

**LEARNING DIGITAL CITIZENSHIP IN PUBLICS OF PRACTICE:
HOW ADULTS LEARN TO USE ACTIVIST HASHTAGS ON TWITTER**

by

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B.A., The University of British Columbia, 2013

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

THE FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES

(Educational Studies)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

August 2018

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Learning digital citizenship in publics of practice: How adults learn to use activist hashtags on Twitter

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the degree of Master of Arts

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Abstract

Today, vital aspects of private life and public discourse are happening online, and media and digital literacy skills (MDL) are necessary to engage in this sphere. This qualitative study examines how adults can learn the MDL skills necessary to advocate for social change on Twitter using activist hashtags, like #BlackLivesMatter and #MeToo, and engage as democratic digital citizens. To do this, nine Twitter users with varying levels of activity provided their Twitter archives and took part in semi-structured, in-depth interviews. These data were evaluated using content analysis to explore how participants learned to use activist hashtags on Twitter. Using the lens of critical pedagogy and a theory of learning through experience (Dewey, 2004) as the foundation, participants' learning journeys were coded, analyzed, and compared to concepts from the literature. These concepts include *public pedagogy* (Giroux, 2000), which applies to sites of learning beyond formal education, and *communities of practice*, which addresses how communities teach their members (Lave & Wenger, 1991). In addition, the concepts of *publics* and *counterpublics* are employed to make sense of how hashtags function (Bruns & Burgess, 2015; Fraser, 1990; Warner, 2002). Finally, the concept of *digital citizenship* is applied to the practices under examination to demonstrate how MDL alone fails to capture the critical, political aspects of activist hashtags.

Study participants learned to use hashtags to advocate for social change on Twitter by combining multiple strategies, based on individual goals, opportunities, and obstacles. In total, participants described 18 strategies, which could be grouped into the four main approaches of applying prior knowledge, exploration, modeling and examples, and directly accessing expertise. The three most common strategies were learning through exposure over time (i.e., experience),

observation and copying, and trial and error. Activist hashtags are able to function not just as sites of public pedagogy or communities of practice, but as “publics of practice” where participants used the public discursive space to learn and practice relevant digital citizenship skills. Although this study is focused on a narrow set of behaviours and participants, it provides insight into how people might be learning to use new digital tools.

Lay Summary

This qualitative study examines how adults can learn the media and digital literacy skills necessary to advocate for social change on Twitter using activist hashtags, like #BlackLivesMatter and #MeToo. Researching how this practice is learned can help us understand how adults are learning to use digital tools to be heard and take part in public life online more broadly. In interviews, participants described 18 learning strategies, which could be grouped into the four main approaches of applying prior knowledge, exploration, using models and examples, and directly accessing expertise. The three most common learning strategies were exposure over time (i.e., experience), observation and copying, and trial and error. Participants learned the necessary skills and attitudes by combining multiple strategies according to their goals, opportunities, and obstacles. The study concludes that activist hashtags on Twitter can offer public space to learn and practice competencies necessary to be an engaged, democratic citizen online.

Preface

This thesis is an original, unpublished work by the author, Megan Ryland. Ethics review and approval for this study was provided by the University of British Columbia Behavioural Research Ethics Board, which issued Ethics Certificate number H17-00001 to cover the research conducted with participants.

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Acknowledgements

In the years that it has taken to complete this thesis, I have relied on many people for support in different ways. I would like to first thank my supervisor, Dr. Deirdre Kelly, who has been thoughtful and supportive from our very first conversation before I had even been accepted into the master's program. Her contributions to this work have been substantial, introducing me to key approaches and concepts that made this work possible, and I have learned a great deal under her guidance. Furthermore, her belief in my project and my skills has buoyed me through this process. Second, my committee members, Dr. Catherine Corrigan-Brown and Dr. Theresa Rogers, have offered critical questions that improved this work. I would also like to acknowledge the professors and classmates I worked with in the UBC educational studies master's program, as many had a role in how I approached and completed this work. I am also grateful for the financial support provided by the Social Sciences and Humanities Research Council of Canada's Joseph Armand Bombardier Canada Graduate Scholarship.

Beyond the university, mentors, and peers, this thesis could not have been completed without the support of my family and friends. My parents, Dianne and Alan Ryland, have been unwavering in their support and I cannot properly express my gratitude for their efforts, past and present, to help me pursue my education. So many of my friends have acted as counsellors and cheerleaders during this process and I am deeply grateful to each and every one, but especially Jess Borthwick, Greyson Peck, and Rebekah Parker.

Finally, I want to extend my enduring gratitude to the study participants who so generously shared their experiences and their Twitter archives to help me better understand their learning journeys. It was a true joy to speak to each person and hear how they used social media

to support positive change in the world. I feel so fortunate to have been able to do this work and learn from each person. I am also incredibly grateful to the people who passed on my call for participants and supported recruitment, as I would be lost without their kindness. This thesis is the result of the efforts of many people, who brought their experience and knowledge to the project, each in their own way. Thank you.

Chapter 1: New Media, New Skills, New Questions

Today, vital aspects of private life and public discourse are happening online, and new skills are necessary to engage in this sphere. Media and digital literacy (MDL) is a vital skill set in a society where people are constantly surrounded by, participating in, and creating media online. MDL has also received renewed interest in the last year as concerns regarding “fake news” and possible manipulative social media campaigns have garnered increasing attention, forcing the public to grapple with the evolving political consequences of living in a media-saturated environment (Padgett, 2017; Rosenwald, 2017). The issue of MDL is also vital when considering how inequality in society becomes wrapped up in who has the tools to access technology and digital literacy, with real social and economic impacts for those who face barriers to becoming digital citizens (DiMaggio & Hargittai, 2001; Mossberger, Tolbert & McNeal, 2007; Norris, 2001; van Dijk, 2005). Scholars and educators are no longer asking whether media and digital literacy are necessary; the key question now is how best to develop media literacy and support digital citizenship (Citron & Norton, 2011; Kellner & Share, 2005; Mihailidis & Thevenin, 2013).

Many scholars are researching MDL and attempting to provide educators with the tools to incorporate it into the classroom (Hobbs, 2010; Hoechsmann & DeWaard, 2015; Hoechsmann & Poyntz, 2012; Kellner & Share, 2005). However, my interest lies in how people outside of formal education can acquire these new and necessary MDL skills. Specifically, I am looking at the Internet as a site of learning. Online, informal learning can occur as citizens navigate the new media available, expanding learning opportunities beyond the classroom. Kellner and Kim (2010) see these opportunities and argue that, “the Internet provides individuals today with a

whole new pedagogical setting: decentralized and interactive communication, a participatory model of pedagogy, and an expanded flow of information, thus comprising a new field for the conjuncture of education and democracy” (p. 15). Peter Trifonas (2012) writes that digital culture has “transformed cultural perceptions of learning,” as digital media offers new educational environments (p. 1). Stack and Kelly (2006) argue that “the media are a central, if not primary, pedagogue” and recognize that the media is a formative institution, similar to the education system; digital media are an extension of this impact (p. 6). It is critical to examine the pedagogical role that digital media plays in supporting media and digital literacy (Hoechsmann & Poyntz, 2014).

To focus this study on a set of behaviours that could be measured and investigated, I have chosen a specific practice that could be used as an example for how adults might learn MDL skills informally online. This study explores how adults learn the MDL competencies necessary to use activist hashtags on Twitter. Twitter is a social media platform that allows users to broadcast short messages (“tweets”) and interact online. A hashtag is a type of keyword used to identify a topic online and provoke a shared conversation. I use the term *activist hashtags* (e.g., #MeToo) to refer to hashtags that make justice claims or demand social change.

To examine the learning processes necessary for people to begin using activist hashtags, I have conducted an exploratory, qualitative study of nine Twitter users. Participants each provided access to archives containing their Twitter history and took part in a semi-structured, in-depth interview. Data collected using these two methods were examined through content analysis to identify patterns within and across cases. By incorporating both Twitter archives and interviews, the research was able to include patterns of use over time and thick descriptions of

processes. Participants were also able to offer their own perspective and provide context for their archives, which helped to inform some of the interpretation necessary in my analysis.

I approached this study using the lens of critical pedagogy and a theory of learning that focuses on experience. As a result, I understand learning as situated, contextual, and political. In the discussion of my findings, I draw on the concepts of *public pedagogy* (Giroux, 2000), which is the notion that situations outside formal schooling hold pedagogical value, and *communities of practice*, which addresses how communities teach and incorporate new members (Lave & Wenger, 1991). To support my work with these concepts, I also apply the concepts of *publics* and *counterpublics*, as theorized by Nancy Fraser (1990) and Michael Warner (2002). Finally, I apply the concept of *digital citizenship* to the practices under examination to discern how we might best conceive of these skills. In completing this study, I seek to draw on and contribute to the literature on learning, critical media and digital education, and social media.

1.1 Study Foundations, Context, and Rationale

Before proceeding any further, it is helpful to situate the study in the wider world and the literature. In the process, I offer further rationale for the study and provide the background necessary to understand how Twitter functions, as this is useful to make sense of the data and analysis to follow.

When considering the pedagogical value of the media, it is increasingly common to treat movies, television, and video games as learning spaces (Boler, Schmidt, & Renzi, 2010; Sandlin, Schultz & Burdick, 2010; Steinkuehler, Squire & Barab, 2012; Trifonas, 2012), but I intend to focus on social media as an informal arena where users might learn MDL competencies. I chose to focus on Twitter for this study because I share Reid's (2010) belief in social media websites as "important sites of public pedagogy, places where we go to learn, and places where we learn

indirectly as we come to understand ourselves in relation to others and our culture through social media interactions” (p. 194).

Twitter has specific features, benefits, and challenges as a site of learning and a site of research, making it worth delving into its background. Twitter (www.twitter.com) is a social media platform for microblogging (i.e., short broadcast messages), and participation consists of reading, posting, commenting on, “liking,” and sharing user-generated tweets. Twitter had 330 million active users as of February 2018 (Tsukayama, 2018). According to the Ryerson Social Media Lab, 42% of Canadians use Twitter, with 45% of those users active daily, 21% weekly, and 34% active less often (Gruzd, Jacobson, Mai, & Dubois, 2018). Based on surveys by the Pew Research Center (2018), 24% of American adults use Twitter, and of those number 46% report using it daily, 25% weekly, and 29% less frequently. In both countries, Twitter use is roughly the same across genders, but the main age cohort using the platform is 18-to 34-year-old (Gruzd, Jacobson, Mai, & Dubois, 2018; Pew Research Centre, 2018).

Anyone with an Internet connection and an email address can create a free account to join the online platform and choose their own username (e.g., @username). Users might choose to be anonymous, use their own offline identity, or even pretend to be someone else, although popular users such as celebrities can be “verified” by Twitter and receive a special blue checkmark on their profile to indicate an authentic identity. Once someone has a profile, they can keep their tweets private or, more commonly, broadcast their tweets to other users who might choose to subscribe to (“follow”) their content. A user will also choose to follow others, whose content will automatically be added to their list of updates (“Twitter feed”) to read when they log on. Twitter originally limited each tweet to 140 characters but, in the fall of 2017, increased this limit to 280

characters. A tweet might contain text, hyperlinks, photos, videos (including live streaming video), gifs, polls, and location information.

Twitter does not require mutual recognition for interaction, so strangers can follow or tweet to strangers. Whenever a username is included in a tweet, the user is notified of a “mention,” which can be used to direct a user’s attention to the tweet (e.g., “Hey, I bet @username would love this!”) while a direct reply to another user will begin with their username (e.g., “@username I don’t agree with that.”). When users tweet back and forth in a conversation, they create chains of replies and, given that it is a public forum, other users might jump in and comment as well, creating multiple offshoots in a conversation. Should a user want a private conversation with someone, they can send a direct message (“DM”) to another user that others cannot view. Users can choose who is able to DM them, however, and sometimes DMs are only accepted between mutual followers. Users can create “threads” by replying to their own tweets, creating a daisy chain of linked tweets that other users can follow like conversations as well, and this can essentially help a user exceed the character limit for tweets. Hashtags (e.g., #keyword) can be added to words or phrases to make tweets easily searchable and hashtags automatically create a hyperlink that other users can click to see other tweets that include that hashtag. Hashtags typically compose the bulk of the “trending topics” that appear beside the Twitter feed, which are topics that Twitter observes to be popular within a given area; to be “trending” means that content has been very popularly viewed. Users are also able to re-broadcast (“retweet,” or “RT”) the content of other Twitter users and share it with their own followers, either with additional comments (a “quote tweet”) or directly without any comment. Tweets can be retweeted or liked by other users and the Twitter algorithm recognizes this engagement as well and will present these tweets higher in the feed or even use them to create Twitter “moments”—

that is, highlights from the Twitter community that other users will view. Users must learn the function of all these features of the platform, and more, for full engagement and to maximize its potential for communication.

Twitter is a popular medium for information gathering about and discussion of news, politics, journalism, crisis updates, television shows, cultural and sporting events, conferences, and memes (Bruns & Stieglitz, 2012). Within this space, networks or communities can be formed through a shared participation in conversation, either actively through tweeting, or more passively through observing tweets of others. Information travels quickly through the platform due to the brief word count and ease of sharing, but researchers remain concerned that Twitter users may not be receiving multiple perspectives because information may not bridge barriers between personal networks (Gleason, 2013). Because users choose whom they follow, they can become integrated into communities, or isolated from others, but as they exist through network connections, they are nearly always overlapping, and some content will break through. For example, a comment or joke intended for a small audience may become widely circulated (“go viral”) through retweets, hashtags, becoming a Twitter moment, or being cross-posted in another web platform, and this can occasionally bring disproportionate attention (and, at times, harassment) to users who have very few followers.

Given the nature of the technology, social media literature is constantly attempting to catch up to the current platforms and social conventions for usage. For example, Java and colleagues (2007) published their work, “Why We Twitter: Understanding Microblogging Usage and Communities” only a year after the platform launched, so their article does not include significant features of Twitter, and their four categories of action on the platform (daily chatter, conversations, sharing information, and reporting news) are no longer comprehensive.

Historically, social media or social network literature has focused on “impression management, performance, networks and network structure, online/offline connections, and privacy issues,” but there is increasing interest in using it as an educational support and learning platform (boyd & Ellison, 2008, p. 219). As Twitter has achieved some comparative longevity, researchers using the platform can begin to build on one another, but research has historically been dominated by “topic-, context-, and event-related case studies” that cannot yet create an overall picture of how Twitter is used in 2018 (Bruns & Stieglitz, 2012, p. 161).

danah boyd is a prominent social media scholar who has conducted research on several Web 2.0 platforms, including Twitter. For example, boyd and Ellison (2008) present a comprehensive overview of social network sites at the time, while boyd and Golder (2010) provide an in-depth analysis of retweeting practices. boyd and Ellison (2008) argue that “what makes social network sites unique is not that they allow individuals to meet strangers, but rather that they enable users to articulate and make visible their social networks,” and this highlights the opportunity for social media to have deep research potential (p. 211). Discourse and social connections are more recordable, collectable, and searchable than ever before, and this can be exploited for both prosocial and nefarious (Confessore, 2018) purposes.

Researchers are now drawing connections between education and social network research. For example, in “Tweeting for Learning: A Critical Analysis of Research on Microblogging in Education published in 2008-2011,” Gao, Luo and Zhang (2012) present the research that was conducted to evaluate how Twitter can be incorporated into classroom teaching. They found that Twitter's microblogging “promotes a collaborative virtual learning environment” across several educational settings, even though such participation was often “informal” or “playful” (p. 783). This finding lends credibility to the idea that Twitter use could

have pedagogical value. For his part, Benjamin Gleason (2013) argues that the sharing and construction of knowledge on Twitter could be considered an “informal learning process,” because it is unplanned, spontaneous, collaborative, participatory, interest-driven, and exists outside of the classroom paradigm (p. 968). By facilitating interaction and exchange of information, Twitter might be considered an “information neighbourhood” that is worth considering as a learning environment (Gleason, 2013, p. 969).

However, it is also valuable to note that Dunlap and Lowenthal (2009) found that the quality of Twitter experiences depends on “who you are connected with; how frequently you participate; and how conscientious you are about contributing to the value of the community” (p. 5). Lewis, Pea, and Rosen (2010) provide additional cautions, because although “educational research indicates[s] that people learning within social contexts and that collaboration and development of joint narrative presents powerful dynamics for learning,” they point out that a vibrant learning community typically requires the development of “shared goals and experiences” (p. 357). It is, therefore, critical to keep in mind the importance of participation and connections among users to the experience of learning. It is also important to avoid generalizations about platform purposes and experiences, given that a user’s individual set of circumstances—who they follow, what they tweet, how frequently they use it, their goals, et cetera—will shape their outcomes substantially.

Within Twitter, I focus on the specific feature of hashtags. Hashtags can be used for many purposes. Within my work, an “activist hashtag” is one that can be interpreted as making a claim about social justice, drawing on Iris Marion Young’s (1990) understanding of justice and

the political.¹ Although some may argue that hashtags are not effective activist tactics (Gladwell, 2010), I have chosen “activist” to describe the category of hashtag I intend to study because (a) activists are using these hashtags to make claims, (b) the politics of activism encompass more than the formal politics of governments, expanding my scope, and (c) in making claims, these hashtags are active, performative, and/or prescriptive, rather than passive or descriptive (arguably similar to “activist courts”). I am not, for example, expressly interested in hashtags like #NDP or #cdnpoli that merely reference the political. Rather, I am interested in hashtags that are engaged in making political claims regarding (in)justice, including hashtags such as #NoDAPL, #BlackLivesMatter, and #MeToo. Rachel Kuo (2016) has also used similar terminology to describe this practice as it specifically applies to racial justice, referring to them as “racial justice activist hashtags.”

Activist hashtags allow other users to more easily find, share, promote, collect, add to, and interact with tweets related to a politicized topic or debate. Kuo (2016) also points to the potential of these hashtags to act as “collective action framing tools” (p. 3). That is, activist hashtags might be used to communicate “action-oriented sets of beliefs and meanings that inspire and legitimate the activities and campaigns of a social movement organization” by providing a set of interpretations for a specific societal problem (Benford & Snow, 2000, p. 614). Although it is beyond the scope of this study to analyze the phenomenon or effect of activist hashtags, I do

¹ According to Young (1990), “the concept of justice is coextensive with the political...politics in this sense concerns all aspects of institutional organization, public action, social practices and habits, and cultural meanings insofar as they are potentially subject to collective evaluation and decision-making. When people say a rule or cultural meaning is wrong and should be changed, they are usually making a claim about social justice” (p. 9). For Young, injustice takes the form of oppression and domination, in various forms (ibid.).

attempt to understand how study participants understand the practice, so this is included in the analysis in chapter four. In addition, because activist hashtags can be used to engage in political discourse, interact with other community members, and advocate for change, I also evaluated the skills to use them for their potential as digital citizenship skills in chapter five.

Activist hashtags are becoming a common practice online, and mainstream media seem to report on new trending activist hashtags on a near weekly basis. Scholarship that features activist hashtags tends to focus on the phenomenon of activist hashtags themselves, including the scope of circulation, patterns of use, and reasons for its occurrence, often using network analysis and discourse analysis (An & Weber, 2016; Bastos, Raimundo, & Travitzki, 2013; Bonilla & Rosa, 2015; Hogan, 2016; Kuo, 2018; Olson, 2016; Thrift, 2014). However, I have not encountered scholarly work specifically analyzing how participants learn to take part, which I argue is a critical question. There are few structured opportunities for someone to learn how to use and create effective activist hashtags. It is certainly not within standard school curriculum, where explicitly teaching young people how to participate in protest is a rare element on any syllabus (van den Berg, 2016). Conventional educational institutions also often face challenges incorporating new technologies and media practices into their programs and can do little to educate those who have graduated. Unlike marketing or professional uses for Twitter, one cannot rely on workplace seminars or certificate programs to cover activist tactics. Activist strategies might be shared through activist communities, but when an activist hashtag becomes highly popular, it moves outside of these potential communities of practice—how then do outsider participants learn to join in on this new media practice? I attempt to address this question in this study.

Many scholars have taken up the challenge of exploring how digital media has transformed opportunities for civic engagement or activism more generally, with a specific focus on its potential for young people (Bennett, 2008; Jenkins et al., 2016; Kellner & Share, 2007; McGillivray, McPherson, Jones, & McCandlish, 2016; Mihailidis & Thevenin, 2013; Ratto & Boler, 2014; Rogers, 2015; Shumow, 2015). There is consensus that these tools have the potential to be powerful and that critical media and digital education are key to ensuring that the next generation can take advantage of these opportunities. I argue, however, that there has not been sufficient research on how adults might learn these critical MDL skills, especially considering that most of life is spent outside of the traditional classroom. If these are important tools for civic engagement and activism, as the literature suggests, it is crucial to mark the trajectory of the adult learning curve, too.

This study also responds to scholars who are calling for more study of informal learning and its unique role in adult education (Choudry, 2015; Foley, 1999; Livingstone, 2006). In *Learning in Social Action*, Foley (1999) writes, “for me, the most interesting and significant learning occurs informally and incidentally, in people’s everyday lives,” but this learning often receives little scholarly attention (p. 1). After investigating the subject, Livingstone (2006) writes,

Most adults probably engage in multiple forms of learning on an ongoing basis, with varying emphases and tendencies. Only the state-sanctioned forms of schooling and further education are very fully identified or widely documented. Other adult learning activities have tended to be ignored or devalued by dominant authorities and researchers, either because they are more difficult to measure and certify or because they are grounded in experiential knowledge, which is more relevant to subordinate social

groups... it is clear that both adults' informal education/training and their self-directed informal learning have been relatively little explored to date and warrant much fuller attention from those interested in comprehending the nature and extent of adult learning. (p. 205)

Nearly ten years later, Choudry (2015) notes that, "although there is a considerable body of scholarly literature on adult education and learning, relatively few attempts have been made to understand how people produce knowledge and learn (especially through informal learning) through involvement in social action" (p. 8). This study's design responds to that gap and has also heeded Livingstone's (2006) recommendation for "more inclusive approaches to informal learning that attempt to identify tacit knowledge through such means as direct observation in situation or in-depth interviewing" to research "taken-for-granted learning processes" (p. 207) by incorporating both archival data reflecting user practices and in-depth interview data.

Although this work does not engage directly in social movement learning, as I have narrowed the scope of this study to focus on media and digital literacy skills, the perspectives of scholars like Griff Foley (1999, 2001), Eurig Scandrett (2012), and Aziz Choudry (2015) do support this work. Foley's (1999) work on the informal, adult learning by those engaged in struggle is similar in intent, although our emphasis differs, and Scandrett's work (2012) highlights the importance of incidental learning in social movements. Choudry's (2015) *Learning Activism* offers a look at the wider context of the learning that occurs in social movement participation. These scholars recognize the role for informal, tacit learning to build knowledge, skills, and attitudes in movements. They also acknowledge the dearth of relevant research. Choudry (2015) agrees with John Holst (2002) that adult education has been reluctant to acknowledge that social movements can be both educational and political, consistently

downplaying the role of informal learning. When considering emancipatory adult education, it makes sense to look to activism for lessons, and in activism, “often learning by doing leaves the deepest footprints” (Choudry, 2015, p. 9).

The nature of this study is deeply interdisciplinary, and a complete picture of all relevant scholarship would not be possible or practical to include. However, further context will be provided by the theoretical and conceptual framework in chapter two, which details the theories and ideas at work in this study. This introduction is simply intended to provide the background necessary to understand the remainder of the thesis and establish the stakes of the inquiry. This study draws on social media and media and digital literacy scholarship, as well as educational theories and research, to answer questions of interest to social movement learning and hashtag activists themselves.

1.2 Research Questions and Considerations

My primary research question is: How do adults learn the MDL competencies necessary to use activist hashtags on Twitter? Additional related questions of interest flow from this primary question, and this study has been designed to provide opportunities to examine the following subset of questions:

- What media and digital literacy competencies are necessary to use activist hashtags on Twitter?
 - Could the set of skills under examination be better described as digital citizenship practices?
- What motivates learning to use activist hashtags on Twitter?
- How do users conceptualize the practice of using activist hashtags?
- What mechanisms allow or enable learning to use activist hashtags on Twitter?

Given my understanding of the literature and the activity itself, I initially anticipated that learning to use activist hashtags on Twitter would most often be a process of learning by doing. I anticipated finding that users can learn by encountering activist hashtags, observing their use in the Twitter environment, engaging in a process of trial and consequences, and learning from experience. To be successful, Twitter users would have to learn to access, analyze, evaluate, create, reflect on, and take action with activist hashtags on the social media platform—that is, develop MDL skills for that environment. Users would also bring experience from other environments to bear on their hashtag trials, but they would have to adjust their strategies and develop media and digital skills for the specific Twitter environment. Broadly, participant experiences did align with these expectations, but participants employed more learning strategies than anticipated by combining a variety of different approaches to learning.

I return to these questions in the final chapter, where I explore how my data and analysis speak to my conceptual framework and the literature. I also address the potential advantages of viewing these skills as digital citizenship, rather than simply MDL, and how activist hashtags might function not just as either sites of public pedagogy or communities of practice, but also as “publics of practice.” Although this study is focused on a narrow set of behaviours, and a yet narrower set of participants, I believe it can provide some insight into how people might be learning to use these new digital tools for public discourse and advocacy.

Chapter 2: Building the Framework

In this chapter, I describe the key theories and concepts necessary to establish the basis for this research. I begin by presenting the theoretical assumptions built into my approach for this research, including my theory of knowledge and learning. This is followed by mapping the conceptual framework I am using to make sense of this work. Finally, I also provide a description of how I see my own positionality and my role in the research process. Together, this chapter will detail the structural foundations of the study.

2.1 Theoretical Framework

A theoretical framework is, in effect, a set of lenses that are used to view and understand data. By explicitly stating what theories have shaped this study, I hope to clarify my approach to the production of knowledge and be transparent about the assumptions built into my interpretation of the data. By situating my work and its claims, I hope to make it more robust under scrutiny.

2.1.1 Theory of Knowledge: Critical Realism

I approached this study through the lens of critical realism, which holds that reality is both concrete and constructed. According to critical realism, “material practices are given an ontological status that is independent of, but in relation with, discursive practices” (Sims-Schouten, Riley, & Willig, 2007, p.101). Sousa (2010) puts this another way: “the world is complexly brought about by interlocking causes,” both material and discursive (p. 461). Instead of accepting the world as empirically verifiable, as posited by positivism, or entirely constructed, as in social constructionism, critical realism offers a third way that I find especially useful when conducting social science research. In addition, critical realism is typically concerned with

investigating “mechanisms”—generative processes—rather than simply “events” and this matches well with the focus of my study examining a learning process (Danermark et al., 2002).

Arising first from the work of Roy Bhaskar in the 1970s, critical realism was a response to the critiques of positivist and constructionist approaches (Alvesson & Sköldbberg, 2009; Sousa 2010). Critical realism incorporates aspects of both social constructionist and positivist traditions to create a theory of reality and science that attends to power, social construction, relativity, and subjectivity without rejecting the notion of a material reality (Alvesson & Sköldbberg, 2009). Sims-Schouten, Riley, and Willig (2007) clarify this point: “acknowledging that our knowledge of ‘reality’ will always be limited is not the same as saying that there is no such thing as ‘reality’” (p. 105). In this view, the purpose of “scientific work is instead to investigate and identify relationships and non-relationships, respectively, between what we experience, what actually happens, and the underlying mechanisms that produce events in the world” (Danermark et al., 2002, p. 21). Critical realism separates questions of “that which exists” from “the knowledge we have about it (what we believe)” (Alvesson & Sköldbberg, 2009, p. 40). This distinction supports a humble philosophical position that does not mistake human understanding for material reality and encourages a critical approach to producing knowledge.

Critical realism more accurately captures my approach than positivism or social constructionism because it values both the observable and unobservable (such as power) to help explain phenomena and patterns (Alvesson & Sköldbberg, 2009; Sousa 2010). Something is considered “real,” whether socially defined or not, “if it affects behaviour and makes a difference,” and so this includes both material goods and discourse (Alvesson & Sköldbberg, 2009, p. 41). Although I acknowledge the social construction of reality and the effective contingency of truth, my knowledge claims are formed on the basis that some realities can be

considered more likely than others (McCall, 2005; Lopez & Potter, 2005; Fletcher, 2016).

Critical realism approaches science with “epistemological caution” based on the recognition that humans create knowledge through a social process and humans are fallible, but it remains possible to discern between theories, and there is a substance to the world independent of human understanding (Lopez & Potter, 2005, p. 9; Alvesson & Sköldbberg, 2009). Critical realism sees knowledge as contextual and dependent on perspective, but its practitioners seek to present “truer and truer (truth is not absolute) accounts of reality” (Lopez & Potter, 2005, p. 12). This is a key distinction. Although my knowledge claims must be limited by my situated construction of meaning and the specifics of context, it is my responsibility as a researcher under the critical realist framework to present a reasonable argument and convincing evidence for my conclusions, which form the basis for a claim that the reality that I describe is more likely than others.

2.1.2 Theories of Learning: Critical Pedagogy and Experience

Given the nature of this study, evaluating the learning process, it is important to establish how I understand learning to take place. My theoretical framework focuses on how learning occurs and what learning does, and it is shaped by two key perspectives. First, it is influenced by critical pedagogy and considers learning to be ideally emancipatory but always power-laden. Second, it is informed by John Dewey’s approach to learning as an outcome of experience, particularly in light of how he understands the role of the environment in the learning process. These theories are compatible because they both frame learning as a relational, situated process that has political implications.

2.1.3 Critical Pedagogy

In *The Critical Pedagogy Reader*, Peter McLaren (2003) admits that the practice of critical pedagogy is “as diverse as its many adherents,” but there are common themes to the

approach (p. 69). Both the critical posture and the diversity of the field appeal to me, as it offers a flexible lens to approach this work.

McLaren (2003) states that critical pedagogy theory tends to share the key understanding that,

The individual, a social actor, both creates and is created by the social universe of which he/she is a part. Neither the individual nor society is given priority in analysis; the two are inextricably interwoven, so that reference to one must by implication mean reference to the other. (p. 69)

This assumption is vital to my approach, particularly when practically applied to behaviour within a social media network. On a social media platform, users input content and receive content that has been curated according to their desires, other users, and algorithms; each experience is then a result of both internal and external forces that are “inextricably interwoven” as a user simultaneously influences and is influenced by the social media platform. More broadly, the relational and social construction of knowledge is a key assumption in my project.

