WHERE'D YOU GET THOSE NIGHTCRAWLER HANDS? THE INFORMATION LITERACY PRACTICES OF COSPLAYERS

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ABSTRACT

Kimberly Hirsh: Where'd You Get Those Nightcrawler Hands? The Information Literacy Practices of Cosplayers
(Under the direction of Sandra Hughes-Hassell)

In a time of abundant information, misinformation, and disinformation, information literacy—the ability to find, evaluate, use, and share information—is a key competency for people of all ages. Traditional models of information literacy depict a universal set of skills that can only be learned via instruction from an information professional and must be used in a linear order. More recent models describe it as a set of fluid sociocultural practices that is unique to a particular context, shared by a group of people in that context, and able to be developed through both instruction and personal experience.

One context in which information literacy has rarely been studied is that of the affinity space, an informal space—physical or digital—in which participants come together around a shared interest and learn. This qualitative research study investigates the information literacy practices of participants in the affinity space surrounding cosplay, a creative pursuit in which people dress up and roleplay as beloved characters from narratives such as television, video games, and comic books. The study used information horizon maps to ask participants to graphically depict themselves, the information sources they use for cosplay, and relationships between themselves and the resources, as well as relationships the resources have to each other. Through information horizon interviews, participants discussed

specific cosplay-related information-seeking incidents and the resources and strategies they used to find the information they needed.

Findings indicate that participants use a variety of resources, with all participants mentioning turning to other people for help. Participants also described using many different social media platforms, web-based resources, and events. Participants discussed the way they curate cosplay-related information and the role of trial-and-error in their information seeking process. Trial-and-error is not usually included in either traditional or recent sociocultural models of information literacy. This study suggests that future models should incorporate this part of the information-seeking process, especially when describing information-seeking and use in everyday life contexts rather than academic or professional contexts.

This dissertation concludes with a set of recommendations for information literacy instructors to leverage interest-driven information literacy practices in formal educational environments.

For Michael, because everything is

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CHAPTER 1: INTRODUCTION

In its report, *Words of an Unprecedented Year*, Oxford Languages declares, "...2020 is a year which cannot be neatly accommodated in one single 'word of the year'" (*Words of an Unprecedented Year*, 2020). Instead, the report highlights 47 words that together sum up the year 2020. One of these words is *infodemic*, which Oxford Languages defines as "a proliferation of diverse, often unsubstantiated information relating to a crisis, controversy, or event, which disseminates rapidly and uncontrollably through news, online, and social media, and is regarded as intensifying public speculation or anxiety" (*Words of an Unprecedented Year*, 2020, p. 35). Misinformation spread rapidly in 2020, whether it focused on the novel coronavirus (COVID-19) itself (Roozenbeek et al., 2020), COVID-19 vaccines in development (Santos Rutschman, 2020), or the United States presidential election (Ferrara et al., 2020). Over the course of the year, social media platforms implemented a variety of techniques designed to mitigate the spread of misinformation, including adding warning labels to posts and increasing the number of steps users must go through to share links (Bond, 2020; Isaac, 2020). Experts interviewed by the Pew Research Center and Elon University's Imagining the Internet Center in 2017, however, had asserted that technology alone could not solve the problem of misinformation, suggesting that "the flaws in human nature and still-undeveloped norms in the digital age are the key problems that make users susceptible to false, misleading and manipulative online narratives" (Pew Research Center, 2017, p. 32). They suggested that "better information literacy among citizens will enable people to judge the veracity of material content and eventually raise the tone of discourse"

(p. 4) and that to achieve this would require "an education effort that reaches out to those of all ages, everywhere" (p. 82).

Most information literacy education relies on one of a number of traditional models of information literacy (American Association of School Librarians, 1998; American Library Association (ALA) Presidential Committee of Information Literacy, 1989; Association of College and Research Libraries, 1998; Association of College and Research Libraries (ACRL), 2000; Bruce, 1997; Bundy, 2001, 2004; Candy, 2002; Clausen, 1997; Doyle, 1992; Edwards, 2006; Lau, 2006; Spitzer et al., 1998; Zurkowski, 1974). These models restrict information literacy to the domain of work or school, treat it as a linear sequence of steps that can be checked off as if on a checklist, and are derived not from empirical or naturalistic research, but from the recommendations of information professionals (Martin, 2012a; Tuominen et al., 2005; Webber & Johnston, 2000). These frameworks of information literacy operate on a deficit model, as if information literacy is something that information professionals have and lay people do not, that can only be transmitted via direct instruction by an information professional (Martin, 2011). These approaches, in spite of their lack of consensus, treat information literacy as a universal process that will be the same for every information seeker in every context.

A growing body of research reconceptualizes information literacy not as a universally applicable set of skills or techniques possessed by an individual, but as a set of personal and social practices situated in a particular context (Lloyd, 2007a; Tuominen et al., 2005). Most studies in this vein examine information literacy in the workplace (Lloyd, 2005b, 2006, 2007a, 2009, 2010b, 2010c, 2011, 2004; Olsson, 2010a, 2010b, 2016). A few studies take this perspective in other settings or with other populations, such as refugees or pregnant

women (Lloyd et al., 2013; Papen, 2013). Others investigate information literacy as it relates to a hobby or lifestyle (Harviainen, 2015; Lloyd & Olsson, 2019). This emphasis on information literacy in a social context where people share a common goal, in the case of the workplace, or interest, in the case of refugees, pregnant women, and hobbyists, point to a specific set of spaces where information literacy can be studied: affinity spaces, "loosely organized social and cultural settings in which the work of teaching tends to be shared by many people, in many locations, who are connected by a shared interest or passion" (Gee, 2018, p. 8).

Only a few studies of information literacy are set in affinity spaces and framed as such (Bebbington, 2014; Bebbington & Vellino, 2015; Martin, 2012a, 2012b, 2013; Martin et al., 2012; Martin & Steinkuehler, 2010). These studies examine a subset of the gaming affinity space, focusing either on *World of Warcraft* or *Minecraft*, and focusing exclusively on the information practices of youth. This dissertation study takes a sociocultural perspective of information literacy in an as-yet-unstudied affinity space: that of cosplay, "the portrayal of a character or object from a media property such as a Japanese anime or a video game through costuming and performance" (Bender, 2017, p. 155). The study also expands research on affinity spaces to include adults. Adults are present in many affinity spaces, and many of the young people studied in early affinity space research are now adults who may have brought their earlier practices with them into adulthood or gained new practices as they have grown.

Earlier studies of information literacy for hobbyists or in affinity spaces focus either on the physical environment (Harviainen, 2015; Lloyd & Olsson, 2019) or the online environment (Bebbington, 2014; Bebbington & Vellino, 2015; Martin, 2012a, 2012b, 2013;

Martin et al., 2012; Martin & Steinkuehler, 2010). This study explores both the physical and the online environment and the relationship between them, as cosplay is an activity that crosses both contexts.

Purpose

The purpose of this qualitative study is to explore the information literacy practices of cosplayers participating in the blended cosplay affinity space, as constituted through conventions, meetups, online profiles and comments, and forum posts. In this study, information literacy practices are generally defined as the individualized practices people "use to help them successfully fulfill their information needs" (Martin, 2012a, p. 108) and the related information practices of groups of people in an affinity space "that encompasses cultural norms, discourses, and implemented practices" (Martin, 2012a, p. 109). This study focuses on cosplayers' positions within the constellation of information, "the information available in and around" the cosplay affinity space (Martin, 2012a, p. 5)

Research Question

How do cosplayers situate themselves within the constellation of information available around their affinity space?

Significance

This study is significant for several reasons. It fills a gap in the library and information science literature by exploring information literacy practices in an under-researched environment, a blended affinity space. Its approach uses a novel way of thinking about human-information interaction, focusing on information practices in a sociocultural context rather than information behaviors (Lloyd, 2010b). It offers insight for information literacy educators into the ways the people they serve might enact information literacy in

domains of their own interest. Finally, these findings can inform future directions for information literacy education, providing both an understanding of the types of information literacy practice that might be worth teaching and ideas for how to cultivate educational environments that leverage the features of affinity spaces for improved information literacy.

CHAPTER 2: INFORMATION LITERACY PRACTICES

In November 2016, the Stanford History Education Group (SHEG) released a report that concluded current information literacy education efforts are inadequate, stating, "young people's ability to reason about the information on the Internet can be summed up in one word: *bleak*" (Wineburg et al., 2016, p. 4). SHEG designed, piloted, and tested fifteen assessments of online information literacy at three levels: middle school, high school, and college (McGrew et al., 2018). The assessments asked students to evaluate social media arguments, examine comment sections, analyze news articles, identify advertisements, evaluate evidence, compare articles, research claims, determine the trustworthiness of websites, and identify the strengths and weaknesses of online videos.

The assessment tasks, externally imposed and answered in isolation, reflect traditional models of information literacy, in which an individual information seeker engages in a linear information seeking process conducted in five sequential phases: seeking information, evaluating information, interpreting information, synthesizing information, and disseminating information (Martin & Steinkuehler, 2010). These models, however, leave "much missing in terms of [information literacy's] inherently collaborative nature, its relationship to other twenty-first-century skills, and its ties to social capital for many online youth" (Martin & Steinkuehler, 2010, p. 355) as well as adults. New definitions and models of information literacy take into account information literacy practices beyond the educational environment and how they are embodied and collaborative. This chapter explores these new models of

information literacy as a sociotechnical and sociocultural practice situated in a variety of information landscapes, contrasting them with traditional models.

Information Literacy as a Concept

Paul G. Zurkoski introduced the concept of *information literacy* in 1974 in a report for the National Commission on Libraries and Information Science (Zurkowski, 1974). He identified information literacy as the goal of the commission's efforts but offered no definition. He did, however, describe information literate people as people "trained in the application of information resources to their work" who have "learned techniques and skills for utilizing the wide range of information tools as well as primary sources in molding information solutions to their problems" (Zurkowski, 1974, p. 6). He added that "being information literate means being able to find what is known or knowable on any subject" (Zurkowski, 1974, p. 23). Zurkowski's initial description of information literate people includes several components that would be incorporated into later standards for and frameworks of information literacy: located in a work/institutional setting, focused on skills, requiring training, and emphasizing seeking knowledge.

Later reports on, standards for, and frameworks of information literacy inherit many of these qualities (American Association of School Librarians, 1998; American Library Association (ALA) Presidential Committee of Information Literacy, 1989; Association of College and Research Libraries, 1998; Association of College and Research Libraries (ACRL), 2000; Bruce, 1997; Bundy, 2001, 2004; Candy, 2002; Clausen, 1997; Doyle, 1992; Edwards, 2006; Lau, 2006; Spitzer et al., 1998). These various approaches do not arrive at a single consensus definition of information literacy, but "share similar features such as finding, evaluating, and using information" (Martin, 2013, p. 22). They restrict information

literacy to the domain of work or school, treat it as a linear sequence of steps that can be checked off as if on a checklist, and are derived not from empirical or naturalistic research, but from the recommendations of information professionals (Martin, 2012a; Tuominen et al., 2005; Webber & Johnston, 2000). They operate on a deficit model, as if information literacy is something that information professionals have and lay people do not, that can only be transmitted via direct instruction by an information professional (Martin, 2011). These approaches, despite their lack of consensus, treat information literacy as a universal process that will be the same for every information seeker in every context.

Information Literacy as Social Practice

In the early 21st century, scholars started to conceptualize information literacy not as a universally applicable set of skills or techniques possessed by an individual, but as a set of personal and social practices situated in a particular context. In 2005, Kimmo Tuominen, Reijo Savolainen, and Sanna Talja defined information literacy as a sociotechnical process that "evolves in the course of realizing specific work-related tasks and mundane activities, which usually involve a complex system of social relationships, sociotechnical configurations, and work organization" (p. 329). They asserted that information skills are inextricably linked with the context in which they are used and thus cannot be taught independently of that context. Based on this conception of information literacy, they called "for empirical research efforts to analyze how specific communities use various conceptual, cultural, and technical tools to access printed and digital documents and to evaluate and create knowledge" (Tuominen et al., 2005, p. 342).

Responding to this call, Annmaree Lloyd analyzed "the nature and role of information literacy among a group of firefighters" (Lloyd, 2005a, p. 84). She interviewed 20

firefighters about “how they locate, access, and use information to develop a sense of professional identity” (Lloyd, 2005a, p. 84). She used constructivist grounded theory to analyze the data. She also investigated “the use and experience of information in learning to become an ambulance officer” (Lloyd, 2009, p. 396), conducting interviews with both novices and experienced ambulance officers and comparing their responses.

Lloyd considers the nature of information literacy across three information landscapes: schools, tertiary education institutions, and the workplace. She defines information literacy “as the ability to know what there is in a landscape and to draw meaning from this through engagement and experience with information” (Lloyd, 2006, p. 570). Like environmental landscapes, information landscapes “are characterized by different topographies, climates, and complex ecologies” (Lloyd, 2006, p. 572). Each individual landscape will require “different skills, practices and affordances… to make them accessible and knowable” (Lloyd, 2006, p. 572).

Within a particular information landscape, different “modalities of information are valued, used and contested” (Lloyd, 2010c, p. 45). In her work with emergency workers (2005a, 2005b, 2006, 2007a, 2007b, 2009, 2010a, 2010b, 2010c, 2011, 2012; Lloyd & Somerville, 2006), Lloyd identifies three modalities of information:

- textual sources, which act as a site of conceptual knowledge;
- physical sources, which act as a site of embodied knowledge; and
- social sources, which act as a site of community knowledge. (Lloyd, 2007a, p. 197)

Traditional conceptions of information literacy are situated in education environments and focus primarily on textual sources and on information literacy as a cognitive process. Lloyd’s work illuminates the role of physical sources as a site for the development of embodied information literacy. Lloyd explains that

> our bodies, the information they possess, produce and disseminate are central for understanding the information experience we have created when we engage with learning and knowledge acquisition through the collective and situated practices that shape our specific information landscapes. (Lloyd, 2010a, para. 5)

Lloyd points out that seeking information from the body — either one's own body or the bodies of others — "requires observation, rehearsal, reflection, and the experience of authentic practice" (2007a, p. 189). She offers the example of firefighters who have undergone formal training gaining "fire sense" through drills and practices, in which experienced firefighters observe the bodies of novice firefighters "which provided them with visual clues about information gaps that might compromise platoon safety" (Lloyd, 2007a, p. 189). Likewise, novices sought information by observing the bodies of experienced firefighters through training nights and scenario training. These activities also help firefighters develop their own "fire sense" as their bodies begin to internalize and automate the knowledge they gain through them. In addition, firefighters use their bodies as instruments for information seeking, attending to sounds and sights in their environment to gain "information critical for safety in dangerous situations" (Lloyd, 2007a, p. 189).

Lloyd also emphasizes the social nature of information literacy, suggesting that "when learning is informal or unstructured, acquiring information literacy becomes a collaborative process aimed at developing collective competency" (Lloyd, 2005b, p. 236). This process connects an individual to workplace culture and "the sources of information legitimized by the community" (Lloyd, 2010c, p. 44). Through acquiring information literacy in the workplace landscape, an individual undergoes an identity shift from a novice to an expert, becoming part of a group that builds a shared understanding of what information is valuable and useful in that landscape. Lloyd calls this a transition from *acting* to *being*; for example, novice firefighters arrive knowing practices based on institutional information that

allows them to *act* as firefighters, while after a time they *become* firefighters, "being repositioned, with the assistance of others, into the collective construct where accessing, interpreting, and understanding information in agreed-upon ways becomes critical to team safety" (Lloyd, 2007a, p. 195).

Lloyd describes information literate people as "engaged, enabled, enriched, and embodied by social, procedural, and physical information that constitutes an information universe" (Lloyd, 2004, p. 223). They are *engaged* with a particular information landscape, such as a school or workplace. They are *enabled* by others within a landscape who assist them in navigating the information landscape. They are *enriched* through their ability to use information in the landscape to produce meaningful outcomes within that landscape. They are *embodied* in a particular place, developing experience in the textual, social, and physical experiences of the information landscape.

Lloyd concludes that an information literate person:

- is informed about the epistemic or social traditions underpinning the foundations of their practice;
- has developed the practical information skills (technological and otherwise) to perform in their practice and understand the relationship between this experience and performance;
- recognizes their bodily experiences as part of the experience of information gathering which informs practice;
- understands how information is influenced, used, disseminated and contested, and uses this information in the performance of practice. (Lloyd, 2010c, p. 46)

Information Literacy Beyond School and Work

Lloyd, Mary Anne Kennan, Kim M. Thompson and Asim Qayyum extended Lloyd's information practice approach beyond workplace information literacy by investigating the information literacy practices of refugees (2013). They conducted semi-structured face-to-face interviews and focus groups with ten refugees and five service providers. Their analysis

focuses on the relationship between information literacy and social inclusion and exclusion. Lloyd and colleagues conceive of social exclusion as an information disjuncture, in which refugees in a new information landscape "find that their previous information practices may no longer be adequate or appropriate to their new settings" (p. 122). They found that "social inclusion becomes possible where information is provided via sharing through trusted mediators who assist with navigating the information landscape and information mapping, and through visual and social sources" (p. 121). This reflects Lloyd's earlier findings that information literacy practices go beyond textual sources to include social and physical sources. They also found that service providers' ideas about the best way to present information to refugees may, in fact, be a barrier to social inclusion.

Uta Papen brings the idea of information literacy as a social practice into the health information landscape, focusing on the information practices of pregnant women (2013). She conducted interviews with pregnant women and analyzed pregnancy books and websites. She found that women constantly assess knowledge for its trustworthiness, relying on both expert advice and social networks. Like Lloyd and colleagues (2005a, 2005b, 2006, 2007a, 2007b, 2009, 2010a, 2010b, 2010c, 2011, 2012; Lloyd et al., 2013; Lloyd & Somerville, 2006), she found that "the search for and the assessment of information is not a solitary and purely cognitive process, but a practice that develops in interaction with others, face-to-face, or online" (Papen, 2013, para. 41). Also like Lloyd and colleagues, she finds that information practices must be considered in context.

While Lloyd considers both print and digital textual sources together (2007a), Papen draws a distinction between print and digital textual sources. Papen sees digital sources as a combination of textual source and social source. Online sources were important not just as a

complement to printed text, but also as a supplement to or replacement for "oral information gathered from friends and family" (Papen, 2013, para. 46). Social sources incorporated a power dynamic as well; advice from experts like doctors might conflict with advice from friends, family, or online forums. Papen's participants had to evaluate this conflicting information and determine which to choose.

