Moving beyond the descriptive: The grounded theory of mitigating risk and the theorisation of information literacy

- **Purpose**
  - Information literacy has been consistently undertheorised. This paper contributes to the ongoing theorisation of information literacy by exploring the meaning and implications of the emergent grounded theory of mitigating risk for information literacy research and practice.
- **Design/methodology/approach (mandatory)**
  - The grounded theory was produced through a qualitative study that was framed by practice theory and the theoretical constructs of cognitive authority and affordance, and employed constructivist grounded theory, semi-structured interviews and photo-elicitation methods to explore the information literacy practices of language-learners overseas.
- **Findings**
  - This paper provides a theoretically-rich exploration of language-learner information literacy practices while further identifying the importance of time, affect and information creation within information literacy research and practice as well as the need for the continued theorisation of information literacy concepts.
- **Research limitations/implications**
  - The paper's constructivist grounded theorisation of information literacy remains localised and contextualised rather than generalisable.
- **Practical implications**
  - The paper raises questions and points of reflection that may be used to inform the continued development of information literacy instruction and teaching practices.
- **Originality/value**
  - This paper contributes to an increasingly sophisticated theoretical conceptualisation of information literacy as well as forming a basis for ongoing theoretical development in the field.

**Keywords**: information literacy, time, affect, information creation, international students, information practices

1. **Introduction**
Information literacy has consistently been undertheorised (Limberg, Sundin & Talja, 2012; Lloyd, 2005, 2017; Tuominen, Savolainen & Talja, 2005). While ‘literacy’ has been identified as a growth word within Library and Information Science (LIS) literature (Larivière, Sugimoto & Cronin, 2012) and there has been a steady increase in information literacy dissertations (Webber & Johnston, 2017, p.163) and peer-reviewed articles (Sproles, Detmering & Johnson, 2013), it was not until 2017 that the field was able to point to its first theory (Lloyd, 2017). There are many potential reasons for this lack of theorisation. On the one hand, information literacy has been dominated by conceptualisations that draw upon normative professional practice and policy-making approaches rather than analytically-driven research-based understandings (Pilerot & Lindberg, 2011). On the other hand, the field may have
been distracted from theory-building by the proliferation of (often acrimonious) discussions regarding the shape and purpose of information literacy, which has variously been described as a skill, a habit of mind or a social practice (Hicks & Lloyd, 2016). A lack of theorisation may also reflect issues within the broader field of Library and Information Science (LIS), which has been critiqued by North American library historian, Wayne Wiegand (1999), for neglecting to engage beyond its discursive formations. However, as Lloyd (2017, p.91) points out, a continued failure to engage in theory-building challenges our ability to situate information literacy within LIS research as well as to translate and “champion” its benefits within workplaces, broader communities and funding agencies.

This paper contributes to the ongoing theorisation of information literacy by exploring the meaning and implications of the emergent grounded theory of mitigating risk (X, 2019) for information literacy. The grounded theory of mitigating risk emerged from an exploration of language-learner information literacy practices and states that the academic, financial and physical stresses that are produced through engagement within new information landscapes catalyse the enactment of the information literacy practices that mediate transition to and within a new setting. As an interpretive theory that was produced through a constructivist grounded theoretical methodological approach (Charmaz, 2014), the grounded theory of mitigating risk offers a contextual explanation for the situated actions of undergraduate students who are learning a language overseas. At the same time, the theorisation of connections between language-learner activity and broader social structures means that the grounded theory of mitigating risk also offers abstract understandings pertaining to the enactment of information literacy practices during a complex period of change. The emergent approach of constructivist grounded theory means that the grounded theory of mitigating risk is subsequently positioned as forming a basis for ongoing theoretical development in the field of information literacy.

2. Theorising 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 use to conceptualise the field. Most generally, information literacy constitutes a field of research that centres on “theoretical understandings of information, learning and knowledge” (Limberg et al., 2012, p.95). The key role that learning and information play within complex social worlds illustrates the importance of interpreting and conceptualising information literacy in more detail. However, the tendency to position information literacy as a teaching rather than as a learning object (Limberg et al., 2012, p.94) has limited the construction of theoretical understanding about how it is shaped and mediated as well as how it relates to the connected areas of information behaviour (Julien & Williamson, 2010), information seeking (Limberg & Sundin, 2006) and information practices (Lloyd, 2010). Even the employment of more rigorous phenomenographic, sociocultural or discourse analysis perspectives, which form three of the most common lenses through which information literacy has been explored (Limberg et al., 2012, p.95), has failed to lead to sustained interest in the theorisation of information literacy. The use of grounded theory as a method of inquiry has similarly tended to stop short of information literacy theory-building (Hicks, 2018a).

One of the few exceptions to this oversight is found in the work of Lloyd (2017), whose empirical research in the workplace as well as in community and health settings forms the basis of the field’s first theory of information literacy. Influenced by practice and
sociocultural theory, Lloyd’s theorisation positions information literacy as a situated practice that is shaped by a social site. Within this conceptualisation, information literacy forms a way of knowing that scaffolds a person’s intersubjective understanding of and engagement within an information environment. Highlighting the sites of knowledge that are valued within a community, information literacy is seen to centre on the development of understanding about how knowledge is located, valued and accessed within a specific setting. In further facilitating awareness of and connections to the shared meanings that drive the development of subjectivity, information literacy is also positioned as shaped in relation to the social, material and corporeal dimensions of practice as well as more traditional textual information modalities. As a mid-range theory, Lloyd’s theorising incorporates earlier work that explores the concept of an information landscape to establish foundational elements of information literacy as well as to reflect on the design of pedagogical interventions. At the same time, the emphasis on observable practice as well as its antecedents in empirical, grounded theoretical research means that the theory also forms the basis for future aggregable findings (Lloyd, 2017, p.100).