In working with critical pedagogy, my theoretical framework can acknowledge the politics of the learning process. Douglas Kellner and Gooyong Kim (2010) state that a “major goal of critical pedagogy is to facilitate simultaneously individual development and social transformation for a more egalitarian and just society” (p. 3) Learning should be emancipatory within this framework. This theoretical orientation appeals to me, particularly for this project, because it informs my choice to focus on learning to use activist hashtags. I am interested in media and digital literacy (MDL) as it can be practiced for critical, emancipatory ends. Learning to use activist hashtags appears to be a practical case where it is immediately clear that knowledge has a “social function” (McLaren, 2003, p. 72). It is a deeply relational set of skills

where power is being invoked, wielded, and resisted. Power must be at play when people are able to take up new political tools. Although there are many examples of developing a MDL competency available for study, I am choosing to focus on a skill set that has been politicized by its practitioners. My investigation of this topic presumes that MDL competencies are not neutrally acquired or practiced, making critical pedagogy a useful approach to take.

Kellner and Kim (2010) also note that key critical pedagogy scholars Paulo Freire and John Dewey both held that education has the potential to “be a democratizing force and promote cultural revolution and social transformation” (p. 3). In *Pedagogy of the Oppressed*, Freire (2000/1970) argues that individual and social transformation through education are linked; learning for liberation has impacts on both a personal and political level. As I am focusing on the case of learning to use activist hashtags, individual learning and social change are also linked within my study. Learning for democratic purposes is a thread woven throughout this work, including my use of citizenship and publics as key concepts within this work.

Finally, it is worth noting that digital technologies have been viewed by critical pedagogy scholars as a potential opportunity to learn outside of dominant institutions, participate in public discourse, and pursue empowerment (Kellner & Kim, 2010). However, “potential” is a key distinction, and it is important to remain critical of the narratives of digital empowerment as well. Powerful technologies can cut both ways—supporting democratic engagement, or eroding trust in democratic processes, for example. Furthermore, significant digital inequality remains locally and globally, as many people do not have access to technology or sufficient digital literacy to participate due to social, geographic, or economic factors (van Dijk, 2005; DiMaggio & Hargittai, 2001; Mossberger, Tolbert & McNeal, 2007; Norris, 2001). Again, attending to power is key to understanding the opportunities of digital technologies—and the power to access

and learn about digital technologies is substantial. Digital space is not equally accessible to all, and its affordances are concentrated with those people already most likely to hold power. While this study will be an addition to the growing critical pedagogy literature that considers the power of digital media as a learning space, I am also sensitive to the problem of falling into technological determinism, utopic thinking, or universalizing experiences.

2.1.4 John Dewey: Situated Learning Experiences

The scholarly work of John Dewey is frequently considered a part of critical pedagogy literature, but as that literature is particularly wide-ranging, I think it is valuable to be clear that I am drawing on a specific aspect of a specific theorist in my work. My choice of study has already been deeply shaped by my understanding of learning as situated in an environment and shaped by experiences. As John Dewey also pays significant theoretical attention to these ideas, his work provides an approach to learning that can be used as a potential starting point to understanding how media and digital literacy skills are acquired through experience. I believe it is important to be explicit regarding how I understand learning to occur.

According to Dewey, learning arises from the engagement of the “self” in the “world,” and this relationship is key to Dewey’s influence on my work. In *Democracy and Education*, John Dewey (2004/1916) writes, “all learning is something which happens to an individual at a given time and place,” describing learning as inherently context-based and situated, giving pride of place to the environment in his framework for education (p. 117). As theorized by Dewey (2004), the environment is the “particular medium in which an individual exists” and which leads him [sic] to see and feel one thing rather than another; it leads him to have certain plans in order that he may act successfully with others; it strengthens some beliefs and weakens others as a condition of winning the approval of others. Thus it gradually

produces in him a certain system of behaviour, a certain disposition of action. (pp. 11-12)

Dewey (2004) further specifies that the “social environment,” in particular, is shaped by people living in association, who present the “objects” of affection and dislike, esteem and aversion, through group behaviour that establishes normative standards that new members of society may observe and emulate (p. 18). Each group or community, from a gang to a guild, can be considered its own social environment. In examining learning on a social media platform, environment is a key element to consider. As Dewey has theorized, I understand the environment as generative of experience and learning as situated in a context. Experience, and thus learning, arises from the environment.

For Dewey (2004), experience is activity (“trying”) followed by consequences, which results in learning (p. 151). As Bente Elkjaer (2009) describes in *Contemporary Theories of Learning*, experience is the “transaction” that occurs between individuals and their environment (p. 74). Dewey (2004) writes,

To “learn from experience” is to make a backward and forward connection between what we do to things and what we enjoy or suffer from things in consequence. Under such conditions, doing becomes a trying; an experiment with their world to find out what it is like; the undergoing becomes instruction—discovery of the connection of things. (p. 151)

This idea of learning by trial and consequences (experience) is central to my understanding of how learning occurs. So too is his notion of relational learning. We understand things, ideas and experiences in relation to one another, rather than in isolation (Dewey, 2004, p. 155).

Experiences are necessarily connected and inform one another. As my study focuses on learning by doing, or as Dewey might put it, learning by “trying,” rather than a traditional learning environment, Dewey’s work helps articulate how that process occurs.

According to Dewey, learning is a deeply situated process dependent on context and experience. Situated learning is a valuable lens for understanding the learning process of participants in this study because I am studying learning that occurs in the course of life and is applied to genuine problems, rather than an instructional scenario. The theory of situated learning assumes that “learning cannot be isolated from the activity, the culture, and the context in which it takes place” (Schugurensky, 2006, p. 168). By taking this approach, I am able to incorporate the full richness of participants’ contexts and experiences in my understanding of their learning process.

In reviewing the literature, it is important to note that David Kolb has also proposed a well-known approach to experiential learning. Kolb (1984) defines learning as, “the process whereby knowledge is created through transformation of experience” (p. 38). In this view, experience may lead to knowledge, but it is not knowledge itself. However, I do not find it as compelling as Dewey’s theory of experience.

First, as Elkjaer (2009) observes, Kolb’s learning cycle indicates a sequence of events. Kolb’s theory suggests that learning occurs in a cycle of concrete experience, followed by reflective observation, followed by abstract conceptualization, followed by active experimentation, returning again to concrete experience, and so forth (Kolb, 1984). Each aspect requires a skill set that must be used together, so that learners “need four different kinds of abilities,” which Kolb then associates with his theory of learning styles (Kolb, 1984, p. 30). For Dewey, experience cannot be meaningfully broken down into separate processes. Action and thinking are integrated. According to Dewey, thinking “is the intentional endeavour to discover specific connections between something which we do and the consequences which result, so that the two become continuous” (Dewey, 2004, p.158). Although separating these capacities may be

useful when theorizing, I do not think that these individuated capacities reflect the practice of learning where each facet is intertwined. I favour a theory that embraces a continuous integration of thinking and action, as Dewey theorizes learning through experience.

Second, experience results in more than abstract conceptualization or, put more simply, knowledge. Dewey acknowledges that many types of meaning can be drawn from experience; his definition of experience includes knowledge, emotion, aesthetics, and ethics (Elkajaer, 2009). It is important to me that my work recognize that the body and emotion are not separate from the learning process, just as they are never separate from experience. Although learning requires thought, it cannot be a simply cognitive or behavioural process. In addition, in an applied setting where the learner is tacitly acquiring skills and using them, abstract conceptualization may not be a useful part of the learning process. If participants do not “reach” abstract conceptualization, I am disinclined to consider the learning “incomplete,” if the learner has built a skill set that does serve their purposes.

Finally, Dewey is part of the tradition of pragmatism, and I think this is a valuable orientation to hold when approaching informal learning specifically.² As one learns through experience rather than instruction, knowledge must logically be contingent on present experience and adjust according to new experiences. The value of actions is dependent on consequences, as one finds in pragmatism (Elkajaer, 2009, p. 76). There are simply few resources outside of practical experience on which to draw. This is particularly true within my study, as a quickly-changing technology platform has little pre-established tradition for success; users likely have to

² Although it is often unwise to put stock in colloquial use of philosophical terms, a layperson would certainly call most informal learning “pragmatic.” Skills that you develop without structured curriculum in the course of your life are often practiced out of need and use value.

pay attention to their practical experience to drive their behaviour—to be successful, they do what works. As Elkjaer (2009) puts it, “The view of experience as encompassing the relation between subject and worlds, inquiry as experimental and instrumental and knowledge as fallible means that pragmatism can be called a learning theory for the future,” and I tend to agree (p. 75).

2.2 Conceptual Framework

Karlsson and Ackroyd (2014) write that, “the issue for CR-guided researchers is always: what concepts are required to understand the data available and to bring into focus the processes or mechanisms that are really at work?” (p. 22). Within critical realism, conceptualization is an important part of analysis, because “concepts provide an abstract language enabling us to speak about qualitative properties, structures, and mechanisms” that are the focus of a study (Danermark et al., 2002, p. 120). They also function as theories, as they attempt to describe a reality. In the following section, I explain the concepts that provide the language for my approach to this study. My conceptual framework is an interdisciplinary structure out of necessity, and, therefore, rather than presenting a comprehensive review of each field involved, I am including examples of each concept that provide support for my approach, contextualize my research, and allow me to draw a clear map of connections between various concepts. Using this conceptual framework, I investigate the potential for activist hashtags to create an online public or counterpublic that could be a space for public pedagogy regarding media and digital literacy, and perhaps even democratic digital citizenship.

2.2.1 Media and Digital Literacy

Media and digital literacy (MDL) combines two terms which will be treated as inseparable concepts, at least in the contexts where it will be applied in this study. The first term, *media literacy*, is defined as the skills to “access media on a basic level, to analyze it in a critical

way based on certain key concepts, to evaluate it based on that analysis and, finally, to produce media oneself,” according to the leading media education non-profit MediaSmarts, which conducts research and provides curriculum resources about media and digital literacy in Canada (MediaSmarts, n.d.a, para. 2). The “key concepts” of media literacy are considered to be, “that media is constructed; that audiences negotiate meaning; that media have commercial, social and political implications; and that each medium has a unique aesthetic form that affects how content is presented” (MediaSmarts, n.d.a, para. 2). These core principles are broadly shared with media literacy scholars (Buckingham, 2003; Kellner & Share, 2005). The second term, *digital literacy*, is seen to “encompass the personal, technological, and intellectual skills that are needed to live in a digital world” (MediaSmarts, n.d.a, para. 3). Although MediaSmarts distinguishes between media literacy and digital literacy, they acknowledge that the two skill sets are "closely related" and the key concepts outlined for media literacy are “equally applicable” to traditional and online media sources (MediaSmarts, n.d.b, para. 2). In fact, their website helpfully points out the “intersection” of digital and media literacy; it is that intersection my work intends to occupy by using *media and digital literacy* (MDL) as an umbrella term to encompass both skill areas.

Essentially, given that the digital world is a subset of the media landscape, digital literacy requires media literacy, but it is also difficult to imagine calling someone media literate if they could not navigate digital media, given the impact of digital technology on all aspects of media creation and consumption. In the current North America context, I do not believe a meaningful engagement with media literacy excludes the digital sphere. For example, media literacy has generally considered viewing, creating, understanding, and analyzing film to be part of its domain; given that digital technologies have transformed how films are created, distributed, and consumed, ignoring digital literacy makes a meaningful difference in how the medium could be

understood. Media literacy and digital literacy literatures have not always been intermingled, but I intend to draw on literature that considers media literacy to have evolved into this broader concept of media and digital literacy.

Other terms have been proposed to describe the new skill set necessary for the contemporary media-saturated context. For example, the term “21st century skills” has received some significant attention, but as Jenkins and colleagues (2009) point out, it tends to de-emphasize textual literacy in its rush to move forward and fails to understand the importance of a digital social skill set rather than just vocational or individual skills. In “Confronting the Challenges of Participatory Culture: Media Education for the 21st Century,” Jenkins, Purushotma, Clinton, Weigel, and Robison (2009) argue for “new media literacies” as a broadly encompassing term for the “set of cultural competencies and social skills that young people need in the new media landscape,” but I find their list of competencies included in this set of literacies to be so inclusive as to be ungainly to use within my research (p. 4). I intend to use a definition of media and digital literacy that I am able to articulate clearly, so that I might be able to find measures for identifying it.

MDL are competencies that are defined in a variety of ways, but generally emphasize the necessity of (a) technical and procedural skills, (b) analytical and evaluative approaches, and (c) attitudinal and social capacities (Hoechsmann & Poyntz, 2012; Kellner & Share, 2005). Although traditional literacy focuses on reading and writing, literacy expands within MDL to cover a wider set of skills: not just consuming, understanding and creating texts, but also analyzing, critiquing and contextualizing all forms of media and communication (National Association for Media Literacy Education, 2007). It is valuable to note that MDL is most usefully conceptualized as a spectrum of capacities. Given the wide variety of skills under the

umbrella of MDL, it is possible to continue developing MDL skills over a life time. However, educators and legislators are increasingly interested in supporting a minimum level of competence to ensure that basic engagement with media and digital technology is possible for all citizens, who need these tools to navigate an ever-more crowded media landscape (Kellner & Share, 2007).

Renee Hobbs, a media education scholar, has provided the definition of media literacy that is used by the American National Association for Media Literacy Education (National Association for Media Literacy Education, 2007). Hobbs considers MDL to include “the full range of cognitive, emotional and social competencies that includes the use of texts, tools and technologies; the skills of critical thinking and analysis; the practice of message composition and creativity; the ability to engage in reflection and ethical thinking; as well as active participation through teamwork and collaboration” (Hobbs, 2010, p. 17). Hobbs (2010) breaks down the competencies of MDL into five essential, interlocking competencies: the capacity to access, analyze and evaluate, create, reflect, and take action using all forms of communication. I will use Hobbs’ framework as the assessment criteria for determining what kind of media and digital literacy skills are required to use activist hashtags. Although competing definitions are available, I find Hobbs incorporates many of the features common to other definitions while being both focused, specifying clear competencies, and broad enough to include the wide range of capacities required to develop MDL in the contemporary environment.

2.2.2 Exploring Digital Citizenship

I will also be exploring the emergent concept of digital citizenship as a lens to interpret activist participation and community formation online. By exploring the potential for informal learning about politicized issues and justice claims through the process of online participation, I

seek insight into how people can learn to engage, understand and use media as digital citizens.

Digital citizenship is being theorized in many different ways (Choi, 2016; Couldry et al., 2014; Jones & Mitchell, 2015; Mossberger, Tolbert, & McNeal, 2007; Ohler, 2010; Ribble, 2015). For example, Mossberger, Tolbert and McNeal (2007) describe digital citizenship as “the ability to participate in society online,” and a digital citizen is defined as “those who use the Internet regularly and effectively—that is, on a daily basis” (p. 1). In a guide for educators, Mike Ribble (2011) argues that “digital citizenship can be described as the norms of appropriate, responsible behaviour with regard to technology use” (p. 10). Jason Ohler (2010) similarly proposes that digital citizenship education is closely tied to character education, emphasizing good conduct, ethics, and community alongside digital literacy. In a survey of Canadian education policy across the country, Hoechsmann and DeWaard (2015) suggest that in general there is a trend to “focus on keeping Canadian students safe and responsible in their interaction online, as well as providing guidance to help them maintain healthy relationships and to develop civic responsibility,” but a look at the provincial policies shows that they diverge in significant ways (p. 14). Other scholars place different emphasis and implement digital citizenship in new ways, including a focus on preventing cyberbullying and developing civic culture online (Couldry et al., 2014; Citron & Norton, 2011; Jones & Mitchell, 2015).

It is also important to highlight what the digital citizenship literature might be missing. I agree with Akwugo Emejulu and Callum McGregor’s (2016) claim that digital citizenship has largely been de-politicized in the literature, and this critical feature of this term must be re-introduced in how it is used. Emejulu and McGregor (2016) call for what they term “radical digital citizenship” that refers to a “praxis” where individuals or collectives might “critically analyze the social, political, economic and environmental consequences of technologies in

everyday life” and “collectively deliberate and take action to build alternative and emancipatory technologies and technological practices” (p. 1). Although I do not directly adopt their definition of digital citizenship, this study does take up a critical, political digital citizenship. Iris Marion Young’s writes that politics “includes all aspects of institutional organization, public action, social practices and habits, and cultural meanings insofar as they are potentially subject to collective evaluation and decision making,” and I consider politics to be similarly expansive, including the work of activists, politicians, and citizens simply taking part in their community (1990, p. 34). Where there is power at play, there is politics, and this is an important feature of digital citizenship.

Furthermore, I will specifically be focused on democratic digital citizenship practices, although the additional modifier is often not specified in the digital citizenship literature. In specifying “democratic” practices, I draw on Dewey’s (1916/2004) theory that, “Democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experience” (p. 95). In addition, this study will also make use of the concept of publics, which elaborates on the role of the public sphere in a democracy (Habermas, 1989; Fraser, 1990). Drawing inspiration from both Iris Marion Young (2000) and Chantal Mouffe (2005), I am interested in digital citizenship practices as framed by Young’s deliberative democratic theory and influenced by Mouffe’s “agonistic public sphere.”³ For the purposes of

³ In *On the Political*, Mouffe (2005) writes, “the task for democratic theorists and politicians should be to envisage the creation of a vibrant ‘agonistic’ public sphere of contestation where different hegemonic political projects can be confronted” (p. 3). In this study, I approach Twitter as a series of publics and counterpublics that might aspire to resemble the public sphere described by Mouffe, in the sense that Twitter has the potential to provide public space for counterpublics to contest hegemonic publics. An agonistic approach to politics that values ongoing struggle is an intuitive and visceral fit to me, having engaged in political dialogue

this study, I see these approaches as compatible because, as Kelly (2011) has argued, Fraser has similarly drawn on both deliberative and agonist traditions to theorize contestation within publics and counterpublics. Within this approach, contestation and dialogue are critical to seeking justice for all in a democracy, but consensus is provisional and struggle is the status quo.

To evaluate digital citizenship within this study, I turn to Moonsun Choi's (2016) concept analysis of the term, as I have found Choi's description of digital citizenship best suited to my own understanding and purposes. Choi (2016) found that four major categories compose digital citizenship: ethics, media and information literacy, political participation/engagement, and critical resistance. Choi (2016) argues, "digital citizenship needs to be understood as a multidimensional and complex concept in connection with an interrelated but non-linear relationship with offline (place-based) civic lives" (p. 565) and "being a good digital citizen is not just participating in pre-existing communities but also creating new and different types of communities and/or sometimes transforming the community, society, and world when social injustice happens online and offline" (p. 585). Moonsun Choi's (2016) work drawing out the elements of digital citizenship and close attention to the implications of digital engagement on citizenship is a compelling starting point for examine the practices in this study. I return to Choi's elements of digital citizenship in chapter five as I consider how to define the skills of participants.

The lack of consensus about use of the term "digital citizenship" within policy, practice, and theory suggests that the concept is still open to exploration and innovation. I hope to contribute to the growing literature by considering how hashtag activism in an online public

online. The experience of it much more often resembles struggle than rational consensus.

might be a digital citizenship practice and examining how adults are able to learn this new set of digital citizenship capacities online.

2.2.3 Public Pedagogy

In evaluating the impact of the environment on the participants in the study, I will be drawing on the concept of “public pedagogy.” Public pedagogy refers to the way media, popular culture, and daily interactions can act as informal education (Giroux, 2000). This concept is imagined in several ways in the literature, but a common understanding is that schools are not the only site of education, and other environments can have educative effects through their structures (Sandlin, Schultz, & Burdick, 2010). Public pedagogy might be used to describe “learning in institutions such as museums, zoos, and libraries; in informal educational sites such as popular culture, media, commercial spaces, and the Internet; and through figures and sites of activism, including public intellectuals and grassroots social movements” (Sandlin, O’Malley, & Burdick, 2011, p. 339). Use of the concept has grown in both cultural studies and adult education, but Giroux’s work has had a formative impact on the notion of public pedagogy (Sandlin, Schultz, & Burdick, 2010). Giroux’s (2000, 2003, 2004) approach to public pedagogy can be closely associated with critical pedagogy theory, as his analysis of the concept is deeply infused with power relations and the emancipatory potential for education.

It is increasingly common to consider various kinds of digital media a potential form of public pedagogy, which supports using the concept in this study to help understand how learning might occur through Twitter use (Andersson & Olson, 2014; Dennis, 2015; Sandlin, O’Malley, & Burdick, 2011; Sandlin, Schultz, & Burdick, 2010; Trifonas, 2012). For example, in Sandlin, Schultz, and Burdick’s *Handbook of Public Pedagogy* (2010), video games (Hayes & Gee, 2010; Trifonas, 2010), blogs (Bernstein, 2010), and social media (Freishtat, 2010; Reid, 2010) are all

among the sites evaluated as public pedagogy. Twitter, in particular, does not appear to have been made a common object of close study as a site of public pedagogy, especially compared to Facebook, but it a strong candidate. This study contributes to this growing area in the literature.

My understanding of public pedagogy also draws on Dewey's approach to the environment's role in learning, as discussed above. My research is seeking to understand how an environment that has not been curated by an educator might still become a learning environment. With these ideas in mind, questions of public pedagogy meet questions of how an online environment could teach social justice activism. Recalling my interest in the potential for online spaces to generate a digital citizenship, the assumptions of my research project become clearer. I am invested in the possibility of a public pedagogy that might inform critical digital citizens.

However, Glen Savage (2010) provides a word of warning regarding the concept of public pedagogy, based on the educational research literature. He reminds theorists to be explicit in naming what "public" a pedagogy might reach, differentiating this process from socialization, and recognizing both the regulatory and resistance potential in these pedagogies (Savage, 2010). Often, these steps are not taken, and the term becomes less meaningful, Savage argues. Therefore, in drawing conclusions, I must be clear who is participating in any theoretical "public pedagogy" and ensure that my argument is applied to a particular public.

Furthermore, although there is sometimes an assumption that MDL competencies can be created passively or intuited through simple exposure, Jenkins and colleagues (2009) point out that there are potential barriers to this process that are commonly overlooked. First, the "participation gap" is created by unequal access to technology, experiences, and skills (Jenkins et al., 2009, p. 3). Second, the "transparency problem" occurs when digital processes are concealed from consumers (ibid.). The final barrier is what they call the "ethics challenge," or the

“breakdown of the traditional forms of professional training and socialization” that would prepare a young person to act and create in a digital community with integrity (ibid.). This is a valuable critique levelled at those who believe young people can adapt to new media without support, and one I kept in mind as I approached my research on the potential for a MDL learning process through the use of social media. It is important to consider the limitations to “learning by doing” compared to engaging with intentional or formal education. Even if public pedagogy online can support the development of MDL competencies and offer another way to access MDL education, it is not a sufficient solution to the problem of how to ensure consistent and comprehensive access to MDL education to all people.

2.2.4 Community of Practice & Legitimate Peripheral Participation

In addition to public pedagogy, I will also be making use of two connected concepts: “community of practice” and “legitimate peripheral participation,” as articulated by Jean Lave and Etienne Wenger (1991) in *Situated Learning: Legitimate Peripheral Participation*. These terms focus on learning through participation in social activity and evolution towards community membership, which has the potential to be a useful way to view my participants’ learning process.

According to Lave and Wenger (1991),

a community of practice is a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice... the social structure of this practice, its power relations, and its conditions for legitimacy define possibilities for learning. (p. 98)

However, Lave and Wenger (1991) clarify that the use of “community” in the phrase does not “imply necessarily co-presence, a well-defined identifiable group, or socially visible boundaries.

It does imply participation in an activity system about which participants share understandings concerning what they are doing and what that means for their lives and for their communities” (p. 98). A community of practice will have shared practices, mutual participation, common goals, and construct a collective culture and history (Wenger, 1998). Communities of practice created online have been termed by some “electronic networks of practice,” and typically feature a looser, more fluid membership, as participants are frequently distant and/or strangers (Hildreth & Kimble, 2004).

“Legitimate peripheral participation” is how Lave and Wenger have labeled the process of a new learner beginning to participate in a community of practice and increasing their mastery over time through participation in the “sociocultural practices of a community” (Lave & Wenger, 1991, p. 29). For Lave and Wenger, legitimate peripheral participation is central to the process of learning through practice and is a part of their evolving approach to the concept of apprenticeship. They write, “legitimate peripheral participation moves in a centripetal direction, motivated by its location in a field of mature practice. It is motivated by the growing use value of participation, and by newcomers’ desires to become full practitioners” (Lave & Wenger, 1991, p. 122). It should be noted that Lave and Wenger were not suggesting that there is a “centre” to a community of practice into which the newcomer might move from the periphery, but the newcomer could be said to be moving from partial participation to full participation in the community. As such, they theorize learning as not just acquiring skills, but also the construction of an identity as someone who is a part of a community.

I apply these concepts more instrumentally to describe the learning processes of participants, as they are compatible with my theory of learning as a situated, social practice, as explained in the prior section. Lave and Wenger “locate learning... in the increased access of

learners to participating in roles in expert performances,” and this is a helpful approach for a study that focuses on learning that is measured through its application (p. 17). In addition, a number of scholars have applied the concept of the community of practice to learning online and networked Twitter behaviours (Gilbert, 2016; Gunawardena et al., 2009; Johnson, 2001; Lewis & Rush, 2013; Wesely, 2013; Xu, Chiu, Chen, & Mukherjee, 2015) and, given that I am evaluating learning on the platform, I want to ensure that I can put this work in relation with this literature as well.

2.2.5 Publics and Counterpublics

Twitter is widely considered a part of the public sphere, but conceptualizing Twitter as creating the conditions for multiple, competing publics supports a richer understanding of that platform. The concept of “publics” deconstructs the traditional, singular “public sphere” in favour of viewing civic engagement and discourse as taking place in multiple spaces, including the concept of “counterpublics” as publics that resist dominant discourses (Fraser, 1990; Warner, 2002). Given the expansive public space provided for discourse by the Internet, it is difficult to imagine this arena as the single, shared, coherent public sphere that scholars might have traditionally imagined. Nancy Fraser (1990) presents an appealing alternative in “Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy,” where she argues that there are “a variety of ways of accessing public life and a multiplicity of public arenas,” and the bourgeois public sphere traditionally described by Habermas is just one of many competing publics (p. 61). Within this framework, a dominant (bourgeois) public is placed alongside many other publics, and the sum total of public space is composed of many separate and overlapping publics. Furthermore, for Fraser, “counterpublics contest the exclusionary norms of the bourgeois public, elaborating alternative styles of political behaviour and alternative norms

of public speech” (1990, p. 61). Scholars have been imagining how contemporary digital media has shifted opportunities to create and access publics, and I hope to contribute to this literature by considering what skills are necessary to access these digital publics and counterpublics on Twitter (Papacharissi, 2010; Rambukkana, 2015; Rogers, 2016).

There is a growing support for treating hashtags as publics of various kinds (Bruns & Burgess, 2015; Jackson & Banaszczyk, 2016; Kuo, 2018; Papacharissi, 2016; Rambukkana, 2015). In *Publics and Counterpublics*, Warner (2002) helpfully defines a public as a “space of discourse organized by discourse,” which exists “by virtue of being addressed”; I believe that a Twitter hashtag can function in this way (pp. 67-68). Creating a hashtag (e.g., #BlackLivesMatter) can make discursive space for a conversation and its attendant community of participants. Furthermore, Warner writes that, “when people address publics, they engage in struggles—at varying levels of salience to consciousness, from calculated tactic to mute cognitive noise—over the conditions that bring them together as a public,” and a hashtag public negotiates the contested meaning of the discursive space through the use of the hashtag itself (Warner, 2002, p. 12).⁴ Even provisional consensus requires struggle and may not occur at all (Kelly, 2011). It is further important to note that in Warner's public, participating strangers “become, by virtue of their reflexively circulating discourse, a social entity,” and this process can be seen to occur when users participate in a hashtag and bridge the gaps from digital stranger to digital neighbour in the process (pp. 11-12).

Becoming an emergent social entity, however, is not to be equated with becoming a

⁴ For an example of how activist hashtag counterpublics engage in a struggle for coherent meanings and inclusive consensus, see Jackson & Banaszczyk (2016) for their analysis of racial justice activist hashtags.

community. On this point, Bruns and Burgess (2015) write:

the extent to which any one group of participants in a hashtag may be described as a community in any real sense is a point of legitimate dispute. The term “community,” in our present context, would imply that hashtag participants share specific interests, are aware of, and are deliberately engaging with one another, which may not always be the case; indeed, at their simplest, hashtags are merely a search-based mechanism for collating all tweets sharing a specific textual attribute, without any implication that individual messages are responding to one another (this is most evident in the case of emotive hashtags such as #headdesk). On the other hand, there is ample evidence that in other cases, hashtags are used to bundle together tweets on a unified, common topic, and that the senders of these messages are directly engaging with one another, and/or with a shared text outside of Twitter itself. (p. 5)

A hashtag public and a hashtag community are not synonymous. Furthermore, Bruns and Burgess are right to avoid assuming that all hashtags share the same qualities and that they all act in the same way to create discourse or relationships between participants.

Hashtags are flexible linguistic tools, and research participants make use of them in many different ways to a variety of ends. Although not all hashtags are effectively publics, I believe my analysis benefits from thoughtfully applying the concept of publics and counterpublics to hashtags. Armed with this framework, the many swirling factions and subcultures of the Internet begin to resemble a network of publics and counterpublics, rather than a chaotic monolith.

2.2.6 Hashtags & Activism

Hashtags are worthy of consideration as concepts because they provide specific opportunities to understand communication on the platform and offer unique functionality that

has been adopted by other social networks, as well as popular vocabulary. Hashtags were first generated by users rather than Twitter's creators, emerging from the necessity to find information management strategies in the noisy environment of Twitter (Rambukkana, 2015). In 2007, user Chris Messina publicly proposed using hashtags to signal a "channel," based on the tradition of user-generated tags and IRC (Internet relay chat) channels, so that tweets could be meaningfully grouped for easier "contextualization, content filtering, and exploratory serendipity" (Rambukkana, 2015, p. 16). According to Zappavigna (2015), hashtags function as "social metadata," appending additional meaning to the content to "assist in retrieving and understanding that content when it is stored or published" (p. 276). Hashtags also invoke an "imagined audience" and assume an awaiting conversation, because the original purpose of a hashtag is to add a tweet to a greater collection and increase the chances of sharing through establishing a way to locate a tweet (Zappavigna, 2015, p. 275). That being said, Zappavigna points out that a hashtag may not be self-explanatory to those who fall outside of the community it is addressing. Hashtags communicate to a particular public, rather than all people. Bruns and Stieglitz (2012) write that hashtags might be created on an "ad hoc" basis, responding in the moment to a new development, might be "reoccurring," repeatedly referring to the same event or phenomenon, or hashtags can be "promoted praetor hoc" (i.e., before an occurrence), often by organizations who are trying to establish how users reference an upcoming event (p. 165).

