

Developing the methodological toolbox: Grounded theory, information literacy and visual research

Abstract:

The growing complexity of information environments calls for a reconsideration of the ways in which grounded theory method is employed within library and information science (LIS). This methodological discussion explores the synergies between grounded theory, information literacy and visual research to establish a research agenda for the extension of grounded theory method within LIS. The discussion draws upon recent theoretical and methodological advances to outline the challenges and opportunities of the proposed shift in focus for the development of a LIS researcher's methodological toolbox. The ongoing exploration of grounded theory method is vital for the creation of richer and more complex theorising about the ways in which people engage with information within evolving settings and spaces.

1. Introduction

Grounded theory provides a method for the collection and analysis of data that can lead to the construction of theory (Charmaz, 2014). Emerging in the 1960s through the work of two sociologists, Barney Glaser and Anselm Strauss, grounded theory (Glaser & Strauss, 1967) has since developed distinctive practically-focused (Strauss & Corbin, 1990) and constructivist versions (Charmaz, 2014). Frequently used within LIS to explore how research participants understand and interpret the ways in which they engage with information (Mansourian, 2006), grounded theory has also been credited as playing an important role within the turn towards qualitative research (Westbrook, 1994).

Notwithstanding, the evolving shape of research practices as well as changing social priorities calls for an ongoing interrogation of the ways in which grounded theory is employed within LIS. This methodological discussion explores the synergies between grounded theory, information literacy and visual research to present a research agenda for the continued elaboration of grounded theory method within LIS research.

2. Research problem

Grounded theory has been employed within LIS since the 1980s (Mansourian, 2006), where it has been used to produce a number of well-known LIS theories, including Mellon's (1986) theory of library anxiety, Kuhlthau's (1988) information search process and Ellis' (1993) model of information-seeking behaviour. However, since these early studies, the use of grounded theory has predominantly been confined to the domain of information behaviour (Mansourian, 2006; González-Teruel & Abad-García, 2012) rather than being used in the related field of information literacy, with a few exceptions (e.g. Lloyd, 2007). This lack of methodological application is problematic because it excludes literacy and learning practices from grounded theoretical accounts of information activities. LIS studies that adopt a grounded theoretical approach have further tended to rely on researcher rather than participant-driven observations and discussions of information interactions, with nearly 50% of the studies identified by González-Teruel and Abad-García (2012) employing interviews as the sole research method. The exclusion of participatory approaches to data collection such as visual methods presents issues because it restricts grounded theory analysis to outsider rather than to the harder-to-access emic or insider viewpoints that are revealed through the adoption of a participant-centred approach.

The value in extending both the reach and the scope of grounded theoretical research comes from the production of richer and more complete understandings about the ways in which people engage with information. On the one hand, greater knowledge of grounded theory method creates opportunities for researchers to produce increasingly rich conceptualisations of information literacy. The creation of theoretical complexity is important given the evolving shape of information literacy research as well as growing interest in research-driven approaches to the development of information literacy teaching interventions. On the other hand, a better grasp of how visual research methods diversify grounded theory method facilitates the construction of more detailed and robust analytical accounts of empirical events. The ability to integrate participants' multimodal representations of their understandings into grounded theoretical research is vital given changing understandings of the value of participatory methods within LIS. An examination of the connections between grounded theory, information literacy and visual

research will subsequently provide LIS researchers and teaching librarians as well as scholars from outside the field who employ a grounded theoretical perspective with the understandings they need to continue developing and expanding the LIS methodological toolbox.

3. Literature review

3.1 (Constructivist) grounded theory

Grounded theory, which refers to both the method as well as the final product of inquiry (Charmaz & Bryant, 2008), emerged in the 1960s as researchers sought to develop newly established qualitative research methods (Thomas & James, 2006). Providing the means to analyse qualitative data as well as to generate theory (Charmaz & Bryant, 2008), grounded theory was rapidly adopted by researchers who were looking for a solution to the problems of working meaningfully through findings from their research interactions (Thomas & James, 2006, p.768). In further facilitating the explanation of “fundamental social patterns” (Glaser & Holton, 2004) or processes, grounded theory furnished researchers with both the “epistemological critique” (Charmaz, 2014, p.7) and the methodological strategies to explicitly explore (and remain faithful to) the ways in which people interpret and assign significance to their engagement in the world. Established through the publication of Glaser and Strauss’ 1967 book, *The Discovery of Grounded Theory*, and later developed by Strauss and Corbin (1990), grounded theory has since been adopted in numerous fields (Clarke, 2007), including LIS.