3. The language-learner study

The grounded theory of mitigating risk was produced through doctoral research that explored the information literacy practices of language-learners who were engaged in work or study abroad as part of their undergraduate degree. This period of time overseas is often interpreted as a highlight of the modern language degree, a chance to connect the classroom with ‘authentic’ activity. However, 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 build meaning within a new context as well as to mediate these changes in educational circumstances has rarely been considered. To this end, the original study was driven by the following research question:

- How do language-students enact information literacy practices during time overseas?

These learners’ need to develop connections to a new information environment provided a justification for this study’s focus on information literacy, which is defined as a “way of knowing the many environments that constitute an individual's being in the world” (Lloyd, 2007, p.182). The ongoing internationalisation of campus as well as growing engagement with high-impact, alternative teaching and learning practices within higher education (Kuh, 2008) further demonstrated the relevance and importance of developing knowledge about information literacy practices during an overseas sojourn. The paper will provide a brief overview of the research design and findings, which have been presented in detail elsewhere (X, 2019), before specifically focusing on the implications of the grounded theory of mitigating risk for information literacy.

3.1 Research Design

Situated within an interpretivist research approach, the study was informed by a theoretical framework that included practice theory. Practice theory positions “social practices as the
central phenomenon in social life" (Schatzki, 1996, p.xi). Establishing practice rather than people as the starting point for theorising “human affairs” (Nicolini, 2012, p.162), practice theory moves beyond individualism and abstract social structures (Schatzki, 2012, p.13) to centre the contributions of both humans and non-humans to the organisation and reproduction of social life as well as to related questions of agency and power. From an information literacy perspective, the recognition that human existence is “tied to the context in which it transpires” (Schatzki, 2005, p.467) meant that a practice theoretical framework transferred the focus of the research to the local activities and ways of knowing that make information literacy practices visible (Lloyd, 2010, p.253). The emphasis within practice theory on bodily and material activity further shifted the study towards the centrality of student action as well as the role that tools, technologies and objects play within the development of understanding.

The study applied constructivist grounded theory (Charmaz, 2014) as the method of inquiry. The use of constructivist grounded theory method, which centres the researcher in the construction of meaning, moved the emphasis of the study beyond descriptions of information literacy skills and procedures to facilitate the generation of theoretical understanding about the diversity, complexity and situatedness of student information activities (Hicks, 2018). Qualitative research methods were employed in accordance with the theoretical and methodological stances that guide the study. The use of semi-structured interviews provided a useful entry point into the practices and arrangements that structure a person’s activities (cf. Pilerot, Hammarfelt & Moring, 2017). Interviews took place via a video-conferencing service and explored typical everyday activities in which information was expected to play an important role, such as opening a bank account. The employment of ice-breaker questions as well as verbal and non-verbal cues helped to mediate the inherent communication limitations of video-conferencing tools.

The study also employed photo elicitation research methods to generate additional insight into participants’ information activities. Photo-elicitation methods enriched and extended data collection by centring participants’ situated ways of knowing as well as providing the means to elicit tacit knowledge that was hard to put into words (Hicks & Lloyd, 2018). Participants were asked to take photos of anything that had helped them to settle into or learn about their new setting. These photos were subsequently discussed at the second interview rather than forming an object of analysis in their own right. The use of a follow-up interview also helped to limit the risk that participants could use photographs to misrepresent their activities. Data were analysed comparatively using constructivist grounded theory (Charmaz, 2014) and situational analysis methods (Clarke, 2005), which further helped to draw attention to the site as the context in which social life transpires (Schatzki, 2005).

The study’s sample comprised 26 participants, who were each interviewed twice for a total of 52 interviews. Participants were selected through a maximum variation purposive sampling strategy and comprised students from the UK, the US, Australia and Canada who were engaged in a language-learning oriented study, work or volunteer placement overseas for a period of between three and 12 months. The use of theoretical sampling after the first round of interviews helped to broaden participant recruitment.

3.2 Findings
Findings from this study indicated that students engaged in a variety of information activities as they attempted to rebuild understanding within an unfamiliar information environment. Calibrating, which refers to the adjustments that language-learners made through comparison to knowledgeable others, constituted the first of the two major categories of
activities that were identified within this study. Forming a mechanism through which students built and evaluated their understandings of the local information environment, calibrating was composed through the information activities of *sifting*, which helped students to identify the core characteristics of a setting; the *observing* of others and of themselves to become aware of local practices; the *checking* of information, which helped students to validate their activities within a setting; and the *noting* of information, which enabled them to regulate their performance over time. The credibility that language-learners ascribed to local authority illustrates the important role that knowledgeable others, who include locals and native speakers as well as recently-returned students, play in helping newcomers to map and orient themselves to local understandings of practice. At the same time, the emphasis within calibrating on adjustment demonstrates how knowledgeable others also provide the feedback that language-learners need to assess and regulate their own performance within a new setting. The recognition that recently-returned students help to reassure as well as to inspire new language-learners further acknowledges the emotional support that knowledgeable others provide at this time.

