recognition that language-student time overseas is marked by risk means that the study broadens understanding about the complexity of a newcomer’s transition within everyday settings. Highlighting the active role that people play in the development of knowing, the study also illustrates how missing or contradictory information about official procedures, including registration, legal compliance and financial issues, adds to and intensifies the pressures that are produced through engagement in a new context. On the other hand, the realisation that student participation within their new information environments is mediated through the social conditions as well as the power structures of their new setting means that the study also extends understanding about the impact that the reactions and the receptiveness of local communities have on the shape of intercultural transition. Findings from the study provide a vivid illustration of the tensions as well as the opportunities that underscore newcomer attempts to engage within a new context and highlight the importance of looking beyond individual information activities towards the broader community’s role in preparing for and engaging with questions of global movement.

8.5 Contributions to language-learning research

The research contributes to the fields of second-language acquisition and international education by extending an information perspective to the study of immersive language-learning activities. Most importantly, the study draws attention to the importance of information literacy during residence abroad. Providing students with the means through which they can both orient themselves to and learn about local ways of knowing, the study demonstrates how the enactment of information literacy practices enables students to recognise and engage with the “cultural subsystems” that form the basis of translilingual and transcultural education (MLA, 2007; Hicks, 2013). Importantly, the recognition that an engagement with information mediates the development of student subjectivity within a new context illustrates the important role that information literacy plays in helping language-learners to create meaning within a new setting. In allowing students to perceive and
practices play a key role in enabling students to situate themselves overseas as well as to recreate their identity as a language-student.

8.6 Contributions to transitions theory
The information perspective of the study means that it makes a variety of contributions to transitions theory. Specifically, the study increases understanding about the sociocultural conditions that constrain and enable transition. The recognition that students actively negotiate the ways in which they mediate change highlights how transition is shaped through the social interactions between people rather than forming a one-way process of acculturation. In centring on a bounded rather than an irreversible transition, the study also recognises the role of time within transition. Rather than seeing transition as fixed-in-time (Bridges, 1991), the realisation that temporality both constrains and enables the enactment of information literacy practices demonstrates how time plays an active rather than a passive role within processes of change. The important part that mobile phones and artefacts play within language-student activities overseas means that the study also brings a material focus to transitions theory. Demonstrating that material objects enable students to both regulate and coordinate their engagement overseas as well as to sequence their activity over time, the study signals the neglected role that tools and technologies as well as information creation play within transitional processes. The study also extends a focus on the body to transitions theory. Highlighting how language-students use their own bodies as well as the bodies of others to guide their activity and the development of knowing, the study develops transitions theory by emphasising that transitions are both corporeally and socially mediated rather than purely focused on the cognitive.

8.7 Limitations
Building upon the methodological shortcomings of the study (see 4.8), the findings are subject to several limitations. One of these limitations centres on the use of photographs; while photographs broaden the study in a variety of ways (see 8.3), the reliance on images may also have over-emphasised the visual aspects of the study by accentuating an ocular-centric focus. Another limitation centres on the time-scale of the research; the abbreviated nature of students’ stays abroad as well as my status as a part-time PhD student meant that it was not possible to share all the findings from the research with participants. Although I asked students to critique my initial findings in the second interview, I would have liked to have shared the situational analysis maps (see 4.5.2) that were produced in the study with participants. Importantly, a further limitation of the study is that it did not attempt to measure or to analyse how ‘successful’ students were during their time overseas. While the study focused on transition rather than on language-learning improvements, it seemed evident that some students were happier than others during their time abroad. The structure of the study additionally meant that it was impossible to tell whether the support that students received from English speakers counteracted gains in language skills.

8.8 Practical recommendations
Findings from the study lead to the formulation of several practical recommendations. For language librarians, the study highlights the importance of broadening information literacy instructional opportunities beyond the more typical literature class. The recognition that students struggled to find housing as well as to understand the various legal rules and regulations with which they need to comply means that the study recommends that language librarians work with residence abroad coordinators to help prepare students for everyday information environments. Upon students’ return, language librarians could further draw upon student engagement in everyday information activities to design reflective learning opportunities that underscore the transcultural goals of modern language education (MLA, 2007). Similarly, findings from the study have implications for librarians who work with international students. Highlighting that one of the challenges of residence abroad is to rebuild social connections, the study recommends expanding library events such as speed-friending (Bridges, 2014) that aim to break down barriers and build networks between domestic and international students. In further demonstrating the pressure that many students are under to make the most of their time overseas and the impact that these tensions has on the shaping of information literacy practices, the study also illustrates the need to design learning opportunities that are sensitive to the complexity of international students’ transitional activities.