The pregnant women in Papen's study were not only "engaged, enabled, enriched, and embodied" (Lloyd, 2004); they were also emotional. While Lloyd introduced the concept of embodied information literacy including reading physical sources, Papen adds the idea of evaluating information not just for its cognitive value but for its emotional value (2013). Participants in Papen's study assessed information not only based on whether it seemed useful cognitively, but also based on how it made them feel.

Harviainen brings the concept of information literacy as a social practice into the hobby/lifestyle landscape in his study of the information literacies of self-identified sadomasochists (2015). He draws on two decades of ethnographic work, interviews with thirty practitioners, and an extensive literature survey. He focuses in particular on Lloyd's concept of embodied information literacy, finding that sadomasochists "learn from other practitioners by reading and interpreting their actions as 'texts'"(Harviainen, 2015, p. 423) and stockpile information for future use.

Participants in Harviainen's study mentioned all three of Lloyd's (2006) types of sources: textual, physical, and social. Textual and visual information sources were often biased and created by outsiders, such as those in the medical profession, or fictional, such as pornography and erotica. Participants applied critical information literacies to gain information from fictional accounts, especially visual pornography. Information from other

practitioners was another source, not just as it was transmitted socially, but also through observing other practitioners in their practice and reading their actions as texts. Participants linked new information with their existing knowledge.

Unlike the workplaces Lloyd (2010c) studied, in which emergency workers began working with formal information sources and training and then transitioned to informal learning as they entered the workplace, the BDSM ("simultaneously denoting bondage/discipline, domination/submission, and sadism and masochism," Harviainen, 2015, p. 424) community was more chaotic. They didn't necessarily have an agreed-upon information landscape into which newcomers could be initiated. There was not a stable set of preferred modalities. It was important to "acquire at least some information about the practices as soon as possible for both safety and prestige" (Harviainen, 2015, p. 432); experts were seen as more desirable play partners than novices were.

Harviainen (2015) blends Lloyd's social and physical sources, referring to the community itself as a repository of knowledge expressed through community member's bodies:

> As the memberships of the groups that constitute the community are always in a state of flux, the active information sharing insures *[sic]* that an increasing amount of knowledge is retained by the community itself. The knowledge is then distributed back to practitioners, by way of both various forms of training and by the provision of opportunities for sadomasochists to watch each other play. In *[sic]* such occasions, community members especially apply their ILs, reading the activities of each other like guidebooks. (Harviainen, 2015, p. 435)

Harviainen (2015) contests Lloyd's (2006) and Papen's (2013) assertion that information literacy practices are entirely context-dependent. Participants in his study mentioned both context-dependent information literacy practices and context-independent uses.

Information Literacy in Online Affinity Spaces

Papen's (2013) incorporation of online social sources and Harviainen's (2015) examination of a hobby/lifestyle setting, taken together, point to another setting where information literacy can be studied: the online affinity space, "a place to gather with others who share common interest and through these interests participants develop knowledge, literacies, communication skills, and many others learning pursuits in the quest for information or to solve a problem as a group" (Martin, 2012a, p. 6). This provides an additional information landscape for researchers to consider, as it is neither an explicitly educational space or a workplace. It brings Harviainen's (2015) work with a face-to-face community to a new environment, as it incorporates online communities.

Collective Information Literacy

Crystle Martin and Constance Steinkeuhler (2010) conducted the first research on information literacy in an affinity space, studying the affinity space surrounding the Massively Multiplayer Online Roleplaying Game (MMORPG) *World of Warcraft*. They explored "the forms of information literacy that arise in commercial entertainment games" (Martin & Steinkuehler, 2010, p. 355). During a 2-year ethnographic study from the Games+Learning+Society Casual Learning Lab, they collected data including "video, audio files, interviews with participants and staff, photographs, in-game chatlogs, and multimodal fieldnotes" (p. 358). They coded this data using an *a priori* coding scheme based on a variety of traditional information literacy standards frameworks.

While traditional models of information literacy focus on one individual's process of seeking, finding, evaluating, and using information in an institutional setting such as a school, Martin and Steinkuehler (2010) found that Lloyd's (2010c) findings about the social

nature of information literacy in the workplace can be extended to the naturalistic environment of *World of Warcraft,* which brings "the collective and collaborative nature of such practices to the fore" (p. 355). They emphasize that "*communal rather than individual* participation is the defining feature of online play spaces such as massively multiplayer online games" (p. 363).

Martin and Steinkuehler (2010) identify five collective information literacy patterns in the *World of Warcraft* online affinity space, which they call "1. call and response, 2. call and refer, 3. call and avalanche, 4. simultaneous, not sequential, and 5. fluid" (p. 360). In the *call and response* pattern, one person seeks information from the community and one person responds. In the *call and refer* pattern, one person seeks information from the community and one person "refers to or gives links to outside resources" (Martin & Steinkuehler, 2010, p. 360). In the *call and avalanche* pattern, one person asks a question and several people respond. In this case, the information seeker must evaluate the possible answers and choose the correct or best one. In the *simultaneous, not sequential* pattern, the information seeker is not the only person evaluating, synthesizing, and interpreting the information; information disseminators may do this as well. These steps may or may not be explicit in the interaction; after the first dissemination, the information seeker asks subsequent questions based on the information given. In the *fluid* pattern, "information literacy moves are done *collectively by community members working in conjunction* such that the practices which constitute information literacy often arise multiple times across multiple individuals in a single information-seeking episode… multiple conversational partners engage in various steps of the traditional information literacy model at different times and in different sequential orders" (Martin & Steinkuehler, 2010, p. 362).

Bebbington and Vellino's (Bebbington, 2014; Bebbington & Vellino, 2015) work echoes the presence of communal information practices in an online affinity space. Investigating another Massively Multiplayer Online Game, *Minecraft*, Bebbington "examines the potential that the online game MineCraft, and one of its related affinity spaces, may have in the development of information literacy skills in teens" (Bebbington, 2014, p. ii). She analyzes the game, a related discussion forum, and interviews with eight teen gamers. She finds that the game's design "induces players to seek out game-related information in affinity spaces, select appropriate sources, evaluate the information shared by fellow gamers, and decide what best satisfies their information need" (p. ii). The process she describes here is similar to traditional information literacy models, with the exception that the information being evaluated is created by fellow gamers rather than authors or institutions. She goes on to explain that not only is the information created by fellow gamers, but that gamers sometimes evaluate this information collaboratively, "providing justification for the assessment, debating responses, correcting incorrect information and indication *[sic]* if a solution or information is accurate and useful or not" (Bebbington, 2014, p. 83).

Hollister's (2016) work with the Massively Multiplayer Online Roleplaying Game *WildStar* also emphasizes the communal and collaborative components of information literacy. Placing information literacy under the umbrella of digital literacy, Hollister "explores and describes the in-character and out of character information worlds and digital literacy practices of role-players" (p. viii) in the game. Employing a hybrid ethnographic approach, Hollister uses qualitative data from in-game chatlogs, screenshots, audiovisual recordings, and community artifacts such as forums. Hollister also conducted seventeen

semistructured interviews. Hollister found that "digital literacy practices and skills" in the game and its larger affinity space "were social and collaborative in nature" (p. 220).

Individual and Collaborative Information Literacy Practices in World of Warcraft

Building on her work with Steinkuehler (Martin & Steinkuehler, 2010), Martin (2012a) offers a model for information literacy that takes into account the structure of traditional models but incorporates practices identified in naturalistic research. She investigated "the information literacy practices that take place in the *constellation of information*, which is the in-game and out-of-game information resources of the massively multiplayer (MMO) game *World of Warcraft (WoW)"* (p. i). Martin (2012) used *information horizon maps* generated by participants in the Games+Learning+Society Casual Learning Lab and an analysis of "community curated resources like knowledge compendiums" and "forums and chat logs" (p. i) to explore the information literacy practices in the *World of Warcraft* affinity space. She coded forum and chat log data using a coding scheme derived from a framework for information literacy based on an aggregation of the information literacy literature.

Information practices and identity. While Martin and Steinkuehler (2010) found that collective, collaborative, and communal information practices were the defining feature of online play spaces, Martin (2012a, 2012b, 2013) considers the role of individual practices within this information landscape. Like Lloyd (2010c), she identifies a relationship between information practices and identity. Using information horizon maps, "a data collection and analysis method in which a participant is asked to draw a map oriented around himself and connected with resources that they use for a specific purpose" and structured interview data in which the participant explains "the map, the order in which they would use the resources

for an information need, and how they situate themselves within the constellation of information and therefore within the community" (Martin, 2012a, p. 39), Martin explores "players' identity with and orientation to the information resources they access for the game" (2012a, p. 39). Martin (2012a) found that players used a wide variety of sources and processes to find information and interact with the constellation of information around the *World of Warcraft* game space. She asserts that this finding contradicts traditional models' focus on a universal, standardized information literacy process. Like Lloyd (2010c), she found that novices and experts differed in their information practices; experts tended to use more precise resources, while novices were more likely to use broader resources or leverage social resources such as other gamers in the in-game chat.

A new model of information literacy. Martin (2012a) considered collaborative information practices as well as individual practices. She developed an analytic framework based on several definitions of information literacy (American Association of School Librarians, 1998; American Library Association (ALA) Presidential Committee of Information Literacy, 1989; Association of College and Research Libraries (ACRL), 2000; Bundy, 2001, 2004; Doyle, 1992; Edwards, 2006; Lau, 2006). Martin describes the definition of information literacy emerging from this aggregate as a "linear and solitary process" (p. 66) but points out that "in affinity spaces with synchronous and asynchronous communication, peer-produced resources, and frequently changing content, these spaces are neither linear nor solitary" (p. 66). She also points out that standard models of information literacy presume "dissemination as the end product" (p. 68-69), while in online affinity spaces, use may be the end of the process. Both of these differences from traditional models suggest that information literacy in online affinity spaces has more in common with information literacy in the

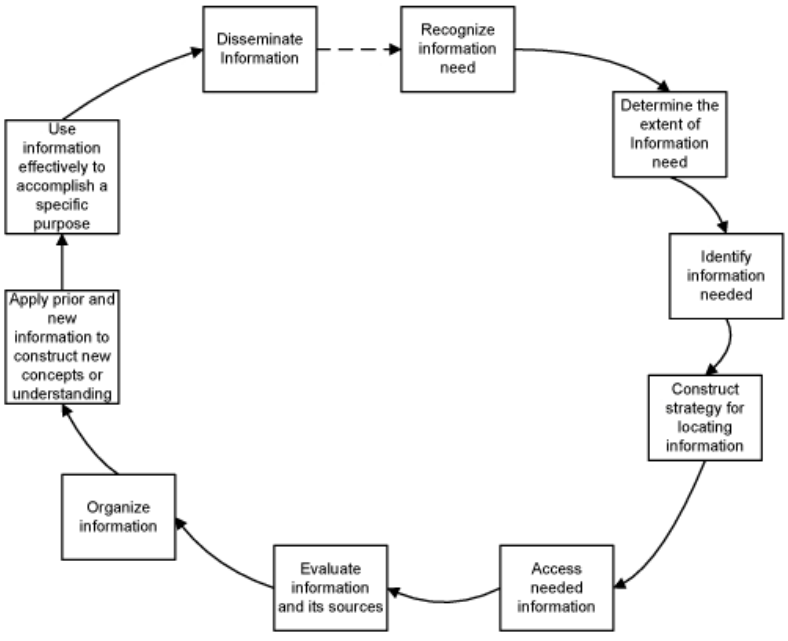
settings studied by Lloyd (2010c), Papen (2013), and Harviainen (2015) than with information literacy in the educational setting anticipated by traditional models.

Martin identifies the following stages in the standard model (Figure 1):

1. Recognize information need.
2. Determine the extent of information need.
3. Identify information needed.
4. Construct strategy for locating information.
5. Access needed information.
6. Evaluate information and its sources.
7. Organize information.
8. Apply prior and new information to construct new concepts or understanding.
9. Use information effectively to accomplish a specific purpose.
10. Disseminate information. (Martin, 2012a, p. 66)

Figure 1

Standard Model of Information Literacy



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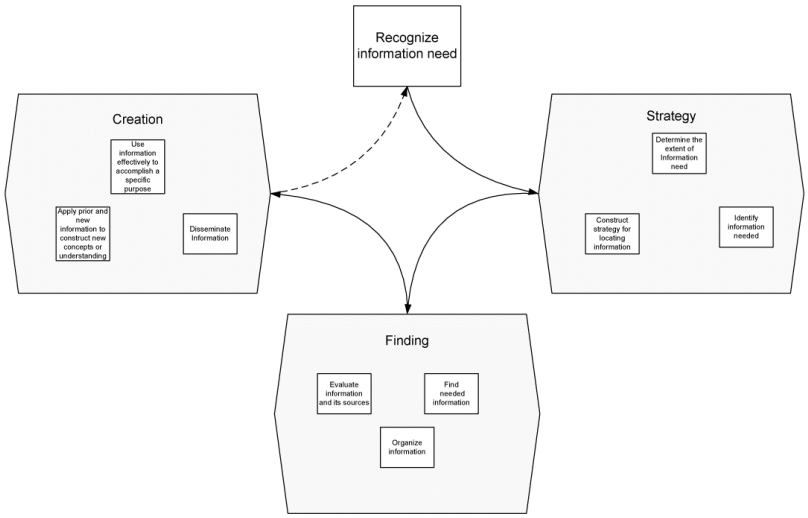
Traditional models tend to portray this as a cycle, recognizing that "sometimes one cycle does not fill the information need so therefore the process must be started again" (Martin, 2012a, p. 67). Martin points out that these steps can be divided into three phases (Figure 2): strategy (stages 2 - 4), finding (stages 5 - 7), and creation (stages 8 - 10).

Martin (2012a) offers a modification of this model in which information seekers can move backwards and forwards at any point in the process or skip stages entirely. Martin points out, however, that this is still a fairly linear and orderly process that does not reflect the collective information literacy patterns identified by Martin and Steinkuehler (2010). Taking Martin and Steinkuehler's (2010) findings into account, especially the fluid information literacy pattern, Martin proposes a new model in which all of the stages are present, but the process begins with recognizing the information need and ends with using the information, with information seekers able to jump between any of the other stages, repeating them within one information seeking cycle as necessary and skipping those that are unnecessary. Martin visualizes the proposed model "using different geometric shapes based on the number of connections each stage has to the other stages [to illustrate] these connections more clearly" (Martin, 2012a, p. 75) (Figure 3).

Figure 2

Standard Information Literacy Phases



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Martin suggests that in this model, steps can be divided into three phases (Figure 4), as well, but these are input (stages 5, 8, and 10), in which the information seeker receives information, output (stages 10, 7, and 9), in which the seeker creates output, and evaluation (stages 2, 3, 4, 6, and 7), which encompasses most of the traditional model of information literacy. Martin states, “The division of information literacy by the processes in which the intellectual work is undertaken represents information literacy as a cognitive process instead of a skills-based system that essentially lays out a checklist” (Martin, 2012a, p. 75).

Martin used the analytic framework based on the standard model of information literacy to generate a priori codes, which she used to analyze “chat logs from within the massively multiplayer game *World of Warcraft (WoW)*, and the *WoW* Reddit forum” (Martin, 2012a, p. 76).

Figure 3

New Information Literacy Model

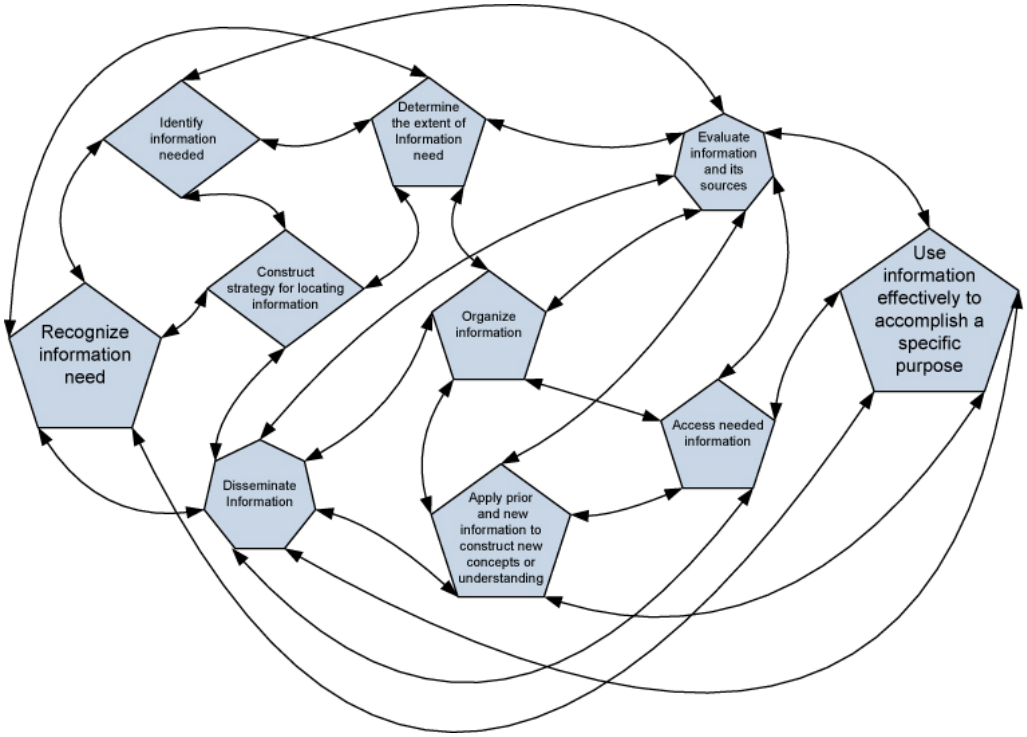

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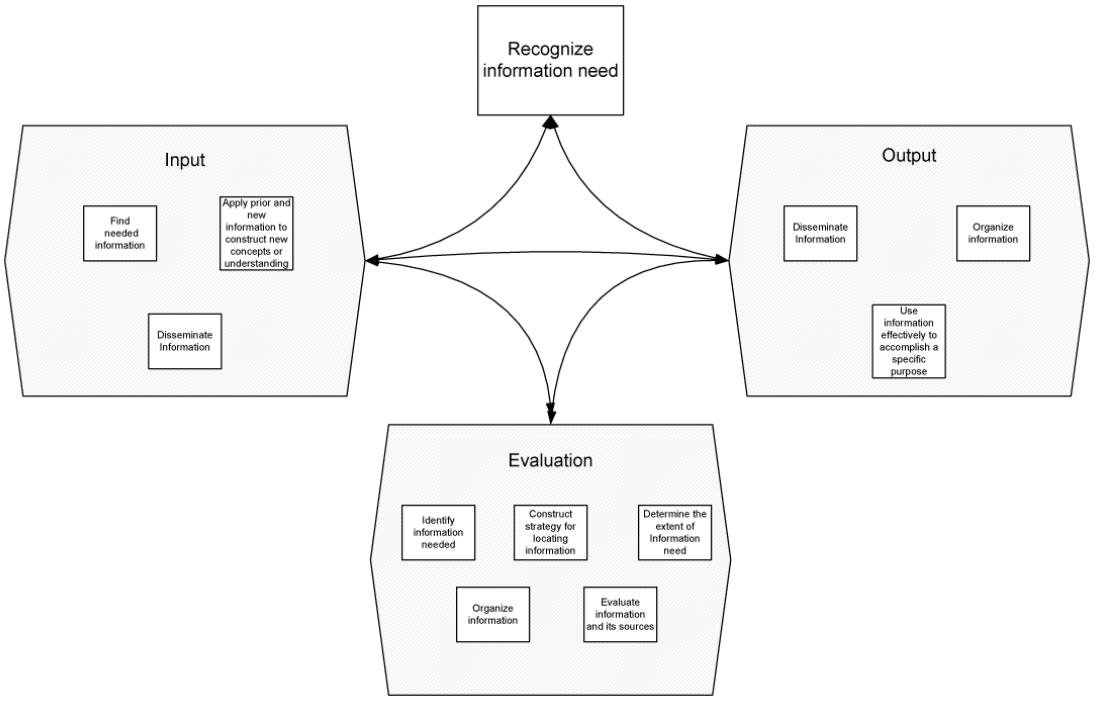
Figure 4