By the turn of the twenty-first century, however, the emphasis within Glaser and Strauss’ original conception of grounded theory on “awkward scientific terms” (Charmaz, 2000, p.525), as well as a neutral observer and objective reality had led to accusations that grounded theory still maintained “tastes and flavors of 1950s and 1960s styles of American positivism” (Clarke, 2007, p.429). To this end, Charmaz, Bryant and Clarke, among others, started to articulate constructivist, feminist, critical thinking and postmodern interpretations of grounded theory that explicitly responded to these criticisms (Mills, Bonner & Francis, 2006). As the most widely explored of these approaches, constructivist grounded theory recognises a researcher’s positionality within the research process. It also highlights how “both the research process and the studied world are socially constructed through actions” (Charmaz & Bryant, 2008, p.376) rather than forming an objective reality that is discovered through the work of a neutral researcher. Facilitating the creation of interpretive understanding that accounts for both context (Charmaz, 2008) and researcher reflexivity, constructivist grounded theory builds upon the flexibility of Glaser and Strauss’ comparative and emergent approach to data analysis while still retaining a connection to both the data and the participants from whom the emerging theory is derived (Mills et al., 2006, p.12).

3.1.1 Grounded theory and LIS

Grounded theory has a significant history of use within LIS. Arguably first employed by a group of researchers in the United Kingdom in the 1980s (Selden, 2005), grounded theory was also applied in Mellon’s 1986 study of library anxiety to produce what would form one of LIS’ most well-known grounded theories. Structured through the appeal to see research participants as people rather than as objects (Wilson, 1990), these early studies paved the way for a growing acceptance of grounded theory within LIS (Powell, 1999). Since then, grounded theory has predominantly been used within studies of information behaviour (Mansourian, 2006), and particularly in the realm of health research (González-Teruel & Abad-García, 2012). While other LIS researchers have applied a grounded theory approach, for example, in Star’s (1998) study of faceted classification, González-Teruel and Abad-García (2012) suggest that the focus on the person rather than on the system aligns grounded theory methods to the goals and motivations of user studies research, although they note that not all studies document their theoretical propositions.

Most recently, LIS researchers have started to explore ways in which a grounded theory framework can be extended given postmodern concerns about the instabilities and contradictions of social life (Clarke, 2003). Situational analysis, which refers to the use of mapping techniques to analyse complex situations of inquiry (Clarke, 2003), forms one such approach. Centred on the laying out, linking and positioning of the major elements and conditions within a study’s research data as well as,

importantly, the “sites of silence” or elements that are present yet unarticulated (Clarke, 2003, p.561), situational analysis draws attention to the multidimensionality of information sources as well as to the shifting ways in which people engage with information (Sen & Spring, 2013). In further illuminating the “negotiations over power and knowledge” (Greyson, 2015, p.149) that happen within a social world, situational analysis also demonstrates the constantly changing shape of grounded theory methods, as well as their continued value within LIS research. The ongoing relevance and use of grounded theory provide the rationale for a continued exploration of its scope within LIS.