Repositioning, which refers to how language-learners situated themselves within and in relation to an information environment, constituted the second of the two major categories of information activities that were recognised in this study. Forming the means through which language-learners managed their participation within a new social context, repositioning was constituted through the *triaging* of information questions and interactions, which helped students to channel their engagement overseas, the *mediating* of information to validate their expertise within a setting and the *archiving* of information, which enabled students to uphold their credibility as a language-learner over time. Taking place concurrently with calibrating, repositioning emerged in response to the linguistic, cultural and physical barriers that limited language-learner opportunities to engage with information within a new setting. The emphasis on negotiation and alignment, which echoes the learning dynamics that are found in the concept of legitimate peripheral participation (Lave & Wenger, 1991), illustrates how language-learner engagement within a new information environment is constrained as well as enabled through social interaction. At the same time, student attempts to redefine themselves in terms of collectively-agreed upon ways of engaging with information also demonstrates their growing confidence and expertise within a setting as well as the active role that they play in moulding the shape of their information landscapes.

Language-learner information activities were subsequently drawn together under the overarching theme of mitigating risk. The overarching theme of mitigating risk demonstrated how the uncertainty that was produced through student engagement within a new information environment and intensified by the brevity of their stay overseas led to the establishment of academic, financial and physical risk. The potential impact of these pressures on student time abroad subsequently catalysed the enactment of information literacy practices as language-learners were forced to negotiate and mediate the demands of this overseas sojourn. In establishing knowledgeable others as a trusted template against which they could calibrate their information activities, language-learners mitigated the risks of their new settings by orienting themselves towards the people and the objects that they perceived to form the most reputable guide to local ways of knowing. Similarly, language-learners mitigated the risk of remaining detached from the learning opportunities or affordances of their new information environments by purposefully resituating and repositioning themselves in relation to local and native speakers. Information literacy, as represented by calibrating and repositioning, is subsequently positioned as structured by
students’ varying goals for their time overseas as well as the sociocultural conditions that constrain and enable the construction of new information landscapes.

4. The grounded theory of mitigating risk and information literacy

These research findings were subsequently conceptualised through the lens of the study’s theoretical framework as well as the theoretical constructs of cognitive authority and affordance to produce the emergent grounded theory of mitigating risk. The grounded theory of mitigating risk states that the risks that are produced through engagement within a new information environment catalyse the enactment of the information literacy practices that mediate transition to and within a new setting. This theorisation, which emerges through the application of constructivist grounded theory (Charmaz, 2014), is interpretive and centres on the production of abstract understanding about participant realities rather than forming a decontextualised generalisation, as is found in a positivist definition of theory (Charmaz, 2014, p.229). The important role that the construction of new information landscapes plays within the theorisation of the study’s findings means that the grounded theory of mitigating risk has a number of implications for our understanding of information literacy.

4.1 Catalysts for information literacy practice

One of the main premises for the grounded theory of mitigating risk is that information literacy is catalysed through the risks that this time overseas poses for language-learners. The emphasis on risk, which is constituted by the stresses and strains that are produced within an unfamiliar setting (explored later on), draws attention to the complexity of the dynamics that underscore engagement within a new information environment. More specifically, the recognition that student information activities are shaped by the potential impact that risk has upon their goals for this time overseas illustrates how information literacy is constructed in relation to the changing meaning that an event holds for a person instead of merely being linked, inevitably, to a physical move. Demonstrating how information activities are prompted rather than forming a set of pre-established understandings, the evolving shape of student activity illustrates that information literacy is shaped by both the space and the boundaries of situated material culture. At the same time, the focus on subjectivity, which links immaterial feelings, experiences and perspectives with the material conditions of a site (Burnett, Merchant, Pahl & Rowsell, 2012), means that the grounded theory of mitigating risk also decentres over-materialised conceptions of situated practice (Burnett et al., 2012, p. 90) to position information literacy as flexibly and multiply located.

The grounded theory of mitigating risk consequently positions the concept of risk as central to information literacy practice. Risk has typically been understood in terms of the risk society (Beck, 1992) or the health and safety-driven culture of blame and responsibility that is perceived to structure everyday life in the West (Tulloch & Lupton, 2003). Within the confines of this institutionally-centred framing of late modernity, information has been seen to either cause risk (when information is lacking) or to form the means through which people can, as responsible citizens, “ward off” potential dangers and hazards (Tulloch & Lupton, 2003, p.77). From this perspective, information literacy is positioned as helping people to develop the knowledge that will enable them to avoid or diminish objective threats. However, when risk is examined through a sociocultural lens (Douglas, 1992), it can be seen as localised and contextual rather than as centred upon calculated predictions. More specifically, the related theory of edgework (Lyng, 1990), which emerged through studies of voluntary risk-taking, highlights how an engagement with risk can be pleasurable as well as
centred upon self-fulfilment. The recognition that skydivers “spend more time preparing for a jump than they do making it” (Lyng, 1990, p.874) further demonstrates how risk is mediated through planning rather than through luck and mental toughness. An emphasis on growth as well as the development of skilled performance means that the grounded theory of mitigating risk establishes information literacy as the means through which people take control of their new setting as well as the boundaries of their own body (Tulloch & Lupton, 2003).