Today, the question of what a hashtag does is made challenging by the flexibility of the practice. Zappavigna (2015) writes that hashtags can be used to communicate, (a) the topic of the post, (b) association with an existing community practice, and/or (c) additional emotional commentary. Bruns, Moon, Paul, and Münch (2016) argue that the hashtags can be used for creating an "ad hoc public," "a community of practice engaging in shared, possibly concurrent

activities,” creating and spreading a (funny or serious) meme, or creating emotional emphasis, and they further acknowledge that a full investigation of other possibilities has yet to be completed. In their quantitative study of communication patterns, Bruns and Stieglitz (2012) identify two key, common behaviour patterns related to hashtag use. First, “gatewatching” occurs when users include a hashtag to facilitate identifying, sharing, and disseminating “situationally relevant information” with other users in the moment, especially during breaking news events (p. 176). Second, “audiencing” occurs when users include a hashtag to support a shared experience of an event and collect live commentary on the platform, exemplified in the popular practice of “live-tweeting” events as they occur (p. 176). Tsur and Rappoport (2012) point out that hashtags will often provide valuable context, which was particularly important when there were only 140 characters allowed and a user is liable to encounter a tweet in isolation from the larger conversation of which it is a part, literally or figuratively. According to Bruns and Burgess (2015), the ability of a hashtag to communicate with a “community of interest” on an ad hoc basis is a unique strength of this “communicative practice,” as it has the potential to bridge gaps between users who do not follow one another and create conversations that can span wider networks through forming a public (pp. 4, 7). I hope to add to the growing literature examining the possibilities within these publics.

A particular hashtag practice of interest in this study is what has been referred to as “hashtag activism,” which is activism mobilized on social media and marked by the shared use of a hashtagged word or phrase, like #MeToo (Clark, 2016; Cumberbatch & Trujillo-Pagán, 2016; Stache, 2015; Vats, 2015; Yang, 2016). This form of activism is particularly vulnerable to being labeled as “slacktivism,” which is a derisive term for passive and/or performative gestures that do not effect social change but allow people to look and/or feel like they are engaging in

activism (Cabrera, Matias, & Montoya, 2017; Christensen, 2011). However, Christensen (2011) argues that online activism does not appear to substitute for alternative offline actions, and may actually reinforce other activism, and so concerns that tweeting is diluting the power of movements are likely uncalled for and may actually be missing the point. In general, Twitter has been established as a potential tool for activism, as it is closely associated with prominent contemporary movements, such as Occupy Wall Street, Black Lives Matter, the Indignados, as well as moments of significant social upheaval such as the Arab Spring, where substantial news and discussion occurred on Twitter (Murthy, 2018). For activists, Twitter might function as an opportunity to be heard, spread a message, coordinate and mobilize around actions, hold power accountable (particularly through sharing recorded video), and show solidarity (Murthy, 2018). Many scholars have begun evaluating Twitter hashtags for their potential to contribute to social justice activism (Berridge & Portwood-Stacer, 2015; Bonilla & Rosa, 2015; Booten, 2016; Clark, 2016; Cumberbatch & Trujillo-Pagán, 2016; Eagle, 2015; Gleason, 2013; Olson, 2016; Stache, 2015; Vats, 2015; Yang, 2016). However, this work is typically focused on the impact, meaning, or media representations of the activism taking place on Twitter, assisted by specific hashtags, rather than how participants in such activism were able to take part at all.

It is important to note that evaluating the effectiveness of Twitter or hashtag activism is not within the scope of this study. Determining the overall effectiveness of any given activist tactic is typically challenging, given the many possible metrics for measuring success, differing circumstances in which the tactic might be applied, and multiple co-mingling strategies, making attribution challenging. In addition, in many cases hashtag activism is arguably too recent to have accomplished its intended goals, if it were even expected to be able to do so. For example, participants cited the hashtag #BlackLivesMatter as an effective hashtag, but it has not ended

state-sanctioned violence against Black people, so what do the participants mean by effective? This will be explored in chapter four. My stake in addressing hashtag activism with research participants, however, is in understanding how they view the practice, rather than determining the objective effect of hashtag activism as an activist or political tactic.

In a sense, I am interested in the origin story, rather than the phenomenon, of how Twitter users learned to use the Twitter platform to advocate with hashtags. To do this, I will be focused specifically on the hashtags that are making a claim for justice and advocating directly within the text of the hashtag, such as #YesAllWomen, #BlackLivesMatter, or #NoDAPL, which I call “activist hashtags.” According to Young (1990), injustice takes the form of oppression and domination, in various forms, and “when people say a rule or cultural meaning is wrong and should be changed, they are usually making a claim about justice” and so activist hashtags might take on a broad range of issues, from wide-scale social issues to problems of misrepresentation in a particular news story to gentrification of a community (p. 9). Although activism on Twitter takes many forms and may not use hashtags at all, this study focuses on a particular strategy as an example of the wider possibilities.

2.2.7 Conceptualizing Next Steps

By outlining these concepts, I hope to provide a clear picture of where this study sits in the greater web of ideas. Media and digital literacy, digital citizenship, public pedagogy, communities of practice, publics (and counterpublics), and hashtag activism are used to analyze and understand participant experiences learning to use activist hashtags on Twitter. Because my topic cuts across subject areas, I believe that the interdisciplinary nature of my research allows me to learn from researchers in different fields and combine concepts across disciplines for greater understanding overall.

It is worth reminding readers that for critical realists, concepts are also theories about the world they are attempting to describe (Danermark et al., 2002). As a result, concepts can be taken up pragmatically as they are useful to describe data, demi-regularities, mechanisms, or other features, and re-imagined according to new theories of the world. In chapter five, I will return to the concepts presented here to theorize how they relate to my findings.

2.3 Situating the Researcher

Finally, given my understanding of learning as situated, influenced by context and formed by experience, it is important to situate myself within this research. This study, like all research, is a learning process. My learning will be informed not just by the literature I review and the research methods I choose, but also by my own perspective and lived experiences. Inevitably, my point of view is a lens that I use to see any data and, in order to transparently describe all of the methods I have used to interpret information and reach conclusions, I must also provide a description of my positionality.

I was born in 1991, and so the World Wide Web has always existed during my life time. Although I reject the premise of the “digital native” (Prensky, 2001; see Bennett, Maton, & Kervin, 2008) that might assume I have a “natural” ability regarding digital technology simply due to my age, I do approach my research from the position of someone who is comfortable living, learning, and working online, and this does influence my perspective. The most basic influence is the desire to initiate and complete this research at all, particularly as this study assumes that one might learn transferable skills within an informal digital environment. My belief that informal learning could be a key tool for generating knowledge of rapidly changing digital tools and techniques is based on my own experience of navigating digital space. In addition, my experience developing critical consciousness of media has been influenced by

access to online resources. Given my own history, I hoped to get insight into how common my own experiences might be. Research inevitably becomes a personal project, but the impetus for this research is immediately personal, arising from a curiosity about the processes that I engage with on a daily basis and the desire to compare my own experiences with those of others.

Of course, it is important to acknowledge that reliable, continuous Internet access and the skills to use it remain privileges. My position as a white, educated, settler Canadian who has grown up with the means and skills to access the Internet throughout my life, generally through a computer in my home, puts me in an advantageous position relative to many people. In essence, I am on the privileged side of the “digital divide,” a concept popularly used to describe the unequal access to the Internet, technology, and digital skills (van Dijk, 2005). Such access throughout my life has given me the opportunity and inclination to take on digital research.

Further motivation for this project has been provided by participating in both activist and Twitter communities since 2009. I have been a part of feminist activist communities online and in Vancouver, BC for almost a decade, and for much of this time I have been investing my time in educating youth regarding social justice issues. Activist hashtags were first brought to my attention through feminist hashtags that I encountered as I used my personal Twitter account. Although I use Twitter for a variety of purposes, my main focus has been to continue to gather information that is relevant to me as a feminist and citizen. Until I began this study, however, my Twitter use was infrequent, sometimes stopping for months at a time. This experience in activism and on Twitter has provided some sense of being an “insider” when speaking with some participants, but I have been very interested to learn more about how other people use Twitter quite differently from myself and I have enjoyed seeing new sides of activism on Twitter that I had never heard about.

As I consider knowledge to be relational and socially constructed, I am aware that my own relationship to my research is incorporated into any findings, regardless of any intention to present only the “facts.” Transparency about my positionality is intended to locate my situated knowledge (Haraway, 1988) for readers and allow for greater accountability. As my perspective will shape the focus and outcomes of my research, I believe my best strategy for accounting for this influence is to be clear about its presence. While I cannot pretend to begin with a blank slate, I can attempt to transparently establish my positionality, so that others might trust my findings based on their own analysis of my methods, understanding the assumptions I make, investments I hold, and the limitations of my lens.

Chapter 3: Charting the Course of Study

Having established my philosophical approach within my theoretical framework, I proceed to describing the concrete facets of research design and the procedures that I followed in collecting and analyzing data. Within this section, I detail my research design and then walk through my procedures to provide a clear map of my journey through recruiting participants, collecting data, and completing analysis. In the process, I also detail the data collected and provide a picture of the participants who took part in the study. This chapter should give the necessary background to understand the sections to follow where I present and discuss my findings.

It may be useful to first return to my research questions. My main research question asks how adults learn the media and digital literacy competencies to use activist hashtags on Twitter. However, several questions arise in trying to make sense of the first:

- What media and digital literacy competencies are necessary to use activist hashtags on Twitter?
 - Could the set of skills under examination be better described as digital citizenship practices?
- What motivates learning to use activist hashtags on Twitter?
- How do users conceptualize the practice of using activist hashtags?
- What mechanisms allow or enable learning to use activist hashtags on Twitter?

To answer my research questions, I completed content analysis of Twitter archive data and transcripts of in-depth, semi-structured interviews with nine participants. Below, I describe the approach and procedures completed to ensure that the two methods of data collection, archives and interviews, were complementary.

3.1 Research Design Rationale

Critical realism does not prescribe a specific kind of research design and, in fact, often embraces the necessity for using multiple methods, allowing for a “both-and” approach that rejects methodological “purity” while still considering compatibility, which Danermark, Ekström, Jakobsen, and Karlsson (2002) call “critical methodological pluralism” (p. 2).⁵ In light of this view, this research is designed as a qualitative, exploratory study that incorporates two complementary methods under the umbrella of content analysis.⁶

Content analysis, broadly defined, is a set of research techniques intended to develop systematic, credible inferences from texts (Drisko & Maschi, 2015). This is typically done through the process of coding—that is, attributing a segment of text (unit of analysis) with a specific value or meaning (code) (Flick, 2014). Content analysis necessitates a transparent account of how these inferences are made, as interpretations of text are not self-evident or universal by nature (Drisko & Maschi, 2015). Tools such as code books or analytical frameworks are commonly used to consistently establish and provide rationale (Flick, 2014). There are many different, related strategies for coding, and I outline my particular strategy as I describe my procedures below. Using content analysis, “conclusions can be drawn about the communicator, the message or text, the situation surrounding its creation—including the sociocultural background of the communication—and/or the effect of the message,” making it a versatile approach (White & Marsh, 2006, p. 27). Content analysis can also traditionally be applied to a

⁵ It may also be worth noting that case studies are frequently embraced by critical realist scholars, placing my exploratory study within the tradition of analyzing social mechanisms through close examination of a narrow data set (Edwards, O’Mahoney, & Vincent, 2014).

⁶ Although frequently considered only a method, content analysis can be considered a research methodology itself (Pfeil & Zaphiris, 2009; Small, 2011; White & Marsh, 2006).

wide variety of texts. Because it is well-suited even for data that were not generated for research purposes, content analysis is a useful approach for understanding all of the different kinds of data in this study (Drisko & Maschi, 2015).

Content analysis is quite compatible with the process of critical realist research as described by Fletcher (2016) and Danermark, Ekström, Jakobsen and Karlsson (2002). They write that critical realist research begins with empirical description where demi-regularities, trends or patterns within a data set, are identified and then a researcher must consider what casual mechanisms might generate the demi-regularities (Danermark et al., 2002; Fletcher, 2016). Next, a researcher would go through a “process of abduction—also known as theoretical redescription” where the researcher will analyze the data through the lens of concepts (Fletcher, 2016, p. 8). Braun and Clarke (2006) describe coding in generally similar terms, without the terminology of critical realism. In their process, data is first summarized descriptively, and empirical features of the data are captured, following by analysis of these initial codes for themes at a more abstract level that have explanatory power (Braun & Clarke, 2006). Critical realism research frequently includes interviewing and qualitative coding, but the literature does not present a strict method for coding. Later in the chapter, I discuss in greater detail how I approached this task.

Overall, I have chosen content analysis for its flexibility, its capacity for addressing large data sets, and its application in similar studies. This preference for pragmatic methods and flexibility is typical of critical realist research (Edwards, O’Mahoney, & Vincent, 2014). As this study is exploratory, I wanted to employ methods that offered me as much room to maneuver as possible. Content analysis provides the flexibility necessary to approach analysis from several angles, as both quantitative and qualitative strategies might be employed (Drisko & Maschi,

2015).⁷ Although my study is essentially qualitative in nature, because I am interested in describing a situated learning process, the amount of Twitter archive data also lends itself to some quantitative description. I am interested in patterns (or, demi-regularities), and I consider repetition and shared language to be important, so elements of descriptive statistics are useful to understand the wide trends in the archival data. However, the logic of my approach and strategy of analysis remains consistently qualitative overall. Coding and thematic analysis of the data as text add greater depth than any numerical summary I compose, and I did not complete a statistical analysis, as one might in a quantitative study. Whether counting or coding, my work will be characterized by qualitative aims to “turn the world into a series of representations” as part of “attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them” (Denzin & Lincoln, 2005, p. 3).

Content analysis is also useful for its ability to manage large amounts of data, particularly by reducing data into manageable pieces via a system of coding (Schreier, 2014). Together, study participants have produced 446,765 tweets over a period of a decade. A procedure that focuses on reducing archive data is key. Twitter also arguably lends itself to this type of analysis, as many of its own internal data organization strategies can be re-purposed within content analysis, such as the hashtags, retweets, and mentions that show up in the content of a tweet. I was able to code structurally to identify specific Twitter behaviours quite easily. Interview data required a different procedural strategy that focused on analyzing themes, but content analysis proved to be

⁷ It is worth distinguishing the capacity for content analysis to incorporate both qualitative and quantitative techniques into one method from truly mixed methods research that encompasses separate, distinct qualitative and quantitative studies under a greater research umbrella (Drisko & Maschi, 2015). I will not be conducting a mixed methods study, but I will draw on a variety of techniques available to me under the banner of content analysis.

a useful approach for summarizing, analyzing, and understanding both data sets. The systematic approach of content analysis and its acknowledgement of the iterative nature of data analysis review also appealed to me, because it incorporates revision within the strategy of inquiry itself.

Content analysis has frequently been used as a methodology in internet-mediated research that focuses on text generated online, from blogs to message boards (De Wever, Schellens, Valcke, & Van Keer, 2006; Garrison, Anderson, & Archer, 1999; Gay, Pena-Shaff, & Martin, 2001; Hara, Bonk, & Angeli, 2000; Hine, 2008; Pena-Shaff & Nicholls, 2004; Stacey, 2002). In the early 1990s, scholars like Robin Mason (1992) and France Henri (1992) called for an increase in qualitative content analysis, in particular, for analyzing computer-mediated communication in online learning environments. Henri's (1992) work has been important in providing a preliminary framework for content analysis of these digital learning spaces, and other scholars like Hara, Bonk, Angeli (2000) and Pena-Shaff, Martin, and Gay (2001) have continued developing content analysis as a tool for this work. Since that time, there has been a consistent trend in using content analysis for evaluating learning, although a preference for quantitative features appears to have continued into the 2000s (Gerbic & Stacey, 2005). However, while these studies offer a strong rationale for using content analysis in my own study, their coding frameworks are poorly suited to Twitter as a learning environment and the evaluation of informal learning. The processes and frameworks for using content analysis to examine conversational environments like message boards or distance education platforms cannot be directly applied to Twitter archives because this data is quite different. Rather than following threads of conversations, Twitter archives capture only one person's activity, and tweets are often not sequential in any meaningful way. Furthermore, these prior studies typically occurred in digital spaces where students were purposefully engaged in learning, making

indicators of learning much more directly visible. Therefore, there is limited use in applying the approaches of studies that focus their attention on online learning in these spaces, except to understand the advantages of content analysis as a methodology for analyzing computer-mediated communication in general.

Regarding Twitter and content analysis specifically, other scholars have fortunately provided models that are better suited to the kind of data I am reviewing, which can provide some guidance for my research (Bruns & Burgess, 2015; Bruns & Stieglitz, 2012; Bruns & Stieglitz, 2013; Gao, Lui, & Zhang, 2012; Rinaldo, Tapp, & Laverie, 2011). For example, Tamara Small (2011) offers a useful framework in, “What the Hashtag: A Content Analysis of Canadian Politics on Twitter,” as she examines the impact of #cdnpoli on the dissemination of information through a content analysis of tweets that included the hashtag during 2009. Her clear description of her method provides a helpful starting point, but her focus differs quite significantly from this study of learning processes rather than analyzing a digital artefact (the hashtag itself), and so significant departures from her work were necessary. This is essentially the challenge of interdisciplinary work that educational researchers often encounter, requiring that we learn from several fields of research to create our frameworks.

There are a growing number of examples of similar research regarding how Twitter hashtag activity impacts social movements, protest, and political action around the world (Berridge & Portwood-Stacer, 2015; Bonilla & Rosa, 2015; Booten, 2016; Clark, 2016; Cumberbatch & Trujillo-Pagán, 2016; Eagle, 2015; Gleason, 2013; Olson, 2016; Rambukkana, 2015; Stache, 2015; Vats, 2015; Yang, 2016). Benjamin Gleason (2013) provides a strong model for using a hashtag to explore informal learning, as he evaluated the capacity to learn about a social movement through Twitter. Using a case study that incorporated a mixed-methods

approach, including descriptive statistics and content analysis, Gleason found that Twitter provided “multiple opportunities for participation in the Occupy movement...which may help learners becoming more informed, engaged citizens” (p. 966). Furthermore, he specifically identified competencies that were required to engage in such a manner, including navigating Twitter hashtags, information management, and a “learning mindset” (Gleason, 2013, p. 977).⁸ Gleason’s examination of the learning process, however, was conducted from a first-person point of view, analyzing his own learning through content analysis, while my study seeks to understand the learning of others. My study shares many of Gleason’s methods and questions but includes a set of interviews to provide additional perspective beyond what content analysis of Twitter archives can offer.

It should be noted that interviews are less frequently used in the literature I have reviewed, although they do appear (see Stephansen & Couldry, 2014). There is a growing interest in using interviews to support text-based content analysis to get a more detailed picture of online behaviours (Bruns & Stieglitz, 2012; Pfeil & Zaphiris, 2009). Researchers working in understanding student learning online have specifically recommended that content analysis of posts be paired with retrospective interviews to allow for greater insight into learning (Hara, Bonk, & Angeli, 2000). Interviews pose a greater challenge to obtain than publicly available

⁸ In contrast, Bonilla and Rosa (2015) offer an ethnographic approach to hashtag activism research by treating Twitter as a field site as they analyze the #Ferguson phenomenon as a “political temporality” (p. 4). They highlight the semiotic significance of hashtags beyond existing as a “filing system,” arguing that hashtags create a “particular interpretative frame” that “locates texts within a specific conversation” by more directly indicating the meaning of a tweet (Bonilla & Rosa, 2015, p. 5). Their close reading of the #Ferguson hashtag provides strong background in how hashtags might create and politicize a public. Although an ethnography is out of the scope of my project, their approach is broadly informative for projects looking at hashtag activism.

Twitter messages, which may explain some of this discrepancy. I believe that it is important, however, to allow Twitter users an opportunity to elaborate on their experiences of using hashtags.

Although a survey might be more convenient for a sample that is distant and diverse, my questions about Twitter competencies practiced through engagement with activist hashtags required fulsome answers, particularly if participants had not thoughtfully considered their involvement prior to being contacted. In addition, capturing experiential data on informal learning often requires “an initial orienting process” for study participants by researchers because of the tacit and casual acquisition of knowledge; without such guidance, “most people do not register much of the informal learning they do until they have a chance to reflect on it” (Livingstone, 2006, p. 217). After having completed the interviews, I can attest to the benefits of interviewing over surveys for informal learning, as I observed how participants would come to realize how much they had learned as we spoke. Interviews also allowed for more flexible responses, greater exploration of issues, and made room for unexpected answers in a way that survey questions do not. Achieving long, deeply considered answers to questions on a survey is possible, but I believe unlikely in the circumstances of my study. For many participants, the interview process was the first time that they critically considered their own behaviour on Twitter. Without a responsive dialogue and probing questions, reflections would likely have been much more surface-level.

Critical realists use interviews to understand both the interpretations and social context of interview participants, so that they might understand their experience and how it is structurally situated (Smith & Elger, 2014). The interview is also the juncture where researcher theory and interviewee expertise meet (Smith & Elger, 2014). Critical realism approaches the interview as

an interactive dialogue where knowledge and meaning are mutually constructed by both interviewer and interviewee throughout the process, which is a view shared by constructionists (Smith & Elger, 2014). However, critical realists recognize that “accounts need to be subjected to critical scrutiny not only in their own terms but also in relation to other sources, including observation, documents, and other interviews,” and my research design follows this logic during both data collection and analysis (Smith & Elger, 2014, p. 119). For example, I used Twitter archive data as a type of stimulus text during the interviews to create a more concrete context for their accounts. By connecting interviewee descriptions of practices with their demonstrated practices on Twitter, the interview data we co-construct was influenced by interviewee perspective, interviewer theories, and documented evidence. Through the combination of these factors, I hoped to “generate situated accountings” of how interviewees learned to use activist hashtags (Roulston, 2010, p. 60).

Finally, my research design is significantly informed by the unique challenges of researching informal learning, particularly tacit knowledge that is often acquired in the process of everyday practices. Livingstone (2006) notes that direct observation and in-depth interviewing can both be useful to get in touch with “previously taken-for-granted learning processes” and case studies are common within informal learning scholarship (p. 2006). By incorporating both observation (via archives) and interviewing, I hope to be able to begin to fill in the picture of how the learning process occurred for my participants.

3.2 Ethical Considerations and Concerns

Ethical considerations must be a part of every research process. Although I seek to be aware of and address the potential negative impacts of my work, I also consider ethics to be an ongoing responsibility. For example, while I received ethical approval from the University of

British Columbia Behavioural Research Ethics Board to complete this study according to proposed procedures, I remained vigilant for ethical challenges and nuances that might arise during and even after the study.

Content analysis itself presents some challenges, as its focus on a systematic reduction of data to concepts is necessarily fraught. Coding requires interpretation, and I recognize that the way that I make meaning of data will not be universally-held, despite my best efforts to provide rationale. I hope to avoid a narrow view of the data by collecting archive data *and* conducting interviews, which can provide insight into the archive data and serve as a partial check to my own interpretation. I also purposefully put the two data sets in conversation during analysis. By recognizing that coding and identifying themes is an iterative process, and incorporating points of reflection into the research design, I hope to mitigate some of this limitation. However, it is inescapable that my interpretation will shape the conclusions I reach. Therefore, I think that it is important to recognize that this study will only present a partial vision of this learning phenomenon and that participant voice will be significantly muffled by my own analysis.

Regarding interview ethics, I have done my best to enter interviews without assumptions about participant experiences and be aware that these conversations sometimes inspire strong emotions or reactions from the participants. While this study “only” focuses on experiences of learning about a specific social media practice, it is not necessarily a light topic, and Twitter experiences can be fraught, particularly for people who use the platform for activism. I anticipated that my participants may have had negative encounters on this platform, particularly if they had achieved the notoriety that often accompanies a trending activist hashtag. In addition, the activist hashtags themselves can arise from difficult circumstances, such as the #MeToo hashtag, and I took this seriously as I asked participants about their hashtag use and motivations.

My questions were particularly open when requesting information about these topics, and I let the participant determine the depth of disclosures. Because I was addressing potentially challenging topics, I was prepared to be patient, take breaks when necessary, and I had resources ready if they needed more support, although no participants required them. I did ensure that I communicated that I understood the gravity of disclosures when they were made and limited my questions to what was necessary for the research, which did not require exploration of their personal history beyond Twitter use. I was able to develop a rapport with participants through email correspondence and conversation prior to questioning, which allowed for more sensitive handling of topics. Through these interactions, I could establish a more comfortable dynamic where mutual humanity was recognized, rather than engaging just from the role of “researcher.”

The nature of the research involving social media data makes additional vigilance important because there are fewer models for how to proceed. Qualitative research, in particular, is still finding its legs, although it is quickly expanding (Poynter, 2015). Digital or virtual methods continue to be a site of research innovation (Hine 2005; Poynter, 2015; Rogers, 2013). As technology is shifting quickly, norms and understandings remain under construction, so questions of identifying public versus private speech, how potential subjects should be approached, and how to best maintain relationships with research participants are all still being answered (Golder, Ahmed, Norman, & Booth, 2017). While this means that I must be vigilant to ethical issues and clearly document the reasoning behind practices that are not yet tradition, the possibilities for digital research are also exciting (Markham & Buchanan, 2012). I hope my study contributes to the literature to help shape how this kind of work is approached.

In general, practicing confidentiality was important to be able to assure participants that they could reflect on their experiences openly. By removing identifying information from

interviews and tweets, I am attempting to reassure participants that sharing their learning experiences will not result in being exposed to (additional) potential scrutiny or harassment. To achieve confidentiality, I avoid quoting directly from Twitter data if the sentence(s) could be entered into a Google search and identify a participant. While this kind of deanonymization might seem outlandish, there have been documented cases where people have gone to the trouble of identifying anonymized research participants by tracing social media content (Golder, Ahmed, Norman, & Booth, 2017). As a result, I have generally analyzed and presented Twitter data in the aggregate for patterns, rather than a close reading of specific tweets. According to Golder, Ahmed, Norman, and Booth (2017), this strategy aligns with how study participants would prefer their social media be treated. In their survey of social media research ethics, Golder and associates found that respondents were generally comfortable with aggregate social media data being used in research but found that opinions differed greatly on using quotes from publicly available social media.

As in all studies, it was important to explain and address any potential risks with participating in the study and gain participants' informed consent. Given the degree of literacy engaging in English-speaking Twitter requires, I felt comfortable relying on conventional consent forms and ongoing conversation to get informed consent. In forms and during interviews, I did ensure that I was clear with participants about the intention, scope, and data collection involved in the research. I wanted participants to understand their role and contribution to the study before speaking with me. I also offered to provide transcripts to participants to review prior to their use in the study. Several participants took me up on this offer, but of those who reviewed their transcripts, only one provided minor clarifications. No participants withdrew their consent during the process.

Researchers have not reached a consensus regarding consent for use of publicly available social media data, but there is an increased public interest in ensuring active informed consent, even if terms of service or other methods might officially allow for data collection (Golder, Ahmed, Norman, & Booth, 2017). I chose to seek explicit informed consent for both interview and Twitter archive data. For some participants the notion that a researcher would be searching through their Twitter history may be unremarkable, as the data is publicly accessible anyway, and several were quite aware of their tweets being used by others already. However, my scrutiny may also have felt very invasive, as a Twitter archive potentially covers a substantial amount of information about the participant. As the publicness of social media is continuously being re-negotiated, I am interested in preserving the greatest portion of privacy I can for participants. To this end, I requested that participants provide their Twitter archive by exporting it from the platform themselves and sending it to me. Although qualitative software packages like Nvivo do offer features that allow me to collect data directly from the web, I was not comfortable “data scraping” (extracting data from websites) when I had an alternative procedure available that would provide participants with more control over their data and more awareness of its collection. If a user had wanted, they could have edited the data that they submitted to me, as these files can be manipulated. Thus, my procedure made it clear what information would be under my consideration, because I would not be collecting their data in an ongoing way, as I might have been able to do with data scraping. In addition, the Twitter API (application processing interface) provides much less control over what data is collected and often limits how far into the past a researcher might review. In this way, the user and the researcher had more control over data collection when it was controlled by the user rather than software (Bruns &

Stieglitz, 2012).⁹ While much similar research has used automated data scraping to collect social media data (Bruns, Moon, Paul, & Münch, 2016; Gleason, 2015), I have preferred to avoid this strategy when possible to have the highest possible ethical standard.

3.3 Data Collection

This study is composed of two sets of complementary data, Twitter archives and interviews, collected from nine participants. These two methods of data collection were chosen to seek some degree of “methodological triangulation,” where multiple forms of data are used together to support understanding a single shared aspect, like one might use cross streets to find an intersection (Roulston, 2010, p. 84). Using both archives and interviews also gave me the opportunity to see a longitudinal view of a participant’s Twitter use, and potentially understand a bigger picture of the strategies at play. Relying on interviewees to remember fleeting interactions or long-ago social media updates seemed unrealistic, but to analyze the data without the context provided by the rich descriptions available in interviewing would leave me to only guess at intentions, meanings, and goals of participants. In the following sections I explain the process and rationale for participant recruitment and selection, summarize the data collected, and then describe the data collection and analysis procedures.

⁹ Bruns and Stieglitz (2012) helpfully note that Twitter data collection is always limited by what the Twitter platform collects and makes available. While I was able to collect certain information more reliably by asking participants to download their complete archive, Twitter’s records are not without fault and features like emojis in tweets often created errors when exported. No data collection strategy is perfect.

3.3.1 Selecting a Sample

Choosing the selection criteria for my participants presented challenges. The study scope is rather expansive, and to narrow it required putting aside interesting questions. For example, because I am dealing with knowledge acquisition regarding technology, one might anticipate that age is an influential factor in how technology is taken up. I would be deeply interested in investigating the practices of youth, but this group ought to be examined as its own particular case, and Twitter is not the most meaningful platform for young people at this time (Anderson & Jiang, 2018). Therefore, I limited my study participants to those over the age of nineteen.

Another important criterion for inclusion was that participants must communicate in English on Twitter. This is a significant limitation to my study, but I did not feel prepared to take on the expense of translation for substantial data sets and, perhaps more to the point, I do not possess the cultural knowledge that would be necessary to make sense of political conversations relevant to many non-English speaking groups. Even within English, I was often faced with the limits of my cultural knowledge and had to research meanings. Given the scope of my master's thesis, I thought that it was reasonable to limit my participants to English speakers, although I acknowledge the loss that this presents. The processes that I describe may be quite different for people who speak other languages, given related cultural affordances. Interestingly, two study participants who speak English as an additional language post exclusively in English on Twitter; the forces behind that decision were unfortunately out of the scope of this study, but I would encourage other researchers to explore language use on the platform and how that impacts Twitter experiences.

To capture the necessary data about the media and digital literacy (MDL) learning required to use activist hashtags, participants did have to have some Twitter archive history.