3.2 Information literacy

Information literacy is a complex phenomenon that has been rendered even more complicated by the range of approaches that scholars and librarians have used to frame its theorisation and practice. Traditionally explored as a teaching or learning object (Limberg, Sundin & Talja, 2012), information literacy has since started to become positioned as an object of study in itself, an ontological approach to research that foregrounds how information literacy is organised and shaped rather than how it is taught. Opening up research to the broader contexts in which people act, the focus on how information literacy is made manifest within a specific community extends scholarship beyond the standardised skills that learners have typically been expected to attain (e.g. ACRL, 2000). The recognition that learners have to mediate and negotiate their access to these information environments further illustrates how information literacy is constrained and enabled through the various affordances and power structures that shape everyday life rather than centring on the development of individual dispositions or habits of mind (e.g. ACRL, 2015). Most importantly, the theorisation of information literacy through social theories, including sociocultural theories of learning (Limberg et al., 2012) as well as the lens of social practices (Lloyd, 2011) has ushered in the need for research methods that move beyond a focus on measurement and description. In further positioning information literacy as embodied and mediated through material artefacts rather than as uniquely focused upon a person’s ability to manipulate textual information modalities (Lloyd, 2017), this broader picture of practice also opens up the field to research designs that go beyond a phenomenographic or discourse analytic approach (Limberg et al., 2012).

3.2.1 Information literacy and grounded theory

Information literacy researchers have not typically employed grounded theory method despite its wide adoption within the connected area of information behaviour. Related, perhaps, to the typical emphasis within information literacy research on the measurement of learner skills rather than on the analysis of human activity (Hicks & Lloyd, 2016), a lack of engagement with grounded theory methodologies could also be linked to the predominance of descriptive and best-practice oriented studies in the field (Pilerot, 2014), as well as to the slow growth of related peer-reviewed literature (Sproles, Detmering & Johnson, 2013). The pervasive influence of a phenomenographic approach within Australian and British research literature (Bruce, 2016) could further have impeded a broader exploration of alternative information literacy research designs. However, as studies continue to examine how information literacy is conceptualised and articulated in workplace and everyday contexts as well as in educational settings, the development of information literacy theory (Lloyd, 2017) and the application of increasingly research-oriented approaches to information literacy instruction (e.g. ACRL, 2015) call for a renewed exploration of research methodologies. In effect, the recognition that these studies are leading to the creation of what Bruce (2016) labels as a “collective consciousness” or increased engagement in information literacy research highlights the need for continued discussion about both the scope and the shape of future approaches to research. An exploration of the role that grounded theory can play in extending information literacy research provides one such way to examine these ideas.

3.2.2 The application of constructivist grounded theory in information literacy research.

One of the most meaningful ways in which the use of grounded theory supports the continued expansion of information literacy scholarship is through its positioning of information literacy as a research rather than as a teaching object (Limberg et al., 2012). When information literacy is explored in terms of how it

is shaped rather than how it is taught, emphasis moves from the measurement and description of learner attributes to an examination of the ways in which a community engages with knowledge within a specific setting. In centring the analysis of actions rather than exploring data through pre-established themes or structures (Charmaz, 2014), grounded theory focuses attention on the ways in which information literacy is made manifest within a specific context instead of how well learners fulfil institutional learning goals. In further foregrounding what people are doing as well as how they do this, grounded theory's employment of gerunds and coding for action also draws attention to the broader information activities in which people engage to construct their information landscapes. From a practice theoretical lens, which positions practices rather than people as central to social life, information literacy only exists through the performance of information activities that reflect the ways in which information is created, valued and organised within a specific context (Bonner & Lloyd, 2011). Accordingly, an engagement with information activities develops understandings of information literacy by highlighting how people draw from the knowledge base of their setting as well as the material and social resources that they need to do so (Lloyd, 2017).

Grounded theory's emphasis on what people do rather than "what they do not do when compared to a dominant group" (Larson & Marsh, 2014, p.101) further extends understandings of information literacy by drawing attention to how these information activities are shaped by a person's engagement within a specific context. In anchoring analysis in a detailed examination of an event as well as a person's consequential and compelling concerns (Charmaz, 2014, p.125), grounded theory's use of line-by-line coding, for example, illustrates how information activities reference local or intersubjectively-agreed upon understandings of knowledge rather than forming solitary and individual actions. From a practice theory perspective, information activities are produced through a person's engagement in the world (Feldman & Orlikowski, 2011) as well as, in determining the shape of others' engagement in practice (Schatzki, 2003), belonging to practice rather than forming a possession of a specific person. As a consequence, grounded theory's emphasis on enacted processes or the exploration of data rather than its mapping to existing models moves information literacy research beyond its typical focus on librarian and scholar conceptions of appropriate knowledge (Hicks, 2018a) towards an engagement with both normative and non-normative (Lloyd & Wilkinson, 2016) ways of knowing.