For university staff and study abroad providers, the study recommends integrating student peers into pre-departure orientations. Peer-led panels recognise the important role that fellow students play in preparing learners for residence abroad and give students the opportunity to ask about insider information that a home or host institution may not think is relevant while also helping them to assuage their fears before departure. Importantly, while
recognising that many students will supplement official welcome events with advice and recommendations from family contacts, orientations such as these also help to ensure the accessibility of residence abroad (cf. Brooks & Waters, 2010; Waters & Brooks, 2010). Similarly, findings from the study suggest the need to design learning opportunities that integrate students into their new setting. Noting that few students in the study engaged with the community groups and leisure activities that afford access to information (Quirke, 2014), residence abroad coordinators could establish opportunities for students to participate in local faith-based, service or sports organisations. Participation in these groups would help students to build connections to their local community and engage them with the tacit and contingent forms of information that structure social life (Lloyd et al., 2013). The important role that observing plays during student time overseas means that the study also encourages the training of students in ethnographic methods to scaffold their engagement with the puzzling events that they encounter (e.g. Jackson, 2005; Kinginger, 2011).

Notwithstanding, while recognising that transitional sites provide an inhospitable setting for many, findings from the study call for a nuanced approach to academic staff involvement within transition. Demonstrating that transition provides a variety of complex yet generative opportunities for student learning, the study emphasises the need for academic staff to refrain from simplifying educational interventions and positioning students as unable to navigate change without formal support. In further recognising that transition is neither linear nor predictable, findings from the study also demonstrate the need to acknowledge discontinuity within student learning to avoid creating normative and cumulative development trajectories that obscure the dynamics of change.

8.9 Future research
Findings from the study provide various avenues and angles for future research. Most importantly, the theory of mitigating risk needs to be examined within other contexts to determine its use in explaining other transitional activities as well as to explore the findings from the research further. As both Webber and Johnston (2013, p.23) and Willson (2016) signal, transitions play an important role throughout a person’s life and future research should move beyond the academic focus of the study. More specifically, the emphasis on social tension and the affordances of a setting means that the theory of mitigating risk provides a meaningful way to investigate how people engage in what may be considered stigmatised activities such as elective surgery and gambling as well as exploring different identities as a second-generation immigrant or in a very conservative or liberal area. The focus on high stakes pressure means that the theory should further examine the activities of people in stressful situations including financial speculation, extreme sports and the military. In turn, the emphasis on change means that mitigating risk can be used to study situations in which people are attempting to rebuild their lives, for example while recovering from addiction or mental health issues. The prominence of time pressure means that mitigating risk should also consider time-delimited activities such as event planning or seasonal workplace practices.

Beyond focusing on specific groups of people, the theory of mitigating risk provides the means to re-examine common ideas within library and information science. The concept of satisficing, which describes information that is “good enough” (Case & Given, 2016, p.36), has often been used to explain the selection of less reliable or credible information. In recognising that people who are engaged in satisficing direct their information activity towards meeting specific goals within a specific time-period (Zach, 2005, p.31), future research should explore whether satisficing emerges from a person’s attempt to mitigate risk within a defined scenario. Similarly, the study’s emphasis on temporality means that the theory of mitigating risk could re-examine Wilson’s (1977) ideas of concern or caring, where a person’s interest affects how much energy they invest in resolving an issue. Future research should also investigate the connections between the theory of mitigating risk and information poverty (Chatman, 1996). In employing secrecy and deception to avoid asking supervisors, colleagues or fellow residents for assistance, the janitors and elderly residents in Chatman’s studies could be engaging in self-protective activities to mitigate the risk of being found out as less healthy or competent than they appear. Chatman’s (1996, p.204) focus on risk-taking, which demonstrates the important role that “contextual others” play in shaping whether it is worth attempting to access and engage with information or not, could further demonstrate the role that temporality or a person’s projection for the future plays within these activities.