Uncertainty forms one of the two major influences that combine to produce the risks that structure student time overseas. The unfamiliarity of a new information environment and the loss of customary support structures creates uncertainty that contributes to the build-up of pressure within a new setting. Uncertainty has most famously been explored within library and information science through Kuhlthau’s Principle of Uncertainty (1993) as well as in Wilson’s uncertainty project (1999). Characterised as emerging from a lack of understanding, a gap in meaning or a limited construct (Kuhlthau, 1993, p.347), uncertainty has, like risk, typically been positioned as creating anxiety that is reduced by the addition of information (Kuhlthau, 1993; Wilson, 1999). Seen in this light, information literacy alleviates uncertainty by connecting people to relevant information. At the same time, language-learner engagement in triaging, where students ignore information to minimise information overload as well as to reposition themselves within a new information landscape, demonstrates how information literacy centres on the extension of uncertainty as well as its reduction. Similarly, language-learner engagement in noting and archiving illustrates how uncertainty is mediated through a wide range of organisational and creative information activities, rather than merely through information seeking, as Kuhlthau (1993) asserts. The grounded theory of mitigating risk consequently demonstrates how uncertainty plays a generative role within the practice of information literacy rather than uniquely being seen as undesirable. The recognition that uncertainty catalyses a variety of purposive and self-protective activities also illustrates how information literacy facilitates the management of emotional turmoil rather than being impeded by the stress of this time.

Time forms the second of the two major influences that combine to create the risks that structure student engagement within an unfamiliar environment. The short time-frame of students’ stays overseas exacerbates the pressures of a new setting by creating what is perceived to form a one-off opportunity to profit from this time abroad. The creation of a “temporal constraint” (Savolainen, 2006, p.116) upon language-learner engagement within a new information environment positions information literacy as shaped as much by when a person seeks information as by what they seek (McKenzie & Davies, 2002, p.4). Time also refers to temporality, which refers to the “past-present-future dimensionality of activity” (Schatzki, 2012, p.18). Drawing upon the work of Heidegger (1928, trans. 1962, Int. II: 18), who asserts that time forms the means through which human existence is united, Schatzki’s (2012, p.19) understanding of temporality illustrates how language-learner information activities are simultaneously fashioned amid entities (which constitute the present) as well as directed toward an end (which constitutes the future) from what motivates (which constitutes the past). Drawing attention to students’ home universities’ prior expectations for this time as well as their current encounters abroad and their motivations for future linguistic fluency, the grounded theory of mitigating risk illustrates how time and temporality shape information literacy practices rather than forming an abstract container in which activities occur (cf. Savolainen, 2006, p.113). The addition of a temporal dimension to the more spatially-focused idea of an information landscape (cf. Schatzki, 2013, p.97) also reinforces how information literacy is both interpreted and continually unfolding as people actively reflect upon their actions in relation to broader social processes.
4.2 Information literacy practice

The second main premise of the grounded theory of mitigating risk is that information literacy plays a key role in helping language-learners to mediate the risks that structure their time overseas. The emphasis on skilled and knowledgeable performance, which positions information literacy as a complex social and material practice that enables people to become situated within a specific community setting (Lloyd, 2010), means that the grounded theory of mitigating risk has a number of implications for our understandings about the shape of information literacy as well as the ways in which it contributes to the development of knowing.

Practice theory states that practices are central to the production and reproduction of all organisational and social structures (Nicolini, 2012, p.8). Composed, from a Schatzkian perspective, of constellations of human activities (Schatzki, 2012), practices are also positioned as organised through understandings that connect the various elements of practice together. From an information perspective, the recognition that practice only exists through the performance of activity confirms that information literacy reflects what is happening in the world rather than centring on discrete skills and competencies (e.g. ACRL, 2015). The mundane and everyday shape of language-learner information activities further illustrates how information literacy is both made and remade in practice as people draw on the resources that they have available to them within a specific setting. At the same time, the emphasis that language-learners place on acceptable practice, as their engagement in checking the credibility of the information sources that they propose to use demonstrates, means that the grounded theory of mitigating risk also demonstrates that information literacy is organised through shared practical understandings about how to identify and carry out these actions (Schatzki, 2002). The acknowledgement that the activities of a practice are linked rather than being pre-determined moves the focus of information literacy towards an exploration of the ways in which ‘knowing how’ guide and shape information interactions. The emphasis on context is also particularly important for information literacy research, where, despite recent attempts to acknowledge the impact of collaborative spaces upon information literacy (e.g. ACRL, 2015), information activities continue to be positioned as composing a solitary academic practice (Hicks, 2018b).

The recognition that language-learner information activities are shaped by collective understandings about how information is located and valued within a setting also sheds light on the ways in which information literacy scaffolds situated ways of knowing. On one level, the role that information activities such as sifting play in helping language-learners to orient themselves to key physical features within their new context illustrates how information literacy facilitates the mapping of information sources that support the broader practice of language-learning. More intricately, however, student engagement in information activities that help them to position themselves in relation to others demonstrates how information literacy also supports a reflexive examination of their own engagement in language-learning practices, which fulfils a key goal of language-learning education (MLA, 2007). The important role that social support plays during student time overseas, as evidenced by student engagement in mediating information, provides a further example of the ways in which information literacy facilitates the construction of language-learning practice. As a consequence, the grounded theory of mitigating risk positions information literacy as a dispersed practice that happens within broader and more complex integrative practices (cf. Lloyd, 2010, p.246). Dispersed practices course through social life (Schatzki, 2002, p.88) yet reflect the social, historical and political features of the integrative practice in which they
circulate (Schatzki, 2002, p.88). As a practice that facilitates immersion and participation within local activity, information literacy is consequently positioned as hanging together with other dispersed practices and projects to facilitate knowing of a particular setting.