In turn, grounded theory method brings theoretical complexity to understandings of information literacy by raising these information activities to analytical significance. As a practice that is both situated and dialogic, information literacy is enacted through a series of complex interactions about how and why it is manifest within a specific context (Lloyd, 2017). In encapsulating the key social processes that shape people's situated actions, grounded theory's increasingly focused coding and categorising helps to establish how information literacy *works* within a person's life rather than merely focusing on the information sources through which it is enacted. As such, the establishment of a central interpretive frame or explanatory theme extends information literacy research by illustrating both the shape that a person's engagement with information takes and, more importantly, the rationale or reasons for this. By the same token, the emphasis on using relevant theoretical constructs to illuminate the emerging theory means that the use of grounded theory methodology enables the construction of a rich and "focused explication of what it means to be information literate" (Lloyd, 2011, p.284) in a field that is notoriously undertheorised (Todd, 2017). Leading to the construction of contextualised rather than generalisable theory (Charmaz, 2014), the use of a grounded theory approach subsequently lays the groundwork for future information literacy theory-building, as evidenced by the emergence of the first theory of information literacy from Lloyd's (2017) constructivist grounded theory-informed studies of fractured landscapes.

In sum, a grounded theory method extends LIS research by facilitating an understanding of how information literacy is 'grounded' in the everyday activities of people and the happenings of practice rather than uniquely in the ability to navigate models of scholarly communication (Hicks, 2018a). Where grounded theory has previously been adopted within information literacy research, it has been valued for its ability to inform topics on which little research exists (Bury, 2016) as well as for its inductive research approach (Maybee, Carlson, Slebodnik & Chapman, 2015). Moving the focus of information literacy research from the lens of normative educational frameworks and standards to an exploration of how "the

construct of information literacy [is] manifest...” (D’Angelo, 2012, p.642), constructivist grounded theory approaches have also been successfully used to illustrate collaborative aspects of information literacy (Elmore & Stordy, 2015) as well as the rhetorically-driven shape of student engagement in research processes (D’Angelo, 2012). However, while these studies provide insight into the shape of information literacy within different contexts, they are also limited by the tendency to adopt specific aspects of grounded theory analytical processes while stopping short of explicit theory-building. In raising analysis to the construction of theoretical arguments, the use of a grounded theory method consequently extends research by facilitating a more robust conceptualisation of how information literacy is valued and legitimised within specific communities. Exemplified through the prior work of Lloyd (e.g. 2007; Lloyd & Wilkinson, 2016) and Herring (2011), whose studies employ constructivist grounded theory to explore how information literacy shapes and is shaped within a wide range of academic, workplace and everyday life scenarios, information literacy research consequently becomes centred on the complexity of social life rather than on its simplification.

3.3 Visual methods

Referring to “the use of images to learn about the social world” (Hartel, Lundh, Sonnenwald & Foster, 2012), visual methods have not been as widely explored within LIS (Hicks & Lloyd, 2018; Pollak, 2017). First used within ethnographic fieldwork as a way to document objects and events of interest, visual methods have since expanded to encompass a wide range of images, including illustrations, maps and cartoons as well as photographs (Hartel et al., 2012). A broader shift towards more reflexive and decentred methods of scholarship has also led to the adoption of participatory visual methods, which centre on the collective analysis of participant rather than researcher-created images. Encompassing techniques as varied as photovoice (Julien, Given & Opryshko, 2013), which is a photographic research method that emphasises social change, and photo-elicitation (Hicks & Lloyd, 2018), which employs photographs to guide interview discussion, participatory visual methods mediate power relations between participant and researcher. From an information perspective, the use of participatory visual methods also expands the site of data collection by foregrounding participant representations of their information activities and facilitating access to the places and spaces to which a researcher may not have entry (Hicks & Lloyd, 2018). In creating a more “holistic” picture of the ways in which people engage with information (Given, O’Brien, Absar & Greyson, 2013), visual methods further extend the scope of information research by enabling participants who are working across linguistic, geographic or social divides to represent their information environments (Greyson, O’Brien & Shoveller, 2017; Hicks & Lloyd, 2018). The recognition that visual methods help to explore complex meaning as well as to mediate temporal and spatial constraints highlights the continued need to design methodologies that respond to the changing shape of information research. While visual methods have previously been used within grounded theoretical studies (e.g. Greyson, 2015, Lloyd, 2007), the lack of prior research into methodological connections illustrates the scope for a continued exploration of these ideas.