8.9.1 Information literacy
The study demonstrates the importance of continuing to study information literacy through both a social constructivist and a practice theory lens. More specifically, future research could target far less commonly explored questions of materiality (although see Pilerot, 2016; Sundin & Carlsson, 2016; Sundin & Francke, 2009). In highlighting that tools and material surroundings coordinate and direct student enactment of information literacy practices, further research would provide a more complete exploration of the role of material affordances in the development of knowing. Spatiality forms another underexplored focus
within information literacy research. While Lloyd and Wilkinson (2016, 2017) have explored learning opportunities within everyday spaces, few studies have explored how subjectivity flows across and between the various spaces in which learners enact information literacy practices. In further recognising the important role that materiality plays in coordinating what Burnett et al., (2012, p.92) refer to as the articulations of literacy between contexts, the study demonstrates the need for future research into both the “siting” (Leander & McKim, 2003, p.213) of information literacy across online and offline contexts and the situatedness of information literacy from a spatial perspective.

Findings from the study also highlight the need for further research that takes a social constructivist approach to information literacy within academic settings. One area of interest centres on how students engage with information throughout their degree, rather than purely in relation to research papers. An emphasis on everyday and workplace information practices focuses attention on the various internships, work placements, and other high-impact (Kuh, 2008) industrial and vocational collaborations (Ahlryd, in progress) in which students engage while extending academic information literacy beyond its traditional focus on scholarly communication. In turn, findings from the study call for future research into the design of transitional learning opportunities within the classroom, including how librarians can scaffold learners’ engagement with and preparation for transitional activities. The important role that vernacular literacy practices and material objects play within information literacy practices means that the study also highlights the need for research into how artefacts (Pahl & Rowsell, 2010) and students’ funds of knowledge (Moll, Amanti, Neff & González, 1992) can be integrated into information literacy teaching.

8.10 Chapter conclusion

The chapter has highlighted the theoretical, methodological and practical contributions that the research makes to knowledge. Exploring how findings from the study shed light on the role of risk, uncertainty and time within information research, the chapter also illustrates how the study extends and refines understandings about information literacy during a time of transition as well as within academic and everyday settings. In further broadening the focus and scope of transitions theory, the chapter culminates by offering practical recommendations for librarians and study abroad educators as well as indications for future research.

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**Appendix 1: Recruitment information**

**Webpage Text**

Are you studying a language and about to travel abroad on a study, work or volunteer placement for three months or more? If so, consider participating in this research about your information experience and use as you settle in! You’ll be helping me with my research, but you’d gain a valuable chance to reflect on your experiences abroad, which may help you if you have to write a report for your programme. I will also be providing USD$40 Amazon or iTunes gift cards to compensate you for your time.

You are eligible if you are:

- Currently undertaking an undergraduate degree in a world language (e.g. French, Spanish, Japanese, Russian, Arabic, etc.)
  - In the United States, Canada or Australia, this includes students with language major/minor or who are studying a language in an honors/honours programme
  - In the United Kingdom, this includes students studying single or joint honours, as well as *ab initio* students.
- About to go abroad for a period of three months or more
  - This includes study, work or volunteer placements

If you agree to take part in this research, you will take part in two audio-recorded interviews via Skype or similar, and capture photos of your information usage. Anything you say, and any media you capture will be treated in confidence. It is your decision to be part of this project and if you decide that you would later like to pull out from the research, you don’t have to tell me why you are leaving and you won’t be disadvantaged in any way.

Sound intriguing? Register your interest below!

- **Contact Details**
  - Name/Email:
  - What’s your degree/major? What language(s) are you studying?
- **Residence Abroad:**
  - Which country are you going to and which language are you studying?
  - How long will you be there for?
  - What will you be doing there? (Study, Work, Internship, Volunteer, Other)
PARTICIPANT INFORMATION SHEET

You are invited to participate in a research study on your time abroad, which is known as Study Abroad or Exchange in the United States, Canada and Australia, and the Year Abroad in the United Kingdom. This study is being conducted by Alison Hicks at Charles Sturt University, Australia.

Before you decide whether or not you wish to participate in this study, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and discuss it with others if you wish. I will ask you to confirm in the first interview whether you give consent to take part in this study.

1. What is the purpose of this study?
I’m interested in how language majors/students transition from the classroom to the country whose language you have been studying, in particular, how you use information to settle in, to adjust your everyday habits, and any new information practices that you might have adopted.