New Information Literacy Phases



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She analyzed the data for patterns and quantified it to identify which codes occurred most frequently. As in Martin and Steinkuehler (2010),

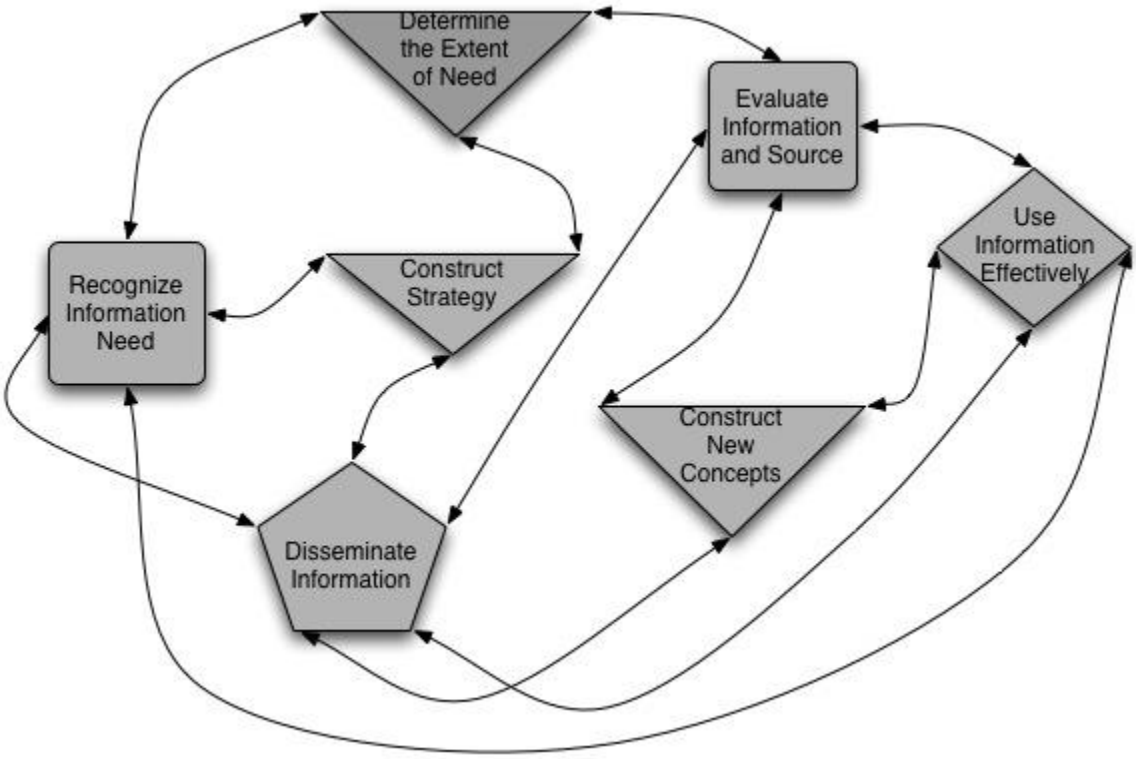
> the individuals who had questions were not always the only ones to evaluate the information presented to them by others. Community members jumped into conversations whenever they felt they had information to contribute or comments to share. So every time that information was sought, the possibility existed for multiple community members to become involved. (Martin, 2012a, p. 78)

The practices Martin identified most frequently in the data included "expressing a need for information, helping others with that need, and evaluating the information being presented" (Martin, 2012a, p. 83). Based on these findings, Martin eliminated some of her codes and

collapsed others, arriving at her final framework (Figure 5). This model "is flexible, non-linear, and designed to function in contemporary information environments like affinity spaces" (Martin, 2012a, p. 86).

Figure 5

New Information Literacy Analytic Framework



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Collective intelligence and information literacy. Lloyd (2010c) and Harviainen (2015) both suggest that information literacy includes information that resides within the community itself rather than within any single individual. Martin (2012a) investigates this same concept by asking whether collective intelligence is present in online affinity spaces.

Martin (2012a) uses Levy's (1997) concept of *collective intelligence* and Jenkins's (2006) concept of *participatory culture* to frame her question. She defines collective intelligence as "intellect pooled across groups of people to solve problems and create new information" (Martin, 2012a, p. 96) and operationalizes it using the following checklist that maps features of participatory culture to characteristics of collective intelligence (in brackets):

- Low barriers to participation – *there has to be active participation from the community* [Participation]
- All levels of expertise can participate – *anyone with interest can participate in the community without being an expert* [Participation]
- Interested individuals – *those participating in the community must be interested in the topic* [Interested individuals]
- Online community – *the community must be online* [Online community]
- Distributed intelligence – *multiple people sharing information* [Distributed intelligence]
- Constantly enhanced – *the information available is constantly improved* [Constantly enhanced]
- Coordinated in real time – *participants in the community can interact in real time* [Coordinated in real time]
- Growth and development of individuals – *each participant has the opportunity to develop their expertise within the topic* [Growth and development of individuals]
- Information mentorship/apprenticeship – *mentoring and apprenticeship amongst these participants around the exchange of information* [Growth and development of individuals; Interested individuals]
- Social process of acquiring knowledge – *there is an opportunity for social interaction between members of the community to gather information* [Growth and development of individuals; Participation] (Martin, 2012a, pp. 96–97)

Martin (2012a) collected data from the WoW Reddit forum and analyzed it to identify when information seekers were asking questions, whether responses were correct or incorrect, and what other types of communication were present in posts. She found that all of the items from the checklist were present in her data, either in this data or the data from the information horizon maps and information literacy framework analysis. She found that the collective intelligence of the community tended to produce correct responses most of the

time, and that information seekers were able to avoid misinformation or irrelevant information with the help of other members of the community.

Martin (2012a) concludes that "affinity spaces encourage collaborative information literacy practices" (p. 108). She contests the idea that information literacy is something that information professionals have and lay people do not, that can only be transmitted via direct instruction by an information professional, that is only present in educational or workplace information landscapes, and that information literacy results in a universal and linear information seeking process.

Conclusion

Martin (2012a) suggests that her methods can be applied to investigating other affinity spaces, and that doing so has the potential to strengthen her information literacy model. Applying this model to a blended affinity space that spans both online and offline spaces, such as the cosplay affinity space, requires attention to several aspects of information literacy. Information literacy skills are often developed in relationship to a particular context or landscape (Lloyd, 2006; Tuominen et al., 2005), but have the potential to be transferred to other contexts (Harviainen, 2015; Martin, 2012a); affinity space information literacy research must consider the relationship between information literacy applied in the affinity space and how it can be transferred to other settings. In a blended affinity space, especially one like the cosplay affinity space where the focus of the activity is physical, embodied information literacy may be particularly important as compared to affinity spaces that exist entirely online (Harviainen, 2015; Lloyd, 2007a). Information literacy in an affinity space is social, collaborative, and collective, with shared information sources, multiple participants addressing a single information need, and information that resides in the space or community

itself (Harviainen, 2015; Lloyd, 2005b, 2010b; Martin & Steinkuehler, 2010). At the same time, becoming information literate in a given context involves an identity shift from novice to expert (Lloyd, 2007a; Martin, 2012a, 2012b), which is achieved individually with the support and guidance of other participants in the context. As such, information literacy research in an affinity space must take into account both individual practices and collective practices (Martin, 2012a). Sociocultural models of information literacy suggest that it goes beyond the definitions put forth by traditional models. As Martin says, "Information literacy is more than a set of skills or abilities… information literacy is a way of being in the world" (2012a, p. 109).

CHAPTER 3: AFFINITY SPACES

Affinity spaces, places "to gather with others who share common interests and through these interests participants develop knowledge, literacies, communication skills, and many others learning pursuits in the quest for information or to solve a problem as a group" (Martin, 2012a, p. 6), are valuable spaces for studying learning and literacies in a naturalistic setting. The concept of an "affinity space" has been in use continuously since James Paul Gee first proposed it in 2004, but both affinity spaces and scholars' theoretical conceptualization of them have shifted over time. This chapter describes Gee's (2004) original concept of the affinity space. It then discusses the work of several scholars who have refined and expanded the concept. It concludes with a synthesis of these refinements and expansions, identifying several themes researchers must consider when studying affinity spaces.

Conceptualizing Affinity Spaces

James Paul Gee first conceptualized affinity spaces in his book, *Situated Language and Learning: A Critique of Traditional Schooling* (2004). In the book, Gee argues that "people learn new ways with words, in or out of school, only when they find the worlds to which these words apply compelling" (2004, p. 2). Gee defines affinity spaces as "specially designed spaces (physical and virtual) constructed to resource people tied together, not primarily via shared culture, gender, race, or class, but by a shared interest or endeavor" (2004, p. 4), arguing that spaces centered on popular culture are far ahead of school in creating worlds that inspire people to learn specialist language.

At first glance, affinity spaces may seem similar to communities of practice as articulated by Jean Lave and Etienne Wenger (1991). In a community of practice, a newcomer is apprenticed to experienced practitioners and moves from the periphery of the community to the center over time. The community comes together around a shared interest and participants exhibit a desire to both learn from and contribute to the community. Gee distinguishes affinity spaces from communities of practice by deliberately avoiding questions of "belongingness" and membership; he focuses on the structure of affinity spaces, which enable both novice and experienced participants to contribute, allow for both shallow participation at the level of mild interest and deep participation at the level of intense passion, and provide a space people can visit briefly to acquire a key piece of information and then never return or spend time in regularly, developing relationships with others in the space (Gee, 2012).

Affinity spaces, Gee (2004) asserts, are a type of *semiotic social space* (SSS). A semiotic social space focuses on some body of *content*: it is "about" something. Gee uses the example of the video game *Age of Mythology* and contrasts it with a science classroom. The game itself is the focal content of its related semiotic social space, while the subject of science provides the focal content of its SSS. This content is provided by one or more *generators*. The game, whether stored exclusively in a digital file or on a physical medium, is a generator: it provides the images, sounds, texts, and gameplay experience, all of which contribute to the content. A textbook is an example of a generator in the science classroom. The organization of the space can be considered through two lenses: *content organization* or *internal grammar* (Gee, 2005) refers to how the designers have organized the space. *Age of Mythology* involves "trees, farms, and gold that can be collected and used as resources with

which to build buildings" (Gee, 2004, p. 73), while a science classroom might be designed for lecture, collaboration, or independent work. *Interaction organization* or *external grammar* (Gee, 2005) refers to how people interact with the content and each other in relationship to the content. People may use any number of strategies when playing *Age of Mythology*, may play alone or with other people, may discuss the game with others, or may read books or websites with information about the game; students in a science classroom may interact with the teacher or each other, use or ignore the textbook, and may bring supplemental information to the classroom. These two types of organization, *content* and *interaction*, have the power to influence each other. Designers may release updates to the game based on player responses, and players' actions are shaped and constrained by the design of the game; teachers may modify their instruction based on student responses, but students' actions are shaped and constrained by the design of the classroom. The final component of a semiotic social space is one or more *portals* that people use to enter the space. In the case of *Age of Mythology*, one portal is the digital file or physical disk on which the game is stored, while other portals include websites where players can play against each other or discuss the game and strategy guides that can be purchased as books or found online. Portals can act as generators and vice versa. A portal for *Age of Mythology* might be a website where people can download maps that they then use within the game, while the game file is both a portal and a generator; a science textbook is both a portal through which students can enter the space and a generator of content referenced in the space.

An affinity space like the space surrounding *Age of Mythology* is a semiotic social space centered on a particular interest or endeavor; a science classroom is a semiotic social space where the content is not necessarily interest-driven. In his original conception of

affinity spaces, Gee (2004) describes eleven features of affinity spaces that distinguish them from other semiotic social spaces (Table 1). Gee emphasizes that a space need not have all of these features to count as an affinity space, but rather "we can say that any space that has

Table 1

Features of Affinity Spaces

Feature	Description
"Common endeavor, not race, class, gender, or disability, is primary" (Gee, 2004, p. 85).	People in the affinity space relate to each other based on common interests, while attributes such as race, class, gender, and disability are backgrounded but may be used strategically if people choose.
"Newbies and masters and everyone else share common space" (Gee, 2004, p. 85).	People with varying skill levels and depth of interest share a single space, getting different things out of the space in accordance with their own purposes.
"Some portals are strong generators" (Gee, 2004, p. 85).	People can create new content related to the original content and share it in the space.
"Content organization is transformed by interactional organization"(Gee, 2004, p. 85).	Creators of the original content modify it based on the interactions of the people in the space.
"Both intensive and extensive knowledge are encouraged" (Gee, 2004, p. 85).	Specialized knowledge in a particular area is encouraged (intensive knowledge), but the space also encourages people to develop a broad range of less specialized knowledge (extensive knowledge).

Feature	Description
"Both individual and distributed knowledge are encouraged" (Gee, 2004, p. 86).	People are encouraged to store knowledge in their own heads, but also to use knowledge stored elsewhere, including in other people, materials, or devices, using a network of people and information to access knowledge.
"Dispersed knowledge is encouraged" (Gee, 2004, p. 86).	One portal in the space encourages people to leverage knowledge gained from other portals or other spaces.
"Tacit knowledge is encouraged and honored" (Gee, 2004, p. 86).	People can use knowledge that they have built up "but may not be able to explicate fully in words" (Gee, 2004, p. 86) in the space. Others can learn from this tacit knowledge by observing its use in the space.
"There are many different forms and routes to participation" (Gee, 2004, p. 87).	People can participate in different ways and at different levels. Participation may vary in depth and across time.
"There are lots of different routes to status" (Gee, 2004, p. 87).	People can gain status by being good at different things or participating in different activities.
"Leadership is porous and leaders are resources" (Gee, 2004, p. 87).	No one is the boss of anyone else; people can lead by being designers, providing resources, or teaching others how to operate in the space. "They don't and can't order people around or create rigid, unchanging, and impregnable hierarchies" (Gee, 2004, p. 87).

more of these features than another is more of an affinity space than the other or is closer to being a paradigmatic affinity space" (2004, p. 77). Gee argues that as young people confront more affinity spaces, "They see a different and arguably powerful vision of learning, affiliation, and identity" (2004, p. 81) than they do in school. As educators design their classrooms, they can look to the features of affinity spaces for ways to structure the space to encourage learning that students find personally meaningful (Gee, 2005).

Refining and Expanding the Concept of Affinity Spaces

Many scholars have found Gee's (2004) concept of affinity spaces useful for investigating the learning that occurs in these spaces and using it to consider how classroom spaces might change to incorporate these features in a number of disciplines (Table 2). Early studies offer examples of how Gee's (2004) eleven features of affinity spaces manifest within specific affinity spaces and the implications these manifestations might have in classrooms (Black, 2007, 2008; Black, 2007; Lam, 2009; Steinkuehler & Duncan, 2008; Steinkuehler & Williams, 2009), but do not expand the theoretical conception of affinity spaces. As the technologies used to facilitate online affinity spaces shifted from individual websites or forums to social media platforms, however, scholars refined and expanded Gee's (2004) original concept to keep up with these changes (Bommarito, 2014; Duncan & Hayes, n.d.; Gee & Hayes, 2012; Lammers et al., 2012).

Table 2

Studies of Learning Using Affinity Spaces as a Theoretical Model

Discipline	Studies
Literacy	Black, 2007, 2008; Black & Steinkuehler, 2009; Black, 2007; Curwood et al., 2013; Gee & Hayes, 2011; J. Lammers, 2016; Lammers et al., 2018; Magnifico et al., 2018)
Language Learning	Halaczkiewicz, 2019; Ibrahim, 2019; Lam, 2009
Science	Steinkuehler & Duncan, 2008
Mathematics	Steinkuehler & Williams, 2009
Information Literacy	Bebbington, 2014; Bebbington & Vellino, 2015; Martin, 2011, 2012a, 2012b; Martin et al., 2012; Martin & Steinkuehler, 2010, 2011

As they studied The Sims affinity space, Gee and Elisabeth Hayes (2010, 2012, 2011) began to distinguish between nurturing affinity spaces, which are particularly supportive of learning, and elitist affinity spaces, which "are sites of very high knowledge production, [but] tend to value a narrow range of skills and backgrounds, have clear hierarchies of status and power, and disparage newcomers who do not conform to fairly rigid norms for behavior" (Hayes & Duncan, 2012, p. 11). Based on this distinction, Gee and Hayes (2010, 2012, 2011) refined and expanded on Gee's original features of affinity spaces (Table 3).

Table 3

Nurturing vs. Elitist Affinity Spaces

Feature	Description
"Affinity spaces are not segregated by age." (Gee & Hayes, 2012, p. 135)	"In nurturing affinity spaces, the older and more advanced members set a standard of cordial, respectful, and professional behavior that the young readily follow" (Gee & Hayes, 2012, p. 135), while in elitist affinity spaces, "experts will share their knowledge as mentors to only a restricted number of people who already show commitment and talent"(Gee & Hayes, 2012, p. 136).
"Everyone can, if they wish, produce and not just consume." (Gee & Hayes, 2012, p. 137)	Affinity spaces allow participants to visit the space to consume content and resources, but also provide tools, tutorials, and mentorship for those who wish to create content and resources themselves.
"Roles are reciprocal." (Gee & Hayes, 2012, p. 143)	Any participant in an affinity space may "sometimes lead, sometimes follow, sometimes mentor, sometimes get mentored, sometimes teach, sometimes learn, sometimes ask questions, sometimes answer them, sometimes encourage, and sometimes get encouraged" (Gee & Hayes, 2012, p. 143).