Initially, I imagined that a minimum of ten tweets would be necessary to gain a sense of how users interacted with the platform. However, after struggling to find participants who had low activity on Twitter, I did accept a participant, @Mary, who had only five tweets in her history. As a result, I leaned more on her interview to understand her Twitter use and her understanding of activist hashtags. However, the smaller archives did prove to be easier to analyze than those that spanned tens of thousands of tweets, which was a challenge I did not fully understand until I was faced with it.

I also required that participants had used an activist hashtag, as this was the practice under examination, but I did make a further exception for @Mary. I did so on the basis that her short Twitter history did include tweets that were participating in advocacy, which was a behaviour I considered aligned with activist hashtags, and I was also interested in speaking to someone who might be able to provide the experience of having chosen not to participate in a hashtag. However, upon interviewing this participant, @Mary revealed that she had participated in an activist hashtag on Facebook, #MeToo, and so she was not so much of an exception to this criterion as I had anticipated.

To create potential points of comparison and capture different experiences on the platform, I focused on recruiting participants who used Twitter differently. I aimed to recruit three participants who tweeted at least once a day, three participants who tweeted at least once a week, and then three participants who tweeted once a month or less. To measure this, I divided their total numbers of tweets by the number of months they had been active on Twitter to get a rate of activity. I also asked participants to self-report their Twitter use, as tweets are not always reflective of time spent using Twitter. To ensure that I had participants who fell within these categories, I pre-screened participants via their public Twitter profiles, considering especially

their activity in 2017, and used a preliminary survey. I also recruited the originator of an activist hashtag to hear specifically about that experience as well. Within this cross-section of Twitter behaviour, I hoped to be able to draw comparisons between behaviours on the platform within my sample.

The selection criteria also implicitly include “those people who are interested in participating in my study” and “those people who are accessible to me.” Among these candidates, I aimed to recruit people who could describe different potential trajectories for learning to use activist hashtags. As a small, qualitative study, my goal was not to draw a sample statistically representative of the very broad community who uses activist hashtags (Emmel, 2013). Instead, I focused on selecting diverse participants who had the relevant experience and inclination to help explore the potential learning strategies available.

3.3.1.1 Recruitment Strategies: Challenges and Procedures

During the process of the study, I attempted two different recruitment strategies for participants. Initially, I proposed to recruit ten people by choosing an activist hashtag, such as #WeNeedDiverseBooks, and contacting Twitter users who had participated in that hashtag and met the selection criteria. In this way, I could be assured that candidates would have participated in the relevant practice under investigation and that the procedure allowed for randomized selection of Twitter users and limited bias in the selection process.¹⁰ Under this plan, I would set an interval and contact every fourth user who participated in the hashtag and met my selection

¹⁰ While this strategy would offer a randomized selection from the pool of hashtag participants, it is worth emphasizing that this sample of users would unlikely be reflective of a randomly chosen sample of Twitter users in general. Users who are activated to practice activism on Twitter are a subset of overall users; people advocating for any particular issue are an even smaller subset.

criteria until I reached a total of ten research participants.¹¹ This purposive sampling was intended to include random Twitter users who have diverse but relevant Twitter experiences. Users who were contacted for recruitment were approached through Twitter direct messages or (when possible) through contact information available in their user profiles. Potential participants were given information about the study and fourteen days to respond to my inquiry before I would seek out a new candidate and assume they were uninterested in participating. As a small honorarium and a minor incentive to participate, study participants were all offered a \$25 gift certificate. The amount was low enough to avoid the risk of coercion for the vast majority of Twitter users but provided a little motivation to reply to my initial contact.

As part of the process, I needed to choose an activist hashtag. To do this, I used the following criteria:

- The originator of the hashtag was interested in participating in my study, as I hoped to include a hashtag creator in my sample.
- The hashtag referred to an issue that did not target a narrow identity group. This criterion was meant to avoid a sample that was pre-determined to disproportionately include people from a particular identity group. For example, the Twitter users for the activist hashtag #ShoutYourAbortion were predominantly women. To maximize the chances of a

¹¹ As I was approaching random Twitter users and reviewing their profiles prior to contact, I also reserved the right to forego contacting a user to whom I did not feel safe providing my contact information. This judgement was based on my own familiarity with the phenomenon of “bots,” programmed accounts, and “trolls,” abusive users who often use anonymous accounts created to prank, harass and/or threaten other Twitter users. As I did not want to become targeted by these kinds of users, I did not approach potential research participants who I believed participate in Twitter in this way. Although it would be of interest to learn how trolls might learn to use activist hashtags, I believe that would be a separate project and I did not wish to put my own safety or well-being at risk.

diverse sample, I chose a hashtag that was not similarly focused.

- At least one hundred Twitter users participated in the hashtag over time. I did not need the hashtag to be widely popular (“trending”), but I needed sufficient users to be able to recruit ten research participants for my study.

I was able to successfully contact the creator of a popular activist hashtag and recruit her into the study, which was very fortunate. However, when I proceeded to try to contact Twitter users who had participated in this hashtag, this stage of the process proved much more difficult. While the activist hashtag was extremely popular and well-recognized, providing many possible candidates for participation, my messages to users received nearly no responses. As months passed, key obstacles to this recruitment process became clear.

First, random online recruitment presents a practical challenge, as users are generally not motivated to respond to random inquiries, even with a small monetary incentive. Without shared interest, community, or network, recruitment messages are likely to be interpreted as like spam. In fact, my strategy of sending direct messages to Twitter users who were not mutual followers was considered rather bold or even inappropriate by some, much like approaching someone in the street might be. I did not realize this at the beginning of the study, as I had not yet spent considerable time on Twitter, although I had been a user since 2009. This realization made me understand how my recruitment messages might be coming across, and why I was not receiving responses.

Furthermore, the ease of recruiting a hashtag creator is not representative of how easy it would be to recruit a random Twitter user. The hashtag creator had been interested in speaking with me on the topic of the study because she was invested in the work that she was doing. Therefore, it was intuitive for her to consider a study of her behaviour to be relevant to her

interests and worthy of her time. When I did recruit other participants, it would usually be because they were also likely to be interested in the outcome of the study, at least nominally. If I approached candidates who did not value the study for their own reasons, the recruitment pitch was not very compelling, even with a monetary incentive.

Finally, this study is interested in participants who also use Twitter infrequently. However, in a random sampling of Twitter users of #activist (for example), frequent Twitter users are highly represented, due to their activity, and infrequent Twitter users are rarely encountered. Without directly pursuing this type of Twitter user, it is difficult to recruit an infrequent Twitter user. Furthermore, infrequent users of Twitter are likely not to even encounter the recruitment message, as they must sign on to the platform to receive it, and they rarely do so. It was important to pursue Twitter users with different usage patterns and relationships to the platform, as it is reasonable to consider this a factor in their learning process and skill development, which is the focus of the study. Therefore, the study could not simply sample high frequency users on Twitter, but these are the users to be mostly encountered in a random sample.

Although the messages did receive some interest and one interview had been conducted with the hashtag creator, it was necessary to pursue alternative recruitment strategies in order to achieve the necessary data to continue pursuing this project in a timely manner. To address these obstacles, the new recruitment process was adjusted to also include publicly requesting participants via two additional strategies: digital outreach and third-party recruitment.

In digital outreach, I used social media posts and social media advertisements, including a recruitment video (see Appendix A for materials). The University of British Columbia Behavioural Research Ethics Board has itself drawn up guidelines for recruitment using social networking sites in response to increasing research recruitment happening over social media,

providing a strong precedent for this strategy. By posting and advertising on Twitter and Facebook, the message was able to reach potential participants who were active in these spheres and therefore likely to be familiar with activist hashtags. For example, the #MeToo hashtag was being used on Facebook as well as Twitter during the time of this recruitment, demonstrating that Facebook could also be a good place to recruit. In addition, I could reach people outside of my immediate social circle and keep the pool of participants open to those who might not share my particular position. To support public understanding of the study and give context for the video and advertisements, a Facebook page, Twitter account, and a UBC blog were created where potential participants could get more information or be re-directed. Text of these pages was limited and consistent across various platforms.

However, posting on social media would again encounter the difficulty that infrequent users would be unlikely to be exposed to the participation request or recruitment advertisement. Therefore, I also made use of third-party recruitment as an approach for contacting potential participants. I provided a third-party recruitment letter to acquaintances who might serve as gatekeepers for additional social networks and would be willing to pass on a message to others. Through word-of-mouth, I was more likely to locate potential participants who could not be reached online due to the nature of their Twitter use and who might be interested in participating.

Because of the new recruitment strategies, potential participants had to be vetted to determine if they fit the selection criteria, as I could no longer assume that they had participated in a relevant hashtag, and no recruitment letter could realistically be comprehensive in listing qualifying hashtags. Therefore, I also created a preliminary survey that would be provided to potential participants to ensure that they met the selection criteria. Upon receiving the

preliminary survey, I could review their Twitter feed to ensure that they did use activist hashtags, if necessary.

All potential participants who received information about the study through a third-party recruiter or advertisement were directed to contact me if interested in participating. When potential participants got in touch, they were provided additional information about the study, including a consent form and the preliminary survey, and they were given fourteen days to confirm interest in participating and return the survey. At that time, they were asked to sign the consent form and return it via email within seven days.

As this is a small exploratory study, a comprehensive or representative sample is unlikely using any recruitment method. Therefore, the final recruitment strategy focused on simply reaching those who would be interested in taking part and prioritized including those people who represent a variety of Twitter experiences. Participants were predominantly recruited through third-party recruitment. While a randomized sample would arguably be the most defensible, and online recruitment has opened up possibilities to reach more potential participants, I found that nothing was more effective than a trusted contact identifying candidates who might be interested in participating. I believe that online recruitment was especially challenging because I was not pursuing participants who might be invested in the work or targeting members of a specific community; these features would have offered avenues for incentivizing participation or establishing initial rapport. I encourage others to explore the potential impact of a more appealing incentive or using online recruitment within communities that might identify with the goals of the study.

3.3.2 Participant Data Overview

Following the second recruitment strategy, a total of nine participants joined the study. In all, 446,765 tweets were included in the nine archives, with the smallest archive containing only five tweets and the largest containing 386,306 tweets at the time of submission. I spoke to each participant for an average of one hour for an interview over video conference software, like Skype, Google Hangouts or FaceTime. Given the amount of data generated from these participants, nine people were deemed sufficient for this exploratory study and additional candidates that could be reached seemed unlikely to provide substantial new information.

For an overview of the data collected and the participant demographics, please see the following Table 1 (Twitter use information), Table 2 (demographic information), and Table 3 (educational background). In analysis, I frequently used groupings according to activity level (high, moderate, or low), overall total number of tweets (top, middle, or bottom of the group), whether participants reported to have relevant education, and who identified as an activist. These features are also included in the tables for clarity during analysis.

It should be noted that I did not specifically pursue participants who identified as activists, as the practice of activist hashtags is not specific to activists as a group, but all of my participants did report to participate in activism.¹² For the purposes of analysis, I divided the total group into people who identified as activists and those who only tentatively identified as

¹² Corrigan-Brown (2012) writes in *Patterns of Protest* that activism is practiced “in a multitude of ways, and with varying degrees of continuity” and a typical activist has an “episodic and intermittent trajectory of engagement” with activism (p. 3). This description tracks well with the overall behaviour of most participants, who would have periods of high and low activist engagement. Although self-identified activists tended to be more consistent in their activism, even their level of engagement rose and fell, relatively speaking, as they moved between campaigns or issues.

activists, usually providing caveats before relenting that their participation in activism technically qualified them, but this identity was not important or useful for them in general. Those who identified as activists were also the most active and most prolific users in my sample. The participants who were tentative about identifying as activist had the lowest activity rates and typically had lower total tweets as well.

Participants were given the opportunity to choose their own pseudonym, although not all people chose to do so, and I did not insist. When participants did not choose a pseudonym, I provided a simple handle in the form of “user” and then attributed a letter in the order of recruitment. Regarding names, it is worth noting that I generally recruited people who are identified by their real name on their Twitter account, and this is not representative for how everyone uses Twitter. Many people on Twitter are anonymous and do not tweet to people with their own identity. It makes sense that anonymous Twitter users are less likely to want to be interviewed by a real person, even if they are promised confidentiality. However, as a result, this study focuses on hearing from people whose offline and online identities are roughly synonymous and their online activities align with their “real lives,” so their experiences of the platform reflect this use. This aspect is particularly important when doing activist work that includes disclosures or putting oneself “on the line,” because using one’s authentic identity is a more vulnerable choice than anonymous disclosures. Consider the consequence of sharing a traumatic experience anonymously online compared with sharing the same story when one’s identity is clear, as many did in the #MeToo hashtag. Only two of my nine participants took any lengths to conceal their identity on the platform through their usernames and all participants interacted with offline peers using their Twitter account.

Participant	Total Tweets	Period of Activity (months)	Reported Twitter Usage	Activity Level	Rate of Tweets per Month	Follows (users)	Followed By (users)
@Nina	386,306	85	Daily	High Activity	4,545	3,080	133,434
@UserD	29,175	109	Weekly	High Activity	268	2,364	2,467
@Lorelei	16,702	41	Weekly	High Activity	407	247	428
@UserA	7,098	59	Daily	Moderate Activity	120	5,001	3,153
@Bob	5,256	102	Weekly	Moderate Activity	52	309	430
@UserC	1,178	90	Weekly	Low Activity	13	385	152
@UserB	527	97	Weekly	Low Activity	5	515	391
@NastyWoman	518	4	Daily	Moderate Activity	130	149	109
@Mary	5	4	Yearly	Low Activity	1	52	5

Table 1. Twitter use, ordered by total tweet count

Participant	Age	Gender	Race/Ethnicity	English is Additional Language	Additional disclosed minority status	Identifies as Activist
@Lorelei	21	Woman	White	No		Yes
@NastyWoman	23	Woman	White	No	Immigrant	Yes
@Nina	46	Woman	Black	No		Yes
@UserA	27	Woman	East Asian	No		Yes
@UserD	29	Man	South Asian	No		Yes
@Bob	29	Man	East Asian	Yes	Immigrant	Tentatively
@Mary	27	Woman	White	No		Tentatively
@UserB	43	Man	South Asian	Yes	Immigrant	Tentatively
@UserC	31	Man	White	No	Immigrant	Tentatively

Table 2. Demographic information, ordered by identifying as an activist

Participant	Reported Relevant Education	Post-Secondary Education (degree)				Additional Formal Education Disclosed	Industry
		Bachelor	Law	Master	PhD		
@Bob	Yes	Yes		Yes	Yes		Technology
@Mary	Yes	Yes		Yes		Workplace seminar on social media	Law Enforcement
@Nina	Yes	Yes	Yes				Media/Arts, Law
@UserA	Yes	Yes				Coding boot camp, Marketing certificate	Technology
@UserB	Yes	Yes		Yes		E-commerce diploma	Marketing, Education
@UserD	Yes	Yes	Yes			Community workshop on social media	Law
@Lorelei	No	<i>In Progress</i>					Media/Arts
@NastyWoman	No	Yes		Yes	<i>In Progress</i>		Academia
@UserC	No	Yes		Yes	Yes		Academia

Table 3. Educational background, ordered by participant reports of relevant education

Overall, I was able to recruit participants who used Twitter in a variety of ways to various degrees and I grouped them in several ways for analysis. Demographically, my participants had a variety of racial and ethnic backgrounds and their ages ranged from 21 to 46, with an emphasis on people in their late twenties. Participants were all English-speakers and hailed from North America as I was speaking to them, but two spoke additional languages and were born in Asia. All participants had graduated high school and, generally, participants had received a high degree of formal education. However, when I asked participants about how they learned to use Twitter, very few attributed their knowledge to any kind of formal learning. The descriptor of “relevant education” is the result of reports by participants of how they applied prior knowledge to their

use of the platform, rather than an external judgment based on their educational background; a third of the participants did not say that prior education was applied in their Twitter use. The amount of education acquired by participants in general, however, suggests that my sample generally included those with the sufficient class and economic privilege required for these accomplishments. I did not collect a significant amount of detailed personal background information from participants, so in many cases I cannot definitively attribute specific traits or advantages to each person.

It is somewhat difficult to estimate how the sample relates to the general population of Twitter. It is not currently possible to directly collect demographic data of Twitter users from the platform alone, given that users report little information in their profiles, and so this information is typically collected through surveys of the general population. Canadian surveys by the Ryerson Social Media Lab and American surveys by the Pew Research Center both found that Twitter participation was essentially the same across genders and 18- to 34-years-old were the most likely age group to have Twitter accounts (Gruzd, Jacobson, Mai, & Dubois, 2018; Pew Research Centre, 2018). This gender and age break down has been reflected in the demographics of this study as well. Although the sample includes a high proportion of highly educated Twitter users, this is not necessarily a poor representation of Twitter users. Canadian data suggests those who are highly educated are more likely Twitter users. Among those with Bachelor's degree, 45% used Twitter; among those with a Master's degree, 47% used Twitter; and among those with a professional degree, 47% used Twitter (Gruzd, Jacobson, Mai, & Dubois, 2018). In comparison, 36% of those surveyed with high school education were using Twitter (Gruzd, Jacobson, Mai, & Dubois, 2018). Pew Research Center (2018) found that of high school graduates, only 18% used Twitter, while 32% of college graduates used Twitter. Although the

Ryerson Social Media Lab did not report on racial groups, Pew Research Centre (2018) reports roughly similar participation rates among white, Black, and Hispanic survey respondents. Such data paints an incomplete picture of the participation rates of various racial and ethnic groups, but it does suggest that the platform may be used at similar rates across groups.

Selecting a representative sample is not a feasible goal of this study, in part because I am focused on a subset of Twitter users who participate in activism on Twitter and I do not know the demographic composition of that group; it may or may not differ from the Twitter population at large. I include the available demographic information to demonstrate that my sample, while small, did include a meaningfully diverse group that likely encountered different social and cultural groups on Twitter. As a social network, a user experience on Twitter is affected by social factors, making demographics at least latently relevant to how they learn to use the platform.

3.3.3 Archival Review: Digging into Twitter Histories

After recruitment, I requested that participants provide their Twitter archives for my review prior to the interview. All Twitter users can export their Twitter archive directly from the platform and receive a folder that includes several formats, including a dataset file that I could use for my purposes. I used this bounded set of data in my analysis, rather than gathering ongoing data throughout the process.

I began with the initial review of Twitter archive data prior to interviewing the study participants for two reasons. First, I wanted to prepare for each interview by reviewing their Twitter activity, as this familiarity could benefit me during the interviews. Second, I wanted to be able to draw on specific examples from their Twitter archives during the interviews. I had originally intended to code the archives prior to the interview but found that the logistics of this were not feasible, given that some participants had so much data to go through, and I felt that it

was important not to wait more than a month between joining the study and sitting for an interview. I feared that participants would lose interest in that time, and I would have to put aside the data I had already analyzed, wasting significant time and effort. Therefore, I shifted my tactics.

When I received an archive, I would go through and clean the data set in Excel and prepare it to be imported into Nvivo. This included creating specific columns in the data set associated with each feature of a tweet, marking whether a hashtag was present in each tweet, and simplifying some of the information in the data so that it was easier to understand. Initially, archives provided the following information about each tweet: time and date it was sent, an internal identification number, whether the tweet was a reply, whether the tweet mentioned another user, the tweet content itself, whether the tweet was a retweet and, if so, the user who was being retweeted and the time of posting, the posting method of a tweet, and the extended URL of any link included in the tweet. For example, I got rid of the column for the internal identification numbers and turned entries into binary values for easier sorting when possible.

Once I had imported the archives into Nvivo, I ran frequency queries to find out the more frequent hashtags each participant used so that I could direct my questions towards these examples. I also coded structurally for the different features of hashtags, such as including user mentions, replies, retweets, hashtags, links, and threads. This allowed me to get an overview of what kind of features each participant relied upon and when they began to use them, particularly hashtags. I then extracted all tweets that contained hashtags and made note of the first use of each unique hashtag in a separate Excel document. These increased my familiarity with the data, provided an overview of participants' hashtag use, and provided an opportunity to do research on unfamiliar hashtags prior to a conversation with participants. I could also then bring questions to

the participant for clarification during the interview. Having a record of hashtag use over time also familiarized me with the first few hashtags a participant used, which gave me a sense of what first motivated hashtag use. I chose to do this archive review—identifying frequently used hashtags, noting what features were used over time, and cataloguing introduction of new hashtags—in order to efficiently get a sense of overall Twitter use prior to the interview.

After the interview, I returned to the archive data, prepared to have a more nuanced understanding of their Twitter behaviour. By incorporating a purposeful procedure for analysis, I hoped to allow the archive to affect the interviews and allow the interviews to meaningfully shape how I understood the archive data. Furthermore, I would code the archives prior to the interview transcripts, allowing for a continuing mutual influence between the two data sets as I moved back and forth between them. This procedure was intended to ensure that the two methods of data collection would complement and support one another, rather than simply occur in parallel, and iteratively improve how I understood the sum total of the data.

3.3.4 Conducting Interviews: Soliciting Narratives and Understanding Context

Having reviewed the archives, I arranged to interview each participant. I conducted nine in-depth, semi-structured interviews (Kvale, 2008) using a set of questions as a guide (see Appendix B), but I allowed myself to also be responsive to participants. As learning strategies and Twitter experiences were wide-ranging, this flexibility allowed me to incorporate differences between interviews more smoothly and engage more humanely with participants, rather than sticking to a script. I also wanted to allow the participant to drive the interview to areas that I did not anticipate. Therefore, I was prepared to reword, re-order, or abandon questions. Although I had prepared an “outline of topics to be covered, with suggested questions,” I preferred to stay

open and allow for the participant to move the interview towards topics relevant to their experience, even as I tried to keep my research questions in mind (Kvale, 2008, p. 10).

My demeanour during interviews was open and relational. I approach the in-depth interview through the lens of the “respondent as teacher,” as described by Lara Foley (2012, p. 306), but with a small change in emphasis. I did my best to establish the dynamic of peer-teacher and peer-learner, where we are each working from our knowledge and experience to co-create shared knowledge, rather than a traditional teacher-student dynamic. I see the interviewee as “an active participant and source of knowledge” with valuable experience to share as a peer in online activism (Foley, 2010, p. 306). To make this interview a shared endeavour, I was transparent with my participants regarding my research interest and questions. In addition, I offered a small amount of self-disclosure about relevant experience with the platform because social media remains a relatively new area and so finding a shared vocabulary for practices was very helpful. Not everyone shares a universal language for their own tactics, so we needed to create shared references to compare notes. Therefore, knowledge produced in these interviews was knowledge that was shared in collaboration between the researcher and the respondent. Because the study is focused on how they learned and all answers were given equal regard, I did not feel the need to “sneak up” on the answers to my questions or fear biasing the answers if participants were aware of the purpose of the study. In fact, two participants noted that curiosity about the subject of the study itself was part of their interest in taking part.

When speaking with participants, I also carefully considered my status as a potential insider and outsider. To consider myself an insider, I am acknowledging a shared practice (using activist hashtags), but I could not assume additional similarities. Furthermore, although I may share their experiences of using activist hashtags on Twitter, participants belonged to identity and

political groups where I am an outsider. Others approached activism, citizenship, community-building, politics, and technology with experiences and identities that I do not share. In these cases, it was particularly important to remind myself to consider the implicit assumptions driving my questions and be prepared to follow the participants' lead as they described their experiences. The semi-structured format is intended to allow for this process. Whether the participant viewed me as an insider or outsider (or both) was a determination only they could make, so I was careful to approach the interviewee open to new ideas, receptive to all responses, and responsive to the person I was encountering.

I was able to successfully use various video conference software, such as Skype, FaceTime or Google Hangouts, to meet with my research participants. Although I appreciate the advantages of an in-person interview, video conference software allowed me to move beyond the boundaries of a single location. A remote interview is not ideal to capture the physicality of the interviewee and did present challenges for building rapport, but overall it was more advantageous than a drawback, given my focus. Technical difficulties only interrupted two interviews very briefly, and both participants were sufficiently comfortable with the technology that these short delays did not seem disruptive for them. The convenience of video conferences over in-person meetings may have helped to recruit participants.

After the several email conversations required to arrange a video conference, participants and I typically had established some sense of one another. In the case of the participants who were connected to this study through a third-party recruiter, I also benefited from having been introduced already by someone whom they trusted. This is another benefit of this recruitment method that I had not necessarily anticipated. I also began each conversation with small talk and asked them if they had any questions for me, prior to beginning to refer to my interview guide,

which included scripted material regarding consent and confidentiality. Most participants wanted to be reminded of the purpose of the study, and I found that summarizing the questions of interest in the study increased their motivation to provide information, although some cautioned me that they were not certain they would be helpful. I reassured those participants and expressed my gratitude to all participants that they would take the time to provide their experience and insights for the study.

In general, participants were open about their experiences and did their best to answer my questions, but sometimes did not recall the information that I was seeking. All participants had at least one moment or more where they were unable to remember something. The use of their own archive as a stimulus text was often key to bringing back memories, providing context for pieces of recollections, or drawing their attention to a segment of their history that could be discussed more specifically. I also did my best to communicate my understanding when participants did not remember something, as I was eager to avoid flustering, frustrating, or pressuring the participants. I knew from the start that a significant limitation to using interviews would be that many people are not reflective about their Twitter use and that the sheer volume of tweets makes it impossible to remember much about a single one, especially if a user has been active for years. I tried to present myself as flexible, easy-going, and positive in hopes of receiving a similar attitude and keeping the line of communication open. Furthermore, although I felt very fortunate that my participants appeared genuinely interested in helping me, I also wanted to avoid applying any pressure that might incentivize participants to make up responses when they did not remember. I much preferred a response of, “I don’t remember” to falsifying memories to give a more pleasing answer. However, there is no way to verify that my strategy was entirely effective for avoiding fabrication, and overall, I acknowledge that memory is imperfect regardless.

Although I have coupled interview data with the archives to help support narratives that arise from either source, I know that my data is not a verbatim transcription of reality as it occurred. However, again, some realities can be considered more likely than others (McCall, 2005; Lopez & Potter, 2005; Fletcher, 2016).

Following the interviews, I proceeded to transcribe each conversation. The transcription process allowed me to increase my familiarity with this data and write several memos as I progressed and noticed patterns in responses. It was actually very helpful to immerse myself in the data by transcribing all the interviews in a short span of time. In this way, when I turned to coding the archives, I had been sensitized to concepts that were important to participants in their stories of learning to use Twitter. These concepts helped to influence how I built the code book and what information might be relevant to the participants themselves.

3.4 Data Analysis Strategies

I completed qualitative content analysis of both archive and interview data sets, although my approach was adjusted according to the data source. For example, when looking at the Twitter archive data, the material lends itself to summation through tables that demonstrate patterns of behaviour, while interview data is already focused around key questions, and it is more easily divided into themes. For the archives, I also needed to use a few different strategies to be able to reduce the data sufficiently to bring patterns into focus. With so much information, it was quite difficult to determine where to concentrate, and creating a code book was critical to the process. The interviews were primarily understood through a coding strategy similar to thematic analysis to make sense of each participant's learning journey. In general, my study has used the coding strategies described by Uwe Flick (2014), who cites Margrit Schreier (2014) for his approach to qualitative content analysis, and Virginia Braun and Victoria Clarke (2006) for

thematic analysis. I also found it helpful to draw on Marilyn Domas White and Emily Marsh (2006) and Graham Gibbs (2007) for additional detail or strategies. My analysis has also been influenced by Amber Fletcher's (2016) description of how critical realists move from identifying demi-regularities (patterns) in the research through initial coding and then go through the process of "theoretical re-description, in which empirical data are re-described using theoretical concepts" to move from describing to conceptualizing (p. 8).

As mentioned above, analysis occurred in this study through an on-going conversation between the archival and interview data. I began with an archival review, conducted the interviews, coded the archives, and then coded the interviews. By purposefully building in a procedure for analysis, I intended to build a structure that ensured that I would move between each data set and allow one to influence my understanding of the other. Each participant provided both an archive and an interview, and while these are different formats, I believe they can be best used as mutually reinforcing sets of information on each participant, rather than isolated incidents.

My process was also to evaluate on an individual level and then look for broader patterns across cases. Once data had been analyzed for each participant, I was able to look for points of contrast or similarities between participants, using the themes I have identified to provide structure and focus. Although the data lend themselves to many kinds of analysis, I used my research questions to narrow the scope of my analysis.

3.4.1 Coding Archives

The scale of the data was initially intimidating as I turned to the task of coding the Twitter archives of participants. Over 400,000 tweets were collected as part of participant archives. Although I focused on hashtags, I used tweets as the unit of analysis because hashtags

often work together and provide context to the surrounding text. Extracting hashtags out of the tweet context would frequently decrease clarity and meaning.

Qualitative software was necessary to even begin the practical process of coding, and I chose Nvivo because it boasted the Ncapture feature that extracted social media data from the web and imported it into the software. Although I did not use this feature, I anticipated that Ncapture meant that the software was prepared to deal with Twitter data. Unfortunately, the technical challenges of this amount of data did not become clear until I had already started the process of analysis. Nvivo is not yet optimized for the size of data sets that I wanted to use. Significant time was spent waiting for the software to process queries or respond to commands. However, overall, I believe that coding by hand would have made many of my analysis strategies impossibly time consuming, so the software remains the best option. I can only assume that it will continue to be improved in future versions to handle more data.

To maintain consistency over the significant time it would take to go through all nine archives, it was a practical necessity to systematically establish a code book at the start of the process. My initial code book was built from my familiarity with Twitter features, my initial review of the archives, the interviews with participants, and terms in the literature. Throughout the coding process, the code book was then refined and provided a consistent anchor that could keep a record of how each code was defined. Although I did have to begin with some codes generated from information thus far, I coded inductively, and so codes were added as I had greater exposure to the data. When revisions were made, I could make note of them and return to prior archives as necessary.

My first step was to code structurally for the use of specific Twitter features, which was the one coding step completed prior to conducting interviews. These features included:

- User Mentions: These tweets include a mention of another user, indicated by @username. These tweets might be replies as well (see next point).
- Replies: These tweets begin with @username and are directed more narrowly at a specific user. Replies are treated differently by the platform itself, as they are excluded from follower Twitter feeds.
- Retweets: These are tweets made by others that a user has chosen to share with their followers, and they might include additional commentary.
- Hashtags: These tweets contain a hashtag (#).
- Hyperlinked: These tweets contain a hyperlink, which can be used to add multimedia to the tweet or direct readers to a website external to Twitter.
- Plain text tweets: These tweets do not use any of the other features.