2. Why have I been invited to participate in this study?
I am seeking language majors/students who are going abroad for a period of three months or more. More specifically, you are eligible if you are:

- Currently undertaking an undergraduate degree in a world language (e.g. French, Spanish, Japanese, Russian, Arabic, etc.)
  - In the United States, Canada or Australia, this includes students with language major/minor or who are studying a language in an honors/honours programme
  - In the United Kingdom, this includes students studying single/joint honours
- Currently engaged or about to go abroad for a period of three months or more
  - This includes study, work or volunteer placements
  - If you are going abroad for less than three months you are not eligible to participate.

3. What does this study involve?
If you agree to participate, you will be asked to take part in two interviews via Skype or a video conferencing service. Interviews will take place at the beginning and end of your stay, and will be audio recorded and transcribed. You will also be asked to take photos to record your information experiences over a period of a month. We will then discuss these photos in the second interview.

4. Are there risks and benefits to me in taking part in this study?
There are no known risks of participating in this research. Benefits include the chance to reflect on your experiences abroad, which may be helpful if you have to complete a report about your stay.

5. How is this study being paid for?
Funding from Charles Sturt University will pay for this.

6. Will taking part in this study (or travelling to) cost me anything, and will I be paid?
It will not cost you anything to take part in this study. You will be offered a USD$40 (GBP£25/ CAD$50/ AUD$50) iTunes or Amazon gift card to compensate you for your use of a data plan and for your time in taking part in this study. Gift cards will be emailed after the second interview. If you withdraw from the study you will still receive the gift card to thank you for participating up to the point of withdrawal.

7. What if I don’t want to take part in this study or decide to withdraw before the study ends?
Participation in this research is entirely your choice. Only those people who give their informed consent will be included in the project. If you do decide to participate, you may withdraw from the project up to two weeks after the second interview without giving a reason. Any information that is created up until the time of withdrawal will be removed from the dataset and destroyed.

8. How will my confidentiality be protected?
Any information collected by the researcher that might identify you will be stored securely in a password-protected file and only accessed by the researcher unless you consent otherwise. Data will be stored securely in a password-protected file for a minimum of five years after publication of the results. You will be able to retain copies of all materials submitted during the project.

9. What will happen to the information that I give you?
Data (interview or media) from this research may be quoted or analysed in this thesis, as well as presented at scholarly and professional conferences and published in journals, books, etc. All data will be kept confidential; you will be identified or given a pseudonym in accordance with your wishes. If you choose to be given a pseudonym you will not be able to be identified from any analysis or quotations or through the posting of any media you provide.

10. What should I do if I want to discuss this study further before I decide?
If you would like further information please contact Alison Hicks (ahicks@csu.edu.au) or my supervisor, Annemaree Lloyd (amlloyd@csu.edu.au) from whom potential participants can obtain further information about the project.

11. Who should I contact if I have concerns about the conduct of this study?
The Faculty of Education Human Research Ethics Committee has approved this project. If you have any complaints or reservations about the ethical conduct of this project, you may contact the Committee or my supervisor through the Executive Officer, Lisa McLean:
Faculty of Education Human Ethics Committee, Charles Sturt University
FHEC_Education@csu.edu.au, 02 6338 4966
Any issues you raise will be treated in confidence and investigated fully and you will be informed of the outcome.

Thank you for considering this invitation. This information sheet is for you to keep.
Appendix 2: Semi-structured interview guide (indicative)

Opening Conversation
● Remind me where you're located and what language you are studying.
● How long have you studied that language? What made you decide to go abroad?
● Have you travelled or lived abroad before?
  ○ Has anyone in your family travelled or lived abroad before?
● Tell me about your programme and what you're doing while you're abroad.
  ○ Are you there with anyone you know?

Experiences
● How’s it all going so far?
● What were your first impressions of the country/town?
● How are you coping with everyday things like choosing a grocery store, finding your way around, opening a bank account, finding the best bar etc.?
  ○ How did you work out what to do? How did you find helpful sources of information?
  ○ If you have questions, what do you do? Who do you approach? Where do you go?

Before Arrival
● Were you given any information about this country or town before you got here?
  ○ By whom? Was it helpful? Why or why not? What would have helped you?
● Were you given any information on arrival?
  ○ By whom? Was it helpful?
● How did you prepare before you got here?
  ○ Websites, people, school, prior contact etc.