Refined Features	
Feature	Description
"A common endeavor for which at least many people in the space have a passion – not race, class, gender, or disability – is primary." (Gee & Hayes, 2012, p. 134) and "Newbies, masters, and everyone else share a common space." (Gee & Hayes, 2012, p. 136)	In nurturing affinity spaces, "shared passion can lead to good behavior if everyone sees that spreading this passion, and thus ensuring the survival and flourishing of the passion and the affinity space, requires accommodating new members and encouraging committed members," while in elitist affinity spaces, new participants may have to prove themselves before gaining full access to the space.
"The development of both specialist and broad, general knowledge is encouraged, and specialist knowledge is pooled." (Gee & Hayes, 2012, p. 138) and "Both individual knowledge and distributed knowledge are encouraged." (Gee & Hayes, 2012, p. 139)	Participants in a nurturing affinity space see knowledge as residing more within the space itself than within individual experts, who understand their own expertise as partial and limited. Individuals can draw on the expertise of the space as needed, and contributing to the knowledge in the space is more important than establishing individual expertise. In an elitist affinity space, "individuals place more of a premium on establishing their expertise in relation to other people in the space and may vie to lay claim to the possession of unique knowledge or skills" (Gee & Hayes, 2012, p. 139).
"The use of dispersed knowledge is facilitated." (Gee & Hayes, 2012, p. 140)	In a nurturing affinity space, the structure of the space itself encourages using resources located in other places; for example, one website may have links to other websites on the same topic. In an elitist affinity space, the structure of the space implies that all important knowledge relevant to the interest at hand is contained within the space itself.

Feature	Description
"Tacit knowledge is used and honored; explicit knowledge is encouraged." (Gee & Hayes, 2012, p. 141) "There are many different forms and routes to participation." (Gee & Hayes, 2012, p. 142) "There are many different routes to status." (Gee & Hayes, 2012, p. 142)	In nurturing affinity spaces, there is tolerance for a wider variation in use of specialist language than in elitist affinity spaces. There is also a wider variety of forms of and routes to participation and status than in elitist affinity spaces.
"Leadership is porous, and leaders are resources." (Gee & Hayes, 2012, p. 143)	Nurturing affinity spaces tend to be less hierarchical than elitist affinity spaces, and participants in nurturing affinity spaces tend to see leadership as being more about teaching than about exercising power.

Lammers, Curwood, and Magnifico point out that the "introduction of numerous online technologies and social networking sites has created affinity spaces that are constantly evolving, dynamic, and networked in new ways" (2012, p. 47). In the time of Gee's original affinity space conception, a researcher might consider an affinity space "defined by one central portal (for instance, a discussion board)," but Lammers and colleagues point out that "contemporary affinity spaces often involve social media such as Facebook and Twitter, creative sites like DeviantArt and FanFiction.net, and blogging platforms such as Tumblr and Wordpress" (2012, p. 47). One participant may operate in an affinity space that networks all of these different technologies; accordingly, knowledge within an affinity space "is effectively distributed across learners, objects, tools, symbols, technologies and the environment" (2012, p. 48). Drawing on their research on adolescent literacy in the affinity spaces related to The Sims, The Hunger Games, and Neopets, Lammers, Curwood, and Magnifico "explicate nine features of an expanded notion of affinity spaces" (2012, p. 45) (Table 4).

Table 4

Affinity Spaces, Expanded: Nine Features

Feature	Description
"Participation is self-directed, multifaceted and dynamic" (Lammers, Curwood, & Magnifico 2012, p. 48).	Participants in an affinity space not only participate in existing portals but may build their own portals to generate content.
"In online affinity space portals, participation is often multimodal" (Lammers, Curwood, & Magnifico 2012, p. 48).	Contrasting Gee's (2004) research on early text-based discussion boards as portals, Lammers and colleagues point out that participants in contemporary affinity spaces may produce not just text, images, websites, or maps as in the affinity spaces Gee originally described but also videos, maps, podcasts, and machinima.
"Affinity spaces provide a passionate, public audience for content" (Lammers, Curwood, & Magnifico 2012, p. 49).	Content creators within an affinity space can share that content with others who may provide feedback or become collaborators.
"Socialising plays an important role in affinity space participation" (Lammers, Curwood, & Magnifico 2012, p. 49).	In Gee's (2004) original conception, the role of socializing is minimized. Lammers and colleagues argue that, while the common endeavor is what draws affines to an affinity space, social practices that go beyond the common endeavor, such as games, trivia, and community-building activities, play an important role in an affinity space.
"Leadership roles vary within and among portals." (Lammers, Curwood, & Magnifico 2012, p. 49)	Gee (2004) argues that affinity spaces are not hierarchical, but Lammers and colleagues point out that some affinity spaces do have gatekeepers or moderators who can exert power over other participants in the affinity space.

Feature	Description
"Knowledge is distributed across the entire affinity space." (Lammers, Curwood, & Magnifico 2012, p. 49)	This reflects Gee's (2004) notion that affinity spaces support distributed and dispersed knowledge. Lammers and colleagues emphasize that knowledge is distributed across multiple portals within the affinity space: "many portals have come to specialise in a particular aspect of knowledge or content, and the diversity of portals becomes a strength of the space as participants travel between them" (Lammers, Curwood, & Magnifico 2012, p. 49)
"Many portals place a high value on cataloguing and documenting content and practices" (Lammers, Curwood, & Magnifico 2012, p. 49).	Experts in a particular portal can guide newbies by cataloging the space's content and documenting the possibilities for successful participation in the portal, using multimodal presentation styles, not just text.
"Affinity spaces encompass a variety of media-specific and social networking portals" Lammers, Curwood, & Magnifico 2012, (p. 50).	"Often, the interconnected relationship among media-specific, fan-created and social networking portals is such that they need each other as each contributes to the growth and dynamic participation of the spaces." (Lammers, Curwood, & Magnifico 2012, p. 50)

A Situated Model of Affinity Spaces

Bommarito (2014) also aims to expand the notion of affinity spaces; specifically, he states that "the present view of affinity spaces fails to explain how participants cohere when the group's focus on a common endeavor is called into question, becomes unclear or disappears altogether" (p. 408). Based on Itō and colleagues' HOMAGO model (Itō et al., 2009), Duncan's (2012) study of Kongregate Online, and the work of Lammers, Curwood and Magnifico (2012), Bommarito proposes a situated model of affinity spaces. Bommarito identifies certain assumptions in early definitions of affinity spaces that he argues limit "the

ability of researchers to investigate the evolving nature of affinity spaces" (p. 410). These assumptions include:

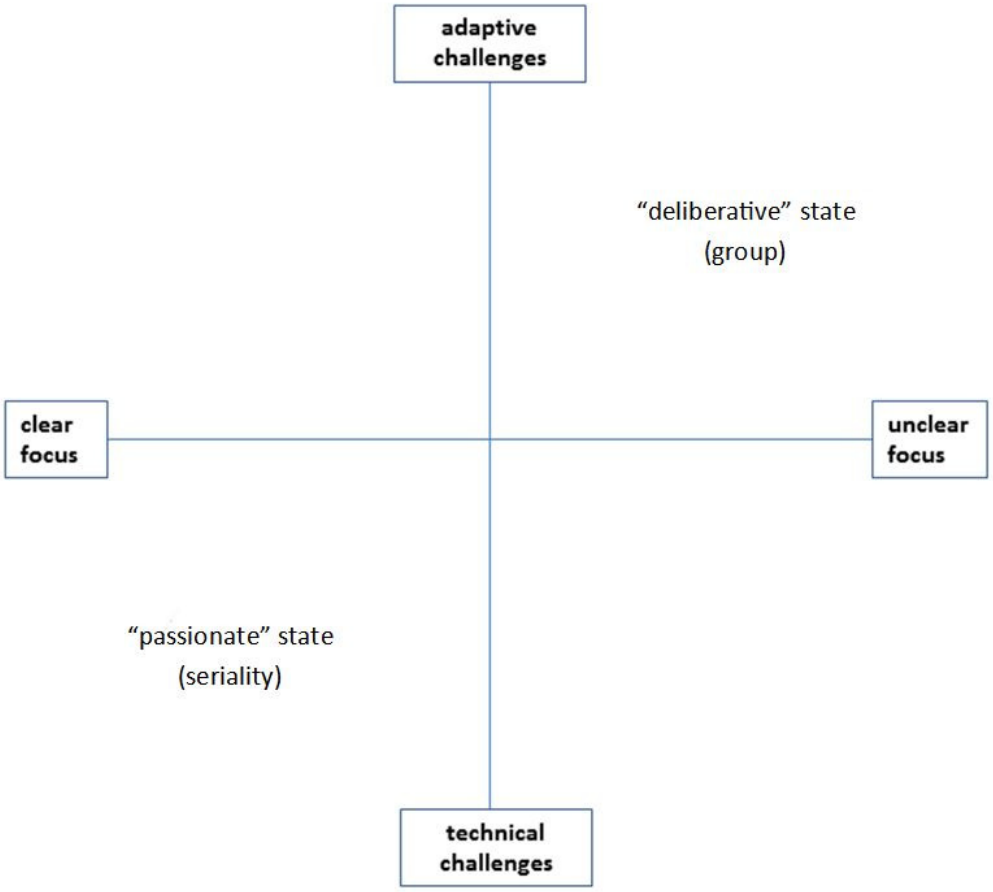
1. "That the important activity in an affinity space is only that which contributes directly to the group's shared interest or common endeavor" (p. 410)
2. "That the development of strong bonds among participants in an affinity space is necessarily subordinate to taking part in the group's shared interest or common endeavor" (p. 410)
3. "That affinity spaces are largely stable entities, confined to single sites or discussion boards" (p. 411)

Bommarito proposes a situated model of affinity spaces (Figure 5), in which affinity spaces shift between a "passionate" state, clearly focused on a shared interest, and a "deliberative" state, when the shared interest becomes unclear and participants have to resolve challenges unrelated to their shared interest. In the "passionate" state, the primary mode of interaction is what Bommarito calls "negotiation," in which participants exchange ideas directly related to the shared interest or the organization of the space in a way that does not supersede the established shared interest. Bommarito offers the example of an affinity space in which he participated, where "negotiation" included collaborating to code video games, mentoring less technically proficient participants in the space, and discussing the best way to reorganize the discussion forum to make it welcoming to new members. In the "deliberative state," the primary mode of interaction is "deliberation," in which participants debate "the nature of the shared interest itself" (p. 412) and what the space will become, potentially even changing or expanding the scope of the interest or shifting so that relationships become primary and the interest secondary. Bommarito draws here on an

example from Lammers's (2012) work, in which participants at The Sims Writers Hangout website discussed whether the site would remain focused on writing or would expand to incorporate socializing, photo editing, and modeling. Bommarito concludes, "negotiation takes place because there exists an established shared purpose, deliberation takes place in the absence of one" (2014, p. 413).

Figure 5

Bommarito's Situated Model of Affinity Spaces



Note. Reprinted with permission from "Tending to Change: Toward a Situated Model of Affinity Spaces," by D. Bommarito, 2014, *E-Learning and Digital Media, 11*(4), p. 411 (doi:10.2304/elea.2014.11.4.406). Copyright 2014 by Dan Bommarito.

Participants in affinity spaces must deal with two different types of challenges, which Bommarito identifies as “adaptive” or “technical” drawing on Heifetz (1994). “According to Heifetz (1994, p. 72), technical problems are those for which ‘the necessary knowledge about them already has been digested and put in the form of a legitimized set of known organizational procedures guiding what to do and role authorizations guiding who should do it’” (p. 413). This is the kind of problem participants tend to face when an affinity space is in a passionate state, when “participation means, primarily, gaining technical knowledge and skills related to the shared interest” (p. 413) and the problems to be solved are clearly related to the space’s shared endeavor. Bommarito offers the example of joining a gaming community and drawing on its knowledge to learn how to program a video game. “Adaptive challenges, on the other hand, are situations in which ‘no adequate response has yet been developed’, ‘no clear expertise can be found’ and ‘no single sage has general credibility’ (Heifetz, 1994, p. 72)” and are the kinds of challenges participants face when the space is in a deliberative state, in which participants are “identifying problems unrelated to some common endeavor while also pursuing and evaluating possible solutions as a collective.” (p. 413). Bommarito asserts, “For the affinity space that has lost a clear grasp of its common endeavor, members must adapt if they are to avoid dissolution.” (p. 413)

Bommarito also contrasts affinity spaces as to whether their participants can be considered a “seriality” or a “group”, drawing on Young (1997). “Young (1997, p. 23), explicitly drawing on Jean-Paul Sartre (Sartre & Sheridan-Smith, 2004), argues that a series is a collective of individuals organized around some material object and the social practices related to that object.” (p. 413) When the affinity space is in a passionate state, its participants can be considered a seriality. “According to Young, however, serial collectivity

is distinguished from groups in that groups are organized around individuals' relationships to one another rather than to some external object or interest." When the affinity space is in a deliberative state, its participants can be considered a group: their relationships become the heart of the space, rather than the shared endeavor.

Bommarito's model, as illustrated in Figure 5, situates affinity spaces along two axes: one according to whether the focus of the space is clear or unclear, and one according to whether the challenges faced by the participants in the affinity space is technical or adaptive. He places the passionate state, in which participants are part of a seriality, in the quadrant of clear focus and technical challenges, and the deliberative state, in which participants are part of a group, in the quadrant of unclear focus and adaptive challenges. Bommarito does not account for the possibilities of a space being in the other two quadrants, with a combination of a clear focus and adaptive challenges or a combination of an unclear focus and technical challenges. Based on Bommarito's description, these kinds of states don't exist. His model might better be depicted as situating affinity spaces on a spectrum from passionate to deliberate with the accompanying descriptors related to focus, challenges, and relationships, especially given the possibility of a space fluidly moving between these states (Figure 6).

From Spaces to Networks

The Leveling Up Study of the Connected Learning Research Network "was designed to investigate the role that online affinity networks play, and could potentially play, in connected learning" (Mizuko Ito et al., 2019, p. 4). While Gee first used the term "affinity" to indicate the affinity participants in a space had for their shared endeavor, Ito, Martin, Pfister, Rafalow, Salen, and Wortman (2019) use it to indicate not only the interest in the endeavor itself but also "in order to highlight [the interest's] relational and culturally situated

nature" (p. 18), reflecting Lammers' and colleagues' (2012) and Bommarito's (2014) emphasis on the social relationships developed within an affinity space.

Figure 6

Bommarito's Situated Model of Affinity Spaces Depicted as a Spectrum

Passionate State	Deliberative State
Negotiation	Deliberation
Clear focus	Unclear focus
Technical challenges	Adaptive challenges
Seriality	Group

Note. Adapted from "Tending to Change: Toward a Situated Model of Affinity Spaces," by D. Bommarito, 2014, *E-Learning and Digital Media*, *11*(4), p. 411 (doi:10.2304/elea.2014.11.4.406). Copyright 2014 by Dan Bommarito.

The authors of *Affinity Online* use the term "network" rather than "space" to capture a wide spectrum of participation from casual to serious. "Online affinity networks… are collectives that have shared interests, practices, and marked roles in the community that define levels of responsibility and expertise…" but also allow for more casual participation from "lurkers, observers, and transient participants" (p. 39). These networks are "united by a shared content world, infrastructure, and affinity," but "successful online affinity networks are spaces of constant renewal" (p. 23) and "are sustained through interpersonal relationships, shared activities, and a sense of cultural affinity" (p. 40).

Online affinity networks have three key characteristics:

1. They are **specialized**, focusing on a specific affinity or interest.
2. Involvement in them is **intentional**; participants choose to affiliate with the network and can move easily in and out of engagement with the network.
3. "Content sharing and communication take place on ***openly networked*** online platforms" (p. 42) New participants can find the networks on the open internet and do not have to enter into a financial transaction or have any specific institutional membership in order to participate.

This shift from affinity spaces to affinity networks reflects both Bommarito's (2014) suggestion that the relational nature of affinity spaces is a key part of their participants' experience and the sustainability of the space, and also incorporates the concept of multiple and varied portals that Lammers, Curwood, and Magnifico (2012) suggest must be kept in mind when studying an affinity space.

While the affinity networks the Leveling Up team studied demonstrated evidence of Gee's (2004) assertion that there were lots of different routes to status, the authors of *Affinity Online* found, as Lammers, Curwood, and Magnifico (2012) did, that self-organizing leadership does not eliminate the possibility of hierarchy. "While all the online affinity networks [they] studied are openly networked and have low barriers to entry, they also have ways of marking boundaries, status, and hierarchy" (Ito et al., 2019, p. 83). As newcomers enter an affinity space, they must be socialized into its self-generated norms. As they gain knowledge and contribute to the space, they may improve their status within that space and come to be seen as experts. This move from newcomer to expert echoes the move from peripheral participation to central participation in communities of practice (Lave & Wenger,

1991); participants in an affinity space, however, may not necessarily improve their status at all if they choose to lurk or hang out socially rather than engage in creation.

Status in an affinity network may change due to the accumulation of subcultural capital, as participants are socialized into "the knowledge and dispositions needed to successfully navigate the affinity network" (Ito et al., 2019, p. 88). Some networks also include reputation or status as an explicit design feature. Status or rank may be assigned, for example, according to the accumulation of points for certain activities, frequency of participation, or points assigned by other participants. These systems are not externally imposed but are maintained by participants in the network "because they all share a stake in how they function" (Ito et al., 2019, p. 95). Leaders act as resources, as Gee (2004) originally suggested, serving as teachers and mentors for newcomers and socializing those newcomers into the network's norms and sharing their knowledge.

Affinity Spaces IRL (In Real Life)

From these descriptions of affinity spaces, it might at first appear that they are an exclusively online phenomenon. Most studies of affinity spaces do examine online affinity spaces, because many of the interests they focus on are niche enough that it can be hard for participants to find a related physical affinity space in their local area (Ito et al., 2019). Gee emphasizes that affinity spaces can be physical or virtual (Gee, 2004), offering the example of his own childhood spent in the Catholic affinity space that incorporated portals such as his home, school, and church (Gee, 2017).