4.2.1 Cognitive Authority
The recognition that language-learners mediate the risks of a setting through calibrating their activities against the actions of knowledgeable others means that the grounded theory of mitigating risk highlights the important role that objects and people who are already embodied within a local setting play in mediating learner engagement overseas. 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 the impact of these relationships upon information literacy. The emphasis on authority, which refers to the justifiable influence that an information source has upon a person’s understanding, illustrates how, within an unfamiliar setting, information literacy centres on the assessment of credibility as well as the establishment of degrees and spheres of competence. At the same time, the acknowledgement that cognitive authorities also proffer useful advice about “how to treat certain pieces of information” (Wilson, 1983, p.17) illustrates how information literacy centres on the rebuilding of trust as much as the recognition of expertise. Developed from social epistemology, the concept 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 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.

Most importantly, the concept of cognitive authority illustrates how the people and the objects that are at the centre of information literacy practices are accorded influence. Locals and native speakers form one of language-learners’ 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,” the local and native speaker’s physical proximity as well as their cultural heritage and long-term exposure to a target language means that their expertise is perceived to be both justifiable and reliable. The recognition that local mastery is particularly prized by language-learners (and teachers), who often position native speakers as an object of desire and an ideal to be emulated (Kramsch, 2013), means that the grounded theory of mitigating risk confirms the value that is accorded to insider ways of knowing within information literacy practice (Lloyd, 2017). At the same time, the important role that recently-returned students play within language-learners’ time overseas illustrates that local knowledge must be broadly understood. The emphasis on returned students’ successful prior accomplishments, which, in forming what Wilson (1983, p.23) refers to as an “index of special competence” fill newly arrived students with confidence, illustrates that information literacy is shaped affectively as well as in relation to competence and expertise. Coupled with the understanding that this authority of experience is transferred (Wilson, 1983, p.22) to the guidebooks and travel websites through which students sift, information literacy can be seen as centred on the reflexive moulding of trust and credibility rather than “discrete evaluation event[s]” (Rieh, 2010, p.1342).
Beyond extending understanding about the shape that judgements of relevance take within an unfamiliar setting, the concept of cognitive authority illustrates the role that these knowledgeable people and objects play within information literacy practice. As Jordan (1997, p.58) points out, authoritative knowledge emerges and is shaped through local structures of accountability (Jordan, 1997). The recognition that language-learners establish a variety of cognitive authorities during their time overseas consequently illustrates how information literacy centres on a negotiation of the ways in which communities legitimise (and devalue) knowledge structures rather than merely on the recognition of specialist expertise. At the same time, the emphasis on collective understanding means that the role of cognitive authorities cannot merely be limited to that of a community guide. Instead, the recognition that practice is constituted through performance illustrates how interaction with the people that Shove & Pantzar (2007) refer to as the “carriers of practice” facilitates language-learners' development of expertise as well as their transformation into a source of expertise for others. Illustrating how cognitive authorities create a route from the periphery to the centre of practice (Lave & Wenger, 1991), the grounded theory of mitigating risk consequently demonstrates how information literacy is shaped in relation to broader questions of power and powerlessness as well as fluid conceptions of expertise.

4.2.2 Affordance
The recognition that language-learners mitigate risk through repositioning themselves in relation to their new information environments consequently expands these ideas by demonstrating how information literacy practices are constrained as well as enabled through the actions of cognitive authorities. The theoretical construct of affordance, which refers to the participatory possibilities for action that a setting offers, provides a useful way to explore how information literacy is shaped through the conditions of a site rather than purely through individual efforts or readiness. The concept of affordance was originally coined by Gibson (1977) to refer to what a physical environment "offers animals, what it provides or furnishes for good or ill" (Gibson, 1977, p.68). Since then, Billett (2001) has explored affordance in terms of learning, which he positions as facilitated and inhibited through the opportunities that an institutional structure offers to participate in its activities. Within a new overseas setting, an emphasis on affordance demonstrates how language-learners mitigate risk through learning to perceive the opportunities that enable them to construct their new information landscapes. At the same time, the recognition that these opportunities are shaped in relation to the “invitational qualities” (Billett, Barker, Hernon-Tilling, 2004, p.233) of a surrounding community draws attention to the negotiated shape of practice as well as raising further questions about the power structures that regulate engagement within a new information environment.

Most simply, the concept of affordance illustrates that information literacy is shaped in relation to the opportunities that a new setting offers to engage with information. As the according of cognitive authority demonstrates, some of the most meaningful affordances of residence abroad are furnished by locals and native speakers, who facilitate access to the shared values and beliefs of a setting. These interactions can be formal; pre-departure orientations that are led by recently-returned students, for example, provide a useful introduction to what is valued within local practices. However, embodied knowledgeability means that locals and native speakers also provide language-learners with a number of “unintended” learning opportunities (Billett, 2001, p.211). Language-learner engagement in observing, for example, which includes listening as well as other forms of sensory engagement, demonstrates how information literacy centres on co-participation as well as
the need to understand both competence and performance within a setting. The recognition that interactions with more knowledgeable others catalyse the reflexivity that enables language-learners to develop intersubjective understandings of practice further illustrates how information literacy cannot always be premised on intentional teaching and learning strategies. Instead, the impact that these social affordances have on performance means that the grounded theory of mitigating risk provides a vivid illustration of how information literacy is shaped by pedagogical “space-time configurations” that regulate the rhythm, shape and scope of everyday life (Fenwick, 2006, p.694).