By coding for the behaviours enabled by the platform, I could track when certain features were used by participants and notice patterns. This strategy is roughly compatible with Bruns and Stieglitz's (2012) proposed quantitative strategies for analyzing communicative patterns on Twitter, although adapted for the purposes of this study. By coding for these features of the archive, it also allowed me to focus my attention when composing a narrative of their Twitter use, as I could see when hashtag use began in the overall timeline and then read that section of the archive more closely.

I also coded for specific hashtag behaviours. I identified which hashtags the user had participated in, originated, and retweeted. Because a hashtag is created whenever a # precedes a word, it is very easy to "originate" a hashtag, but I included a specific kind of hashtag creation in this category. When considering whether a user has originated a hashtag, I did not include hashtags that were incidentally original, such as elaborate one-off comments. I was looking to

capture hashtags that participants might describe as having actively created and repeatedly used. In this case, originating a hashtag implies a level of consciousness and strategy, if not at the moment of creation, then in subsequent use.

The next step in coding the archives was coding specifically the hashtags, now that they could be isolated from the rest of the archive. My initial review of the archives and relevant literature were both helpful in shaping my original coding framework for this step, which also grew as I became more familiar with the data as I coded. Without being able to group the hashtags around specific concepts, it would be nearly impossible to identify any patterns of behaviour.

Michele Zappavigna (2015) provided a useful starting point for this process because she describes hashtags as social metadata with specific functions. For Zappavigna (2015), hashtags are user-generated descriptive annotation that enable additional functionality for a tweet, such as increased searchability or insight into content. Her approach to hashtags emphasizes “meaning in context” that focuses on hashtags as a social practice that is both in service of data management and emotive or social purposes (Zappavigna 2015, p. 276). I took a similar approach as I evaluated the hashtags for their function in context.

Drawing on some of the functions Zappavigna (2015) describes, such as “topic-marking” and “metacommentary,” I broke the hashtags functions into the following categories: *metacommentary* (MT), *topic-marking* (TM), and *metadata* (MD). These categories are explored in the following chapter. I then proceeded to break down these categories into more specific functions, in the case of *metacommentary*, and more specific topics, in the case of *topic-marking* tweets. At this point in the analysis, I chose to strategically narrow the codes that I would apply, as not all hashtags were equally under scrutiny in the study. Therefore, I allowed a

wide berth for “miscellaneous topics” that did not appear to deepen my understanding of activist hashtags, learning, or related practices. My aim in coding was not to comprehensively describe all Twitter behaviours, and so I put aside hashtags that were not dominant themes in the data set and did not appear connected to the practices of interest in the study.

The code book evolved throughout the coding process using inductive coding. I allowed for coding a tweet as more than one thing because one tweet could include multiple hashtags and often words can multi-task, serving as both a comment and marking a topic, for example. Due to the significant number of tweets under examination, I avoided expanding my codes unless I felt it would provide additional depth of understanding. This meant that I had to return to re-code previous archives when it became clear that behaviours that appeared singular were actually a relevant pattern. For example, hashtags coded as both *MC-humorous* and *TM* were re-coded as *meme* when I noticed that this overlap described a common Twitter behaviour. The definitions of each code were refined throughout the process so that I could ensure consistent coding. Interview data also helped inform how I could code specific hashtags, as the description of the purpose behind a hashtag was often informative.

For most of the participants, I was able to code by reading through archives sequentially. However, @UserA, @UserD, and @Nina had large enough archives to make this process unreasonably difficult. @UserA had 4787 tweets with hashtags, @UserD had 9573 tweets with hashtags, and @Nina had 88,074 tweets with hashtags. To address this practical challenge, I used Nvivo to identify all hashtags and their usage frequency, determine the code for each unique hashtag, and then apply this code to all incidents of that hashtag. Many hashtags only appeared once, but procedurally this was a much faster strategy. For @Nina’s substantially larger corpus, additional measures were taken to reduce the data under evaluation.

@Nina's over 300,000 tweets are much larger than the next largest archive (@UserD at approximately 29,000), and this presented a unique challenge in analysis. Although @Nina had much more data to review, it was unlikely to be proportionally informative if I were to examine each tweet and each hashtag. Patterns of behaviour would be evident from a much smaller sample of her tweets. Although @Nina has qualities and successful hashtags that make her archive more interesting for answering some questions, her tweets are not all equally informative. In fact, much of her hashtag use was repetitious; only 24,966 hashtags were unique, although hashtags appeared in 88,067 tweets. Among the group of unique hashtags, many were used only once or twice. Having reviewed the archive, I attribute this effect to a couple of factors. First, the function of topic-marking means that new hashtags are easily introduced into a dataset covering many topics, such as this one; for every potential topic, there is a potential hashtag. Second, metacommentary hashtags are often a phrase that is not intended to be reproduced at all, becoming a single-use hashtag, and this practice can even form the basis for humor, so it is a relatively common purpose for hashtags. Therefore, it is not surprising that of the roughly 24,800 unique hashtags present in the data, 71% have been used only once, and another 11% have only been used twice. The benefit of coding these tweets is likely to diminish compared to the time it takes to code them, as uncoded hashtags are still identified (already coded structurally) and can be presumed to fall in the category of singular or very infrequently used hashtag that is not likely to be representative of a larger trend in the data. Given that the point of coding the archives was to cluster data for identifying patterns, a single data point is unlikely to disrupt a greater pattern, if a sufficient sample are coded.

With this rationale, I separated the hashtags that had been used once or twice from the rest of the hashtags to be coded and randomized these hashtags in Excel. Then, I identified a

smaller sample of hashtags to code. For hashtags that have been used twice, 1/4 of the total were included (711/2,845) and 1/16 of the hashtags that have been used only once (1105/17,677) were included. These figures were chosen due to the consistency of the hashtags themselves — having viewed the entire data set, the tweeting behaviour appears consistent— and because the resulting figures (1,815 hashtags used once or twice) represent a sizeable portion of the unique hashtags included overall (6,681). Therefore, of the 88,067 tweets where hashtags were present in @Nina’s archive, I coded structurally for all the tweets, but coded the content of the tweets for all but 18,706 hashtags, which are generally representing hashtags that were used only once. In all, 69,361 hashtags used were coded, representing approximately 78% of the archive’s hashtags.

3.4.2 Coding Interviews

When reviewing the interview data, my focus was on the qualitative features of the participants’ learning narratives. My intention was to create descriptions of the learning process and identify themes (Braun & Clarke, 2006; Flick, 2014). The transcripts allowed for more open coding because data management was not so vital to the process. Therefore, while a similar process was followed in spirit, the interviews could lean towards thematic analysis, where I moved from coding and into generating larger themes. In the interviews, I could do more than identify patterns or kinds of behaviour and instead look at shared meanings and conceptualize common experiences.

To do this, I read each transcript for both latent and semantic meanings and generated initial codes inductively (Braun & Clarke, 2006). Unlike the archive data, I was able to code more openly, expanding my code book as I went through, and then doubling back and reviewing prior transcripts if new codes were generated. Each transcript received at least three full

“passes,” but sections that were more conceptually loaded received more attention. Given the affordances of using software like Nvivo, I also moved through the data strategically to support my overall process of analysis. For example, as I coded, I also marked out larger sections of transcripts that shared a coherent narrative regarding their learning so that I might return to these sections as I tried to understand the learning journey of each participant.

After initial coding, I began to look for themes. I approached themes as patterns within the data that could be articulated as broader concepts, as compared to codes that are more simply recurring aspects in the data (Braun & Clarke, 2006). My themes are composed of codes that reflect facets of that larger concept. As mentioned, while I was transcribing and familiarizing myself with the data, I was also creating memos, and these were helpful as I turned to the task of identifying themes, as well. Themes that were not relevant to the research questions were put aside as I moved forward with analysis, but this narrowing of focus happened when themes were reviewed and defined, rather than attempting to determine initially what was relevant. This judgement came as I looked to understand what should be reported from this dataset and how these themes fit together to address the research questions.

As with the archives, I went through the process first individually and then collectively. By first investigating the learning journey of each participant, I was then able to identify larger patterns overall and paint a picture of the entire dataset. I explore these themes in the following chapter.

3.5 Considering the Design in Hindsight

Content analysis provided a flexible structure for addressing two sets of complementary data from nine participants. Although there were significant challenges associated with collecting and analyzing both archive and interview data, and alternative or simpler research designs might

have been advisable for greater efficiency, the methods described above have provided a more comprehensive picture than a more streamlined process might offer. Without either archives or interviews, I could not have benefited from having access to both a document of participant behaviour and participants' direct testimony regarding their behaviour's meaning. For example, it would have been difficult to puzzle out acronym hashtags from context alone or guess the purpose of hashtags created as inside jokes. The responsiveness of the semi-structured interview was valuable for the opportunity to explore specific experiences. In fact, given another opportunity and significantly more time, I would use the interviews even more strategically by presenting participants with full re-creations of cases from their own archives, rather than just examples of hashtags, to put the interview and archive data in even more direct conversation. I look forward to more researchers responding to the call for incorporating more interviews into studies of social media communication, as my work would look substantially different without both methods.

Chapter 4: Tracking Learning Journeys

In this chapter, I draw on both the archival and interview data to understand a series of interlocking features of participant Twitter experiences. First, I explore the set of motivations and meanings that shape Twitter use for my participants, particularly when using activist hashtags. Second, I present an overview of the range and patterns of behaviour I observed in hopes of identifying what skills might be necessary to use activist hashtags on Twitter. Finally, I describe the learning process and strategies participants used. As I describe the data, I move fluidly between referencing the archives and the interviews.

4.1 Participant Twitter Use: Motivations and Purposes

My analysis begins with reviewing the uses for Twitter according to my participants to provide context for the use of activist hashtags. Participants frequently reported that they did not understand the purpose of Twitter prior to joining the platform. @UserC admitted, “I didn’t have much of an idea of what I would use it for. It’s just, people were on Twitter and I found certain uses,” demonstrating a key trait in participants: willingness to try something new without a clear reward. @Lorelei, @Nina, and @Mary all even admitted to beginning with a negative impression of Twitter. For example, @Nina said,

I just heard that there was another social media platform out there and I just... I don’t want to know what Kim Kardashian has for breakfast and I don’t want to talk to celebrities or whatever, and I just didn’t understand the potential strengths and efficacies of the platform until I actually got on.

All participants did eventually come to value Twitter and understand its purpose as they learned to use the platform. In general, the most important purposes for Twitter use were shared by all participants; this included gathering information, sharing information, spreading their

beliefs or values, connecting to others, and participating in dialogue. Overall, I coded for 25 separate purposes for Twitter that were shared by at least two participants (see Table 4).

However, when participants spoke about the uses, purposes, and motivations for using Twitter during interviews, five significant themes were consistent across all participants: connecting, contributing, influencing, learning, and pursuing personal goals.

Themes	Twitter uses	Number of participants
Connecting	Connecting to peers (general)	9
	Participating in dialogue	8
	Access to community/communities	8
	Connecting to peers from offline	7
	Feeling heard	6
	Building relationships & networking	5
	Comradery & solidarity	4
Contributing	Sharing information	9
	Amplifying others	4
	Entertaining others	4
	Provide valuable outcomes to others	3
Influencing	Spreading messages & beliefs	9
	Consciousness-raising	8
	Control over the narrative regarding a topic	7
	Mobilizing others for action	4
	Activist campaigns	4
	Gaining the attention of powerful people	4
Learning	Gathering information	9
	Exposure to new perspectives	7
	Listening to others	3
Personal Goals	Receiving attention	5
	Self-expression	5
	Communicating their values	4
	Establishing authority & credibility (reputation)	2
	Receiving affirmation	2

Table 4. Twitter uses, grouped according to five major themes

4.1.1 Connecting

It is not surprising to see that connecting is a key motivation behind using Twitter, as this is a social media platform after all. A significant part of the promise of this type of media is connection. Facets of this theme include feeling heard, building relationships, networking, community, solidarity, and dialogue, as well as simply connecting to offline and online peers. Most participants also spoke to failures of connection, such as harassment, trolling, alienation from communities, negative feedback, and not feeling heard; these experiences demotivated them to use the platform. To give one example, @Lorelei focused the majority her activity on connecting with peers and spoke directly to this purpose for Twitter, saying, “If I was just on Twitter to only say things, I don’t know, into the abyss? That’s not really the point. I wanted to keep in touch with these people and talk to them.” All participants, regardless of their activity level or other factors, spoke to the importance of connecting during their interview to some degree.

4.1.2 Contributing

Contributing is also an inherent feature of Twitter, as the platform runs on user-generated content, and participants consistently spoke about wanting to contribute to others. Sharing of information was a key purpose for using Twitter for every participant in the study. However, participants also named more nuanced contributions: amplifying the voices of others (particularly the more marginalized), providing tangible or intangible outcomes to followers, and even providing entertainment to others. High activity users were much more likely to see Twitter as an opportunity to contribute, and those participants who identified as activists were also much more likely to see contributing as a key purpose for Twitter as well. For example, @Nina, an

activist and high activity user, strategizes to help other Twitter users and feels a significant responsibility to provide value to her followers now that she has a platform:

I would say that I am more proactive in that I use Twitter to educate, enlighten and sometimes to even entertain, whereas before, I think I was doing more of receiving the information, as opposed to trying to help disseminate it.

4.1.3 Influencing

Influencing is the next major theme of Twitter use, and it is particularly relevant when considering Twitter's use for activism. Facets of this theme include consciousness-raising efforts, spreading beliefs or values, attempting to mobilize others for action, getting the attention of the powerful, and controlling the narrative. The majority of participants who identify as activists use Twitter in all of these ways, while tentative activists reported only some of these uses for the platform. Overall, however, all participants were familiar with the capacity for Twitter to be used to push an agenda and influence others. As an activist on Twitter, @UserA was especially clear in her strategizing around this:

I've found that Twitter right now for me has been a great way to get my story and activism heard by being a channel to journalists and journalists channeling that to a broader audience... You can [also] use Twitter to start creating your own narrative, creating your own story, [and] encouraging other people to do the same and once it's kind of reached that intrigue and mass, you'll see a shift in public opinion, at least starting online and then it'll continue to spread outward.

4.1.4 Learning

Twitter was also a tool for learning. All participants said that they used Twitter for information gathering, and this was a critical feature, particularly for low activity users. Access

to dialogue was also informative for several participants, beyond its utility as a way to connect.

@UserD was enthusiastic about this aspect of the platform, saying,

What was really cool about Twitter when it came out was that, for some reason, experts in areas that I was really interested in, especially like oil and gas development, policy, Indigenous issues, were on Twitter and because it wasn't that popular, you could engage with these experts on issues to learn, to influence them, et cetera.

For @UserB,

[Twitter] was more of a learning platform for me than being a contributor, because, yes, once in a while I put some comments on someone's tweets and if I want to learn something more, I would ask them, "Are there any more resources you can provide me?" [but] for me it has been just a learning platform.

Critically, nearly all participants expressed appreciation for the way that Twitter exposed them to new and diverse thought. For example, @Bob said,

I think I mainly use Twitter because it has an interesting community. So, unlike other social networks, I think I'm much more likely to find people who are different from me, whose opinions or views on life are different from mine. So, I don't use Facebook, but when I used to use it, it was mainly people I knew in real life, and that was a much narrower set of viewpoints to be exposed to.

Similarly, @Lorelei said, "I just liked being exposed to a really wide variety of thoughts and opinions that I wouldn't usually get, because I'm hearing voices from so many people across North America, mostly, and a few people across the world." A desire for learning and/or exposure to new information was explicitly expressed by nearly all participants.

4.1.5 Personal Goals

Finally, participants used Twitter to pursue personal goals for their own satisfaction. These included self-expression, communicating their values to others, establishing their authority or credibility, building reputation, receiving affirmation, or getting the attention of others. Interestingly, low activity users did not describe self-expression as a use for Twitter, although they certainly did use it for this at times, and neither did they appear to use the platform for reputation nor credibility purposes. Activist participants were much more likely than tentative activists to describe using Twitter to accomplish personal goals, not just activist ones.

Overall, learning strategies, education, and background do not appear to be meaningful factors in what uses the participants described having for Twitter, but differences across activity rates and activist identity were clear. First, it is interesting to note that the low activity group all identified as tentative activists only, while those in the high activity group were self-identified activists. Participants who had a higher activity rate and total number of tweets articulated many more reasons to use the platform compared to low activity users, who primarily used Twitter for information exchange. While low activity users might take actions that technically count as activism upon their reflection, they did not explicitly use it for activism, unlike other participants in the study. Although it is not surprising that the majority of self-identified activists spoke about explicitly using Twitter for activism, it is interesting to note that activists also used Twitter for the widest variety of reasons, not just their causes. This association between more activity and more uses could be explained by reasoning that more activity helps discover more uses for Twitter, or that having more uses for Twitter motivates higher activity rates, or that they are mutually reinforcing.

4.2 Why #Tweet? Exploring Hashtag Motives

Because hashtags can serve several functions and they are a key feature of Twitter use overall, their purposes dovetail with all the common uses for Twitter: connecting, contributing, influencing, learning, and pursuing personal goals. The use of activist hashtags can also be mapped onto the categories. For example, one participant spoke about using a hashtag that was created by a striking union at his university in an attempt to show solidarity (connecting) and support the strike (contributing) by taking up virtual space and advocating for the importance of teaching assistants (influencing). This participant likely also discovered relevant news by following the hashtag, expanding its use to include the theme of learning as well, and, as a teaching assistant himself, the strike also contributed to personal goals of achieving fairer wages. With this in mind, activist hashtags appear to be a strategy for pursuing the ends that participants already have for their Twitter. It is a practice aligned with general purposes and motivations for using Twitter, not a true outlier behaviour, although participants do not use activist hashtags often.

The attributes of hashtags, however, do entail a unique set of functions within the platform itself. Participants were generally aware of the uses for hashtags that the literature describes. First, hashtags collect information for users, allowing others to both mark tweets as part of an ongoing conversation and for users to seek out information in a centralized place. @UserD told me a story of following a hashtag that a local professor had created for his class in order to learn about a topic of interest; without being a student in the class, he was able to follow along and learn regardless. Hashtags to categorize a conversation (coded as *topic-marking*) are by far the most common use and almost always the first way that participants used hashtags,

@Lorelei representing the only exception. Participants would go on to diversify their hashtag use, as described in the next section, but topic-marking remained important.

Relatedly, hashtags can also be used to reach people beyond Twitter followers, because those following the hashtag will see the tweet. This function is key for how hashtags can be used to influence other users as well, because hashtags can draw new attention to a tweet this way. For example, many of @UserB's initial hashtags were focused on raising awareness about organ donation and helping a friend in need, so he included several hashtags in each tweet in hopes that this would widen his audience. @UserD once used hashtags in similar ways to reach new users as well, but now that Twitter has a search function, he does not find himself clicking on hashtags and felt that this was changing how hashtags could be used. He said,

I honestly think hashtags are dead now, from my perspective. I don't know if you heard that from your other speakers, or participants, but back then [when I started], it was like ensuring that it got in front of people. Hashtags, people searched hashtags. Now, I'm not sure if that's the case.

However, most other participants did report using hashtags to follow content, and so this function of the hashtag remains alive for users who do not have the following @UserD has amassed. For @UserB, hashtags still feature as a key strategy for growing his followers:

Hashtags are very important for reaching out to people... Like, if I'm in [city], if I'm saying something without any hashtag, my reach is limited to the followers that I have. But using a hashtag, that increases my reach by x amount of users... like, for instance, I was using one hashtag called #badparenting, so everyone who is following parenting tips would start following us, because we are tweeting things related to parenting. So, yeah, it's an important way to connect to people with the subject that is being discussed.

Hashtags can also be used to intentionally create recurring conversations within a consistent group that outsiders can join by following the hashtag. These groups are often referred to as “chats” on Twitter, as in “#bcdchat,” but I coded these hashtags as *community* in the archives to be more descriptive of their function. Often these groups will use hashtags for an additional function where they establish a call-and-response format and use the hashtag to link the many answers to the initial question, which I coded as *response*. @UserB described benefiting from this practice as he learned to follow hashtags:

There are these one-hour kind of tweet sessions where, for example, they use a hashtag and everyone searches those hashtags and they join the tweet—it’s like a virtual meeting, and then the organizer of the event, he puts up a question. Everyone who is a part of these conversations, they give their own opinions, their own experiences. So yeah, those tweet meetings are a really interesting way of getting involved and learning a lot about the issues that you are following.

Several participants were also familiar with using hashtags for live tweeting, where a user includes a specific hashtag in a series of tweets that serve as ongoing commentary for a specific event. Others can essentially follow along with the event by following the hashtag. While @Lorelei used this practice to live tweet a movie she was watching and then even mocked the practice by live tweeting ironically, @UserA specifically used this practice for activism. @UserA explained how she did this:

I do a lot of live tweeting especially for important situations or events where other people can’t physically be there and I’m the only person. So, when there is a significant event going on and they want to see what is happening, I live tweet pretty much line-by-line, play-by-play, what’s going on. So, I get a lot of people who—like journalists, or even

general people who I don't know, who follow me to read that. And I try to make it also fun too to keep people interested, and it becomes a good archive for people to reference back, or feel like they were a part of it.

Hashtags used in live tweeting often reference the location or the topic under discussion, which are coded as *topic-marking* or more specifically *location* in the archives.

Hashtags could also be used as additional commentary, or what I refer to below as *metacommentary* as I was coding the archives. This use of hashtags was not a part of the original intended purposes of a hashtag, but users have broadly taken it on as a natural use for hashtags. On average, participants had introduced metacommentary hashtags to their archives by the time they had used 9 unique hashtags.

As hashtags are formed whenever # precedes text with no spaces, the form is highly flexible, and users can make anything a hashtag. This makes a lot of room for humour, much of it ironic and playing with the hashtag form itself. @Lorelei's spoke about primarily using hashtags ironically and, in fact, her first hashtag ever was an ironic comment on hashtags themselves, which is an outlier compared to the other participants in the study. Hashtags can even function as memes where a user will make a humorous comment that becomes a topic itself as it circulates among other users, who add on additional examples. These might be hashtags like #FiveWordstoRuinaDate or #AddaWordRuinaBook. Although @Nina did not explicitly name this behaviour as a key use for hashtag, her large archive contains quite a few examples of hashtags coded as *memes* and these humorous tweets can be linked to her stated intention to "entertain" others using Twitter. Given how often meme hashtags trend on Twitter, this is a common use for hashtag, even if it is rare in the sample data. The use of humour with hashtags is

even incorporated into activist hashtags, like #OscarsSoWhite, where jokes are used to bring attention to an issue.

4.2.1 Why #Activism?

The purpose of an activist hashtag is to advocate for social change and make a justice claim, but this can be done in a variety of ways. Primarily, activist hashtags were described as consciousness-raising strategies that increased awareness of a specific demand or issue. @Mary felt clear that hashtags could be a tool for activism, as

Nowadays it's a really good way to get information out and to get people behind a cause... and so it kind of gives you an idea of the grandeur or the scope of certain things that, previous to social media, you maybe never could have known before, or so readily, I guess.

@UserC also suggested a useful analogy, saying, "it's sending a message or filling up the public space with a message... it's almost like a yard sign for like a political candidate or something." His description of the role of an activist hashtag captures a specific use for activist hashtags as a tool to publicly campaign for a social change and taking up public space with the message.

Aside from the broad purposes already listed, activist hashtags can be part of specific activist strategies. Drawing on examples from the interviews and archives, some of the uses might be pointing to a particular injustice to raise awareness, like #BlackLivesMatter; attempting to support a cause and raise money, like #BellLetsTalk that encourages speaking about mental illness and Bell contributes funds to the cause for each hashtag instance; building solidarity like #WeAreUofT or #StandWithPP; creating shared sustained conversations and linking events to greater issues, one of the many functions of #IdleNoMore; presenting a slogan or demand like #NoDAPL; mobilizing users for actions, like #BoycottRush or #OccupyWallStreet; soliciting

testimonials to specific social justice issues, like #MeToo; reducing stigma, like #WhyIStayed; and even publicly grieving loss, like #Justice4Trayvon, #NeverForget, and many others.

All participants agreed that hashtags advocating for social justice were potentially a form of activism, depending on their content, and might be considered political actions, again depending on their content. Given the timing of the interviews, #BlackLivesMatter and #MeToo were both frequently offered as examples of activist, political hashtags. The main motivations behind caveats for activist hashtags were regarding the degree of their importance and potential for real effect. For example, @Bob said, activist hashtags “attempt to change the conversation around these topics, and I think that can have an impact, though it might be a small impact.” More critical of the practice, @Lorelei said,

I do think they are activist tactics, because you’re creating and sustaining a conversation about these really important things, but at the same time, I don’t know, I wonder if that’s the best form for them? Because lots of people are interested and engaged when online, but then they’re not going to do anything in real life to try to change the things that they’re talking about.

@Lorelei echoed the main concern behind @NastyWoman’s hesitance to call activist hashtags “activism” per se. During the interview, @NastyWoman argued that,

Hashtagging something is not effective collective action. Being an anonymous voice on Twitter isn’t going to change legislation. It may potentially influence—the number of people that engage in it may potentially influence attitudes, but it won’t actually change anything for the lives of people who are affected by these hashtags... if you’re not writing to your senator about feminist issues, you’re not really doing anything. You’re just engaging in a very popular social media trend. So, why it is that I don’t think that that

is sufficient is that I think that—I mean, it’s fine, it’s not hurting anybody—but I would rather spend my energies on more active activism and not passive activism.

In essence, @NastyWoman is concerned that activist hashtags are examples of “slacktivism,” which is a common concern mentioned in the conceptual framework as well.

According to the rest of the participants, however, activist hashtags are not as ineffective or low stakes as @NastyWoman might think. Both @Nina and @UserD testified that activist hashtags that they helped start resulted in tangible outcomes for themselves and others, including the cancellation of a politicized event, crystalizing a new narrative regarding an issue with long-term impact, raising money for a cause, and even just uplifting their followers. As a specific example of activist hashtag impact, @UserC said,

Something like the #MeToo movement, that’s one of the things where its space, its kind of “yard sign” space, just has an effect where the more you see it, and then you see it from friends and family—so like, as a male who’s somewhat aware but doesn’t realize, *that* has a different sort of effect where it’s just like, “This is showing up a lot, among a lot of different people who I know.” So, that’s a different sort of information I guess? It has an interesting effect. You know, it kinda drives home how prevalent issues of sexual harassment are.

@UserA also spoke about using the activist hashtag that she created to keep a specific community informed about critical issues of interest to that group, highlighting the important function of information transfer. Multiple participants described using activist hashtags for information, both gathering it and sharing it, and the importance of this function is arguably undervalued when evaluating the work of hashtags merely through tangible actions.

Communication throughout a movement is a useful function for activist hashtags, especially if

actions will be required as a result, as was often the case for @UserA's activist hashtags. Even @Lorelei and @NastyWoman themselves acknowledged making use of activist hashtags for informational or awareness purposes.

As is the case for most activist tactics, taking part in activist hashtags can also have its risks. @Lorelei pointed out that the amount of reach and attention an activist hashtag can potentially attain can actually dissuade some people from participating in it, citing herself as an example. She said, "sometimes I wouldn't use ones that were more related to me, because I didn't want to get twenty trolls responding to my tweet because I put it in a more public way, so they could find what I'm saying." Using hashtags to publicize a demand for justice opens users to this kind of backlash on Twitter, especially if the hashtag begins to trend, so they do require strong dedication to the cause. This is particularly the case when an activist hashtag requires personal disclosures.

Overall, activist hashtags were seen by participants as a legitimate activist tool with the potential to have a positive effect. Whether that impact appeared small or large depended on the example and often on the practices of the participant. @Nina, @UserD, and @UserA were the most prolific hashtag users and self-identified activists, and they all felt that activist hashtags were a real tool in activism, although they noted that it was one of many kinds of activist strategies. Participants generally acknowledged a preference for combining online and offline activism, and no one anticipated that hashtags might solve significant issues on their own.

This shared belief in the power of activist hashtags is unsurprising, given that all participants did use them at least once. Even those participants who expressed skepticism about hashtags as a tactic would use an activist hashtag as a part of an activist campaign, even @UserD

who said hashtags might be “dead” now. For example, @NastyWoman said that she would use a hashtag

if I were just getting started and it was an individual attempt to raise consciousness or at least get people to think about the issue that might not be salient. I think it’s a good way to get people on board a new idea, not necessarily to effect change on behalf of that idea. Does that make any sense? Where it’s a good way to mobilize the troops, but it’s not really going to get too much done if there are already troops on board.

Here, @NastyWoman summarizes the common use of activist hashtags to raise consciousness, share information, spread beliefs and values, and influence others that recurred throughout my interviews. From her own description, it appears that even for those critical of the practice, hashtags have their place in activism.

4.3 An Overview of Hashtag Behaviour

In this section, I focus on how participants used hashtags, rather than why, by further exploring the archive data. When coding the archives, I evaluated hashtags based on their function. In general, I used three broad categories: *metacommentary* (MC), *topic-marking* (TM), and *metadata*. Although inspired by Zappavigna’s (2015) linguistic analysis of the social function of hashtags, I have generated definitions of each concept that matched how I saw the hashtags implemented in the data I compiled.

Again, MC hashtags are intended to act as additional speech that addresses the tweet itself. This type of hashtag is both communication in its own right and expands on the meaning of the tweet’s text (hence, meta). These tweets typically provide additional content that might be humorous, advocacy, emotive, or others. Often, a tweet will be complete without the hashtag’s commentary, and the hashtag’s meaning can typically stand without the tweet text, but they

inform one another. This type of hashtag includes examples like, #fail, #yuck, #toldyouso, and #bam! It also includes more complete statements like #renewDocMcStuffins. Although MC hashtags often provide emotional information and physical descriptions or gestures like #smh (shaking my head), I have not specifically coded for this subset of behaviour. I have only created subsets of MC hashtags that were highlighted in interviews or were relevant to activist hashtags. As a result, I chose to code specifically for *humorous* (e.g., #firstworldproblems) and *advocacy* (e.g., #savealife) hashtags, with additional subsets within *advocacy* for *activist* (e.g., #BlackLivesMatter) and *marketing*¹³ (e.g., #ExploreEdmonton) hashtags to differentiate between different goals (see Figure 1).

As mentioned, TM hashtags are used to indicate the topic of the tweet and often take the form of a single noun or short phrase, such as #foodies or #cdnpoli. These hashtags might be effectively used for sorting, categorizing, or collecting tweets according to the topic of the tweet. These hashtags are often incorporated in the tweet text itself and when this is the case, the extraction of a hashtag would substantially impede the meaning of the tweet. In contrast, MC hashtags can typically be removed without irreparably damaging the tweet meaning. I also coded for several specific topic areas as they appeared significant, relevant to tweeting for social change, or informative of key Twitter behaviours.