A few studies have explored physical affinity spaces (Clegg et al., 2016; Deborah A. Fields, 2006; Deborah Anne Fields, 2009; Neely & Marone, 2016; Vasudevan, 2017). Fields (2006; 2009) analyzed youth participation in an astronomy-focused summer camp,

examining students' identity development over the course of the camp and investigating the extent to which the camp functioned as an affinity space. Fields found that the camp

> exhibited all of the characteristics of what Gee (2004) calls 'affinity spaces': having a common endeavour or interest, enabling people of various skill levels to participate in the same activities, adapting the core organization through interaction, encouraging the development and sharing of specialized knowledge, honouring tacit knowledge, and allowing many different forms of participation and status in the space. (2009, p. 168)

Clegg and colleagues (2016) explored the learning that took place in an environmental education program for adults, using affinity spaces as a lens. They argue that the program, in which participants take a 12-session in-person course in water stewardship and then develop and complete a capstone project, serves as a rich problem-solving context and an interest-driven site for learning, both important characteristics of affinity spaces (Gee, 2004). Clegg and colleagues found that participants expressed a desire for more support than they received during the 12 in-person classes; the researchers suggest that blending the face-to-face sessions with an online component, such as forums, might provide "additional opportunities for collaboration and engagement" (2016, p. 853). While the face-to-face sessions did serve as an interest-driven learning space, Clegg and colleagues propose that combining face-to-face and online interaction would give participants more opportunities to participate in the different ways that Gee describes.

Neely and Marone (2016) use the concept of the "affinity space" as a conceptual and practical tool to investigate the learning that takes place when fans of jam bands gather in parking lots outside concert venues. As with Fields (2006; 2009) and the astronomy camp, Neely and Marone find that the jam band parking lot gatherings exhibit all of Gee's (2004) original 11 characteristics of affinity spaces. Neely and Marone suggest that further research into informal learning environments such as jam band parking lots can inform scholars'

understanding of learners' experiences in virtual and physical affinity spaces, as well as advancing "a shared understanding of how learning and teaching occurs through meaningful social and cultural interactions in informal contexts" that can impact formal education by informing "the design of new curricula, programs, methods, spaces, and activities grounded on students' interests, passions, and affinities" (p. 64).

Vasudevan (2017) investigated three youth-led affinity spaces as part of a two-year ethnography at the Design School in Philadelphia. The Design School is a public school that uses student-centered pedagogies. The affinity spaces were all production-centered; they included a dance team, a film club, and an organization focused on encouraging students to break boundaries and grow in confidence. Vasudevan studied how and why these spaces emerged, what the nature of making was within these spaces, and what identities youth adopted or developed in these spaces. Vasudevan found that social connections were key to the affinity space experience, students experienced civic engagement by becoming leaders within the spaces and the school, inviting youth's mediascapes into the school helped them consider their own positions in local and global communities, and that learners have more powerful experiences learning *with* technology than learning *from* technology.

None of these studies (Clegg et al., 2016; Deborah A. Fields, 2006; Deborah Anne Fields, 2009; Neely & Marone, 2016; Vasudevan, 2017) adds new dimensions to the affinity space framework; all of them, however, affirm Gee's (2004) original assertion that affinity spaces can be virtual *or* physical. This evidence of physical affinity spaces is valuable because given the prevalence of online spaces used as settings for affinity space research, it might be easy to forget physical affinity spaces exist.

While these studies focus on physical affinity spaces, only one study has explored boundary-crossing between physical and online affinity spaces (E. M. King, 2010). King's description of a longitudinal study following the affinity space involvement of a group of eight adolescent boys across face-to-face and virtual environments offers an extensive description of the methods used for the study but stops short of offering extensive conclusions. King's work does not add insight on the affinity spaces framework itself, but models possibilities for undertaking research on blended affinity spaces; King mentions studying the friend group during face-to-face hangouts, in-game observation, social networking sites observation, and activities in the University of Wisconsin-Madison Games+Learning+Society Casual Learning Lab. Participatory gameplay, interviews, field notes, surveys, and artifacts all provided evidence during the study; King used a variety of theoretical and methodological perspectives to interrogate the evidence, including a learning ecologies framework and phenomenology.

Conclusion

The varying definitions, lists of features, and models of affinity spaces or networks can be synthesized around a few key themes (Table 5). An affinity space always originates as a space focused on a common endeavor. Affinity spaces inevitably involve social activity and that social activity is important to the space and can even become the central focus of the space. Participation in the space is open to participants of a wide variety of ages and experience levels. Affinity spaces may be confined to a single portal but are more likely made up of a number of portals networked together with the same participants encountering each other via multiple portals. Participation in the portal can take many forms and operate across many modes of expression. It may be long-term and deep or brief and shallow.

Participants can take on a wide variety of roles and may take on different roles at different times, serving as audience, creator, leader, mentor, teacher, newcomer, or expert. A wide variety of types and sources of knowledge are valued: specialized, general, individual, distributed, dispersed, tacit, explicit, and meta-knowledge about the space itself. This last theme, knowledge and where it can be found, make affinity spaces an especially valuable setting for exploring information literacy practices, and the importance of participation and socialization in affinity spaces offers the opportunity to investigate how those practices vary at the individual and social levels.

Table 5

Affinity Space Descriptions Synthesized

Theme	Citations
An affinity space always originates as a space focused on a common endeavor.	Bommarito 2014; Gee 2004; Gee and Hayes 2012; Ito et al. 2019; Lammers et al. 2012
Affinity spaces inevitably involve social activity and that social activity is important to the space and can even become the central focus of the space.	Bommarito 2014; Ito et al. 2019; Lammers et al. 2012
Participation in the space is open to participants of a wide variety of ages and experience levels.	Gee 2004; Gee and Hayes 2012; Ito et al. 2019
Affinity spaces may be confined to a single portal but are more likely made up of a number of portals networked together with the same participants encountering each other via multiple portals.	Lammers et al. 2012
Participation in the portal can take many forms and operate across many modes of expression. It may be long-term and deep or brief and shallow.	Gee 2004; Gee and Hayes 2012; Lammers et al. 2012; Ito et al. 2019
Participants can take on a wide variety of roles and may take on different roles at different times, serving as audience, creator, leader, mentor, teacher, newcomer, or expert.	Gee 2004; Lammers et al. 2012; Ito et al. 2019
A wide variety of types and sources of knowledge are valued: specialized, general, individual, distributed, dispersed, tacit, explicit, and meta-knowledge about the space itself.	Gee 2004; Lammers et al. 2012

CHAPTER 4: COSPLAY

People who express their love for a narrative through cosplay, "the portrayal of a character or object from a media property such as a Japanese anime or a video game through costuming and performance" (Bender, 2017, p. 155), learn a variety of skills through this pursuit (Bender, 2017; Bender & Peppler, 2019, 2018; Chen, 2007; Lotecki, 2012; Matsuura & Okabe, 2015; Okabe, 2012). These include, but are not limited to, crafting costumes, styling wigs, designing and applying makeup, constructing props, and analyzing texts both to create a visual look for the character and to learn to roleplay as the character (Lotecki, 2012). In pursuing cosplay, cosplayers must leverage a variety of information sources, and may use their information literacy in a variety of stages: recognizing an information need, determining the extent of the need, constructing a strategy for meeting the information need, evaluating information, constructing new concepts, using information effectively, and disseminating information (Martin, 2012a). Cosplayers interact with each other both in-person and online (Lamerichs, 2011; Lotecki, 2012; Winge, 2006), creating a hybrid affinity space that can offer insight into both pathways for connected learning and how hybrid "affinity spaces encourage collaborative information literacy practices" (Martin, 2012a, p. 108). This chapter begins with a description of the origins and history of cosplay. It then discusses how scholars have contextualized cosplay, describes studies that have investigated cosplayers' demographics and cosplay experiences, and explores various motivations for engaging in cosplay, before turning to the relationship between cosplay, learning, and information.

The Origins of Cosplay

The practice of cosplay is older than its name. It is distinct from other costuming practices such as masquerade balls, fancy dress parties, and Halloween costuming in that it requires some type of narrative as its source and is undertaken as an expression of the cosplayer's appreciation for that narrative. The first recorded instance of costuming that meets both of these requirements appears to have occurred in 1908, when Mrs. William A. Fell and her husband dressed for a mask skating carnival as the characters Diana Dillpickles and Mr. Skygack, respectively, from the science fiction comic strip *Mr. Skygack from Mars*: "Both costumes closely followed those of the comic characters" ("'Mr. Skyjack from Mars' and 'Diana Dillpickles' on Skates," 1908). In 1910, an unnamed woman in Tacoma, Washington won first prize at a masquerade ball wearing a costume based on the title character in the same comic strip (Ashcraft & Plunkett, 2014). A friend of hers borrowed the costume to wear in public as an advertisement for his skating rink, and was arrested for public masquerading. As news of the incident spread through the press, Mr. Skygack costume sightings spread, too.

Fan costuming at conventions began in 1939 when fanzine publisher Myrtle R. Douglas and author Forrest J. Ackerman attended the first World Science Fiction Convention, also known as Worldcon, in costumes Douglas had constructed that were inspired by the 1933 film *Things to Come* and the art of pulp illustrator Frank R. Paul (Lotecki, 2012). The following year, several other attendees brought their own costumes, prompting an impromptu exhibition, and in later years, this event was formalized as a competition called a masquerade (Ashcraft & Plunkett, 2014). This tradition of fan costuming continued into the 1960s, when fans began wearing costumes inspired by *Star*

Trek to conventions. At the same time, members of The Sherlock Holmes Society in London dressed in character and traveled to locations associated with Sherlock Holmes stories, for example, staging the confrontation between Holmes and Moriarty at Reichenbach Falls in costume at a waterfall in Switzerland (Duffy, 2017).

Fan costuming in the United States and Europe continued in the 1970s with costumes inspired by *Star Wars* (Lamerichs, 2011) and other narratives, while in Japan, college students started to dress up as manga and anime characters for conventions and school and university festivals (Ashcraft & Plunkett, 2014). The Japanese term *kasou* was used to describe this dressing up, but it didn't capture the roleplaying elements of fan costuming practices. While the term "masquerade" was used in the West, writer Nobuyuki Takahashi found that when he and his friends were writing a magazine article about the phenomenon for a Japanese audience, the term carried connotations of formality that didn't align with what they were trying to describe. They came up with the term *cosplay* or, in Japanese, *kosupure*, a portmanteau that captured both the elements of costuming *and* of roleplaying.

Takahashi used the term in a 1983 article for the magazine *My Anime* describing Japanese fans who dressed up as manga and anime characters at the Comiket convention in Tokyo (Ashcraft & Plunkett, 2014). Over the next few years, the term came into wide use at Japanese conventions. In the 1990s, it was introduced to a wider Japanese audience through television and magazines, and as Japanese anime and manga increased in popularity in the United States, the term came into use there as well as globally. Takahashi defines cosplay as "a fan's expression of his or her love for a favorite character… in which fans use their entire bodies" (Ashcraft & Plunkett, 2014, p. 20).

Conceptualizing and Contextualizing Cosplay

Theresa M. Winge (2006) identifies four components of cosplay: cosplayer, social settings, character and roleplaying, and dress. Lamerichs (2011) identifies four elements of cosplay: a narrative, a set of clothing, "a play or performance before spectators" (para. 1.2), and a subject/player. Lamerichs (2010) also offers a variety of potential lenses for analysis of cosplay: "the types of performances or spaces in which the costume is worn; the process of making the costume or admiring it and identity of the player (as seamstress, fan and model) and the character" as well as "what kind of ludic experience does cosplay constitute? How can cosplaying as a type of play, be analyzed?" (p. 4) There is some overlap in these conceptualizations of cosplay, but there are differences between them, as well.

Winge's (2006) cosplayer and Lamerichs's subject/player (2011) are nearly identical concepts. Winge defines a cosplayer as "anyone who expresses his or her fandom and passion for a character by dressing and acting similarly to that character" (Winge, 2006, p. 68). Lamerichs's includes the cosplayer's multiple identities, as fan, costume creator, and model, as part of this concept. Most of the literature on cosplay is related to cosplayers' identity. There is a particular focus on how cosplay allows the cosplayer to play with norms of gender, sexuality, and race, whether they are challenging these norms, reinscribing them, or creating a microcosmic community that rewrites them entirely (Table 6).

Closely related to the cosplayer is their choice of character, embedded in Winge's (2006) concept of character and roleplaying and Lamerichs's (2011) concept of narrative. Cosplayers select characters from a wide variety of media and genres, including anime, manga, video games, comics and graphic novels, fantasy, cartoons, film, books, fan art, and original characters (Lotecki, 2012). They choose which character to play for a variety of

reasons, including the character's visual appearance, personality and history, resources available for costume creation, and what members of a cosplay group are wearing (Lotecki, 2012; Rosenberg & Letamendi, 2013; Winge, 2018).

Table 6

Studies on Cosplay and Identity

Topic	Studies
Identity	Bainbridge & Norris, 2013; Bonnichsen, 2011; Brock, 2017; Casey, 2010; Chan, 2018; Farris, 2017; Frey, 2008; Gunnels, 2009; Hill, 2017; Kirkpatrick, 2015; Lamerichs, 2011; Nesic, 2013; Peirson-Smith, 2013; Rahman et al., 2012; Reysen et al., 2018; Sagardia, 2017; L. Smith et al., 2012; Taylor, 2009
Playing with norms of gender, sexuality, and race	Chao, 2017; Gn, 2011; Hjorth, 2009a, 2009b; E. King, 2013; Kotani & LaMarre, 2007; Leshner, 2017; Lunning, 2011, 2012; Morrison, 2015; Scott, 2015; Thomas, 2014; Tiercelin & Garnier, 2015; Whisnu, 2017
Challenging norms of gender, sexuality, and race	Chan, 2018; Hogan, 2012; Leng, 2014; Nichols, 2019; Ramirez, 2017; Taylor, 2009; Truong, 2013
Reinscribing norms of gender, sexuality, and race	Leng, 2014; Ramirez, 2017; Truong, 2013
Creating a microcosmic community that rewrites norms of gender, sexuality, and race	Hutabarat-Nelson, 2017

Cosplayers do not necessarily consider gender, race, or body type of a character a limitation.They might crossplay, changing their own gender expression to match the gender of the character, or gender bend, reimagining a character as a different gender than the character's gender as originally designed (Figure 7) (Leng, 2014; Nichols, 2019; Thomas, 2014; Winge, 2018). They might racebend, playing a character whose original design is not their own race without altering their appearance to match the characters' race (Figure 8). They also might choose a character whose body type is different than their own, either modifying their body to be more like the character's (Figure 9) (Brownie & Graydon, 2015; Winge, 2018) or creating a look that replicates the character's dress but fits their own body (Figure 10) (Hill, 2017; Winge, 2018).

Figure 7

Female Cosplayers Crossplaying as Male Characters

Note. Two female cosplayers crossplay as Roxas and Sora, two male characters from the Kingdom Hearts video game series. Photography by A. Evans. CC BY 2.0. https://www.flickr.com/photos/agius/2906497890/sizes/o/in/set-72157607655028097

Figure 8

A Black Cosplayer Racebending a White Character

Note. A black cosplayer cosplays as Poison Ivy, who is usually portrayed as white, from the *Batman* franchise. From https://www.instagram.com/p/B_DLccfjvqF/, by kitti_rah, 2020. Copyright 2020 by kitti_rah.

Figure 9

A Cosplayer Modifying Their Body Shape

Note. A cosplayer uses padding to create muscles in order to cosplay Hellboy, from the comic and movie series of the same name. From "Muscle Suit," by SarahM396, 2016. CC BY-NC-SA. https://www.instructables.com/id/Muscle-Suit/

Figure 10

A Cosplayer Cosplaying a Character with a Different Body Type

Note. Cosplayer Brichibi Cosplays, who is plus-sized, cosplays as Tiana from the Disney film *The Princess and the Frog*, who is not. From "Up Close and Personal with Plus Size Cosplay SHERO- Brichibi Cosplays," by Marie Denee, 2016, *The Curvy Fashionista.* Copyright 2016 by TCFStyle Media. https://thecurvyfashionista.com/close-personal-plus-size-cosplay-shero-brichibi-cosplays/

Dress (Winge 2006), or a set of clothing (Lamerichs 2011), is the *sine qua non* of cosplay (Winge, 2018). According to Winge (2006), dress includes "all body modifications and supplements, such as hair, makeup, costume, and accessories, including wands, staffs, and swords" (p. 72). Cosplayers acquire costumes by making them themselves, often using help from online tutorials and discussion forums, by commissioning them, or by buying them online (Lamerichs, 2011; Lotecki, 2012; Winge, 2018). They might make most of their costume but buy small additions like wigs, shoes, or small props (Lotecki, 2012). Some cosplayers strive to create a costume as close to the original character's as possible (Lotecki, 2012; Winge, 2018). Others extend the original text by imagining the character in a different setting or type of dress, such as Disney princesses wearing battle armor (Figure 11) (Reading, 2014), or creating a crossover or mashup costume that combines two texts, such as the Sailor Milaje, a group of cosplayers who combine the characters from the manga and anime *Sailor Moon* with the Dora Milaje, a team of women who serve as the personal guard of King T'Challa in Marvel's *Black Panther* comics and movies (Figure 12) (Gaudette, 2019).

Without roleplaying, however, cosplay is just costuming without play. Roleplaying ties together Winge's (2006) concept of character and roleplaying with Lamerichs's (2011) concepts of narrative and play/performance. Having selected a character and created dress that reproduces or reimagines the character's appearance, the cosplayer also roleplays as the character, taking on the behavior of the character through speech and physicality (Winge, 2006, 2018).

Figure 11

Cosplayers Reimagining Characters

Note. A group of cosplayers pose as Disney princesses in battle armor. From "Disney Battle Princesses," by The Will Box, 2014. Copyright 2014 by The Will Box https://www.facebook.com/thewillbox/photos/a.575306665931274/575306719264602

Figure 12

Cosplayers Combining Characters from Two Different Narratives

Note. The Sailor Milaje cosplay group combines the Sailor Senshi from the manga and anime Sailor Moon with the Dora Milaje from the comic and movie Black Panther. From "A Cosplay Sisterhood Mashes Up Black Panther and Sailor Moon and It's Amazing," by Emily Gaudette, 2019. Copyright by Lauren Lea Kitty & Rike, 2019. https://www.syfy.com/syfywire/a-cosplay-sisterhood-mashes-up-black-panther-and-sailor-moon-and-its-amazing

Lamerichs (2010) identifies three types of play at work in cosplay: transformative play, imaginative play, and performance. In transformative play, the cosplayer gives the source narrative a new meaning by either extending it, bringing a fantasy character to life in the real world, or deconstructing it, appropriating the character for new purposes and creating

a new narrative. In imaginative play, the cosplayer engages in make-believe as children do, creating an illusion or imaginary universe. Belief in this illusion can be broken, for example, if a spectator sees a cosplayer arranging their wig in the bathroom mirror. Finally, the roleplaying element of cosplay is a performance, "a framed, structured act that can be repetitive and, though limited to a certain context, can still effect *[sic]* reality at large" (Lamerichs, 2010, p. 6). Spectators evaluate this performance based on the cosplayer's behavior being "in character," or in keeping with the character's behavior in the original text, usually criticizing a cosplayer who behaves in an "out of character" fashion. They also evaluate the performance based on the cosplayer's ability to embody the character, which may lead to criticisms based not on costume construction or in-character behavior, but on disconnects between the original character's appearance and the cosplayer's race or body type (Lamerichs, 2011, 2014, 2018; Silvio, 2006).