Conversely, the affordances of a setting also constrain language-learner access to information; as Gibson (1977, p.77) points out, “some offerings of the environment are beneficial, and some are injurious.” The recognition that language-learners’ perceived competence may be judged through physical characteristics such as personal appearance, including race, gender, attire and accent (cf. Billett, 2001, p.210), as student engagement in triaging demonstrates, illustrates how their opportunities to participate within a setting and, as a consequence, the quality and type of information to which they have access, is often limited. Drawing attention to the power structures that impact students’ abilities to develop knowing, local and native speakers’ reluctance to engage with language-learners vividly demonstrates how, unlike in institutional models of practice, information literacy is shaped through rather than in isolation from the messy tensions of practice. The part that a community plays in inhibiting the development of knowing also extends information practices research which, as Kitzie (2019, p.3) points out, has tended to focus on the enabling rather than the constraining roles of affordance.

At the same time, learner agency means that language-students are also 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. In illustrating that students adjust the ways in which they engage with information to work around impediments, a focus on affordance positions information literacy as negotiated rather than as forming “a unidirectional process of socialisation or enculturation...[and] the mere reproduction of situational values and practices” (Billett et al., 2004, p.237). The realisation that language-learners reposition themselves within their new setting through their growing expertise as well as through “self-preservation” (Billett et al., 2004, p.235) strategies, such as isolating themselves from the stress of their new situation, further demonstrates that information literacy is shaped emotionally as well as in relation to growing knowledgeable. The emphasis on the ways in which language-learners manipulate their engagement within a new information environment means that the grounded theory of mitigating risk also extends information practices research that positions individuals as “agents that tactically leverage technical features, such as a blank search box, to achieve desired outcomes” (Kitzie, 2019, p.6).

5. Discussion

The grounded theory of mitigating risk constitutes an interpretive and emergent conceptualisation of the ways in which newcomers rebuild understanding within an unfamiliar information environment. Its implications for information literacy illustrate the value in theorising the information activities in which learners participate as well as the importance of continuing to develop increasingly sophisticated insight into the ways in which they construct their information landscapes.
5.1 Time and temporality

One of the most valuable considerations that emerged from this study is a recognition of the important role that time plays within information literacy. Time has rarely formed the focus of information literacy research beyond a recognition of the important role that time plays within teaching practices (e.g. Drabinski, 2014; Nicholson, 2016). Instead, information literacy has most typically been positioned as either a sequential or an iterative process that stretches unproblematically from past to future (e.g. ACRL, 2015; Kuhlthau, 2004). However, the recognition that chronological time constraints catalyse language-learner information activities means that the grounded theory of mitigating risk demonstrates how information literacy must be understood as shaped by time rather than being reduced to simplistic models of developmental progress. Similarly, the focus on temporality, which illustrates that language-learner information activities are structured through prior experiences and future motivations as well as ongoing encounters, offers another example of how information literacy is moulded through time rather than merely bounded by its passing. Challenging typical perceptions of the role that time plays within information literacy, the grounded theory of mitigating risk underlines the importance of continuing to explore the impact of chronology and temporality upon the development of knowing.

Time and human agency forms one such interesting avenue of research; the active ways in which language-learners shape their engagement overseas suggests that information literacy cannot uniquely be seen as structured through the passing of time. Instead, the recognition that language-learners construct time through the information activities in which they engage demonstrates how time can also be seen as playing a generative role within information literacy. The information activities of sifting and archiving, for example, demonstrate how language-learners make time as they engage in future-oriented preparatory activities. In contrast, student engagement in triaging demonstrates how they suspend time as they distance themselves from feelings of being overwhelmed. The information activities of checking and noting, which link language-learners' past, present and future actions, further illustrate how information literacy is structured through the connections that learners make across time as they look to coordinate and reproduce consistent performance within the confines of their setting. Highlighting the importance of moments in time, the grounded theory of mitigating risk demonstrates that information literacy is shaped through a learner's attunement with a setting as they seek to create a “window of opportunity” (McKenzie & Davies, 2002, p.9) in which they can meet the demands of an unfamiliar information environment. The emphasis on synchronisation also demonstrates how information literacy both extends and condenses language-learner timescales as well as facilitating the construction of temporal relationships within and between new social worlds.

More subtly, an emphasis on time and temporality means that the grounded theory of mitigating risk challenges the ways in which situated understandings of information literacy has been understood within a teaching context. It has not been until recently that institutional models of practice have started to engage with the context-specific shape of information literacy, as evidenced by the emphasis that the new ACRL Framework (2015) has placed upon collaborative “learning communities” and the flexible implementation of instructional models. However, despite the growth in enthusiasm for what has been termed “authentic practice” (e.g. Farrell & Badke, 2015), a focus on situated information literacy tends to have been interpreted in practice as students' socialisation into fixed and static disciplinary structures (e.g. Farrell & Badke, 2015, Walk, 2015; Grafstein, 2002). Even models of critical information literacy, which have extended understanding of “the socio-cultural forces
underlying information production, consumption, and the ideologies that often underlie information literate behavior and its teaching” (Farrell, 2012) have failed to move substantially beyond stratified and institutionally-centred subject-specific understandings of practice (Hicks, 2018b).