Getting to Know
● Are you using any technologies to help you settle in?
  ○ Have you altered any settings, used any different sites since you got here?
  ○ Have you altered your social media habits? Added anyone local?
● Have any people been especially helpful?
  ○ How did you know to ask them? Did you approach them looking for help?

Challenges and Strategies
● What have been your biggest challenges that you have faced so far?
● What about your family or friends? Do you ask them for help?
  ○ Who else has been helpful so far? Why did you approach them?

Settling In
● Have you been able to share how to do something with anyone yet?
  ○ For example, have you been able to give tips, advice? If so, what?
● Considering what we have talked about, what do you wish you had known before you left home, or what advice would you give to someone going abroad next year?

Appendix 3: Photo-elicitation discussion and training

Thanks for agreeing to be an anthropologist abroad for me! Here are the basic guidelines for capturing photos ethically and appropriately:
● Try and avoid taking photos of people. If you want to take photos of a person or a small group of people, you *must* get verbal consent. Taking photos where the person is not the main focus of the photo and is not identifiable is fine.
● Don’t invade anyone’s privacy! Use your judgment—would you like to be photographed in that situation? Similarly, respect someone’s right to refuse consent.
● Don’t trespass! Take photos on public property and ask permission if you want to take photos on private property.
● Respect the cultural norms and considerations. Don’t make assumptions about what is normal—if in doubt ask a local whether it’s ok.
● Don’t hide! Explain what you’re doing if anyone asks ;)

Personal Safety
Don’t forget, your safety is the highest priority
● Be aware of your surroundings
● Don’t do anything you wouldn’t usually do
● Don’t go anywhere you wouldn’t usually go
● Don’t take photos if it is dangerous to you

Guidelines
If you’re not sure whether you should be taking that photo, ask yourself these questions:
Do No Harm
● Am I taking photos in a way that will do harm to me or my community or my setting?
Do Good
● What is my intention or purpose for taking this photo?
Fairness
● Am I taking photo in a way that fairly represents the situation, or the physical location?
Justice
● Am I respectful of the places and things that I am photographing?
Appendix 4: EthOS training

1. Use the link that Alison will send you to download the EthOS app.
2. Login with your email address and the password they provide. You can change this password under Settings.
3. You can now take photos for this study! Click on the relevant icon to get started.
4. After you have taken the photo, you will be given the option to give it a description-use this if you don’t think you’ll remember why you took it... When you’re done, click Send.
5. Click View Entries to see your media or notes. Swipe left to delete them.
6. If you are not in a Wi-Fi enabled space, simply take photos with your regular camera and upload them later. Click on the photo icon and select Camera Roll.
7. Whatever photos you take will be stored in your device’s normal camera too.
8. At the end of the project I’ll give you warning before I delete your account and let you know how to download photos if you have already deleted them from your phone or tablet.

Appendix 5: EthOS security policy

EthOS Labs leverage Amazon Web Services (AWS) for their computing infrastructure. AWS has achieved ISO 27001 certification and has successfully completed multiple SSAE 16 audits. For more detail on AWS security, please refer to https://aws.amazon.com/security.

Physical and Environmental Security
EthOS Labs employees do not have physical access of any kind to our production facilities, as all of our infrastructure is in the cloud at AWS.

AWS’s data centers are state of the art, utilizing innovative architectural and engineering approaches. Amazon has many years of experience in designing, constructing, and operating large-scale data centers. This experience has been applied to the AWS platform and infrastructure. AWS data centers are housed in nondescript facilities. Physical access is strictly controlled both at the perimeter and at building ingress points by professional security staff utilizing video surveillance, intrusion detection systems, and other electronic means. Authorized staff must pass two-factor authentication a minimum of two times to access data center floors. All visitors and contractors are required to present identification and are signed in and continually escorted by authorized staff.

AWS only provides data center access and information to employees and contractors who have a legitimate business need for such privileges. When an employee no longer has a business need for these privileges, his or her access is immediately revoked, even if they continue to be an employee of Amazon or Amazon Web Services. All physical access to data centers by AWS employees is logged and audited routinely.

Fire Detection and Suppression
Automatic fire detection and suppression equipment has been installed to reduce risk. The fire detection system utilizes smoke detection sensors in all data center environments, mechanical and electrical infrastructure spaces, chiller rooms and generator equipment rooms. These areas are protected by either wet-pipe, double-interlocked pre-action, or gaseous sprinkler systems.