Kirkpatrick (2015) contests Lamerichs's (2010) assertion that cosplay is a transformative performance. She argues that it is impossible to create transformation through performance from a source text; instead, she suggests that cosplayers enact *embodied translation*. This distinction arises from the fact that as "cosplayers convey source characters from a textual realm into a material one" (Kirkpatrick, 2015, para. 4.9), they subject those source characters to the corporeal limitations of their own bodies. Kirkpatrick addresses this especially with respect to the genre of superhero cosplay, through which "cosplayers take the super out of the superhero and demonstrate that superbeings can only really exist within fictional worlds" (Kirkpatrick, 2015, para. 4.9).

Whether a performance is transformative or translational, it hinges on the social settings in which cosplay occurs (Lamerichs, 2011; Winge, 2006, 2018); both Lamerichs and

Winge point out the importance of a spectator to observe the practice of cosplay. According to Winge, “it could be argued that cosplay… would be pointless if it were not for the spectators” (2006, p. 69). This interaction between cosplayer and spectator most often takes place in person, usually within a specific social context such as a convention, film screening, masquerade, fan event, or, in Japan, cosplay district such as Harajuku, though some cosplayers do wear their costumes in public places (Lamerichs, 2011; Lotecki, 2012; Winge, 2006). Within the specific setting of a convention, a cosplayer performs both informally in the halls and formally at specific events such as fashion shows, photography sessions, and masquerades in which they perform skits in character (Lamerichs, 2011; Winge, 2006, 2018). At the same time, these interactions can also take place online (Hill, 2017; Winge, 2006, 2018), as cosplayers “share their work, interact with other fans, keep up to date on the work of other cosplayers, make friends, and promote themselves as artists” (Kane, 2017, p. 215).

Winge (2006) differentiates three types of social structures that support the act of cosplay: social interactions, environments in which those social interactions occur, and experiences afforded by these social interactions and environments. Social interactions occur between cosplayer and character, cosplayer and spectator, and cosplayer and cosplayer. The environments in which they occur “include, but are not limited to… an intimate space (dress), a private space (solitary rehearsals and research), a public space (interactions with other cosplayers, both in person and virtual), and a performance space (ranging from small parties to masquerades)” (Winge, 2006, p. 75). These interactions and environments afford certain experiences such as “making new friends [or] claiming a moment in the limelight” (Winge, 2006, p. 75).

Who Are Cosplayers?

There have been two large scale surveys of cosplayers. Ashley Lotecki (2012) sought "to develop a deeper understanding of North American cosplayers" (p. iii). She used mixed methods, including an online survey, on-site ethnography, and self-directed recording of cosplayers' creation processes "to collect and analyze demographic, behavioural, and creative data" (p. iii). For the survey, she recruited cosplayers via social networking websites in online cosplay groups, website forums, email requests through cosplay event and community organizers to their members, emailing student populations of university creative-based degree programs, passing out business cards with a web link to the survey at cosplay-related events, and asking participants "to pass along the survey link to friends who would potentially complete the survey" (Lotecki, 2012, p. 27). Focusing on self-identified cosplayers from North America who were age 18 or older, Lotecki analyzed 529 respondent surveys.

Robin S. Rosenberg and Andrea M. Letamendi (2013) also conducted an online survey of cosplayers in order to learn more about "their demographic information, how often they cosplay, the amount of time and money they devote to preparing for cosplaying, as well as their psychological motivations and experiences" (p. 10). Rosenberg and Letamendi recruited participants via the internet, including social networks (Facebook), blogs (Wordpress), and micro-blogs (Twitter). As in Lotecki's study, participants were considered eligible if they self-labeled as a cosplayer, spoke English, and had access to the Internet; Rosenberg and Letamendi, however, did not place age restrictions on eligibility for the study. They analyzed 198 responses. The following two sections will address the results of these studies; results have been rounded to the nearest percent.

Demographics

Cosplayers tended to be in their mid- to late twenties. The average age for participants in Lotecki's (2012) study was 23.8 years, while it was 28.4 years in Rosenberg and Letamendi's (2013). Rosenberg and Letamendi reported an age range of 15 - 50 among their respondents.

Both studies found that the cosplay space was dominated by women, with 77% of participants in Lotecki's study and 65% of Rosenberg and Letamendi's study identifying as female. In Lotecki's study, 21% of participants identified their gender as male while 2% identified as other; Rosenberg and Letamendi only offered female and male as choices. Lotecki asked participants about their sexuality, while Rosenberg and Letamendi did not; Lotecki found that 63% of respondents were straight (heterosexual) and 16% were bisexual, while "all other designations selected, including pansexual, asexual, gay, and other, were not large enough to be individually significant and were compiled under the "other" category at 21.7 percent" (p. 36).

With respect to race, Lotecki's (2012) population of respondents was 72% white, 6% "Latin American, Hispanic, Latino or Spanish," and 4% Chinese, while all "other designations selected were not large enough to be individually significant and were compiled under the "other" category at 17.4 percent" (p. 36). Rosenberg and Letamendi's (2013) respondents were 68% Caucasians, 12% Asians, 5% Latino/Hispanic, 0.5% Native American, 11 percent "Mixed", and 4% "Other".

Both studies demonstrate the dominance of white cosplayers and both elide the participation of Black cosplayers by including them in the "other" category, literally othering them. There is evidence in online movements such as #28daysofblackcosplay, created by

cosplayer Chaka Cumberbatch-Tinsley, and #BlackCosplayerHere, created by Belema Boyle, that this elision suggests incorrectly that there aren't many Black cosplayers (Dahir, 2018; Lawrence, 2018, 2019). These hashtags were created deliberately to contest this idea.

Lotecki (2012) deliberately focused on North American cosplayers, finding that 49% of respondents were Canadian, 48% American, and 3% other; while they did not limit their study to North Americans, Rosenberg and Letamendi (2013) found that cosplayers from the United States dominated their results, with 93% from the United States, 5% from Australia, <1% from Canada, <1% from Mexico, and <1% from Sweden. As with race, these results may give a false impression that cosplay is not a global activity. In fact, researchers have studied cosplayers in Australia, China, Hong Kong, Indonesia, Malaysia, the Philippines, Taiwan, and Europe (Table 7), though these studies have not provided any large-scale survey data like Lotecki's (2012) or Rosenberg and Letamendi's (2013).

Table 7

International Studies of Cosplay

Location	Studies
Australia	Hjorth, 2009a, 2009b
China	Wang, 2010
Hong Kong	Rahman et al., 2012
Indonesia	Rastati, 2017
Malaysia	Chan, 2018; Paidi et al., 2014
The Philippines	Benino & Tayag, 2014
Taiwan	Chen, 2007; Silvio, 2006
Europe	Jóhannsdóttir, 2017; Lamerichs, 2013

Lotecki (2012) includes a few demographic categories that Rosenberg and Letamendi do not. She found that cosplayers tended to be highly educated, with 72% having some post-secondary education, 24% having finished high school, 4% having attended some high school, and 1% reporting other levels of education. They were likely to be employed or enrolled in school, with 50% employed, 41% students, and 9% unemployed. They did not seem to have especially high incomes, although not all respondents reported their incomes; 47% of respondents had incomes under $15,000 per year. Only 3% had incomes over $70,000 per year. About 20% elected not to report their incomes. The remaining respondents had incomes between $15,000 and $70,000 per year. Lotecki (2012) breaks down both employment and income categories beyond those reported here.

It is important to note that, while neither of these studies mentioned it, there are general trends in who responds to surveys:

> ...women are more likely to participate than men (Curtin et al., 2000; Moore & Tarnai, 2002; Singer et al., 2000), younger people are more likely to participate than older people (Goyder, 1986; Moore & Tarnai, 2002), and white people are more likely to participate than non-white people (Curtin et al., 2000; Groves et al., 2000; Voigt et al., 2003). (G. Smith, 2008)

These trends are consonant with the results of both studies and may have influenced these results.

Cosplay Experiences

Both Lotecki's (2012) and Rosenberg and Letamendi's (2013) studies asked cosplayers about their cosplay experiences. Lotecki found that most cosplayers had been cosplaying between 3 and 10 years; Rosenberg and Letamendi's respondents had been cosplaying for an average of 6.77 years, with a range of 3 - 42 years. Both studies found that cosplayers usually attended five or fewer cosplay events per year. There was a discrepancy in

their findings about the cost of costumes, with Lotecki finding that cosplayers, on average, spent about $107 per costume while Rosenberg and Letamendi found the majority of their respondents spent between $100 and $399 per costume. It is possible that the large number of students and low-income respondents in Lotecki's study is responsible for this discrepancy, but without any income or employment data from Rosenberg and Letamendi's participants, it is not possible to be certain.

There seemed to be an inverse relationship between amount of money spent and amount of time spent; Lotecki's respondents spent an average of 277.2 hours per costume, while Rosenberg and Letamendi's spent an average of 44.16 hours per costume, with a range of 1 - 450 hours. Lotecki found that 65% of respondents had not participated in cosplay competitions, while 35% had. Rosenberg and Letamendi found that 93% of participants had cosplayed as part of a group, but only 8% of participants always cosplayed as part of a group.

Why Do People Cosplay?

Takahashi's definition of cosplay suggests the most obvious reason for engaging in cosplay: using the cosplayer's body to express the love of a character or narrative (Ashcraft & Plunkett, 2014). This reason seems to be taken as a given in most of the research on motivations for cosplay, which tends to focus on other motivations. Other reasons include social interaction, identity work, creative expression, exploring the relationship with a fantasy narrative, and skill building.

Social interaction is the most commonly cited reason for cosplaying. Cosplayers want to belong to a community of like-minded people who share their interests (Flatt, 2015; Geissler, 2016; Kane, 2017; Lotecki, 2012; Peirson-Smith, 2013; Rosenberg & Letamendi, 2013; Wang, 2010). This desire encompasses both bonding with new and old friends (Kane,

2017) and feeling a sense of inclusion in an in-group. Cosplay is a fan practice embedded in the larger world of fandom; because not every convention attendee will cosplay, cosplayers signal to each other through their dress that they are part of a group together. As Anne Peirson-Smith (2013) points out:

> Adult Cosplay dress-up activity is not an end in itself, but an important social process. It is the creation of an imagined and imaginative world whose passport for entry is the wearing of fantastic costume derived from a commodity culture, forming the basis of shared relationships that are dynamic and which shift over time within the structured setting of Cosplay conventions, competitions, and meetings. (para. 54)

At the same time, Peirson-Smith (2013) suggests, "this dress-up activity affords the individual player a way of celebrating individuality, irrespective of gender boundaries, whilst also expressing and performing the secret self publicly, albeit within the safe confines of the collective" (para. 54). In this way, cosplayers use cosplay to explore their identity. They may enjoy pretending to be someone else for a day, but they may also use cosplay as a way to express themselves creatively (Kane, 2017; Rosenberg & Letamendi, 2013).

Cosplayers explore and extend their relationship with fantasy narratives by bringing those fantasies to life. They enjoy transforming fantasy into reality (Lotecki 2012), "mimicking fantastic and divergent guises in the entertaining and empowering process of dressing up" (Peirson-Smith, 2013, para. 54). They also may see cosplay as a form of escapism (Flatt, 2015; Rosenberg & Letamendi, 2013), leveraging it as a way to cope with social pressures such as low income, high housing costs, and familial expectations.

Cosplay, Learning, and Information Literacy

Cosplay is inherently related to learning; no one is born knowing the skills one needs to cosplay. Of Lotecki's (2012) respondents, 94% reported that they had learned a new technique in the process of cosplaying, with the most cited being sewing (71%), wig or

hairpiece styling (64%), makeup (48%), pattern drafting (42%), and dyeing (41%). Cosplay is not simply a skill-building process, however; it is a subculture with its own set of cultural practices that shape how learning happens.

Perceiving that understanding cosplay would "allow art educators to bridge the gap between mainstream school cultures and adolescent subcultures," Jin-Shiow Chen explored "youth anime/manga fan culture from the viewpoints of six adolescents who are anime/manga fan artists," focusing on their "experiences, opinions, and values in making *manga doujinshi* (self-published comic fanzines), *cosplaying* (costume play), and participating in fan activities" (2007, p. 14). Chen found that these youth were "active cultural producers who are engaged in the reproduction of the materials they consume and in the manipulation of ideas, meanings, and cultural references that they perceive" (2007, p. 21). Chen identifies five characteristics of anime/manga fandom subcultural interaction and production articulated by her participants:

1. Anime/manga fandom is based on the circulation of images and signs for its production and expansion. (p. 21)
2. The production of fan art possesses a psychologically therapeutic function.(p. 21)
3. Anime/manga fandom develops a particular set of criteria, values, and expressive practices. (p. 21)
4. Anime/manga fandom catalyzes a closed cycle of communication and interaction. (p. 21)
5. Anime/manga fandom functions as an alternative community. (p. 22)

Datsuke Okabe (2012) draws similar conclusions based on interviews with female cosplayers and fieldwork carried out at cosplay events. Like Chen (2007), Okabe sees cosplay as a subcultural community with its own cultural practices. The knowledge within this community is esoteric and inaccessible to outsiders, but members of the community derive pleasure from contributing to that knowledge. Interactions take place in a closed cycle in which cosplayers "are motivated by niche knowledge, reciprocal relationships with those who share their niche identity, and positive evaluation by a niche audience" (Okabe, 2012, p. 245). Okabe concludes that the cosplay community "has always been based on peer-based reciprocal learning, with members creating their own rules and codes of conduct" (Okabe, 2012, p. 245).

With their emphasis on the shared interest of cosplayers, the relationships between cosplayers, and the opportunity for cosplayers to contribute to community practices and knowledge, both Chen (2007) and Okabe (2012) point to the possibility that cosplay is a connected learning experience. Matsuura and Okabe explicitly articulate this potential in their study of how women cosplayers "socialize and learn... in [an] information and knowledge ecology" (2015, p. 1). Matsuura and Okabe characterize the cosplay community as an "interest-driven, peer-based reciprocal learning environment" (para. 3). Citing Brunner's "Scaffolding" theory in which a more experienced/older/knowledgeable person assists a learner, they suggest that in reciprocal learning, various learners support each other. They found that this manifested in particular on social networking sites, where cosplayers were able to learn from each others' photographs.

Bender and Peppler (2019, 2018) make this connection even clearer, analyzing case studies of two cosplayers "who benefited from well-developed connected learning ecologies"

(2019, p. 31). Like Chen (2007), their goal is to learn from cosplayers' past experiences in order to design future experiences. They identify four themes that may be useful for designing connected learning experiences: "relationships with and sponsorship by caring others; unique pathways that start with a difficult challenge; economic opportunities related to cosplay; and comparisons with formal school experiences" (2019, p. 31). In both of their case studies, the cosplayers received support not only from other cosplayers, but also from family members, friends, and community mentors. They both chose complex costumes for their first costumes, requiring them to solve problems and learn skills that were well outside their existing knowledge. They each used what they had learned either to gain professional opportunities or to enhance their work. Finally, both of them found that the learning gained through cosplay felt more relevant to their lives than their formal schooling had been.

Information Seeking Behavior of Cosplayers

While a growing body of literature addresses the information behaviors of cult media fans (De Kosnik, 2016; Price, 2017, 2019; Price & Robinson, 2017, 2021; Waugh, 2018, 2019), most of this research focuses on fan tagging practices and folksonomies, with a few studies taking a broader perspective of looking at fan information practices. One study is an exception to these trends: concurrent with this dissertation study, Emily Vardell, Paul Thomas, and Ting Wang studied the information seeking behavior of cosplayers who cosplay as the character Rey from the *Star Wars* franchise (2020). Vardell and colleagues interviewed 17 cosplayers who were members of a private Facebook group called Rey Cosplay Community (RCC). They found that cosplayers turned to the Facebook group when they needed information, mostly for information about particular costume construction techniques or to request feedback on their costumes. Cosplayers' information literacy skills and search

strategies improved as they gained more cosplaying experience. Information needs tended to be focused on overcoming hurdles. Participants in the study emphasized the need for reference images to refer to as they built the costume; these images were the primary information source participants used to create their costumes.

Conclusion

Cosplay is a practice that involves expressing one's love for a narrative by taking on the dress and behavior of a character or object within that narrative, but it is also a subculture that involves connecting with spectators and other cosplayers through performance and socializing. Connecting both online and in-person, cosplayers create a blended affinity space in which reciprocal learning occurs. This affinity space offers a promising setting for investigating both solitary and collaborative information literacy practices.

CHAPTER 5: INFORMATION HORIZONS

This study uses Sonnenwald's (1999, 2005) framework of *information horizons*. This framework draws on research from information science, communication, sociology, and psychology to situate human information behavior in relationship to contexts, situations, and social networks. This chapter introduces the fundamental concepts underlying the information horizons framework and the propositions that comprise it. It then discusses the information horizon mapping data collection method, followed by applications and extensions of the theory and method.

Fundamental Concepts

Sonnenwald's framework relies on three fundamental concepts: context, situation, and social network. Sonnenwald defines context as "the quintessence of a set (or group) of past, present and future situations" (1999, p. 178). Participants in a context usually have some shared understanding of that context. Examples of contexts include academia, family life, citizenship, and clubs. Contexts have boundaries, constraints, and privileges. The boundaries of contexts can be malleable, able to be shifted or negotiated. It can be difficult to exhaustively characterize contexts, as they may be distinguished by place, time, goals, or many other attributes. Different contexts may also share attributes; for example, a faculty member at a university may be acting as a teacher, researcher, or administrator. All of these activities could be carried out in the context of academia, but teaching, researching, and administration can each be their own context, as well. Further, individuals may try to satisfy the constraints of different contexts at the same time, such as when an employee brings a sick

child to work with them, attempting to satisfy the constraints of both the work and the family context. Different contexts can conflict with each other, and Sonnenwald points out that "We often learn more about contexts when conflicts emerge" (1999, p. 179).