Metadata was the final broad category that I identified and it describes a very narrow set of hashtags that are also providing factual or technical information about the tweet itself, rather

¹³ MC hashtags can be used to advocate for many things, as this function of a comment is highly flexible. Those MC hashtags that are advocating for something other than social change were labeled as *marketing*, although they might not be specifically selling something. In general, these hashtags were uncommon, but they were worth separating from *activist* hashtags for their different function.

than commentary that elaborates on the tweet text. This might include hashtags like #thread, which indicates the kind of tweet it is, or hashtags generated by a specific application to indicate what product was used to create a tweet. These were the extreme minority of hashtags used and are unrelated to my research question, so they generally do not feature in my analysis, but they were meaningfully different from the others and worth defining.

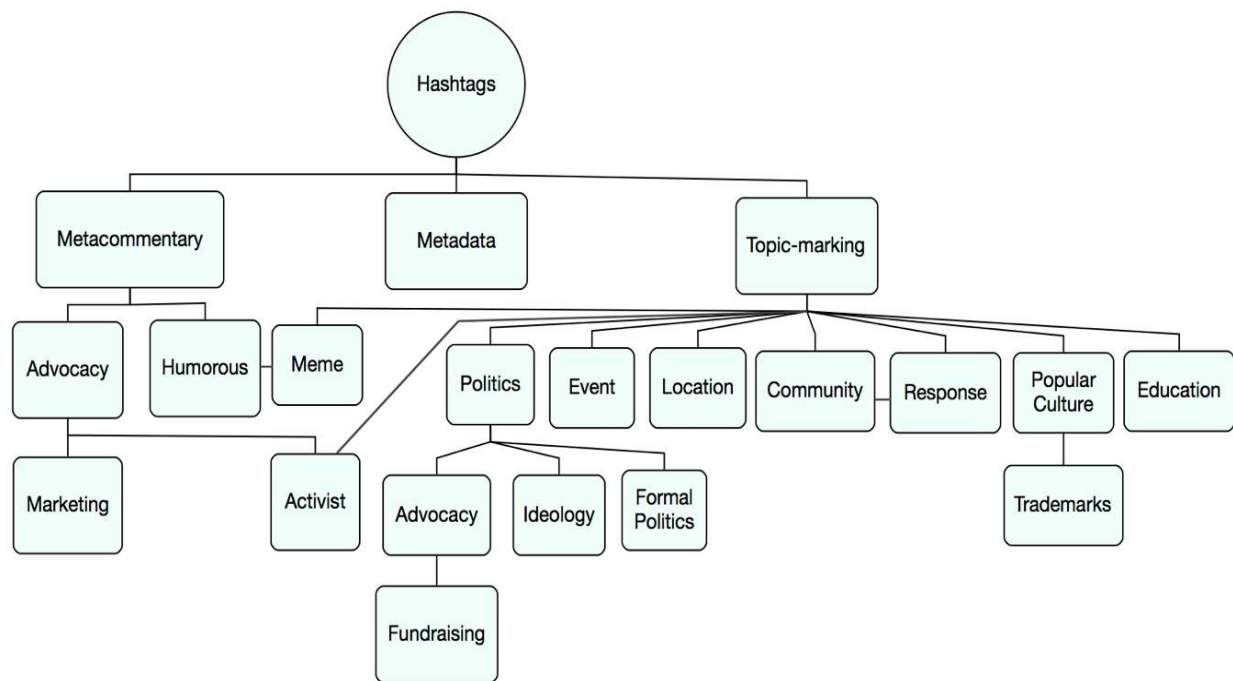


Figure 1. Diagram mapping how various kinds of hashtags are related to one another

Codes	Description	Example	Archives where code appears	Percent of total data coded
Metacommentary (MC)	Hashtag provides additional commentary or insight into the tweet content. Although this hashtag comments upon the tweet, it typically makes sense aside from the tweet as well.	#fail	8	11.4%

Codes	Description	Example	Archives where code appears	Percent of total data coded
MC-Humorous	Hashtag are intended to be humorous, broadly defined, and are often sarcastic or ironic. This is challenging to code, but participants identified humour as an important feature of Twitter behaviour. Therefore, best-guess evaluations based on context are used.	#firstworld problems	7	1.5%
MC-Advocacy	Hashtags that advocate or market something in particular, typically in the form of a statement.	#savealife	8	5.6%
MC-Advocacy-Activist	Hashtags that advocate for social change and make a justice-related claim.	#MeToo	8	4.7%
MC-Advocacy-Marketing	Hashtags that are advocating for something in general, excluding social change.	#Explore Edmonton	8	0.7%
Meta Data	Hashtags that are used to indicate structural or technical features of the tweet.	#thread #RT	6	0.1%
Topic marking	Hashtags that are used to indicate the topic of the tweet, making it easier to categorize, gather, or search tweets.	#tech	9	57.8%
TM-Location	Hashtags that establish the location of the user. Place-based hashtags frequently refer to cities but might also include countries and conferences.	#yvr #chinatown	8	7.4%
TM-Meme	Hashtags that make a humorous comment and are repeated by different users on Twitter so that inclusion of the hashtag marks an entry into a shared topic of conversation.	#RuinaDate inFive Words	8	2.7%
TM-Event	Hashtags associated with current events, excluding recurring topics. Often significant events in the news, like disasters or violence, are associated with a hashtag for a shared conversation regarding the new issue.	#Pulse #Trayvon Martin	7	3.1%

Codes	Description	Example	Archives where code appears	Percent of total data coded
TM-Community	Hashtags that have been purposefully implemented by users to speak to a group of people about a specific topic. These hashtags are often formalized with a set of rules that are stated somewhere accessible online, including relevant topics and periods of activity. A Twitter user or organization often manages the activity on this hashtag through specific posts.	#wjchat	7	3.6%
TM-Response	Hashtags that indicate that the tweet is part of a call-and-response strategy for holding a public conversation on the platform. A question will be asked and user responses will also include the hashtag, connecting the two parts of the conversation. These hashtags might be established by Twitter communities, organizations, or individuals. These hashtags are intended to help users follow a shared conversation that is typically temporary.	#AskaCop	5	0.4%
TM-Education	Hashtags on the topic of education, schools, and learning.	#phdlife #UBC	8	0.6%
TM-Politics	Hashtags that cover political topics, using an expansive definition of the political (discussed above).	#cdnpoli #racism #ACLU	8	20.0%
TM-Politics-Formal politics	Hashtags that cover formal political events, activities, or structures. These might include formal government processes, politicians, or related topics.	#cdnpoli #voting #Trudeau	8	8.8%
TM-Politics-Ideology	Hashtags that refer to belief systems, sets of values, or ideologies.	#feminism #racism	6	2.8%
TM-Politics-Advocacy	Hashtags that refer to informal politics, advocacy events, social change organizations, activist figures, or related topics.	#NelsonMandela #ACLU	8	6.5%

Codes	Description	Example	Archives where code appears	Percent of total data coded
TM-Politics-Advocacy-Fundraising	Hashtags that refer directly to appeals for funds for an organization, cause, or person.	#gofundme	5	0.2%
TM-Popular culture	Hashtags that cover topics in mainstream media and popular culture, including celebrities, sports, brands, arts, or cultural events.	#baseball #Beyonce	9	11.4%
TM-Popular culture-Trademarks	Hashtags that are brands, trademarks, media properties, and corporate entities. As companies often encourage this kind of hashtag presence, it is a particularly relevant type of code for learning to use hashtags.	#NBA #Twitter	8	5.6%
TM-Miscellaneous	Hashtags that do not fall into other topic areas but are functioning to mark the topic of the tweet.	#networking #inspiration	9	8.5%

Table 5. Code book for Twitter archives

The most common way to use a hashtag is for topic-marking, and this aligns with the conventional function of hashtags. Hashtags were originally created for data management in a noisy communication environment, and participants in my study used them for this purpose. A majority of hashtags were coded as TM. Within this category, *politics* was the most frequently used topic area overall, composing 20% of the total. *Politics* here encompasses identity politics, formal politics of government, references to ideologies, and the informal politics of advocacy work. Within this breakdown, *formal politics* was a sizable proportion at 8.8% of the data and *advocacy* was coded for another 6.5% of the data. I include the percentages to give a sense of the significance of each behaviour and the kind of use my participants had for Twitter, overall.

Additional codes of interest are *location*, *pop culture*, and *miscellaneous*. *Location* is a key function to note, as these are hashtags that are used to place the tweet as related to a specific

location, most often a conference or a city. The unifying feature of these hashtags is that they are about putting a pin in the map and they represent 7.4% of coded hashtags. *Popular culture* hashtags are used to refer to topics in mainstream culture and media broadly, while a subset with this code, *trademarks*, refers to particular branded properties. Popular culture is a worthy use to note because it composes 11.4% of the total data and because using *popular culture* hashtags were a common way to start using hashtags among participants. It is also actively encouraged by the media, which is why I coded specifically for *trademarks* as well. For example, during our interview, @Nina said that she might have first heard of hashtags from television shows that she was watching, suggesting that this hashtag behaviour might be a “gateway” to hashtag use. Finally, *miscellaneous* topics compose less than 10% of the coded hashtags, which suggests that I have not missed a key area in my analysis.

Another 11.4% of hashtags are coded as MC, signifying a small but important kind of hashtag use. For the purposes of this study, the most important kind of MC hashtags is the activist hashtag. An interesting feature of the activist hashtag is that it works as both an MC and TM hashtag. An activist hashtag is text with self-contained meaning, like MC hashtags, but it also marks a topic of conversation, like TM hashtags. #BlackLivesMatter is a prime example where it functions as both text, an argument that stands on its own merits, and topic, either an idea or the associated movement. While an activist hashtag is initially only an MC hashtag making a claim, if an activist hashtag receives attention, it circulates like a TM hashtag to invoke a topic or stand in for a set of ideas. Activist hashtags compose a very small proportion of overall Twitter use in the sample, making up less than 5% of total hashtags in the overall dataset.

Within the archives and interview data set, there were also examples of using a hashtag against its original intention to make a justice claim (and sometimes a joke at the same time). In

a couple of cases, the original hashtag had even been an activist hashtag already, but it was being activated in a different way. I coded all of these instances as activist hashtags. The necessity to have enough context to recognize them made these activist hashtags more challenging to identify. However, this is clearly an important practice to note, as @Bob, @Lorelei, @NastyWoman, @UserA, and @UserD all mentioned it during interviews, even if these hashtags made up a tiny fraction of the dataset.

Although humour was identified during interviews as an important practice on Twitter, *humorous* hashtags were not a significant proportion of any one archive. @Lorelei, who identified herself as a part of “Funny Twitter,” used *humorous* hashtags significantly more than the average 2.1% and still these types of hashtags composed only 10.7% of her archive. The next greatest proportion of *humorous* hashtags was @NastyWoman, but only 4.0% of her hashtags were coded as *humorous*. However, @NastyWoman was also explicit in her interview about purposefully using humour when she was on Twitter. Here, the archives and the interviews speak to each other quite clearly. Many participants noted their interest in the humour of others but most did not describe their posts as funny. It is also worth noting that using hashtags for humour is associated with greater overall use of MC hashtags, as @Lorelei and @NastyWoman also have the highest percentage of MC hashtags, 21.8% and 19.8% respectively, compared to the average of 10.4%.

Given that my participants were selected because they were using Twitter for activism, at least occasionally, I would not imagine that all Twitter users have similar behaviour patterns to the users in my study. Given my sample, it is unsurprising that politics feature heavily in their archives. For most of my participants, their mission in using Twitter is not to share funny memes, although they may do so occasionally, or follow the latest championship games, although again

this activity is occasionally seen. Within my sample, the most consistent use for hashtags was to signal participation in a political or cultural discussion. Hashtags allowed participants to be incorporated into these ongoing, wider conversations on Twitter.

4.4 Learning Journeys

The key research question of this study asks how people learn the media and digital literacy competencies necessary to use activist hashtags. Activist hashtags represent a tiny portion of their overall Twitter activity, however, so I focused on how participants learned to use Twitter in general. To participate fully in Twitter, participants needed to be able to use the different features of the platform. Among them is the capacity to post tweets, include user mentions, reply to tweets, use hashtags, retweet others, and link to external content, including pictures and video. Within the data gathered, all these behaviours are quite common (see Table 6 and Table 7). Tweets typically include one or more of these features, with less than 15% of tweets in the total dataset consisting only of plain text.

Participants with the lowest overall activity tended to have the highest proportion of tweets that include links, suggesting that to be a common activity for even a casual user. Participants with the highest activity and highest total number of tweets also had the highest proportion of user mentions and replies, making the most active also the most interactive users. This makes sense, as holding conversations on Twitter easily balloons tweet totals because each response is a new tweet, and recurring conversations likely draw users back to the platform more reliably because they have built relationships. The top tweeters, @Nina, @Lorelei, and @UserD, all spoke directly to the importance they placed on the relationships they have been able to build on Twitter.

Total Data	Instances	Percentage of Total
Plain Tweets	61,490	13.8%
User Mentions	173,779	38.9%
In Reply	162,628	36.4%
Hashtags Present	104,203	23.3%
Retweets	139,056	31.1%
Contain URL	125,409	28.1%
Total All Tweets	446,765	100.0%

Table 6. Overall distribution of tweets across various features of the platform for the total data collected

Mean Percentage of Archives	Percentage of Archive
Plain Tweets	7.1%
User Mentions	32.0%
In Reply	25.2%
Hashtags Present	31.7%
Retweets	34.1%
Contain URL	49.7%

Table 7. The mean distribution of tweets across various features of the platform for a single archive

On average, participants would begin with plain text tweets and move quickly into using user mentions and replies, then begin including hyperlinked content, followed by retweeting others, and finally hashtagging. Overall, the most common trajectory appears to be joining the platform, beginning to interact with other users, sharing external content of interest, amplifying other user content, and then broadcasting messages to a larger audience and incorporating Twitter conventions. I would simplify this pathway to: post → interact → share → amplify → broadcast.

Because retweeting involves sharing posts that a user did not create, I have seen researchers exclude these posts from their analysis, but retweeting is an important, common behaviour on the platform. Retweeting combines interacting with others and sharing content in the process of amplifying someone else's post. Several participants spoke about using retweets as a strategy for information sharing, making this a key feature to begin using because information exchange is one of the most common uses for Twitter among my participants. Furthermore,

participants retweeted posts particularly on topics where they did not feel qualified to speak themselves, and these participants were aware of how the speaker mattered—a topic I explore more below.

Participants generally had learned to use all the features of Twitter within their first 50 tweets. However, it is worth noting that these tweets were frequently spread across several years and the use of new features appeared to be related to each user's needs, rather than a desire to master the platform. In a self-directed learning journey, this makes sense. Users would encounter different aspects of Twitter as necessary over time.

While some participants seemed to take to tweeting quickly and used the platform consistently, like @Nina, @UserD, and @Lorelei, most people's Twitter use fluctuated according to their personal needs or interests with an overall upward trend. @UserA, @UserB, @Bob and @NastyWoman have all had years since first starting to use Twitter when they posted fewer than ten tweets. @Lorelei had left Twitter entirely when I spoke to her, @UserA took long breaks from Twitter, and @NastyWoman's archive reflects only her tweets since returning to Twitter in 2016 after at least 4 years away. Only @UserC's archive features a slow and steady increase in posts over time.

Participants who identified as activists appeared to move through mastering the different aspects of the platform more quickly than the others. Although the small sample disallows generalized conclusions, I think it is plausible that this is because the activists had more specific goals for their Twitter use related to their activism, motivating them to explore the platform more quickly.

By the time participants were using activist hashtags, they had used, on average, 78 unique hashtags and had tweeted 270 times over 858 days or over 2 years. Given that the basic

features of the platform were typically demonstrated within the first 50 tweets, I argue that activist hashtags are a more advanced use of Twitter. Being able to use the platform to advocate for social change requires familiarity with the platform and how using such a hashtag might work, both technically and practically. A participant must be able to use a hashtag, which is a relatively easy skill, but must also understand the utility of the practice. Given that learning the social features of the platform was described as more challenging than the technical features, it makes sense that they generally appeared later in the archives.

4.4.1 Soft Skills are Hard

Participants reported that learning the technical aspects of which buttons to press was straightforward and used similar logic to other social media platforms, easing the transition to Twitter.¹⁴ The exception to this was the practice of threading, which @Bob, @UserA, @UserC, and @UserD all mentioned in their interviews as a challenge. Threading is a technique introduced by Twitter users and involves replying to your own tweet in order to create a series of connected tweets that people can read in chronological order. Often people will number their threaded tweets so that readers can keep track of the order and see the end of a thread. Twitter has recently made the process a true feature of the platform and helped automate it, but, prior to this change, threading was largely a social practice that just re-organized how you used the existing technical features. There was Twitter discussion of whether threading was appropriate behaviour, which @UserD mentioned in his interview, but it has generally become an accepted

¹⁴ @Bob and @UserA both have backgrounds in technology and did note that Twitter's changes to their user interface often do not address common user issues or required recalibrating their Twitter use to adapt to the new version of the platform. However, most participants did not comment on this aspect.

Twitter practice. Participants who brought up threading consistently reported that it was the hardest feature to master as both a thread creator and reader.

Learning the soft skills of Twitter appears to be more challenging than concrete technical skills. Generally, mentally processing the amount of information available on Twitter, as well as the speed of its delivery, and understanding the social norms on Twitter were most frequently described as the points of friction. As a result, I will take a moment to dwell on relevant participant comments.

Regarding the speed and volume of information, @UserB helpfully summed up the experience of first using Twitter, saying,

Sometimes you get lost in so many messages that you cannot actually read them all. Or, then they have links on their own, so once you click one link and you are reading an article—meanwhile, in the background, Twitter has already done five hundred tweets, which you can never follow, and you can never keep track of what’s going on.

The overwhelming speed of information delivery was mentioned even by those who have grown quite comfortable on the platform. For example, @UserA initially found Twitter confusing: “I remember I really didn’t get the format, and I think at first [that’s] how most people feel when they see Twitter. It feels like streams of thought from all these different people that don’t read sequentially.” Participants employed different strategies in response to this challenge; for example, @UserB has used hashtags to focus his information intake, @UserC has chosen to follow users who do not post as frequently, and @UserA avoids reading her main Twitter feed at all in favour of reviewing specific hashtags or accounts.

Discovering Twitter norms was also a key learning curve that multiple participants highlighted to me. Norms are generally important in public spaces and can be communicated in

many ways. However, online, there can be fewer established conventions or cues and participants reported often being unaware of lines until they were crossed. @Bob addressed how he learned what is socially appropriate, saying,

Usually it's by noticing what other people are doing and I think it differs a lot by community. So, for example, in the Japanese-speaking Twitter community, there is a significantly higher amount of explicit sort of social etiquette marking, like people will say things like, "I'm sorry I'm replying from outside of your followers," and then say something. So, I think with those communities, when I see those messages, I can understand, "Oh, that's the etiquette." I think in the case of English-speaking Twitter, it's much more difficult, partly because there is less uniformity in those rules. So, it's basically, I learn the rules I guess by people explicitly tweeting about what they believe should be the rules, or people replying saying, "That was rude" or whatever.

Knowing when to speak on Twitter appears to be a nuanced understanding for participants. I was surprised to hear the majority of participants demonstrate awareness of how their voice was contextualized in public space online. All participants could understand and describe their sense of audience and being in public, which I had generally expected for adults posting on a public platform, but most participants were doing more than curating tweets according to a need for privacy or reputation maintenance. Participants spoke about the knowledge that they took up space online when they spoke and that this impacts who is heard and ways that messages are able to circulate, like when @Lorelei commented that a lot of her activism on Twitter was "more retweeting other people because... I find people who encapsulate everything I want to say, and I don't want to just detract from what they're saying." Since

achieving notoriety, @Nina has intentionally strategized to amplify marginalized voices, and she explained to me that,

It was very obvious to me that people were following me because of my platform, and they felt that I had something to say, and so then it became incumbent on me to make sure that I was using my platform in the best way that I could, which means amplifying voices that may otherwise go unheard, or who just aren't heard as loudly, and then also having conversations that I think would be of benefit to not just my community, because I have a core group of people and then I've got the other 85,000 people.

An awareness of who is speaking is particularly important for how participants used activist hashtags, as several participants explicitly mentioned that this type of hashtag would commonly appear in their retweets, rather than their original posts, because of their sensitivity around the effects of voice and space. For example, @UserD said that he would choose to retweet an activist hashtag because, "what do I need to say that this person hasn't effectively conveyed, or this person is part of this movement and, like, I'd rather amplify their voice than say something—like, what do I know about #BlackLivesMatter, you know? That kind of thing." @Lorelei spoke to this point even more clearly, saying,

I don't feel like I use [activist hashtags] that often, because even though I follow those hashtags to see what other people are saying and I wanted to know what they're saying about it, a lot of the time I wouldn't say something because I felt like maybe it wasn't my voice that needed to be heard at that time. Like, I'm not going to provide anything more useful to this conversation. I just want to be a respectful listener.

Although participants did not name this awareness as something they learned and so did not pinpoint its origin, it was a knowledge that seemed to be shared by most participants, to greater or lesser degrees, and highly useful when navigating Twitter.

There were also other unwritten rules that participants pointed to explicitly, like when it is appropriate to direct message another user, how much emotion to display, appropriate degrees of kindness or “snark,” how frequently you should post updates, linking various accounts, choosing display pictures, or the best ratio of users followed versus following. Although participants named different aspects, everyone seemed to understand that being good at Twitter involved more than simply being able to tweet.

4.4.2 Evaluating Mastery

When trying to understand learning, it is useful to consider what competence means. When speaking to participants, I asked them if they felt that they were “good at” Twitter and what that would entail. Very few spoke about mastery of technical aspects or specific platform metrics, although these were mentioned. After analyzing the interview transcripts, I identified two key themes that helped unite disparate criteria that participants presented: competence was (a) achieving a positive effect and (b) receiving affirmation.

Participants commonly spoke about successful Twitter users providing value to others or making a difference, both of which fall into the broader category of having a positive effect. The value provided might be tangible, such as new information or resources, but might also simply be the value of entertainment. Users that were considered funny were included in the category of providing value to followers, based on the priorities of participants. Although the majority of participants did not themselves try to cultivate a following based on their sense of humour, they could see it as a strategy for gaining influence and attention that they valued. Consciousness-

raising and influence over others were also considered as having a positive effect on their followers (given that they felt that their causes or influence were positive) and the ability to do this was also valued.

Participants also measured competence on Twitter through the resulting affirmation they received. Affirmation might take several possible forms, such as a high follower count, frequent user engagement, increasing their recognition and credibility in their community, or direct feedback from others. @UserA spoke about receiving compliments from community members about her Twitter presence, as well as having journalists seek her out for comments. @UserB considers his slowly increasing follower count to be evidence of his increasing abilities on Twitter and carefully monitors engagement with his tweets on his professional account. @UserD has raised his status within his community as a result of tweeting, received offers to write op-eds, and has even gotten jobs through Twitter. All these things indicated to them that they were performing well on the platform.

The only skill that was highlighted by participants that was not captured in these major themes was the criterion of “good copy.” As @UserA said,

To write effective tweets with hashtags and being able to integrate it, there’s an element of good copywriting... A lot of people just ramble on on Twitter, but some of the most effective tweets, either they have a really poignant point that they’re making that other people haven’t made yet that is different or interesting or unique, or it’s just well-written copy.

Given the platform is largely text based, it is not surprising to hear that good writing supports

successful Twitter use.¹⁵

Turning our attention to activist hashtags specifically, participants had a clear consensus on the qualities of a good activist hashtag, even if they had never created one themselves.

@UserD said that, “It’s gotta be short and catchy and convey meaning,” which is very close to @UserA’s requirements: “short, memorable, and captures the essence of what you’re advocating for.” Similarly, @NastyWoman, @UserB and @Bob all emphasized brevity and clarity. @Nina expanded on the logic of these criteria: “I think that’s sort of the beauty of a good hashtag, that you don’t need an essay about what it means. You know, people can sort of gravitate to it and understand it right away.” In general, participants appeared to know how to create an activist hashtag, at least in theory, even if none could truly explain directly how they came to know it.

4.5 Learning Strategies

Having addressed the questions of why people might learn, what people might learn, and when people might learn it, I now turn to how they have learned. To do this, I reviewed how participants described learning to use Twitter. During analysis, I coded for each strategy I could identify and noticed that many were shared across participants. In the end, I identified 18 separate learning strategies across all the participants and the average number of strategies mentioned in a single interview was seven. The most frequently used strategies were learning through exposure over time and copying what they observed, and these were often described together. The next most common strategies were trial and error, followed by applying prior

¹⁵ Although inserting images, video, and gifs requires its own set of literacies, no participant spoke about the importance of these Twitter features. As such, I have not chosen to focus on this set of knowledges.

knowledge and being directly taught. The Twitter learning curve appears to commonly require more than one tool to reach the present level of competence for each participant.

Although formal education or direct teaching made up only a small slice of the 18 reported strategies, relevant education does appear related to participant learning strategies. Participants who reported no relevant education had the lowest number of strategies that they had used to learn Twitter, between two to five, while the average among the remaining participants was nine strategies. Those without relevant education were unlikely to speak about applying prior knowledge, unsurprisingly, but they were also unlikely to report having role models, consulting peers, learning indirectly from community members, or using feedback from data or other users to guide their tweets. It is possible that relevant education also provided the tools or relationships needed to seek out additional relevant learning strategies. Whatever the cause, the difference is notable.

Reviewing other comparison points for the group, there were not significant differences in the number of strategies used, except that the top tweeters used slightly fewer different strategies, suggesting that learning in more ways does not necessarily correlate to greater participation, advanced learning, or developing expertise. Having several learning strategies appears helpful, but having the *most* learning strategies did not seem necessary to be highly proficient at Twitter.

To get a better understanding of overall patterns, I grouped the eighteen strategies or sources of learning into broader approaches to the learning process (see Table 8 below). These larger themes were: applying prior knowledge, directly accessing expertise, modeling & examples, and exploration. On average, participants drew on three or more of these larger approaches, so even when grouping similar strategies together, it is clear that participants were

employing many different tactics to learn. Based on my participants, informal learning appears to entail a buffet-style approach to learning strategies.

4.5.1 Applying Prior Knowledge

Participants commonly attributed their learning (at least in part) to applying prior knowledge to this new platform. The knowledge in question might be available as a result of something inherent to who they are or, more predictably, based on prior study or training.

Participants who identified as tech savvy applied instincts honed on other technologies, and some of this technical knowledge was further attributed to age or generation. @Bob, @Mary, @NastyWoman, @UserA, and @Nina all felt that they had an aptitude for social media based on these kinds of “inherent” traits. For example, @UserA said, “I’m a digital native and I also work in tech, so it’s easier for me to adopt technologies because I create them, too.” Although participants more often cited their youth as an enabling condition for learning Twitter, @Nina felt that her life experience was helpful as she learned the platform:

I think it would be different if I was someone half my age and just sort of getting started, but again, with my marketing background and being older and just being able to see how things work, I wanna say it came pretty organically to me.

As mentioned, @Nina, @UserA, and @UserB had training in marketing, which they described as relevant. @Bob and @UserA both had also been trained in the technology industry and applied their relevant knowledge to Twitter. In essence, learners using this strategy felt that they had some sort of foundation on which to build. However, it is worth mentioning that participants usually did not consider prior knowledge to be enough to master Twitter, and other learning strategies were necessary. @Bob spoke to this point:

Having a computer science background, I think, makes it more likely that I’m familiar

with how certain UIs¹⁶ and how certain aspects of websites work, more than a completely random user. I think that's just maybe a matter of familiarity with using lots of different kinds of web platforms. On the social side, I think a lot of the social aspects of Twitter are not directly driven by the technological choices, except maybe the things like the character limit and things like that, and so I think a computer science background doesn't help, for example, become a Twitter user that is more likely to follow those social etiquettes.

4.5.2 Directly Accessing Expertise

Some participants did actively seek out or benefit from intentional learning scenarios. This would include a variety of strategies, including getting someone to teach them, consulting with peers, finding resources like blogs or websites with advice, or other ways of seeking information. @Mary and @UserD each chose to participate in workshops that highlighted Twitter as a useful platform for their goals (law enforcement and community building, respectively), although they were not given practical instruction on how to use Twitter there. @Bob spoke about consulting with peers who helped run the same Twitter profile, and @UserB would occasionally ask for assistance from other people in his field with more experience. @UserB was the only participant who reported using online resources like websites and blogs to help learn about the platform. No participant felt that they had been given a thorough lesson in Twitter, although @Mary did describe a brief tutorial from a friend that came closest:

She mostly just said, you know, this is what it's good for and she pointed—like, once I got it on my phone, she was like, “Here's where you push to do a tweet and here's—” and

¹⁶ User interfaces.

I'm like, "So I @ or I # the tweet?" and she was like, "No, if you @, then it goes to the person, but if you #, then it just lumps it together with other people's things that have that same hashtag" and I was like, "Oh, okay" and I might be totally bastardizing what is true, but that's my understanding of it anyway, and so she was like, "Then you can search for hashtags if you want to know—like, if there's a big incident and it gets a hashtag... then you can search for that and you can find all the people's tweets that are related to that."

And I was like, "Oh, okay." So, she kind of told me about it and explained it.

No other participant reported a similar interaction with a friend introducing them to Twitter, even if friends had been encouraging them to join the platform.

Participants often described intentional learning moments as happening piece by piece and just in time. For example, @UserA described the experience of learning to do activist work online, saying that, "you get these little tips from different people and everybody learns a little bit here, a little bit there, and you just share this information to build each other's capacity up." For example, when she was trying to report back her experience to her Twitter community of followers, another user stepped in to teach her how to thread her tweets. However, there was no reliable teacher; @UserA could not recall who had helped her, but she knew she would occasionally get these tips from people "sympathetic to a cause." @UserD also described a moment where a more experienced peer dropped a tip on how to structure tweets in their Twitter conversation to make them more easily shared with followers. These "teachable moments" seemed to come and go quite quickly and stood out as rare occasions of intentional skill acquisition.

4.5.3 Modeling & Examples

The most commonly reported approach to learning was relying on publicly available models or examples. This included learning from witnessing others being taught (or scolded), observing role models or community leaders, media offering examples, or simply copying other users they followed. Nearly all the participants reported observing and copying as a learning strategy, making it one of the top overall tactics, and this makes sense given that this strategy is essentially equally accessible to all of the participants. @Bob, @UserB and @UserD each also named specific individuals who acted as role models, by demonstrating practices of interest, and/or community leaders, who took steps to support others by publicly sharing resources. These model users were unaware of their role in teaching these specific people about the platform, as they were all strangers to the participants, but they served as learning resources nonetheless. In another variation on a role model, @UserD mentioned that some users offered negative examples that he could learn from to avoid unflattering behaviours as well.