Power
The data center electrical power systems are designed to be fully redundant and maintainable without impact to operations, 24 hours a day, and seven days a week. Uninterruptible Power Supply (UPS) units provide back-up power in the event of an electrical failure for critical and essential loads in the facility. Data centers use generators to provide back-up power for the entire facility.

Climate and Temperature
Climate control is required to maintain a constant operating temperature for servers and other hardware, which prevents overheating and reduces the possibility of service outages. Data centers are conditioned to maintain atmospheric conditions at optimal levels. Personnel and systems monitor and control temperature and humidity at appropriate levels.

Management
AWS monitors electrical, mechanical, and life support systems and equipment so that any issues are immediately identified. Preventative maintenance is performed to maintain the
continued operability of equipment. For additional information see: https://aws.amazon.com/security

Network Security
The AWS network provides significant protection against traditional network security issues, and you can implement further protection. The following are a few examples:

Distributed Denial Of Service (DDoS) Attacks
AWS API endpoints are hosted on large, Internet-scale, world class infrastructure that benefits from the same engineering expertise that has built Amazon into the world’s largest online retailer. Proprietary DDoS mitigation techniques are used. Additionally, AWS’s networks are multi homed across a number of providers to achieve Internet access diversity.

Man in the Middle (MITM) Attacks
All of the AWS APIs are available via SSL-protected endpoints which provide server authentication. Amazon EC2 AMIs automatically generate new SSH host certificates on first boot and log them to the instance’s console.

Port Scanning
Unauthorized port scans by Amazon EC2 customers are a violation of the AWS Acceptable Use Policy. Violations of the AWS Acceptable Use Policy are taken seriously, and every reported violation is investigated. When unauthorized port scanning is detected by AWS, it is stopped and blocked. Port scans of Amazon EC2 instances are generally ineffective because, by default, all inbound ports on Amazon EC2 instances are closed.

Packet sniffing by other tenants
It is not possible for a virtual instance running in promiscuous mode to receive or “sniff” traffic that is intended for a different virtual instance. Even two virtual instances that are owned by the same customer located on the same physical host cannot listen to each other’s traffic. Attacks such as ARP cache poisoning do not work within Amazon EC2.

Host Security
Our production environment is completely separate from the other environments, including staging and development.

Our servers are built using repeatable build processes powered by Puppet (http://puppetlabs.com). We keep all source code and configuration files within private GitHub repository’s http://github.com. Root access is disabled on our servers, all access is controlled via SSH keys, individually identifiable RSA key pairs are used for SSH access. This insures that there is a complete audit trail via sudo from a specific action back to the specific individual who triggered that action. Systems are in place to bans IPs that show the signs of malicious activity.

All server log files are curated and stored in a central location, this allows our operations team to search and monitor our logs for unusual events.

Web Security
We actively scan our website for the OWASP Top 10 Web Application Security Risks and other known security holes. We use best practices for secure code, for example, we use prepared statements within our ORM (Doctrine) to avoid SQL injection issues and all user input is sanitised to prevent XSS.

Encryption
Our application interfaces all leverage and require SSL throughout. By using encryption, we minimize the chances of someone possibly intercepting username/password combinations and/or other sensitive information. All data (other than passwords and authentication strings) is stored in plain text.

Data Storage & Retention Policies
File attachments are stored within AWS S3. Video files are transcoded through a 3rd party provider, Zencoder, who also utilize AWS for their infrastructure allowing secure file transcoding and delivery to AWS S3.

Data is stored in a MySQL Database. Our databases are backed up on a nightly basis. In addition to our usage of this data in production we also occasionally take a copy of the data and load it in our testing environments.

We use Amazon’s Content Delivery Network (CDN), CloudFront, which has multiple edge locations around the world to deliver previews of file attachments. Amazon CloudFront caches copies of the preview files close to viewers, lowering latency when they download/view the files. All original files can only be accessed via AWS S3 via an SSL encrypted endpoint using the HTTPS protocol using an expiring token.

Incident Management Policies
We plan on always notifying our customers of security incidents as soon as it is safe and prudent to do so, and will share any relevant information to allow our customers to take the necessary actions.

Customer Data
EthOS Labs employees do not access customer data as part of normal operations, however they may need to when providing support at the request of the customer or when required to do so by law.