3.3.1 The use of visual methods within constructivist grounded theory

Visual methods extend the use of grounded theory method within LIS in a variety of ways. Grounded theory has always constituted a flexible approach to research, as evidenced by the provision of a set of guidelines and strategies rather than formulaic prescriptions for its employment (Charmaz, 2014). While Strauss and Corbin’s (1990) attempts to develop grounded theory were considered to place “much stronger emphasis on its proceduralisation and formalisation into a series of techniques” (Idrees, Vasconcelos & Cox, 2011, p.190), the subsequent growth in constructivist approaches, among others, provides further evidence of its open, generative and emergent principles (Glaser & Holton, 2007). As Charmaz (2008, p.398) points out, “from its beginnings, grounded theory has offered explicit guidelines that promise flexibility and encourage innovation.” To this end, the integration of visual methods into a grounded theory approach is both appropriate and in keeping with its openness to change.

Glaser’s (2001) maxim that “all is data” further illustrates how grounded theoretical approaches have always drawn upon a variety of sources for analysis. Positioning data as anything that is going on in

“the research scene,” whether this is an interview, observations or documents, Glaser’s (2001, p.145) emphasis on the inclusivity of data collection illustrates how grounded theory is characterised by what Charmaz (2014, p.27) labels as “methodological eclecticism” rather than uniquely relying on interview techniques. Charmaz’s (2014, p.47) own use of elicited documents in conjunction with interviews also highlights how access to multiple forms of data can strengthen a study by providing a way to check stories as well as to foster different types of disclosures. For these reasons, the employment of visual methods aligns with the emphasis within grounded theory on using the most appropriate forms of data collection for the research question. The recognition that different research methods affect what the researcher sees as well as how they make sense of data (Charmaz, 2014, p.26) also illustrates how the use of visual methods extends both the scope and the impact of grounded theory method.

More specifically, the use of visual methods expands grounded theoretical approaches by diversifying the research data to which a researcher has access. The realisation that information is constituted through social and corporeal modalities as well as the epistemic (Lloyd, 2017) calls for the use of research methods that are flexible yet robust enough to capture the range of information activities in which people engage. In moving beyond an emphasis on textual data, visual methods extend grounded theory methodology by broadening the ways in which a researcher can answer questions within an emerging analysis. One of the most striking ways in which visual methods expand data collection is by facilitating access to physical processes. While photos and pictures do not constitute an objective representation of reality (Croghan, Griffin, Hunter & Phoenix, 2008), participant images of their engagement in practice magnify understandings of social life by presenting a rich and multimodal perspective of their activities. Relocating the focus of data collection from a person’s description of events to situated and embodied representations of their activities, the use of visual methods generates the rich insights on which grounded theory analysis depends by moving beyond easily-accessible information activities and making the contingent knowledge that is at the heart of information practices visible (Lloyd, 2014). In turn, the ability to discuss images with participants means that the use of visual methods helps to ensure both the credibility and the resonance of the grounded theory by facilitating reflection on “taken-for-granted meanings” (Charmaz, 2014, p.337) or mundane and seemingly irrelevant aspects of a person’s engagement with information. Capturing data that may be hard to access within the structure of a traditional interview, visual methods complement the use of methods that take a similarly emic approach to research, such as interview to the double (Lloyd, 2014), to lay the groundwork for the production of a focused and incisive grounded theory.