This kind of negative feedback is related to what I have termed “indirect teaching,” or moments where participants observed other people publicly explaining how one ought to behave on Twitter or how a feature works, sometimes in the process of publicly scolding a particular user. As a prime example, I return to @Bob’s explanation of learning social norms: “I learn the rules I guess by people explicitly tweeting about what they believe should be the rules, or people replying saying, ‘That was rude,’ or whatever.” When asked, he said that he did not recall ever receiving corrections or negative feedback directly, but it is clear that his position within the public space gave him sufficient information to learn second-hand.

4.5.4 Exploration

The final major approach to learning was through exploration. This theme captures various ways of learning through experience: trial and error, feedback from both data and other users, and then simple exposure helping to build understanding over time. Exposure over time was tied with observing and copying for the most frequently cited tactic, with trial and error close behind. These exploratory learning strategies were sometimes offered rather dismissively, called “clicking around” (UserD) and “plinking” or “stumbling” (@Mary), but nearly all participants relied on exploration as an important piece of their learning journey.

@UserA described her learning process as, “Once you kind of trip over yourself a few times, then it becomes second nature” and her acceptance of bumps in the road is helpful when learning by trial and error. @Bob, @UserA, and @UserB, were all able to reflect on tweets that they regretted posting in hindsight, showing that they were learning from experience and errors in particular. Choosing who to follow was another aspect where several participants attested to using trial and error. Both @UserB and @UserC spoke about choosing to follow certain users and unfollowing them after being dissatisfied by their tweets, and both considered this a natural part of getting comfortable on Twitter.

Twitter provides feedback in the form of user engagement and analytics, which multiple users found educational. @UserA was one of the few who paid attention to the metrics on the platform, saying,

For me, instead of a role model, I look at data more, so I do check up on what are my top tweets, what are people clicking on certain things, or links, and try out—purposely try out different things, and then from there you start to figure out what’s more effective, what’s less effective.

@UserA attributes the instinct to do this to having a job in marketing, where A/B testing on communications is normal; she said,

I do the same for activism work. Some people are like, “How are you able to make so effective statements?” or “How are you able to make such effective tweets?” It’s because, like, you look at the data and see what’s working, what’s not, and you continue to do what’s working. So, data’s been a big part of what I do.

@UserB also has a marketing background, and he is diligent about how he notes user engagement, follower count, and other metrics for the account he helps run.

Learning through exploration appears to be facilitated by a very helpful trait I noticed in many of the participants: a willingness to try something new. In the process of describing how she learned to retweet, @Mary offered a great example of this mindset: “I just push buttons until something happens. That’s kind of my—that’s how I deal with technology: I just do things until it either works or I totally break it. And so, most of the time, eventually, it works.” According to @Nina, she started using Twitter motivated simply by a willingness to explore a new social media platform, “you know, wanting to know what it was about, how it was different from Facebook...just to try it out and see what it did, what it didn’t do.” It is unlikely that @Nina, who was both a mother and lawyer at the time, had nothing better to do than learn a new social media platform, and yet she was willing and interested in doing so simply to satisfy curiosity, as she tells it now. Participants demonstrated a consistent openness to and even active interest in new experiences. This appears to be a supportive trait for learning on Twitter.

Theme & Facets	Description	Participants using this strategy
Applying Prior Knowledge		5
Apply Prior Knowledge & Education	To use Twitter, participant relied on the application of prior knowledge and education. Subsections of this strategy included applying prior marketing knowledge and applying prior technology knowledge.	5
Identity - Generation	Participant attributed their knowledge of Twitter to the generation that they are a part of, or the benefits of being their age.	3
Identity - Tech Savvy	Participant attributed their knowledge of Twitter to being the sort of person who understands technology more generally or participates in a lot of technology.	3
Osmosis & Intuition	Learning involved relying on inherent intuition, instincts, or attributing knowledge to a naturalized absorption of information that feels second-nature and has no clear origin.	2
Directly Accessing Expertise		6
Direct Teaching or Mentorship	Learning involved someone explicitly and directly teaching something. This is different from consulting peers because in consultation, a user would be seeking out assistance and often already created an idea of what they wanted to post or had a problem to solve. When someone is directly teaching, it is about transfer of new knowledge or skills. A key example that recurred in the data was participants learning to thread, where participants were informed of something they did not know by someone who could offer than information.	5
Consulting Peers	Learning involved consulting peers and receiving feedback when solicited. These peers could provide guidance to one another and share practices.	4
Attending Workshops	Learning involved attending a relevant workshop that helped increase understanding of Twitter.	2
Accessing Relevant Resources	Learning involved seeking out and referring to resources that could provide information about Twitter and its use. These might include industry magazines, blogs, or websites where advice about how to use Twitter is shared.	1
Exploration		8
Exposure & Over time (Experience)	Learning involved exposure to the platform over time. Being in the environment of Twitter was informative. Participants could see what kind of information and behaviour was being shared over time and acclimate to the environment. This is a much more passive and long-term process compared to observing and copying, which is more active and narrow behaviour.	7

Theme & Facets	Description	Participants using this strategy
Trial and Error	Learning involved trying something and learning from the consequences.	6
Exploring	Learning involved exploring the platform. This is a combination of exposure and trials through curiosity. This is a discovery process.	4
Metrics Feedback	Learning involved reviewing the data analytics that Twitter provided and considering this feedback when making future posts. For example, if many people clicked on a link, this feedback suggested that this post was successful. Therefore, posts with similar features would be encouraged.	3
Engagement Feedback	Learning involved considering what kind of posts received engagement from other Twitter users and considering this feedback when making future posts. For example, if many people replied to a post, their feedback would determine if the post was successful.	1
Modeling & Examples		9
Observing & Copying	Learning involved purposely observing others and copying demonstrated behaviour. This is different from merely exposure because it is the active reviewing of examples and reproducing similar material as a result.	7
Community Leadership	Learning involved leadership from a community member whom the user knew, online or offline, where behaviour was modeled and Twitter use was encouraged by a specific individual. Participants did not call this mentorship, as it was not a relationship to that individual, and they may not even see this person as a role model, but that community member was able to provide a public resource to on-lookers.	3
Indirect Teaching	Learning involved seeing someone else get directly taught or simply told about something, because it's a public space, and learning by proxy. In some cases, participants learned from someone else's scolding and avoided being scolded by not making a similar mistake.	2
Role Model	Participants learned from a role model on Twitter, who was unaware that this particular user was learning from them.	2
Media Instruction & Marketing	Learning involved media sources instructing participants on how features could be used, including marketing or promotions. This could include brands sharing hashtags and instructing audience members to use them on Twitter, thereby implying what the hashtag was for and when to use it.	2

Table 8. Specific strategies and overall approaches to learning

Each participant spoke to several different learning strategies and approaches, but it is important to note that just because a participant did not specifically articulate a strategy during our interview does not mean that they did not use said strategy. Interview questions were designed to create room for participants to share their stories rather than confirm or deny their use of certain learning techniques. However, I can say that at least this many strategies were described by participants, and they may have practiced even more.

4.6 Hashtag Activism: Applying What They Have Learned

Many participants did not recall specifically when they began to learn about hashtags, especially as hashtags have begun to infiltrate even offline conversation. It stands to reason that they learned in similar ways to how they learned how to use Twitter in general. However, some specific strategies were named. @Nina suspected that she had first encountered hashtags through television shows that encouraged viewers to use specific hashtags to tweet about shows. One of @Mary's early hashtags was also the result of stadium announcers encouraging her to use a hashtag to tweet during a sports game. This falls under *media instruction & marketing*. However, @Mary was originally instructed about hashtags from her friend, who was telling her the Twitter basics, which falls under *direct teaching and mentorship*. @UserD also mentioned that he got some direct instruction about why hashtags were useful at a community meeting, although he already had a sense of what hashtags were. @UserB used websites and blogs (*accessing relevant resources*) to realize the importance of hashtags while he was learning about digital marketing as part of his self-directed professional development. Overall, it makes sense that participants could more easily recall education through these external resources than the creeping awareness of hashtags as a phenomenon that is difficult to pin down.

None of these sources, however, provided instruction for how to use or create activist hashtags. Even activist networks had not reached out to my participants to help induct them into the practice of creating activist hashtags in any explicit way they recalled, and certainly no other organization has taken it upon themselves to ensure that this practice continues to spread.

Although @UserD did describe a community workshop where a local provided information on how Twitter might be used to build community, he said that the workshop simply “solidified” his thoughts about hashtags rather than provided new information he could not glean from “clicking around” already for a year. The main role of movements in this learning is likely during this “clicking around” in a media environment where activists are demonstrating how to use the platform for social change. Even without formal guidance, my participants were able to take on the practice of using activist hashtags because they understood the mechanics of hashtags generally and were motivated to use the specific hashtag for its own particular merits. These merits were generally evaluated based on a participant’s individual ideology, biography, resources, and social network, which aligns with the conventional factors for initial social movement participation (Corrigall-Brown, 2012).

@Nina and @UserA have originated activist hashtags that have received significant circulation. Their descriptions of this process focused on their motivation for the creation, rather than any challenges or learning process duration creation. They were prepared to create a hashtag because they had already gathered all the necessary skills, and any strategies mentioned echo those broadly applied when learning Twitter. As I mention above, the first time participants used an activist hashtag occurred later on in the archives than other skills, and activist hashtag creation occurred even later. By this time, participants were able to navigate Twitter and use it for their

purposes without significant effort. Both participants also identify as activists, and it makes sense that they would express their activism online.

@Nina has been by far the most popularly successful with her activist hashtags and had created four at the time of the interview. She described her hashtags as arising “organically” as she was expressing herself or identifying a need, and then others were able to support her original message. The hashtags were not coordinated with other people or organizations; in fact, her most popular activist hashtag was initially unintentional and then she harnessed its resonance to advocate for change. In that case, creating an activist hashtag was a function of capitalizing on accidental zeitgeist and researching relevant information through external resources once it had taken off, having chosen to embrace the momentum the hashtag was receiving. Since gaining a significant platform, @Nina has been more intentional about creating activist hashtags and provided more framing in the original tweet to ensure that the purpose of the hashtag was clear. She attributed her decision to do that to practical necessity (“so you don’t have to explain fifty billion times what the heck the hashtag is about”), as well as an undergraduate education in marketing and years of law that taught her the basics of branding. This would be an example of combining the lessons of prior knowledge, experience, and feedback from other users. Learning from engagement feedback was also a part of her process for creating a more recent activist hashtag that was responding to low morale within her community, as she assessed the enthusiasm for the hashtag prior to fully encouraging its spread. An initial post tested the waters, and then she was able to launch it in coordination with certain relevant dates; based on further feedback afterwards, her testing had been correct and her community was responsive to her message. It is worth pointing out that @Nina has a relationship and shared community with her followers, describing them as her “tribe,” and so she can use this connection for reliable feedback, while

other participants have not developed this kind of network and may not have access to learning this way.

@UserA has created three different activist hashtags, with varying degrees of success. Her strategies for developing the hashtags have varied, although each one was an intentional attempt to create an activist hashtag. Her first was based on a slogan she had created for a website and simply adapted as a hashtag. She found that this was often too long, and this caused the hashtag to be modified by others when they used it. Her next two activist hashtags did not receive widespread use, which she attributed in one case to a lack of time to cultivate messaging around it and, in the other case, she found that an alternative hashtag had already taken hold within the community. This highlights two challenges when creating activist hashtags: the speed of information and the competitive attention market. In creating these hashtags, @UserA was applying prior knowledge and drawing on experience on Twitter, and as a result of creating them, she began to learn from engagement feedback as well as trial and error. She said she fully expects to continue to create hashtags, although she is taking a break after spending much of the last year on various social media activism campaigns.

@UserD reported that he might have originated a hashtag as part of trying to pressure a local politician. He was taking part in a campaign with a specific political goal and was acting as part of a team, which might be the source of his uncertainty about the origin of the hashtag. Although he did not elaborate on his creation process, @UserD had significant Twitter and activism campaign experience at this point and was working with an experienced team, so I would expect that this process was some combination of applying prior knowledge and consulting with peers. The activist hashtag summed up their goal in a phrase, and so it is likely to have felt intuitive to simply add a hashtag to their demand and circulate it on Twitter, where they

were already active for political work. @UserD reported that this campaign used several offline and online tactics, not just an activist hashtag, but they were able to fundraise and receive attention from both the local media and the opposition leader in the provincial government as a result, so he felt the campaign was generally successful. As I spoke to him, he was in the process of brainstorming an original hashtag as part of advocating for a political goal in his region. As part of an online strategy to build public support for change on a specific niche issue, he planned to use a succinct phrase that captured his demand. He was hopeful it might help his cause.

Based on the experiences of @Nina, @UserA, and @UserD, once someone has created an activist hashtag, there seems to be a high likelihood that they will create another. This makes sense. Once the tactic has been attempted, it is relatively easy to try again. It does not cost anything to try. Each participant planned to use hashtags again in the future and found the strategy rewarding, even if they did not reach their original goals.

4.7 Learning Journeys with No Destination

A final thought on learning journeys on Twitter: there is no clear endpoint to informal learning, but there are rest stops. Nearly all the participants felt that they had more to learn on the platform to be considered experts, but it was rare to hear any kind of interest in learning more. @Bob, @NastyWoman, @Mary, @UserA, @UserC, and @UserD all acknowledged that they could be better at Twitter if they were to put in more time and effort. Several participants explicitly expressed unwillingness to further develop their skills in an intentional way. Although some participants, like @UserA, said they do look at metrics and analytics provided by Twitter to purposefully improve, others like @Bob acknowledged their potential utility and yet knowingly put the tools aside. @NastyWoman attributed her passive approach to learning Twitter to the fact that she is “not trying to be good at Twitter.” This is an interesting aspect of the learning

behaviour on Twitter, where it is self-directed. Participants need a motivation to increase their skills, and although several of these participants have goals for their Twitter use, like spreading beliefs or mobilizing people, they are not necessarily sufficiently motivated to learn advanced skills. This means that people will stop seeking improvement when they feel that they will not be sufficiently rewarded for their efforts towards excellence. Is it worth taking the time and effort to be better at Twitter? At least for @Bob, @NastyWoman, and @UserC, the answer was explicitly “no,” at least for now. In fact, the only participant who reported continuing to be engaged in his own learning is @UserB, whose job requires that he run a Twitter account. In his case, it makes sense that he be motivated to continue to get better and better at Twitter. For everyone else, even @Mary, who is new to the platform and only five tweets into her learning journey, competence is sufficient, and mastery is not motivating in and of itself.

Chapter 5: Mapping the Learning Landscape

Having explored the archives and interviews with participants, this chapter reflects on how my analysis speaks to concepts from the literature and then considers the implications of the study. First, I compare the competencies and practices I encountered with the principles of media and digital literacy (MDL) and digital citizenship to show how the latter might be a useful concept to describe the skill set in question. I then return to the concepts of public pedagogy and communities of practice to show how they might apply to the experience of participants. I close by making note of arising questions, study limitations, and final reflections.

5.1 Media and Digital Literacy or Digital Citizenship Skills?

Media and digital literacy is a big tent, as explored in chapter two. MDL generally refers to a set of competencies that encompass practical technical skills, conventional literacy, critical analysis, as well as a set of attitudes and social skills (Hoechsmann & Poyntz, 2012; Kellner & Share, 2005; Hobbs, 2010). In fact, MDL only truly makes sense as a coherent skill set when you contemplate the magnitude of navigating the modern media and digital landscape, which necessitates such an inclusive tool kit. To focus my analysis, I concentrated on mapping participant skills to the five essential MDL competencies according to Hobbs, a well-established media literacy scholar (see Table 9).

Essential Competencies of Digital and Media Literacy
<p>Access “Finding and using media and technology tools skillfully and sharing appropriate and relevant information with others.”</p>
<p>Analyze and Evaluate “Comprehending messages and using critical thinking to analyze message quality, veracity, credibility, and point of view, while considering potential effects or consequences of messages.”</p>
<p>Create “Composing or generating content using creativity and confidence in self-expression, with awareness of purpose, audience, and composition techniques.”</p>
<p>Reflect “Applying social responsibility and ethical principles to one’s own identity and lived experience, communication behavior and conduct.”</p>
<p>Act “Working individually and collaboratively to share knowledge and solve problems in the family, the workplace and the community, and participating as a member of a community at local, regional, national and international levels.”</p>
<p>As defined in Renee Hobbs (2010) white paper “Digital and Media Literacy: A Plan of Action,” p. 19.</p>

Table 9. Hobb’s (2010) essential competencies of digital and media literacy

Reviewing these facets of MDL, it is clear that my participants required all of these capacities to engage with activist hashtags on Twitter. Participants all had to access the necessary technology and information to share the hashtags with their followers. To do this well, they had to be able to evaluate each activist hashtag and understand the claim that it was making. When I asked participants about examples of activist hashtags from their archives, they spoke to their rationale and understanding of each one. Participants were aware of the consequences of participating in a hashtag, either through retweeting it or making an original contribution. Hashtag creators had an even bigger vision behind their tweets, but all participants honed their tweets according to their purposes and audience. Participants saw activist hashtags as a way to take action to positively affect their community and contribute in some small way to making change. Participants even spoke to the ethics of whose voice was heard and how to take part in

an activist hashtag responsibly. A full gamut of MDL competencies was displayed by participants in the process of describing their approach to hashtag activism.

Given the breadth of meaning already packed into MDL, it may feel almost gratuitous to ask for a yet-broader concept to help name the skills my participants demonstrated. To say that they were practicing media and digital literacy skills is certainly accurate. I argue that digital citizenship, however, is a superior way to describe the skill set necessary to use activist hashtags. Moonsun Choi’s (2016) elements of digital citizenship include media and information literacy, but expand to also explicitly cover ethics, political participation, community engagement, and critical resistance (see Table 10).

Elements of Digital Citizenship
<p>Ethics Practicing safe, responsible, and ethical use of technology; being aware of digital issues and impact of technology; exercising and respecting digital rights, including privacy, expression, and others; and practicing digital responsibility and appropriate behaviour.</p>
<p>Media and Information Literacy Capable of accessing technology; technical skills and digital literacy; and media literacy skills to understand, evaluate, create, acquire, and use information.</p>
<p>Participation/Engagement Practicing political engagement, including formal and informal politics; participating in the digital economy; cultural engagement online; and personalized engagement through empowered individual use of these tools.</p>
<p>Critical Resistance Critiquing existing power structures and participating in political activism.</p>
<p>Adapted from Moonsun Choi (2016), “A Concept Analysis of Digital Citizenship for Democratic Citizenship Education in the Internet Age,” pp. 599-603.</p>

Table 10. Choi’s (2016) elements of digital citizenship

Although the two concepts share a lot of features, critical resistance is a key difference between MDL and digital citizenship. Critical resistance is also essentially a summary of the purpose of an activist hashtag. By making a justice claim, activist hashtags are necessarily presenting a critique of society by identifying injustice and speaking up to demand change. In a deliberative democracy, this is a key citizenship practice. By including critical resistance as a

skill, there is also an acknowledgment of the role of power, politicizing the skill set, which is necessary when looking at the skills needed to engage with hashtag activism. Without this factor, much is lost.

Digital citizenship also has greater, explicit emphasis on political and cultural engagement, which is important when considering the skills and attitudes that participants demonstrated. Participants see Twitter as a space for connecting, contributing, influencing, learning, and pursuing goals; at least three of these five goals are explicitly about how to engage with others. Competence on Twitter was consistently described not simply as understanding the practical features of the platform but being able to positively connect and contribute to others. Participants were learning a set of skills that could only be practiced within a social network; they are citizenship skills that deal with how people engage with one another in a shared society.

As I discuss in the last chapter, participants also showed a vital awareness of the ethics of speaking online, as well as the potential and the responsibility that accompanies speaking in public space. All participants recognized that Twitter could be used to spread messages and beliefs, and they took this potential seriously. Importantly, six of nine participants spoke about how their speech affected the public space, including its potential to either amplify or muffle the voices of marginalized people. This ethical awareness is a key facet of a digital citizenship that arguably supports deliberative democracy, where citizens must engage in public deliberation to find a way forward. In a time when we are supposedly trapped in filter bubbles and increasingly polarized, my participants expressed desire for exposure to new ideas, dialogue, amplifying others, and exchanging information—a constellation of activities that arguably prepare a citizen to take part in deliberative democracy (van den Berg, 2016).

Certainly, participants needed to develop a broad spectrum of MDL skills to be able to participate in and create activist hashtags, but they also needed the capacities and attitudes of Choi's (2016) digital citizenship. By labeling the skills of the participants *digital citizenship* rather than *MDL*, I am can attend to the elements of power, politics, and ethics implicated in learning to use activist hashtags on Twitter. These participants are not just literate users, they are engaged digital citizens.

5.2 Revisiting Theories of Learning: Public Pedagogy and Communities of Practice

As I review the strategies that participants used to learn, I must also determine if the concepts and theories in my framework can be applied to the mechanisms I have identified. Given that I have named 18 different learning strategies, it is not surprising that I am considering multiple concepts to address the kinds of patterns I have seen in the experiences of participants. I am not trying, however, to prove or disprove the role of public pedagogy or communities of practice. Instead, I am evaluating the potential for either concept to enable or support learning the relevant behaviours under examination.

First, I return to my understanding of learning as situated and contextual. The broad learning strategies of applying prior knowledge, using models and examples, exploration, and accessing expertise are compatible with a view of learning as critically informed by one's environment. These are strategies that rely on, respectively, prior knowledge foundations specific to each participant, observing their environment for models and cues, interacting with their environment to develop increasingly sophisticated understandings of a platform, and accessing the relationships and resources available to each participant. Although I have focused on the shared themes across participants, each learning journey was unique to each participant, combining similar processes in different ways. For each participant, their learning happened in a

specific network of users that comprised their environment, and resources were offered within particular communities.

Given the importance of the learning context to the process, I see Twitter as a learning environment and consider it a site of public pedagogy. Most participants were able to use the resources provided by the Twitter environment itself to develop the necessary skills and knowledges to use activist hashtags. The most common broad approaches to learning— exploration and using models or examples— both rely on absorbing information from Twitter’s media environment and applying what they learned. Of the nine participants, only two chose to participate in a traditional educational environment (workshops) to learn about Twitter, and only one chose to access relevant educational resources, showing that these strategies were not necessary to develop Twitter skills. In addition, neither the workshops nor resources applied directly to learning to use activist hashtags, although they contributed to overall Twitter knowledge. Only five of nine participants reported even brief moments of explicit instruction, and even that was informal. Generally, participants used Twitter as a source of learning about Twitter, and activist hashtags as a source of learning about activist hashtags.

Activist hashtags are well-suited to being learned through public pedagogy. Participants described a good activist hashtag as clearly and concisely delivering the essence of its message, suggesting that the purpose and use of a good activist hashtag ought to be self-evident when a participant viewed it in context. In a sense, the artefact explains itself, recalling @Nina’s comment that, “I think that’s sort of the beauty of a good hashtag, that you don’t need an essay about what it means. You know, people can sort of gravitate to it and understand it right away.” Additional context cues allow potential users to observe and copy a format if they would like to join the phenomenon. Many popular hashtags offer a fill-in-the-blank format that is easily

mimicked by onlookers who might want to take part, such as #YesAllWoman, #WhyIStayed, or #OscarsSoWhite. By creating phrases that allow for easy mimicry and opportunities to join in, the tweet and essentially the hashtag itself can provide information about how to use it. Potential participants can learn from a single example and are likely to use the hashtag correctly, or at least knowingly. It is arguably this function that allows for those who are not insiders to join in, because much of the statement is simplified into a slogan that can be adopted. Participants did not describe any challenges to understanding a hashtag's meaning or a learning curve prior to participating. The ease of participation smooths the friction between those interested in taking part and those who actually partake, making it an easy threshold to cross.¹⁷

Here it is important to recall that hashtags, particularly activist hashtags, are increasingly being conceptualized by scholars as publics and counterpublics (Bruns & Burgess, 2015; Bruns, Moon, Paul, & Münch, 2016; Jackson & Banaszczyk, 2016; Kuo, 2018; Rambukkana, 2015). Through activist hashtags, discursive space is created online for the exchange of ideas, information, and dialogue. I argue that these activist hashtag publics and counterpublics are also liminal spaces of learning that can, through the mechanism of public pedagogy, “teach” onlookers how to participate in this public discourse. Participants are not born knowing how to participate in publics and counterpublics on Twitter; to enter into a public or counterpublic,

¹⁷ It is reasonable to consider that perhaps the activist nature might be impeded by the low cost of participating. However, powerful hashtags like #IfTheyGunnedMeDown, #RapedNeverReported, #WhyIStayed, and the recent #MeToo movement asked participants to actively engage with the hashtag with their own personal stories, and some of these stories are high stakes. #MeToo and #BlackLivesMatter were identified as powerful examples by participants, several of whom spoke at length about #MeToo. Ease of participation does not appear to dampen the effect of these hashtags, as the proliferation of users seems to be key to their effect.

participants had to go through a learning process. While participants might not consciously feel the learning curve as they take part in activist hashtag publics/counterpublics, having already built many of the foundations necessary, it still required learning. Furthermore, each hashtag is loaded with information about how to legitimately take part in the public exchange, as evidenced by the ability for participants to understand when they were contributing according to or contrary to the goals of the hashtag, as previously discussed.

This study has been conducted with the understanding that hashtags can act as publics and counterpublics, but I have also been sensitive to the potential for activist hashtags to facilitate community as well. Because context and connection appear critical to the learning processes and intentions of participants, community could also be a key mechanism for learning, based on Lave and Wenger's (1991) idea of communities of practice. However, the question of community on Twitter, a "social network," is nuanced, and I asked my participants about it directly to hear about their experience.

Just because participants were interacting on a network and even building relationships did not mean that they reported feeling like they were part of a specific and meaningful community on Twitter. Community was reported to exist in pockets, typically that were topically divided. @Bob, @UserA @UserD spoke about how they interacted with several different topic- or location-based communities, moving among them fluidly depending on what they were interested in or sharing. @UserA was able to describe how she interacted with each group differently, because she understood each community as a different audience with a different set of needs or goals. Access to a community, however, did not equate to belonging.

Access to Twitter is not even necessarily access to community. @Bob put it well when he said, "Sometimes I think I feel like I'm a part of those [communities], but I don't think there's

necessarily a broader Twitter community that is the same for everyone.” I notice in this statement how tentative @Bob was to include himself in those communities. @UserC was even more tentative about considering himself part of a community, allowing that he might be “only very partially,” but he felt clear that he was developing some strong interpersonal relationships. @UserD spoke about the feeling of community having “ebbs and flows” and noted that “I don’t know if I would call it community, but definitely, like, relationships... Like, you develop these relationships, networks perhaps.” Likewise, @Lorelei was initially ambivalent on the question of whether she felt like she was a part of a community, but she did value the ongoing relationships that she was forming within “Weird Twitter,” as she called it. Newer participants like @Mary and @NastyWoman, however, did not report feeling connected to a particular community on Twitter. @NastyWoman felt like she had the potential to access communities in the future based on others connecting with her more recently, but currently she felt more alienated from the communities than accepted. While participants were building bonds and connecting to other users, most were hesitant to say they belonged to a community.

In contrast, @Nina and @UserB offered important examples of feeling very connected to a community on Twitter. @Nina described her followers as her “tribe” and her “community” where they hold conversations on various issues, saying that she speaks to them “as if I had 88,000 people in my family room and we were just chatting on a particular subject.” @Nina is a unique case in some ways, as her Twitter use is substantially different from the other participants, simply due to the number of followers and influence she has been able to attain, but her comments about community are still important. She not only felt connected to her followers, but she also felt responsible for using her platform to support and benefit her community of

followers. She understood her position as a community leader and treated it with significant weight and thought.

On the other hand, @UserB was a community member who felt he benefited from the community leaders whom he could follow on Twitter. He was involved in communities on Twitter relevant to his field, and he said, “what I like about that community is that they learn from each other,” cherishing the exchange of skills, tips, and accomplishments with fellow professionals. He argued that Twitter has allowed professionals in his field to share their work with less fear of competition and in a more collegial spirit. Although @UserB’s experience of using Twitter primarily as a work site and a resource for professional development was unique within the sample, it does represent how some Twitter users take advantage of the platform. His strong sense of community is a testament to the fact that he is not alone in using Twitter this way. That said, the rest of the participants did not report a similar experience of learning within a community.

In general, although participants acknowledged that they shared the broader space of Twitter with other users, community required more than mere co-presence on the platform. Because each user curates their Twitter feed and an algorithm further interferes with ordering tweets, essentially no two people are experiencing Twitter in the same way; there is no way to be on the same literal or metaphorical page. As a result, there is no common public square of Twitter where everyone can meet. Although there are inevitably tight links that form based on shared followers and mutual following, most users seem to remain nodes in a network that never quite touch.¹⁸

¹⁸ This resonates with Thomas’ (2002) description of why students never “came together” during

In fact, hashtags are in some ways an attempt to create a shared public space where users can gather content together for a shared experience. Live tweeting explicitly works this way. Therefore, hashtags have the potential to be a community building tactic, and the archive data offered examples of users implementing it in just this way. By creating a *community* hashtag, users can join an ever-widening circle of participants engaging in a shared conversation. However, the accessibility of participation facilitated by a keyword does introduce a further limitation: people are connecting to a hashtag, rather than each other, because this community does not require mutual recognition to take part. In essence, hashtags may become another node in a network of connections.

Scholars of publics and counterpublics may be able to shed light on some of the limitations of hashtags in community formation. Warner (2002) writes that within publics, strangers “become, by virtue of their reflexively circulating discourse, a social entity” but this is not the same as community (pp. 11-12). Bruns and Burgess (2015) struggled with whether hashtags could be described as communities as well and argue that community requires “that hashtag participants share specific interests, are aware of, and are deliberately engaging with one another, which may not always be the case” (p. 5). Some hashtags, like those coded as *community* and *response* do appear to encourage participants to engage with other community members and see themselves as belonging to a group of participants. However, given the purpose of activist hashtags specifically, participants are most likely engaging with the ideas in the

discussions in virtual learning environments: “students interact not with another student, but with another student’s writing. Further, this writing is removed in space and time from the parties involved in the discussion... Therefore, it would be more appropriate to conceptualise students’ messages as *data* stored for potential access by other students, rather than contributions to an ongoing dialogue” (p. 362, emphasis in original).

hashtag, rather than other participants. While there are certainly exceptions, developing community on Twitter is not as easy as participating in a hashtag.