Conversely, the grounded theory of mitigating risk challenges the tendency to equate situated information literacy with stable models of practice. The transience of the oral stories and gestures that facilitate language-learner knowing, the ephemerality of information activities associated with travel, which include mediating information through fluid technologies such as SnapChat and Skype, and the fragile impermanence of noting and annotating means that a temporal lens challenges the typical focus on enduring models of expert activity. The recognition that information literacy is catalysed rather than forming a timeless model that transcends time and place further illustrates how information literacy connects learners to continually unfolding dynamics rather than to isolated norms and homogenous institutional cultures. Centring attention on the implications of a learner’s engagement within an information environment, an emphasis upon time and temporality consequently illustrates how situated approaches to information literacy are shaped by the “day-to-day ‘doing’ and ‘being’” that is involved with disciplinary practice rather than abstract future achievement (Gourlay, Hamilton & Lea, 2013, p.9). These ideas have a number of implications for the ways in which situated approaches to information literacy are taught within the classroom.

5.2 Social mediators

Beyond illustrating the importance of time within language-learner information activities, the grounded theory of mitigating risk extends understanding about the ways in which social mediators shape information literacy. Social mediators have long been seen to play a key role in the reconstruction of knowing. Typically positioned as the expert who draws the novice into a field, which reflects Lave and Wenger’s (1991) model of legitimate peripheral participation, social mediators are valued for their ability to engage learners with community-based and experiential understandings of a setting (Lloyd, 2005). However, the important role that locals and native speakers play in providing feedback on student performance and understanding, as illustrated by language-learner engagement in calibrating, means that the grounded theory of mitigating risk illustrates how information literacy centres on the coordination and regulation of practice as well as upon an exposure to new ways of knowing. At the same time, student engagement in repositioning, which forms a purposeful response to the linguistic, cultural and physical barriers that limit their opportunities to engage with information within a new setting, demonstrates how social mediators constrain as well as enable the enactment of information literacy practice, which is also seen in Gibson’s (2018) work with Black and Latina tween information seekers. Isolation from the groups of people that help language-learners to mediate their engagement within a new information environment means that the grounded theory of mitigating risk provides a vivid illustration of how social mediators both give and deny people the ability “to do things and to think of themselves in a specific way” (Nicolini, 2012, p.6).

The variety of roles that social mediators play within information environments means that the grounded theory of mitigating risk extends understandings about the affective dimensions of information literacy. Affect and emotion have a chequered history within information literacy research. While Kuhlthau (2004, p.6) recognised that feelings “have some import” upon the ways in which people engage within information, emotion has since primarily been understood as an impediment to the acquisition of information literacy skills,
either because ‘positive’ affective behaviours are lacking (e.g. Schroeder & Stern Cahoy, 2010) or because ‘negative’ emotional characteristics are perceived to delay learning (e.g. Matteson, 2014). These perspectives reflect scholarship that sees emotion as irrational or “the antithesis of reason” (Lupton, 1998, p.3) and position information literacy as “best learned by the body at rest and ready for cognitive acts of encoding, decoding, and comprehending” (Lenters, 2016, p.286). However, the important roles that social mediators play within the grounded theory of mitigating risk illustrates how the affective dimensions of information literacy can be seen in a far more nuanced light. Student involvement in mediating, which helps them to build and maintain the emotional support that they need to engage overseas, demonstrates how affect can both augment and diminish an individual’s capacity to engage in new information activities (cf. Gherardi, 2017, p.348). The recognition that recently returned students as well as co-located peers help language-learners to build the confidence that they need to reposition themselves within a setting further illustrates how information literacy is shaped through rather than in opposition to students’ emotional needs. Students’ lack of connection with social mediators, which creates the feelings of loneliness that drive their engagement in mediating and triaging, provides a further example of how information literacy is shaped rather than constrained by emotional and affective responses. At the same time, the social underpinnings of the discrepancies that students feel within an unfamiliar environment means that the grounded theory of mitigating risk reinforces how information literacy is shaped in response to collective rather than individual emotional interpretations.

A focus on social mediators also has a number of implications for the ways in which the concept of information evaluation is understood within information literacy teaching practices. Information evaluation plays a prominent role with information literacy instruction. Centring upon the quality of a specific information source and ascertained through an examination of a source’s physical characteristics, as various checklists attest (e.g. Meola, 2004), information evaluation has typically been positioned within information literacy instruction as the assessment of individual pieces of information. The emphasis on the information source, which further tends to be understood as textual rather than as social or physical, is still maintained even when its authority is positioned as both constructed and contextual (ACRL, 2015). However, the important role that cognitive authorities play in helping language-learners to rebuild trust within a new setting illustrates how information evaluation often centres upon an assessment of the people who provide access to information rather than uniquely on the specific piece of information itself. The positioning of social relationships and connections at the heart of judgements about credibility means that the grounded theory of mitigating risk illustrates the emotional as well as the cognitive dimensions of information evaluation. The key role that local perceptions of competence and expertise play in the assessment of reliability and accuracy further highlights how information evaluation is both nuanced and intersubjectively shaped.