The use of visual methods also enriches grounded theory analysis by reinforcing participants’ central role within information research. Constructivist grounded theory emerged through the understanding that meaning is co-constructed between research participant and researcher rather than being discovered and brought into existence through the efforts of a neutral observer (Charmaz, 2008, p.402). In ceding both the focus and the means of data generation to research participants, the use of visual methods extends constructivist interpretations of grounded theory by cementing the site of knowledge construction within participants’ representations of their social life rather than in researcher-led, interactional negotiations (Mills et al., 2006). The abrogation of researcher authority also provides a way to explore underlying assumptions that may be brought to the research encounter by presenting participants with an opportunity to express what is important to them in the studied situation of interest rather than to the researcher. The core LIS concept of information, for example, is notoriously hard to define (Bates, 2005). In providing the means for research participants to portray rather than to describe what constitutes and is perceived as informative to them, the use of visual methods helps to ensure grounded theory analysis remains centred on participants’ rather than researchers’ views and perspectives. In further encouraging research participants to become “observers of their own practice” (Lloyd, 2014, p.102), the use of visual methods also prompts an engagement with the reflective processes that are needed to paint complex pictures of meaning and understanding. In this sense, the employment of visual methods helps to ensure the quality of the grounded theory by enabling the researcher to depict and build a more complete picture of empirical events (Charmaz, 2014).

In sum, research methods have not always been prioritised within a grounded theory approach; as Charmaz (2000, p.514) notes, “grounded theorists have been accused, with some justification, of slighting data collection.” This lack of attention has led to the supposition that grounded theory forms a method for interview studies (Charmaz, 2014), an understanding that is reinforced by González-Teruel and Abad-García’s (2012) assertion that interviews form the primary method of conducting grounded theoretical inquiry within LIS. Interviews illuminate the ways in which a research participant interprets their activities as well as the broader situation around them and are particularly suited to grounded theory due to shared emphases on the exploration of meaning. However, while these interactions facilitate the reconstruction of events and feelings, the focus remains situated on a person’s spoken reflections about their activities rather than on the physical actions and skills that constitute the practice in which a person is engaged. Similarly, although research methods such as ethnography and document analysis draw attention to daily life, these methods typically move research away from the agentic participant (Mills, Chapman & Bonner, 2007). In contrast, the use of participatory visual methods, which integrates participants’ interpretations of their images into the emerging theory rather than seeing these pictures as independent documents to be analysed, refocuses attention on participant rather than researcher-driven constructions of a situation.

4. Research agenda and challenges

An exploration of the synergies between grounded theory, information literacy and visual research suggests that there are a number of avenues that future research could take to continue developing the methodological toolbox within LIS. Most importantly, empirical research is needed to provide a more detailed understanding of the impact that the extension of grounded theory method has upon LIS research. From an information literacy perspective, empirical research should scrutinise the implications of a grounded theoretical methodological approach within academic and everyday information literacy contexts, which are two settings that have been underexplored to date. Research should also focus on theory-building rather than uniquely using grounded theory method as a form of data analysis. From a visual method perspective, there is a need for empirical research that explores the impact of use on the researcher’s ability to gather rich data as well as the practical mechanics of integrating images into grounded theoretical data collection and analysis. An example of empirical research that explores these ideas is a recently-completed study that examined the information literacy practices of students who were learning a language overseas (Hicks, 2018b). Employing photo-elicitation method within a grounded theoretical approach, the study draws attention to the rich theorising that emerged through the discussion of photographs that participants took to illustrate their engagement within culturally unfamiliar information environments. The study’s emergent theory of mitigating risk further demonstrates the complex shape of theoretical development within an information literacy framework.