Sonnenwald defines situations, saying that "a situation may be characterized as a set of related activities, or a set of related stories, that occur over time" (1999, p. 180). Situations occur within contexts, which may consist of a variety of situations. For example, in the context of academia, "teaching a course and attending a committee meeting are two different types of situations" (Sonnenwald, 1999, pp. 179–180). Different individuals may perceive the same situations differently, based on their own experience, knowledge of similar situations, or privileged information. For example, a dissertation committee meeting might be perceived differently by the committee chair, who has the experience of serving on several dissertation committees, than by a doctoral student, who presumably only has experience with their own dissertation committee. Sonnenwald points out that situations "are not necessarily linearly-ordered discrete events" and "can be rapidly inter-leaved" (1999, p. 180), with situations from different contexts disrupting each other, as when a faculty member meeting with a student must take a call from their spouse to discuss arranging picking up their child from school.

The final fundamental concept Sonnenwald mentions is the concept of social networks, which Sonnenwald describes as referring to "communication between individuals, in particular patterns of connection and resonance interaction" (1999, p. 180). Social networks are mutually constitutive with situations and contexts, helping construct situations and contexts as they are also constructed by situations and contexts. There is a social network within a given situation and context, but members of that social network may not be present

in every situation and context of which the social network is a part; for example, not all members of a social network in an academic department may not be present at a particular department meeting.

Propositions

Sonnenwald's framework relies on five propositions:

> *Proposition 1:* Human information behavior is shaped by and shapes individuals, social networks, situations and contexts. (Sonnenwald, 2005, p. 192)

An individual encounters an information need within a specific situation and context and as part of a specific social network; the situation, context, and social network determine what the need is and what steps the individual can take to resolve it.

> *Proposition 2:* Individuals or systems within a particular situation and context, may perceive, reflect and/or evaluate change in others, self, and/or their environment. Information behavior is constructed amidst a flow of such reflections and/or evaluations, in particular, amidst reflections and/or evaluations concerning a lack of knowledge. (Sonnenwald, 2005, p. 192)

Individuals may recognize an information need arising from a lack of knowledge related to a change in others, themselves, or the environment. Deliberately seeking information to resolve this lack of knowledge, however, is not the only way a person can resolve the information need. If a member of a social network perceives that another member has an information need, and has helpful information that they are willing to share, they may provide that information even if it is not deliberately sought.

> *Proposition 3:* Within a context and situation is an "information horizon" in which we can act. (Sonnenwald, 2005, p. 192)

An individual's information horizon for a given information need can consist of a variety of information sources and the relationships between them. Sonnenwald offers the following examples:

> social networks, including colleagues, subject matter experts, reference librarians, information brokers; documents, including broadcast media, web pages, books; information retrieval tools, including computer-based information retrieval systems, bibliographies; and experimentation and observation in the world. (2005, p. 193)

An individual may have multiple information horizons, with each situation and context involving different resources, relationships, and boundaries. Information horizons are not fixed; a resource may expand an individual's information horizons by providing access to additional resources and relationships. As mentioned earlier, a resource may provide information without it being directly sought, such as sharing through a listserv or offering information to a colleague.

> *Proposition 4:* Human information-seeking behavior may, ideally, be viewed as collaboration among an individual and information resources. (Sonnenwald, 2005, p. 194).

The goal of collaboration among the individual and information resources is to resolve the individual's lack of knowledge. This collaboration presupposes a continuing relationship; an individual may consult the same resources repeatedly after reflecting on discoveries and their application to the information need. The collaboration is bounded by the individual's information horizon in the particular situation and context.

> *Proposition 5:* Information horizons may be conceptualized as densely-populated spaces. (Sonnenwald, 2005, pp. 194–195)

In a sparsely-populated solution space, the goal of information retrieval is to find the "most efficient path to the best solution" (Sonnenwald, 2005, p. 195) In a densely-populated solution space such as an information horizon, where a wide variety of resources are available and may have some knowledge of each other, the goal shifts; the problem assumes there are many possible solutions. The goal of information retrieval in this case is to make these possible solutions visible.

The Information Horizon Map and Interview Method

Based on Sonnenwald's framework, Sonnenwald, Wildemuth, and Harmon (2001) developed the information horizon map and interview method for exploring information horizons within a given situation and context. Based on Sonnenwald's (1999) five propositions of human information behavior, Sonnenwald, Wildemuth, and Harmon (2001) determined that certain types of data were important to capture in order to understand human behavior and that there was not yet a method explicitly designed to capture these types of data. They designed the information horizon map and interview methodology to capture the following data about human information behavior:

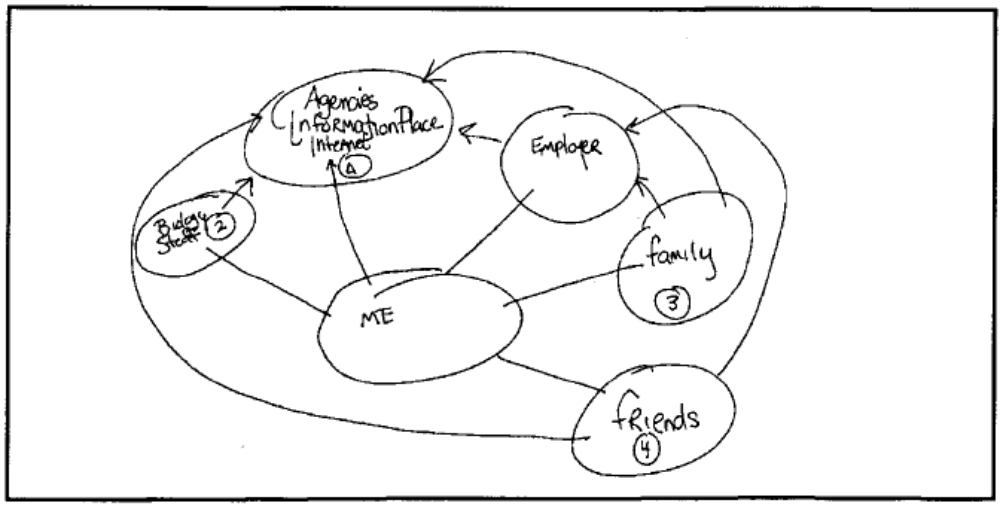
- decisions made and activities undertaken during the information seeking process;
- when and why information resources, including individuals, are accessed (and not accessed);
- relationships or interconnectedness among information resources;
- individual preferences and evaluation of information resources;
- the proactive nature of information resources;
- and the impact of contexts and situations on the information seeking process. (Sonnenwald et al., 2001, p. 68) (bullets added)

The method consists of interviewing the participant about their information seeking process and having the participant draw themselves and the information resources they use, as well as any connections between the resources, on a map of their information horizon. The interview asks participants to describe a recent information seeking situation, follow up questions to elicit details as needed to address the data listed above, as well as incidents when it was difficult to find information, easy to find information, dissatisfying to find information, and satisfying to find information. The interview combines semi-structured interview techniques with critical incident interview techniques (Flanagan, 1954; Patton, 1990). Sonnenwald and colleagues (2001) originally performed the interview before the graphical task of having the participant draw the information horizon map (Figure 13), but Sonnenwald

(2005) later suggested that researchers should conduct the graphical task and think-aloud activity first. Conducting the interview in this order reduces the likelihood that the interviewer will influence the creation of the map.

Figure 13

A Participant's Graphical Representation of Their Information Horizon



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The first step in data analysis is to create a list of all the terms participants used in the information horizon maps with the frequency of use. The next step requires the researcher to create categories from this list and tally their frequency of use. Then, the researcher creates a matrix with resource categories as rows and participant names as columns, placing in each cell the order in which the participant mentioned that particular resource (Figure 14).

Figure 14

Matrix Illustrating Students' Preference Order of Information Resources

	AL	DB	KM	AR	DeK	ME	DoK	JI	DaK	JE	YE	# students	Total times mentioned
Internet	1	2	1	1	2	1	2,4,6,8	1	1	1	1	11	14
Faculty		1	2	4	2,4	2	3	2		2		8	9
Friends			3	3		5	7	1			3	6	6
Univ Library	3	3			3				2	3	4	6	6
Experts	2				1	4		2		2		5	6
"Info Places"	1						2,4,6,8	2		2		4	7
Family				1	1	3	5					4	4
Other Univ Libraries	4							1		4		3	3
Employer							1,6,8				2	2	4
Local Library	5									5		2	2
Popular Magazines				1,2								1	2
TV				1								1	1
University Catalogs								1				1	1
Links among students and resources	7	3	3	10	9	5	18	16	2	9	4		

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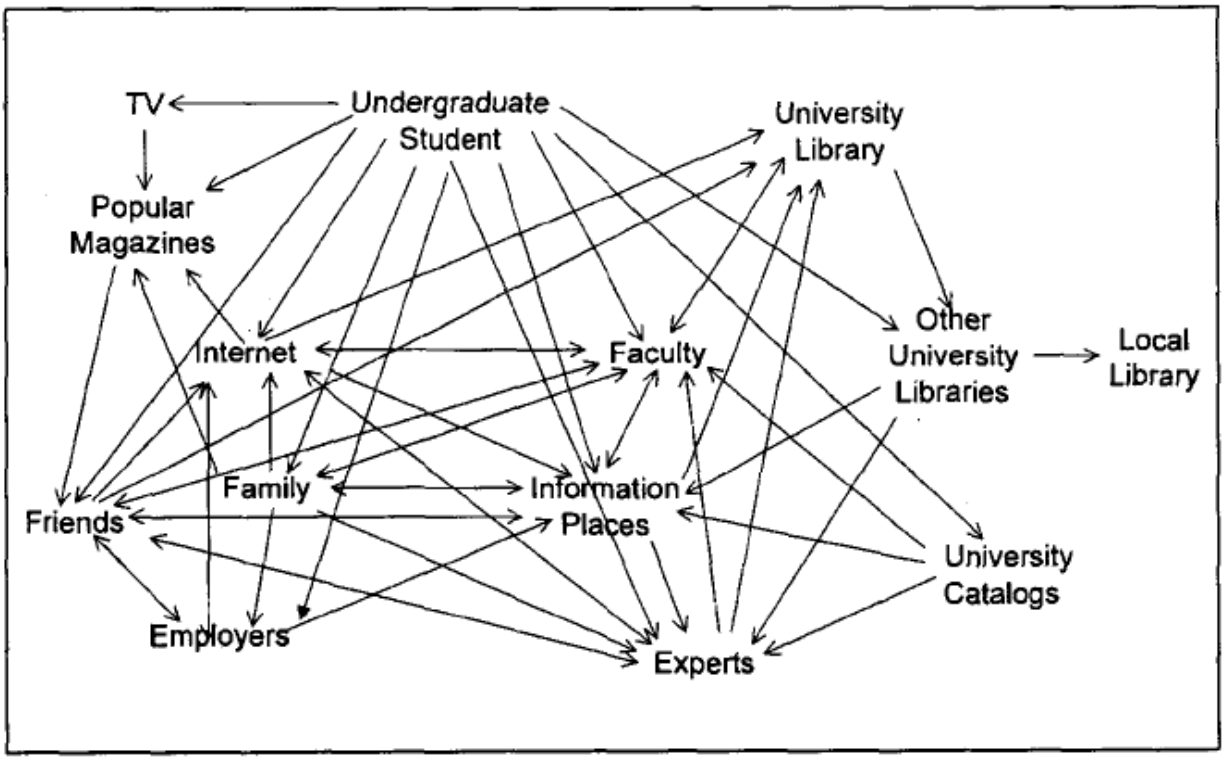
Based on this matrix, the researcher creates an aggregated information horizon map combining the maps of the participants (Figure 15). When participants indicate a directional relationship between resources, those resources are connected on the map by an arrow. If there is not a specific directional flow between resources, they are connected by a line.

Figure 15

Network of Information Resources for Students



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The researcher examines the matrix for patterns in information seeking. Sonnenwald and colleagues (2001) identify four patterns: sequential chain, breadth-first, cyclic, and branching/fan. In the sequential chain pattern, participants use resources sequentially. In the breadth-first pattern, participants prefer to access multiple resources initially, having more than one resource in their first or second tier. In the cyclic pattern, participants move through multiple loops of using information resources. In the branching or fan pattern, participants have multiple resources at multiple levels of preferences.

Another type of potential analysis is to examine what types of nodes are present in the information horizon maps. This involves creating a matrix with the information categories as the rows and the following columns: total times mentioned, total number of links, unique links, outgoing links, and incoming links (Figure 16). By examining this matrix, the researcher can identify the types of nodes present.

Sonnenwald and colleagues (2001) identify five types of nodes: ending resource, starting resource, balanced resource, recommending resource, and focusing resource. An ending resource has connections coming into it but none going out from it. A starting resource has connections going out from it but none coming into it. A balanced resource has connections both coming into it and going out from it. A recommending resource has more connections going out from it than coming into it, while a focusing resource has more connections coming into it than going out from it.

A third type of analysis involves examining places on the map where links are absent. A matrix can be created to examine this that has the categories as rows and the following columns: no connections with, no outgoing connections with, no incoming connections with,

incoming and outgoing connections with (Figure 17). This type of analysis can reveal gaps where relationships might be built in the future.

Figure 16

Links Between Nodes as Representing Node Types

	Total times mentioned	Total # links	Unique links	Outgoing links	Incoming links	Node type
Internet	14	20	8	13	7	Recommending
Faculty	9	19	7	7	12	Focusing
Friends	6	13	6	7	6	Balanced
Univ Library	6	11	6	3	8	Focusing
Experts	6	12	8	4	8	Focusing
"Info Places"	7	14	9	5	9	Focusing
Family	4	8	6	6	2	Recommending
Other Univ Libraries	3	7	5	5	2	Recommending
Employer	4	6	4	3	3	Balanced
Local Library	2	2	1	0	2	Ending
Popular Magazines	2	4	4	1	3	Focusing
TV	1	1	1	1	0	Starting
Univ Catalogs	1	3	3	3	0	Starting

Note. Reprinted with permission from "A research method to investigate information seeking using the concept of information horizons. An example from a study of lower socio-economic students' information seeking behavior," by D. H. Sonnenwald, B. M. Wildemuth, and G. L. Harmon, 2001, *The New Review of Information Behaviour Research, 2,* p. 75. Copyright 2001 by Taylor Graham and contributors. taylorandfrancis.com.

Figure 17

Relationships Among Resources and Incoming and Outgoing Connections

Resource	No Connections with:	No Outgoing Connections with:	No Incoming Connections with:	Incoming & Outgoing Connections with:
Faculty	Employers Local libraries Other univ libraries TV Popular magazines	Experts Univ catalogs		Info places Internet Univ library Friends Family
Internet	Univ catalogs Other univ libraries Local libraries TV	Family Friends	Info places Popular magazines Univ library	Faculty Experts Employers
Info Places	TV Popular magazines Local library	Employers Internet Other univ libraries Univ catalogs	Univ library Experts	Faculty Family Friends
Friends	TV Local library Other univ libraries Family Univ catalogs	Popular magazines	Univ library Internet	Experts Info places Employers Faculty
Experts	TV Popular magazines Local libraries Employers	Univ catalogs Other univ libraries Info places Family	Faculty Univ library	Friends Internet
Univ Library	TV Popular magazines Local libraries Employers Family Univ catalogs	Experts Info places Friends Internet	Other univ libraries	Faculty

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Applications

Academic-Related Information Needs

Sonnenwald, Wildemuth, and Harmon (2001) described the initial use of the information horizon map and interview technique with a group of 11 undergraduates who were participating in an electronic mentoring program. All participants were between the ages of 19 and 23, African American, and students at a "historically minority university in a rural, economically depressed area in the U.S." (Sonnenwald et al., 2001, p. 69).

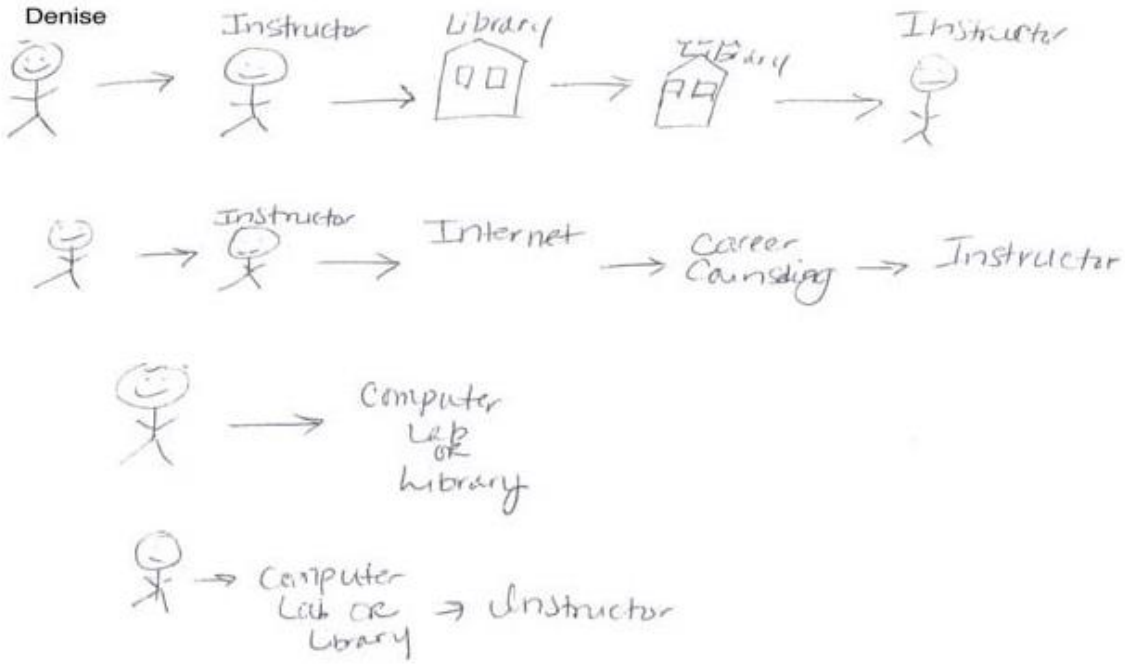
Participants "reported they used 13 different information resources, including the Internet, university faculty, friends, 'information places,' experts, their university library, family members, popular magazines, other university libraries, television, employers, and university catalogs" (Sonnenwald et al., 2001, p. 73). "Information places" were specific locations, such as career centers or hospitals, where participants could go to get the information they needed, while experts were paper authors, individuals with personal or career experience in the topic they were studying, and mentors. Almost all students listed the Internet as their first choice; few information places appeared to recommend participants use the Internet. Information places had more connections with face-to-face resources, such as faculty and friends. The university library was not a preferred resource and was poorly integrated with other information resources; the data suggested that the library did not recommend or suggest many other resources to students.