I argue that a hashtag, and Twitter more generally, often resembles a library. This argument is quite aligned with seeing Twitter as a series of overlapping publics and counterpublics, as it imagines Twitter as a place for the exchange of ideas. For many of my participants, signing on to Twitter is much more like going to the library, a place where you might gather information or resources, than going to a social club or meeting, where you might develop tighter bonds to peers. Although a library is a shared public space, not everyone will engage with others there in a meaningful social way on a regular basis, and social opportunities are often specifically arranged events. The feeling of community was narrower, more selective, and less common among participants, often requiring prompting to consider during the interviews, while the search for information on Twitter was essentially a universal use of the platform. Although participants did communicate a desire for or experience of connecting with others using the platform, this was often framed as interpersonal relationship building rather than community building.

As a result, the question of whether participants were learning through communities of practice may be best answered with, “Sometimes.” According to Lave and Wenger (1991), a community of practice needs more than mere “co-presence,” instead requiring “participation in an activity system about which participants share understandings concerning what they are doing and what that means for their lives and for their communities” (p. 98). A community of practice will share not just practices, but goals, history, and culture. In transient space like Twitter, these requirements set a high bar. Although people using the same activist hashtag might share the same practice and goals, they may not even recognize the other people taking part in the hashtag.

As mentioned above, participants in a hashtag public may be simply participating in discourse, rather than a community.

Still, a community of practice is not without merit for select participants who were able to connect to a community or communities, like @Nina, @UserB, and @UserA. @Bob and @UserD's reports of sometimes feeling like a part of a community can also be considered a nascent opportunity for a community of practice to support learning on Twitter. Given the predominance of using modeling and examples as a learning strategy, and particularly community leadership, it suggests that some of the processes enabled by communities of practice are in place for some of the participants. @UserB was by far the most explicit in his attribution of learning to his community, and the fact that he is engaging with other professionals in his network makes this unsurprising. The concept of communities of practice originally arose from the idea of apprenticeship, and it was used to explain how novices became advanced practitioners (Lave & Wenger, 1991). No other participants, however, purposely immersed themselves in a network of people with more expertise than themselves with the hope of increasing their mastery or network. In a sample of nine, it is difficult to say which experiences are more representative of the larger Twitter population, but @UserB is an important data point. The work of this exploratory study is to discover what is possible, and I am inclined to argue that it is possible to use community of practice to enable learning on Twitter, and I encourage other researchers to explore this phenomenon to a greater depth.

When looking at activist hashtags specifically, however, communities of practice seem less applicable. Even activist hashtags that focus on demonstrating solidarity or shared experience, which can serve to create a sense of closeness, arguably enable mutual recognition rather than a reciprocal closeness, because it is unclear who exactly is viewing an activist

hashtag. Typical boundaries of community actually dissolve when an activist hashtag becomes widespread, opening users to potential scrutiny or harassment from others. More broadly, participants generally did not report feeling like they were a part of an activist community online, even if they participated in activism and followed activist issues using Twitter. To imagine that most of the participants are members of a community of practice regarding activism is potentially an overstatement of the kind of intentionality they have regarding their activism. Although four participants did use the platform explicitly to pursue their activism, only @UserA and @NastyWoman described activism or consciousness-raising as their main goal when using Twitter. In general, even for some of the participants who identified as activists, activism appears incidental to participating on the platform and exchanging other kinds of information. Activist hashtags are just one type of public or counterpublic in which they can participate on Twitter.

A more useful concept than communities of practice is the connected idea of “legitimate peripheral participation,” which Lave and Wenger (1991) use to describe the position of a novice beginning to participate in a community of practice. On this topic, Lave and Wenger (1991) write,

The individual learner is not gaining a discrete body of abstract knowledge which (s)he will then transport and reapply in later contexts. Instead, (s)he acquires the skill to perform by actually engaging in the process, under the attenuated conditions of *legitimate peripheral participation*. This central concept denotes the particular mode of engagement of a learner who participates in the actual practice of an expert, but only to a limited degree and with limited responsibility for the ultimate product as a whole. There is no necessary implication that a learner acquires mental representations that remain fixed thereafter, nor that the “lesson” taught consists itself in a set of abstract representations.

(p. 14, emphasis in the original)

Legitimate peripheral participation seems to be a helpful description of the kind of observation and application of learning that is possible online. One can be legitimately participating in a Twitter hashtag merely through reading their feed, but without necessarily creating a hashtag themselves. Furthermore, when learners do tweet with an activist hashtag, they participate in “the actual practice of an expert,” because their tweet is treated the same as other users—there is no Twitter learner’s permit (Lave & Wenger, 1991, p. 14). Legitimate peripheral participation also recalls the two most commonly reported learning strategies: (a) exposure over time and (b) observing and copying. Therefore, I find the explanatory power of this concept appealing. While communities of practice may not be a concept that applies to many of my participants, nearly all of them described a learning process that was similar to legitimate peripheral participation at times. Perhaps the disjuncture between the two concepts is the presumption of community-belonging and intention to improve in communities of practice, which are often not the case.

Given that an activist hashtag is typically better described as a public or counterpublic than a community, I argue for calling them a “public of practice.” The advantage of this term would be to label the kind of learning necessary to participate in these hashtag publics. It would be marking them as a space of discourse that allows for a type of learning and legitimate peripheral participation that is ongoing but centered around a public rather than a community.

Although it might be sufficient to call activist hashtags a site of public pedagogy and leave it at that, calling them publics of practice highlights the fact that this learning has an element of application to its pedagogy. Not only are activist hashtags learning environments and publics, but they are also a place of practice. Learning is often occurring at the same time as

application, and this is not incidental to its occurrence. Participants reported exploration, and frequently trial and error, as key to their learning process. In calling a hashtag a public of practice, we capture the fullest possible picture of the learning that occurs.

5.3 Limitations of Memory, Technology, and Capacity

In this study, I aim to demonstrate an “emancipatory interest in knowledge” rather than present a “formulaic solution,” following the tradition of critical theory as described by Alvesson and Sköldbberg (2009). I can only describe how it might be possible to learn and present the world as it can be, rather than provide an encyclopedic description of what is. Even aside from philosophical stances and the limits of my own positionality, this project cannot realistically present a definitive answer to the question of how all people will learn the MDL skills to use activist hashtags on Twitter, given its limited scope and its practical constraints as a master’s thesis. Nine participants are simply insufficient to discover all there is to say on this topic and do not reflect all users. For example, it is possible that activists in other movements or communities have developed specific strategies around teaching activist hashtags that I simply did not encounter. An exploratory study is always open-ended, a signal to others that there is more yet to learn, and I hope that others will take up this question in the future as well.

Throughout this study, I have also mentioned the limitation of memory and the challenges of capturing informal learning that occurs through lived experience. Livingstone (2006) cautions researchers that, “retrospective views of the amount of time spent in incidentally initiated informal learning processes are likely to remain very approximate underestimates” but also argues that “approximations of the significance of important phenomena should be preferred to either continuing to ignore them or to imposing false precision in measurement efforts” (p. 218). I have chosen to pursue this study with this limitation continuously in mind, rather than

attempting to acknowledge it and put it aside, because it is a part of the nature of the work. Foley (2001) recognizes the importance of studying informal learning in action despite the challenges incumbent in a study of this kind, writing:

We learn as we act, and our learning is both tacit and explicit. This is indeed a complex tapestry, difficult to unpick. But just to know that it is complex and needs to be unpicked is important for those of us concerned with understanding and facilitating critical and emancipatory learning. We can then let go of formulas that promise quick results, and get on with the difficult and rewarding work of trying to understand what people are actually learning in the places where they work and live. And, of course, considering the implications of that learning for our educational interventions. (p. 86)

This quote gets to the heart of this project. Learning is always difficult to measure, as any educator will tell you, but the difficulties presented by studying learning through experience are not outweighed by the importance of doing so. Throughout this study, I have tried to make it clear that the reports of participants may not be the sum total of either their own experiences or of the phenomenon but analyzed what I could from their reports. The questions of my study remain important, even if they are difficult to answer, and my conclusions are transparent in the scope of their claims.

Given my interest in Twitter as a site of public pedagogy, another significant limitation to the study is that I was not able to capture the Twitter feed of participants, which represents significant evidence of how participants experience the platform. In general, this study focused on capturing what the participants created on Twitter by analyzing their tweets, rather than attempting to directly collect evidence of what they saw on the platform. Not only was I at a loss for how I might collect such data, but if I had, it would have been challenging to determine how

to analyze this information. It is nearly impossible to retroactively determine what tweets any single user might be exposed to on the platform, especially as Twitter's algorithm has made the process for composing a user's Twitter feed increasingly opaque. While historically Twitter displayed tweets in chronological order, since 2016 Twitter has chosen to order tweets according to internal algorithmic estimations of what it calls a "top tweet" (typically tweets that receive a lot of engagement, such as likes, replies, and retweets) and surfacing tweets that "You might have missed" while logged off (Oremus, 2017). This shift has a qualitative and substantial impact on the user experience and what they see on the platform, and it also makes it difficult to guess what tweets a user might be viewing at any given time. Therefore, while the theory of learning in this study focuses on the impact of the environment or site of learning, it is impossible for me to actually recreate and analyze the site of learning. To address this issue, I have chosen to interview participants and hear about their experiences of the platform, but reflections on the use of a platform over years are sketches rather than mirrors of their experience. Participants frequently admitted to not recalling answers.

In addition, I collected the information on the experience of the platform that it was possible to capture, user activity on Twitter, but even this strategy is not seamless. Participants like @NastyWoman and @UserA noted that they had deleted tweets from their Twitter archive, even substantial amounts, in an effort to curate their archives for onlookers. @Bob, @Mary, and @UserB also said that they had additional Twitter accounts as well, which I did not have access to because the accounts were associated with organizations, and it was not possible to get permission. Even if I had received permission, their tweets would have been intermingled in the archives with collaborators. Therefore, even their archives offer an incomplete picture of their

experience. Again, interviews had to stand in for this lack of data but cannot completely compensate.

Due to the difficulty of capturing the site of learning, a useful research strategy would be an autoethnography of a new user of Twitter, and I certainly would have considered this method if I felt that I were sufficiently unfamiliar with the platform. I encourage other researchers to follow Gleason's (2013) example and consider documenting their own experiences of new digital learning environments to capture learning in process. Given that learning is situated and contextual, many accounts of this learning process would be necessary before a bigger picture might be envisioned.

5.4 Implications for Research, Informal Learning, Digital Citizenship, and Education

Despite challenges and questions that remain unanswered, this research offers insights that are relevant to the current moment. First, and perhaps most obviously, research on digital environments is necessary to understand the opportunities and challenges of new technologies. With technological innovations shaping both our everyday present and our future, it is valuable to consider how we can keep up with the necessary media and digital literacy skills to use them for good. In addition, this work is relevant to questions of how lifelong digital learning might occur more generally. Understanding that online informal learning might require a buffet of learning strategies is useful when anticipating how this learning could be supported or enabled. I am proud to join the chorus of voices asking questions about the educative potential of online spaces.

In particular, research into how people learn to use new digital media to create positive social change and support democratic digital citizenship is important. Kellner and Kim, speaking

about their own work on YouTube response videos, offer an argument relevant to the rationale for this study:

When they have an occasion and competence to raise their authentic voices based on their own lived experiences of social oppression, marginalized people are likely to augment their counter-hegemonic struggle by consolidating solidarity with other critical social constituencies. Equipped with crucial sociopolitical consciousness and competency to make use of the Internet, individuals can realize what Giroux (2001) calls the “reconstruction of democratic public life.” (p. 7)

Media and digital literacy skills or, as I have argued, digital citizenship skills are critical in contemporary society to the project of consciousness-raising and social change. In understanding how these skills are learned, even without aid of formal structures, we are given greater insight into how citizens today can participate and shape public life. Although new media technologies are not inevitably tools for positive social change, it is this fact that makes their use for activism even more worthy of attention. In a world where my participants could be using Twitter simply to exchange funny pictures or comment on celebrity news, it is worth examining how and why they (also) use Twitter for activism.

To do this necessary digital research, scholars must develop standards of consent, effective research designs, and best practices. I hope that this study can be of service to future scholars who are taking on digital research. Although technology changes constantly, making applying lessons directly more difficult, the rationale of my design choices—as well as the recruitment challenges I faced—will hopefully help inform others looking to conduct similar research. I especially encourage other researchers to combine research methods and do more than collect publicly available data, even if this creates challenges. There is no shortage of things to

measure on the Internet, but digital qualitative research still has much to explore and offers a different view of life online. I also hope that this research supports norms that favour collecting data using procedures that prioritize informed consent and transparency. Big data offers substantial opportunities for digital research, but it is vital that data collection is done in ways that treat participants as people with dignity, not just accounts with data. There are many ways to explore digital qualitative research while keeping this in mind, and I look forward to seeing how other scholars pursue it.

This study also adds to the voices arguing for the importance of informal learning, and especially incidental learning, as a key educational process (Choudry, 2015; Foley, 1991; Foley 2001; Livingstone, 2006; Scandrett, 2012). Choudry (2015) writes, “People struggle, learn, educate, and theorize wherever they find themselves. The form this takes may change, but the importance of space and places for collective action, learning, reflection, and intergenerational sharing is crucial to building, sustaining, and broadening resistance” (p. 40). Now that people, and especially activists, are finding themselves on Twitter, it is becoming just such a place as he describes. It is critical that we attempt to understand how learning occurs outside of formal structures; if we do not, we will miss much of the learning that occurs.

This study also has implications for formal education regarding MDL and digital citizenship, which is increasingly common in curricula (Hoechsmann & DeWaard, 2015). Although the conceptions of MDL and digital citizenship are quite broad when applied, digital literacy as technical proficiency has been gaining momentum. With campaigns like the Hour of Code (Code.org) and organizations like Canada Learning Coding (canadalearningcode.ca), there is increasing appetite for teaching youth to code, and governments are responding to the industry demand, like British Columbia’s commitment to integrate coding into the curriculum (Silcoff,

2016). If technical skills like coding, however, come to symbolize the totality of digital literacy and are not combined with the softer skills in MDL and digital citizenship, students are left substantially unprepared to use digital tools. Not only did participants report that these soft skills were the most challenging to acquire, but these skills were also vital to the ways that they were using Twitter to connect, contribute, influence, learn, and pursue personal goals. For example, humour was identified as an important part of Twitter use, but this feature is likely to be undervalued by educators describing successful Twitter use. Being funny is not a technical skill, but it is a highly useful, well-regarded skill on Twitter. Applied more broadly, in a world full of social platforms, social skills are just as important to learn to be successful in the Internet age. Educators need to anticipate this reality as they plan their digital literacy lessons.

5.5 Open Questions: Authenticity, Adaptability, Inequality, Anonymity, and More

Many questions remain open for exploration and, given the nature of the technology, they become more numerous every day. For example, anyone watching North American political news cannot help but hear about the influence of Twitter bots, which are accounts that are automated for certain responses, or otherwise fake accounts that might be run for various purposes such as impersonating real people, trolling, or artificially inflating the Twitter metrics. Not only are these practices of concern for the platform, mainstream media, the public, politicians, and others who are trying to use the platform as a public sphere, but skepticism of Twitter users and authentic engagement could potentially poison the entire well. Activists and their allies struggle to maintain legitimacy already, but if hashtag activism is suspected to be AstroTurf instead of a grassroots sentiment, this struggle will only increase. On an individual level, how can a Twitter user join a hashtag in an informed way and avoid empowering bots or malicious users? This is especially difficult when credible reporting on a hashtag can hardly keep

up with the social movement of the hashtag itself, due to the nature of the Internet. Increasingly sophisticated skills may be necessary in the future to be able to separate wheat from chaff and signal genuine sentiment. The ability to discern authenticity online is a critical MDL skill that deserves greater attention.

Informal MDL learning requires more research specifically to answer questions connected to the digital divide. For example, within my sample, I did not speak to anyone who struggled to access the technology and basic digital literacy necessary to join Twitter, but their experiences with the platform are likely to differ from the learning journeys I have described. I also encourage researchers to investigate what makes some adults learn MDL and digital citizenship skills, while others ignore, avoid, or even resist gaining this skill set. My participants had a set of motivations for their Twitter use that helped drive their learning, and they were generally interested in or open to new things, but, without a comparison group of non-learners, I can only speculate that these are important dispositions for this kind of learning. Lifelong informal digital learning will be an increasingly important area of study to understand how people can adapt to technological change and avoid being “left behind.”

Important questions also remain regarding how trolling and online harassment impacts the experience of Twitter learners and their capacity to attain digital citizenship. While my participants were aware of the potential to be harassed, and @Nina briefly spoke to how she handled trolls, it was outside of the scope of this study to deeply explore that experience. It would be worth looking at both how being trolled is a learning curve of its own, often requiring a very specific set of skills to maintain emotional, mental, and even physical health. Kelly and Arnold (2016) have explored the issue of cyberbullying, and I second their concern that online harassment might lead to the silencing of marginalized groups if members withdraw from digital

public space to avoid abuse (Kelly & Arnold, 2016). In the framework of deliberative democracy, the silencing of any group is a substantial limitation to citizenship and access to justice, making this a key point for future inquiry.

I would also be interested in how anonymity impacts the learning process on Twitter. This study generally included participants who posted under their own identity, which arguably enforces certain parameters of behaviour. It might even be valuable to explore how users learn to troll others on Twitter, which is certainly not a skill all users possess. Anonymous users and trolls may have unique goals, practices, and communities on Twitter that are worth investigating for how they inform the skills they acquire and how.

I would also encourage other researchers to draw on this work and apply it to specific publics and counterpublics on Twitter. Critical race digital studies is likely to have a key role to play in understanding how hashtag activism is learned, and potentially even taught, within particular communities and counterpublics on Twitter (see Jackson & Banaszczyk, 2016; Kuo, 2018). Catherine R. Squires' (2002) work considering subaltern counterpublics may hold considerable potential for this work, considering how Jackson and Banaszczyk (2016) have already applied it to activist hashtags. It is also important to consider what it means that Twitter has become home to publics, counterpublics, communities, protests, and amplified voices of many who are usually ignored by mainstream media. For example, what does it mean that "Black Twitter" is considered a key demographic on this format in North America, when Black-owned mainstream media is still a rarity? Many of the examples of powerful hashtags that I have seen and that have come up in interviews were created by people of colour, especially Black women. Researchers who have insight into these communities have much to contribute to how

we can understand how activist hashtags are created, taken up (or not), and become a source of learning for others.

Regarding activist hashtags as a concept, I would be interested in investigating the extent to which these hashtags might be an example of “problem-posing” education. Drawing on Paulo Freire’s (2000) *Pedagogy of the Oppressed* and applying critical pedagogy more directly to the question of what the activist hashtag accomplishes for social movement learning could be rewarding. Kellner and Kim’s (2010) analysis of response videos on YouTube might act as a model for how this might be done. While activist hashtags are less explicit in demanding a response sometimes, they are stating that there is a problem, making a justice claim, and then creating a community of common cause that coalesce around the topic; effectively, they are consciousness-raising, as my participants have described it. This study did not have the scope to tackle broader questions of how activist hashtags function, and there is much work still left to be done.

5.6 In Closing: Reviewing the Learning Tool Kit

Based on the content analysis of the Twitter archives and interview transcripts of nine adult study participants, informal learning online involves a buffet of strategies that can be combined according to individual goals, opportunities, and obstacles. Participants applied prior knowledge, explored, referred to models and examples, and accessed expertise to learn how to use Twitter to advocate for social change with activist hashtags. Few participants relied on directly accessing hashtag expertise, although this was helpful when received. The most common learning strategies reported overall were learning through exposure over time (i.e., experience) and through observation and copying, although trial and error was a significant strategy as well. Nearly all the participants attributed a part of their learning to a process of experience where they

took in events and incorporated their results into their frameworks of understanding. In essence, learning was part and parcel of making sense of their experience. Observation and copying, essentially mimicking other users, also makes some intuitive sense on a platform built around “following” others. These findings approximately align with anticipated strategies, although I did not expect participants to each describe so many different strategies in addition to these. In total, participants described 18 strategies, which I grouped into the four main approaches.

Specific cohorts within the sample had some differences in experience. Participants who had high tweet activity, and who also identified as activists, reported more uses for Twitter. High activity participants and those who reported relevant education also reported a wider array of learning strategies. Whether participants saw themselves as activists or not, using activist hashtags aligned with their interest in using Twitter to connect, contribute, influence, learn, and achieve personal goals.

By the time study participants were using activist hashtags, they had typically mastered all the basic features of the platform and were familiar with hashtags already, so they were able to apply what they knew to take part in the activist hashtag at hand. Among those participants who had created an activist hashtag, experiences varied in their outcomes, but all reported that they would use the tactic again in the future. Hashtag use was motivated by the particulars of each activist hashtag, and, in general, participants felt that hashtags advocating for social change had the potential to be an activist tactic and useful political tool. Like all tools, however, it depended on how they were used. According to participants, an effective activist hashtag is clear, concise, and captures the essence of its message.

Considering the breadth of learning strategies that I identified in the study, my findings align well with Choudry’s (2015) argument that there is a “dynamic interrelation” between

formal, informal, and other kinds of education (p. 101). I agree that learning occurs through a series of overlapping processes, and that these processes have a dynamic relationship, as evidenced by the fact that participants who reported relevant education also reported using more (and arguably unrelated) learning strategies. Learning happens in many forms and, formal or informal, lessons learned one way are integrated into insights gained in another to create a coherent overall skill set to apply. It all becomes experience that helps you understand and act in the world.

Finally, it must be said: new research regarding new media will inevitably become old research about old media. Twitter was born over a decade ago, but it is difficult to guess if Twitter be around in a decade from now. Several participants pointed out that Twitter is not as popular or successful as they think it should be, and they worry about Twitter's future. Although currently receiving renewed attention thanks to events connected to the American 2016 elections and tweets by President Donald Trump, Twitter has struggled to become a profitable company and retain users (Tsukayama, 2018). My participants, and many others, feel that Twitter is a powerful and effective platform for their purposes, but even several of them have left the platform in the past.

The experiences of participants are relevant beyond the life span of a particular social media platform, however. Even if activist hashtags were no longer in circulation, it is likely that we would still need to keep making space for publics of practice that support democratic digital citizenship. The Internet and networked communication are not going away, and hopefully neither is democracy. As we begin to understand how learning digital citizenship skills happens in public space, we can gain understanding of the present moment and develop strategies for building digital environments that enable this skill-building in the future. Furthermore, it will not

be enough to teach the young and wait—we need citizens with these skills now. I hope this study inspires others to consider how to enable or encourage adult learners to use social media platforms for critical consciousness and pro-social skill development. Technology is just a tool; it is up to us to learn together how to use it well.

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Appendices

Appendix A Recruitment Materials

A.1 Recruiting Advertisement



Figure 2. Recruitment image to be posted to Twitter and Facebook

A.2 Blog Text

(<http://blogs.ubc.ca/hashtagstudy/>)

Home Page:

Recruiting Participants

Do you use Twitter? Have you used it in the past? Do you ever use hashtags to talk about issues that are important to you?

The study “Learning to Use Activist Hashtags on Twitter” is recruiting participants. We are researching how people learned to use hashtags on Twitter to talk about issues they care about.

These are hashtags that ask for change or point to problems, like #EndPoverty,

#BlackLivesMatter, or #WeNeedDiverseBooks. Have you ever used hashtags like this? If so, please consider getting in touch at [email address] to join the study. Your experience is can give important insight into how people start using these hashtags.

Study participants will be interviewed and give us permission to use their tweets in the study. Information will be confidential and all answers are voluntary. Participation will not take longer than an hour, and as thanks for your participation, you will receive a \$25 gift certificate to Amazon. To join the study, contact [email address] or click on “[About the Study](#)” to learn about this research and participation.

This study has been approved by the University of British Columbia Behavioural Research Ethics Board and supervised by Dr. Deirdre Kelly.

About Page:

About the Study: Learning to Use Activist Hashtags on Twitter

Purpose of the Study:

The goal of this study is to look at how adults (ages 19+) learn to use hashtags on the social media website Twitter to talk about injustice. Hashtags are a type of keyword used on social media to label or comment on a topic, but the focus of the study will be on specifically “activist hashtags” that might be seen as a call for action or related to injustice, like #WeNeedDiverseBooks or #EndPoverty. Although they are being called “activist hashtags,” they are used by many different kinds of people for many different reasons.

Activist hashtags are becoming common online, but there are few structured opportunities for someone to be taught to use these tools. This study is interested in asking the question: How do we learn the knowledge and skills to use and create activist hashtags? In addition, how do we understand these new digital tools?

Principal Investigator:

Dr. Deirdre Kelly, Professor

Educational Studies

University of British Columbia

Tel: [phone number]

Email: [email address]

Co-investigator:

Megan Ryland, Graduate student

Educational Studies

University of British Columbia

Email: [email address]

Participant Recruitment

Participants are currently being recruited for this study. People are invited to participate in the study who have used activist hashtags and would like to share their experiences. Twitter beginners, amateurs, and experts all have important experience to share for this study. If you are interested in taking part, please contact [email address].

Description of Participation:

There are two parts to participation in this study: sharing your Twitter archive and completing an interview. In total, participation time should not exceed 1 hour.

First, you will be asked to download your Twitter archive (your tweet history) and provide a copy to the co-investigator, Megan Ryland. Clear instructions for how to do this will be provided. Twitter archive data will be analyzed to understand how you learned to use activist hashtags over time.

Second, you will be interviewed one-on-one for approximately forty-five minutes via video conference software like Skype or Google Hangouts. The interview will focus on the process of learning to use Twitter and activist hashtags, including questions about the hashtags that you have used on Twitter. However, please note, you *will not* have to defend or justify your use of particular hashtags. With your permission, the audio of the interviews will be recorded for transcription and analysis by the researcher.

You will have the opportunity to review your contributions to the study prior to its completion to ensure that you feel you have been represented accurately in transcripts.

Confidentiality:

We will ask you to choose a pseudonym (fake name) to be used in the study, rather than your real name or Twitter username, to protect your privacy. Participants will not be identified by their real name or username in the interview transcripts, Twitter archive data, or the completed study. Any references to names of people, organizations, or locations will be deleted or changed

to protect the confidentiality of research participants. Your social media archive will not be directly quoted in full within the final study if it can be used to identify specific Twitter users; such data will be included in aggregate. All documents or recordings, including consent forms, will only be stored as electronic files, which will be kept on a password-protected and encrypted hard drive. The study outcomes will include a graduate thesis and a brief summary report, which will be shared with participants.

Potential Benefits and Risks:

You will receive a \$25 Amazon gift certificate for taking part in the study and you will have a chance to reflect on their experiences using activist hashtags. Reflection might encourage greater insight into your social media or activist practices. For people invested in social media activism, the final study might provide information about how others learn about social media activism, suggesting resources for their own use. You will experience no known risks from taking part in the study.

During interviews, you are free not to answer any question and/or to stop participation as you see fit. Although the interview does not contain questions specifically targeting sensitive topics or intended to draw out difficult experiences, the researcher can refer you to a counselor or other community resources as necessary.

Study Contact Information:

If you have any questions about this study, feel free to contact Professor Deirdre Kelly at [phone number] or [email address]. If you have any concerns or complaints about your rights as a

research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or, if long distance, e-mail RSIL@ors.ubc.ca or call toll free at 1-877-822-8598.

Consent:

Taking part in this study is entirely up to the participant. You have the right to refuse to participate at any time. If you do decide to take part, you may later choose to leave the study if you no longer wish to participate for any reason.

Appendix B Interview Guide

Participants and I shared a brief conversation prior to launching into the interview portion, allowing us to become comfortable as people before the more structured interaction of the interview.

Interview Introduction

Thank you for agreeing to be part of my study about how people learned to use activist hashtags. I appreciate the chance to hear about your experiences so that we can better understand how this happens. Is it alright if I record our session? It will let me focus on listening now, rather than taking notes. [Wait for response] I'll be sending you the transcript after the interview to make sure that I've understood what you've said, so you'll have a chance to double check before I get too ahead of myself. Just as a reminder, your name will be kept confidential and I will be anonymizing any details you provide that might identify you to others, so please feel free to speak freely. Do you have any questions about that? [Wait for response]

After I finish the research, I'll circulate a summary of the findings, and of course make my thesis available for anyone interested, in case we can learn from other people's strategies for learning about activist hashtags, and social media activism in general. Before we start, do you have any questions about me, the study, or this interview? [Wait for response] Finally, given what I have just told you, do you consent to participate in this study? [Wait for response]

Hashtag Encounters - How do activists encounter hashtags?

- How did you hear about Twitter?
- What made you join Twitter?
- What sort of things do you use Twitter for?
- Were there any challenges or things that were more difficult to learn than others?
 - If so, could you describe them?
- Did you have any teachers or mentors for Twitter?
 - If so, could you describe them?
- What would it mean to be "good at" Twitter?
 - Do you feel like you are "good at" Twitter?

- Do you remember your first encounter with hashtags?
- Can you tell me the story of how you started to use hashtags?
- Can you remember the first time you saw or learned about activist hashtags? These would be hashtags that are related to an issue of justice, oppression, domination or power in society, like #BlackLivesMatter or #NotOkay.

Hashtag Participation - How do users understand the practice of using activist hashtags?

- Are there activist or politicized hashtags that you remember using?
 - Do you remember how you encountered them?
 - Do you remember why you used them?
- How do you use activist/politicized hashtags?
- How have you learned to use activist hashtags?
- Do you feel like you really understand how to use activist hashtags or are you still learning?
- Can you tell me why you used a particular activist/politicized hashtag? [Draw example from archive]
- Who are you hoping will see your activist hashtag?
- Who are you speaking to when you use an activist hashtag?

Hashtag Creation - What is the thought-process behind *creating* an activist hashtag?

- Have you ever created a politicized or activist hashtag?
 - Can share a story of an example?
 - What inspired you to create a hashtag?
 - Why did you choose to create that hashtag in particular?
 - Who did you think would see it?
 - Who did you think might use it, if anyone?
 - Who else used your hashtag?
 - Did you do it again? Was it different the other times you tried?

Hashtag Impact - How do users understand the impact of using activist hashtags?

- What do you think makes for a good activist hashtag?
- What about a bad one?

- What are you hoping the hashtag will do?
- What does it mean to you, to engage in this way?
- Have you ever done something because of a hashtag you saw?
- Do you feel like you're "in public" when you use hashtags?
- Do you feel like you are part of a community when you participate in a hashtag?
 - If yes, can you describe the community?

Activism and Civic Engagement - What is the role of the hashtag in activism and/or political action?

- Would you consider yourself an activist?
 - If yes, what kind of activism are you involved with?
- Could you describe what the term "activist" means to you?
- What makes an action "political" to you?
- Can you please explain why you would or would not consider activist hashtags a political strategy?

Closing

- Do you have anything that you would like to add or mention?
- Do you have any questions for me?
- Do you have any questions about the study?

N.B. The questions here represent a guide. Although not all questions could be addressed in each interview, my goals were to address each category of question and ensure as much question consistency among interviews as possible.