Beyond facilitating an engagement with how information literacy is manifest, future research should explore the impact of grounded theoretical information literacy studies upon the design of teaching interventions. While the positioning of information literacy as a sociocultural practice has started to lead to the creation of situated educational practices (e.g. Hicks, 2015), there has been little sustained exploration of the ways in which findings from information literacy studies that have adopted a grounded theoretical methodological approach can inspire and be adapted for use in the classroom. Growing interest in strengths-based educational models as well as the development of critically-informed and student-centred pedagogy further speak to the need for continued research into the connections between emerging information literacy theory and the implications for teaching and learning opportunities. Future studies should also continue to examine how grounded theoretical approaches to research can be used to build rich and complex theoretical understanding about what it means to be information literate. As Todd (2017, p.128) points out, there is a need to move beyond isolated models of information activity to build “conceptual coherence with the existing body of literature on IL.” Future research should examine how emerging grounded theoretical accounts give form to and shape an increasingly sophisticated body of information literacy scholarship.

Research should also explore the impact of constantly evolving visual methods on grounded theoretical approaches to research. The use of video, for example, which includes body cameras as well as personal recording devices, has a number of implications for the development of emic research perspectives. Future research should explore whether or not, given the ethical and legal questions that are raised through the use of video, greater access to a participant's everyday surroundings and activities leads to the creation of richer and more insightful theoretical understandings about participant information practices. Research should also explore the role that non-photographic visual methods play within a grounded theoretical framework, both within the field of information literacy as well as in the related areas of information behaviour and practices.

At the same time, while the extension of grounded theory method benefits LIS in a number of ways, this research agenda is also constrained by a number of challenges. From an information literacy perspective, the use of grounded theory is primarily dependent upon the recognition that information literacy can be explored both sociologically and as a practice rather than as a set of skills or dispositions. While there has been growing acceptance of information literacy as a research object (Bruce, 2016), it is clear that the field is still dominated by descriptions of pedagogical interventions as well as by accounts of skill-based deficits (Sproles et al., 2013). In adopting a grounded theoretical approach, researchers must recognise and build upon the work of the Australian and Nordic scholars who have started to theorise information literacy beyond its instrumentalist roots (e.g. Limberg et al., 2012; Lloyd, 2017; Tuominen, Savolainen & Talja, 2005) to fully explore the ways in which people engage with and use information within their setting. In turn, the extension of grounded theory methodologies also requires researchers to move beyond description to focus on the analysis and theorisation of how information literacy is constituted within a community. While theoretical approaches to information literacy have often been critiqued for their removal from instructional realities, the raising of data to analytical significance not only helps to produce rich and situated accounts of information literacy that can extend teaching interventions but also lays the groundwork for ongoing research in the field.

The use of visual methods is subject to a number of limitations in itself, including the need for extensive ethical consideration as well as due attention to questions of copyright and the availability of photographic devices (Hicks & Lloyd, 2018). From a grounded theory perspective, the use of images should not be seen as providing raw data for the study's analysis. The recognition that pictures and photographs are produced through technologies, a participant's time and opportunities to engage with the task that the researcher assigns (Croghan et al., 2008) highlights how images must be subject to the same forms of scrutiny and analysis as interview data. In turn, the question of representation means that participatory visual methods should not form the sole means of data generation within a grounded theoretical approach; images can be used to distort as well as to capture a person's perspectives. In this light, visual methods should be combined with interviews to provide the means through which researchers can tell the poignant tales that are at the heart of grounded theory analysis (Charmaz, 2014, p.47).

5. Conclusion

The complexity of today's information environments requires the employment of a research design that is versatile enough to respond to new research imperatives while flexible enough to facilitate insight into changing social processes. In providing the means to raise data to analytical and conceptual significance, grounded theory method facilitates the production of rich and theoretically-infused understanding about the shape of information literacy. The use of visual methods further strengthens the theoretical reach and import of grounded theory analysis by centring hard-to-access perspectives as well as social and embodied aspects of practice. Together, the ability to produce more complete theoretical knowledge demonstrates how an ongoing interrogation of grounded theory method is vital for the development of understanding about a person's information interactions as well as the broader meaning-making that underscores how these activities unfold. The potential impact on the design of information literacy teaching interventions as well as on LIS theory and practice further illustrate the importance of continuing to shape and explore this emerging research agenda.

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