5.3 Information creation

The important role that noting, mediating and archiving play during student time overseas means that the grounded theory of mitigating risk also signals the importance of information creation to information literacy practice. Like the concept of time, information creation has not typically been recognised as key within either information literacy or the broader field of information practices (Kitzie, 2019, p.6). Referring to how people “make contributions to the information world” (Koh, 2013, p.1826), information creation, which differs from the ‘Information Creation as a Process’ frame of the ACRL Framework (ACRL, 2015), has more
commonly been seen as the final product of information literacy or as a way to present content (e.g. Koh, 2013). However, the various informative objects that language-students produce during their time overseas suggests that information creation plays a more significant role within information literacy than has previously been assumed. Constituted, within this study, through archiving, in terms of the souvenirs and scrapbooks that students create to memorialise their stay overseas as well as noting, where students use temporary photos, annotations and screenshots as memory aids, information creation also encompasses mediating, through the stories that students present and share. These informational objects fulfil a range of individual purposes and needs rather than constituting formal outputs. However, in helping students to manage their participation in an unfamiliar setting, the grounded theory of mitigating risk demonstrates that information creation supports the enactment of information literacy practices in a number of ways.

Most simply, a focus on information creation means that the grounded theory of mitigating risk demonstrates how information literacy centres on the organisation of information. The unfamiliarity of a new information environment means that language-students must learn to reproduce as well as to access the shared practical understandings that structure their information literacy practices (cf. Schatzki, 2002). The creation of information forms the means through which they are able to firstly, describe and secondly, regulate these understandings as they seek to maintain their engagement overseas. Student participation in noting, for example, demonstrates how information literacy centres on the temporary stabilisation of practice as learners substantiate and refine their performance within a new setting. The production of temporary memory aids such as screenshots, which parallels the activities of the tourist who uses notes to “botch” or work around his lack of internet access in Haider’s (2017) study of search practices, further illustrates how information literacy is standardised or coordinated through the formalisation and materialisation of practice. The recognition that annotations and photos allow language-students to reliably reproduce their information activities over time further demonstrates how information literacy is structured through the ongoing monitoring and adjustment of activity, which is similar to what Cox, McKinney & Goodale (2017) found with the production of food logging diaries.

Beyond providing practical support for the enactment of information literacy practices, information creation also helps students to situate themselves in relation to local ways of knowing. The process of creating an archive, which centres on the recursive selection and collection of local cultural knowledge, such as newspapers and tickets, or a story, where students select, organise and connect events, illustrates how information creation facilitates an immersive and reflexive engagement with cultural narratives. The recognition that archiving furnishes tangible evidence of students’ stay overseas as well as, through the irreproducing of the artefacts, a marker of knowledgeability that only comes with being present, further stresses how information creation facilitates a learner’s positioning within and in relation to a new setting. Storytelling, which involves the creation of narratives that are shared with friends and family fulfils a similarly important role in helping students to reflect upon, or reshape, reassess and reconstruct their expertise within a setting (McDrury & Alterio, 2003). Mediating and archiving also enable students to build a personal narrative and a stabilising sense of continuity during 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.” Enabling language-students to both recognise and be recognised for their own expertise, information creation consequently supports the interpretation and
performance of transformative identity work, which parallels findings from Kitzie’s (2019, p.6) study of LGBTQ+ millennials.

The importance of information creation during student time overseas means that the grounded theory of mitigating risk draws attention to the role that materiality plays within information literacy practices. Lloyd’s (e.g. 2007) work with firefighters and emergency services workers means that corporeal and embodied aspects of information literacy practice have been examined in detail; within these framings, the body is positioned as a vital information source as well as an important site of knowledge. However, the implications of other material aspects of practice, which encompass "tools, technologies, bodies, actions and objects" (Fenwick, 2010, p.69), have been less commonly explored (although see Pilerot, 2016), despite their prominence in practice theoretical and socio-technical approaches to research (Tuominen et al., 2005). In contrast, the range of everyday and ephemeral material objects that support language-student engagement within a new information environment means that the grounded theory of mitigating risk draws attention to the ways in which structures and spaces insert themselves into information literacy practices. The recognition that student memories and feelings materialise in souvenirs and local artefacts raises a number of questions about the connections between the temporal and the material, including the role that autobiographical, practice and social memory plays in the prolongation of activity. The unfolding shape of technologies, which are often implicated yet black-boxed within information literacy research (cf. Gourlay et al., 2013, p.6), further foreground a consideration of the impact that these tools have upon the production of subjectivity as well as the broader configuration of practice. Highlighting questions of control and agency, an emphasis on matter consequently illustrates the need for research that explores the relationships between information creation and materiality in more detail as well as the role that material affordances play in shaping, perpetuating and supporting the development of knowing.

6. Conclusion

This paper has conceptualised information literacy through the lens of the grounded theory of mitigating risk (X, 2019). Providing a localised theorisation of language-learner activity overseas, the grounded theory of mitigating risk illustrates how information literacy forms a complex social practice that is catalysed and shaped through the concept of risk. In offering a theoretical interpretation of the social dynamics of this period, as well as students’ goals and motivations for their time overseas, the grounded theory of mitigating risk also uses shared and participatory experiences to create emergent and practical insight into temporal, situated, affective and creative dimensions of information literacy. Findings from this paper consequently illustrate the importance of continuing to build theoretical understanding in relation to how information literacy is manifest. Given that practice theory is under-utilised within information literacy research, findings also point to the key role that this theoretical framework can play in facilitating information literacy theory-building, as well as the need to explore these ideas further. While the grounded theory of mitigating risk needs to be examined within other contexts to determine its use in explaining transitional activities, it is clear that an emphasis on theory-building leads to a rich and complex set of understandings about the multitude of ways in which information literacy impacts upon the coherence of social life.

7. References

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