Samuel (2001), working with Sonnenwald and colleagues' data, describes four layouts students used in their information horizon maps: linear, scatter, star, and box (Figures 18 - 21). Samuel suggests that researchers should consider the relationships between "umbrella" resources, such as the library or the Internet, and their sub-resources, such as

books or particular websites. Samuel also describes three categories of resources participants can be considered to prefer: people resources, when an individual "chooses a majority of human resources to supply their information, such as professors, family, or other students" (p. 40); electronic resources, when information seekers "use mostly technical resources over all others, such as the World Wide Web or electronic databases in lieu of paper or people resources" (p. 41); and paper resources.

Figure 18

Example of Linear Pattern



Note. Reprinted with permission from *Routes and Resources on the Information Horizon Map: Understanding Undergraduate Students' Information Seeking Patterns and Preferred Resources to Enhance Bibliographic Instructio*n, by Monecia Samuel, 2001, p. 30. Copyright 2001 by Monecia Samuel.

Figure 19

Example of Scatter Pattern

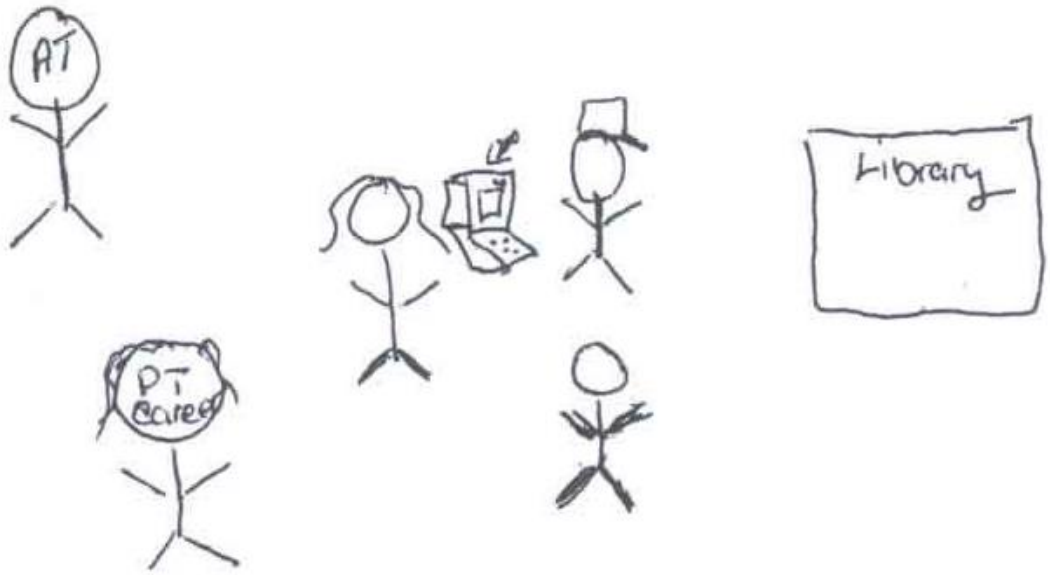


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Figure 20

Example of Star Pattern

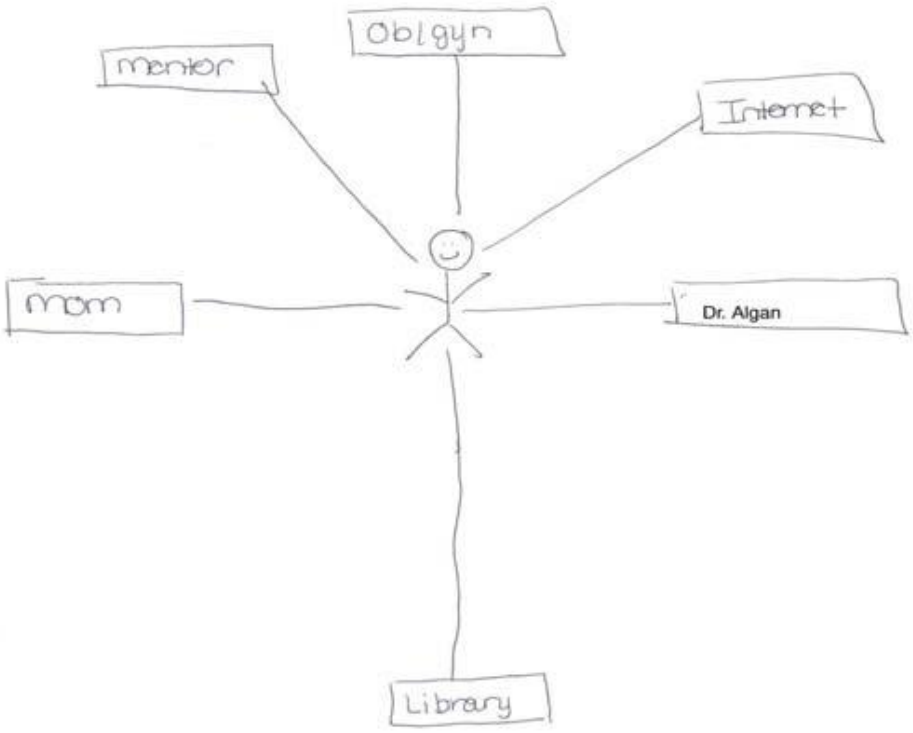

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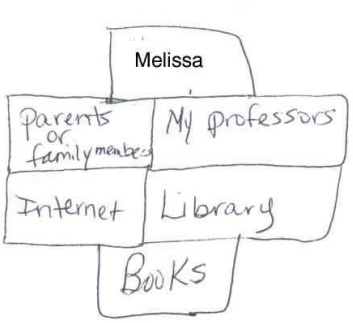
Figure 21

Example of Box Pattern



Note. Reprinted with permission from *Routes and Resources on the Information Horizon Map: Understanding Undergraduate Students' Information Seeking Patterns and Preferred Resources to Enhance Bibliographic Instructio*n, by Monecia Samuel, 2001, p. 31. Copyright 2001 by Monecia Samuel.

Other researchers have also used the information horizon map and interview technique with participants in an academic setting, usually for research related to their academic information needs. Jiang, Yeh, and Lin used the technique to explore "graduate students' information seeking behavior during the processes of inquiry and scholarly activities" (2008, p. 1). They investigated the following research questions:

> 1.What context and situation of do shape *[sic]* graduate students' information seeking behavior?
> 2.What information resources do graduate students value, and where do they find them?
> 3.What are the collaborative relationship *[sic]* between graduate students and information resources?
> 4.What factors shape graduate students' information seeking behavior? (Jiang et al., 2008, p. 1)

All ten of the study's participants were graduate students with full-time jobs living in Taipei, Taiwan. The researchers asked the participants to "describe the information resources and

explain their importance and role in the information seeking process" (Jiang et al., 2008, p. 1) and to draw information horizon maps.

Graduate students tended to choose their research area based on their work experience; their discipline served as a context for their information behavior. Graduate students expressed preferences for electronic resources, social networks, institutional resources, in-class learning materials, and print materials. Like the participants in Sonnenwald and colleagues' study, these graduate students expressed a strong preference for electronic resources, including university-subscribed databases, discipline-related websites, and library websites. They tended to prefer discipline-specific electronic resources over broader resources such as Google. Participants did not indicate that social networks or institutional resources were preferred; Jiang and colleagues (2008) attribute this to their limited time on campus and their focus on full-time work. Of the social networks and institutional resources they mentioned, participants indicated a preference for professors, classmates, and the university and local libraries.

Jiang and colleagues (2008) used Sonnenwald et al.'s (2001) method of identifying node types depending on incoming and outgoing connections. They found that most electronic resources were recommending resources, sending participants elsewhere; Yahoo, professors, and the university library were focusing nodes, with more connections coming in than going out. Participants were generally unfamiliar with library services and, though they preferred discipline-specific databases, had not learned to use these databases through library instruction. Participants perceived libraries as important resources for obtaining physical materials, but not as recommending resources. As in Sonnenwald and colleagues' (2001) study, the library was poorly integrated with other information resources.

Steinerová (2014) used information horizons as a way to gain insight into PhD students' information literacy practices. The relationship between information horizons and information literacy will be discussed more fully later in this chapter. In a set of 19 semi-structured interviews with PhD students, 17 participants drew information horizon maps. Steinerová set out to answer the following research questions: "What are the patterns and differences in the information horizons maps? How is information use experienced? Which metaphors hidden in information horizons are useful for information literacy research?" (2014, p. 70).

Steinerová's participants included nine males and eight females; nine were students in the social sciences and humanities, four in the natural sciences, and four in the technical sciences. Steinerová observed disciplinary differences in information needs and strategies, but found that PhD students' information behaviors shared common characteristics such as needs including "finding focus, expert support, networking and collaboration" (2014, p. 70) and strategies including "browsing, filtering, citations, and monitoring of journals and authors" (p. 73). Participants doing empirical research tended to prefer electronic resources over traditional resources, while participants doing theoretical research tended to prefer people as information resources. Participants working in the social sciences and humanities used more detailed categorization in their information horizon maps than participants working in the natural and technical sciences did. Books, articles, the internet, and colleagues were the most frequently mentioned resources. Documents (including books) were the highest priority resource, followed by advisors and colleagues. While many participants indicated electronic resources as the first resource they consulted, the strongest relationships seemed to be between participants and their advisors. Friends and social networks were

marginal resources, but participants indicated a preference for informal resources such as media and meetings over more formal resources such as databases and colleagues. Many participants included themselves as an important resource, especially in the social studies and humanities.

Steinerová identified three major information use patterns in participants' information horizon maps: the interactional pattern, the sequential pattern, and the evolutionary pattern. Details of these patterns are explained in Table 8. It is important to note that Steinerová's collapsing of social sciences and humanities into one category may have elided some distinctions between the information practices of scholars in these two disciplines.

Doiron (2019) examined the information behavior of graduate students in the University of Toronto's Faculty of Information who were learning French as a second language. Doiron conducted semi-structured interviews with three graduate students who were students of beginning or advanced French. These interviews included information horizon maps. Doiron found that social learning was as important as or more important than text-based and in-class learning. Doiron also found that external motivation, in this case the perception that learning French would provide increased employment opportunities, influenced information behavior.

All participants in the study were critical of formal, in-class education. They felt that this format focused too heavily on written French. This instruction taught basic skills such as vocabulary and grammar well, but did not provide the opportunity to practice practical, social, and verbal interactions. Participants indicated a strong preference for one-on-one learning or immersive learning. They found information through word-of mouth or online

searches. Rather than use one resource to recommend others or focus their search, participants tended to try different resources individually. The results of these trial-and-error searches "shaped future search strategies and queries" (Doiron, 2019, p. 76).

Table 8

Information Use Patterns

Pattern	is marked by...	can be defined as...	is used in...
interactional	Multiple interactions, directed links with resources, cyclical movement between resources, networking, branching, monitoring	Finding context and making sense of information	Social and natural sciences
sequential	Traditional information seeking process, filtering and selection, chaining, problem solving, progressing from reference resources to other resources	Information problem-solving	Technical and natural sciences
evolutionary	Knowledge growth, learning, steps, a spiral	Understanding and cognitive development	Social sciences and humanities

Note. Adapted from "Information Horizons Mapping for Information Literacy Development," by J. Steinerová, 2014, *Information Literacy. Lifelong Learning and Digital Citizenship in the 21st Century*, p. 77. Copyright 2014 by Jela Steinerová.

Interest-Related Information Needs

Few studies have used information horizon maps to explore personal interests. Bromberg explored "the music management and collection behaviours of three students in their early twenties with developed musical tastes and daily interactions with digital music streaming or storage platforms" (2019, p. 60). In semi-structured interviews, Bromberg asked participants about "the potential roots of their musical tastes, how and when they listen to music, and their preferred methods or personally developed systems of organizing their music collections" (2019, p. 63). Bromberg then asked participants to graph their music collecting information horizon.

Bromberg's research is different from other information horizon studies not only because it focuses on a personal interest, but because it seems to take a broader view of an information horizon. The studies described earlier in this chapter all seemed to focus primarily on information seeking, while Bromberg's participants include influences on their musical tastes, how they find music, and how they curate music. Bromberg does not provide the specific interview protocol used in the study, but based on the description of the interview, it seems likely that Bromberg's questions prompted participants to take this more expansive view of an information horizon.

Bromberg found that "In an effort to organize their personal digital music libraries, these informants rely on a combination of social, collaborative and individual collections, designed for different listening moods and audiences" and "the act of curating personal playlists is like creating one's own familiar bubble or world within a broader and more overwhelming music information landscape" (2019, pp. 68–69).

Bromberg's work focused on individual collectors who referenced social and collaborative information behaviors, but the research did not take place in an explicitly social setting. Frederick (2019), however, investigated a participatory community cooking group. In the group, participants would have weekly meetings where they created a meal together. Participants ranged in age from their teens to their thirties Participation was on a drop-in basis, with not required registration or expectation of consistent participation. Different people volunteered to lead each week, choosing a recipe to make and share. Frederick focused on "the nature of information in the program and how information is shared among participants" (2019, p. 2). Frederick used embodied information and group interaction as sensitizing concepts.

Frederick collected data via both participant observation and information horizon interviews conducted with two of the group's participants. Frederick found that information sharing among participants was non-hierarchical, with leaders asking other participants for feedback and suggestions and various participants sharing ideas back and forth. Frederick also found that information sharing was cyclical, with participants sharing information with others the same way it had been shared with them. For example, one participant had learned certain techniques from her mother via verbal instruction and demonstration and used those same methods of information sharing when sharing techniques with other members of the cooking group. Participants used their bodies to obtain information; for example, one participant thought she was chopping cilantro but only realized she was chopping parsley after another participant commented on the parsley's smell.

The cooking group in Frederick's study demonstrates some of the features of affinity spaces, with participants focused on a common endeavor (cooking), engaging in social

activity, coming from a wide variety of experience levels, and taking on a variety of roles. Martin (2012a) more explicitly sets her study of information horizons in an affinity space, interviewing players of *World of Warcraft* who use a variety of portals such as in-game chat, Reddit forums, and game wikis to interact in the affinity space. Martin (2012a, 2012b, 2013) conducted information horizon interviews with 10 teenage boys who played *World of Warcraft* and found that they used a wide variety of sources and processes to find information and interact with the constellation of information around the *World of Warcraft* game space. She also found that players tended to use different sources and interact with information in different ways based on their level of experience with the game, with novice players engaging in general searches because they were still becoming familiar with the resources surrounding the game and experienced players serving as mentors, offering information to help other players.

Extensions

Analytical Information Horizon Maps

Huvila (2009) introduces the idea of using information horizon maps for data analysis instead of data collection. Huvila presents this as a solution to a variety of challenges that may prevent a researcher from using information horizon maps directly with participants, including lack of resources, interest in group behaviors, lack of comparability between individuals' information horizon maps, or "a need to gain a deeper analytical insight into an informant's information horizon than a self-drawn diagram permits" (2009, p. 18). In Huvila's method, the researcher draws a variety of information maps in order to analyze and depict the "information horizons of a shared information activity" (2009, p. 19).

To demonstrate this use of information horizon maps, Huvila (2009) describes a study in which researchers conducted thematic interviews with 25 Finnish and Swedish archaeology professionals. Participants' work responsibilities "ranged from education to field archaeology, museum work, and cultural heritage management" (2009, p. 19). Thematic interviews involved freeform thematic discussion and storytelling, active semi-structured interviews, reflection, and an imagination exercise. Through these activities, interviews asked or prompted participants to elucidate how they obtain information, "how and when they used different kinds of information resources," "their motivations and the objectives of their work," and "ideal information resources to support their work," as well as asking them to describe a specific case in which they conducted information seeking activities in the process of producing archaeological information (2009, p. 19).

The researchers conducted a schematic analysis and identified seven work roles mentioned by participants in their interviews:

> 1. academic teaching (education of future archaeologists at universities)
> 2. field archaeology (excavations and archaeological field work)
> 3. antiquarian (collection management and artifact analysis duties at archaeological museums and research institutions)
> 4. public dissemination (popularization of archaeological knowledge in different forms: books, films, museum exhibitions and workshops)
> 5. academic research (archaeological)
> 6. cultural heritage administration (cultural heritage management duties in state organizations responsible for the preservation of archaeological heritage)
> 7. infrastructural development (development of methods and tech-niques for archaeological work, e.g., analysis methods, information systems, or best practices). (Huvila, 2009, pp. 19–20)

The researchers then created an information horizon map depicting "the information resources involved in representative patterns of information use" for each work role based on the interviews (Huvila, 2009, p. 20). The goal of this process is not to represent the

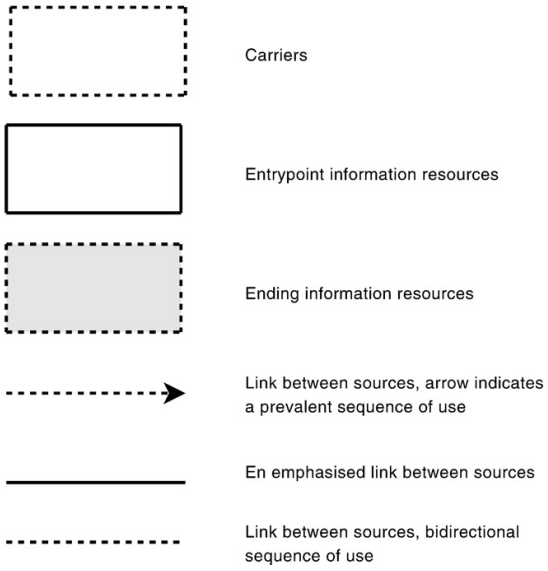
information horizons of individual actors, but rather to provide a typified information horizon for a given work role.

Because the researchers were generating the analytical information horizon maps (AIHMs), they did not have to aggregate sources, create an aggregate map, and only then determine whether sources were starting sources, ending sources, focusing sources, recommending sources, or balanced sources. They could use the interviews to determine these characteristics as they were building the maps, and indicated these qualities by using specific types of borders and lines in the maps themselves, as depicted in Figures 22 and 23. Researchers were also able to use the dimensions of breadth and depth to indicate the variety and significance of different information sources: "A deep information horizon focuses on a limited (i.e., narrow) variety of information resource types, but these resources are perceived to be highly significant. In a broad information horizon, more resources are perceived to be potentially very significant" (Huvila, 2009, p. 25).

Huvila (2009) concludes that AIHMs can provide comparability in a way that participant-drawn information horizon maps cannot. They offer a quick overview of information horizons at a glance, which neither text nor tables are able to do. They are able to "articulate shared components of information resource use" (Huvila, 2009, p. 27). Finally, they can draw on data collected across multiple sessions and using a variety of data collection methods.

Figure 22

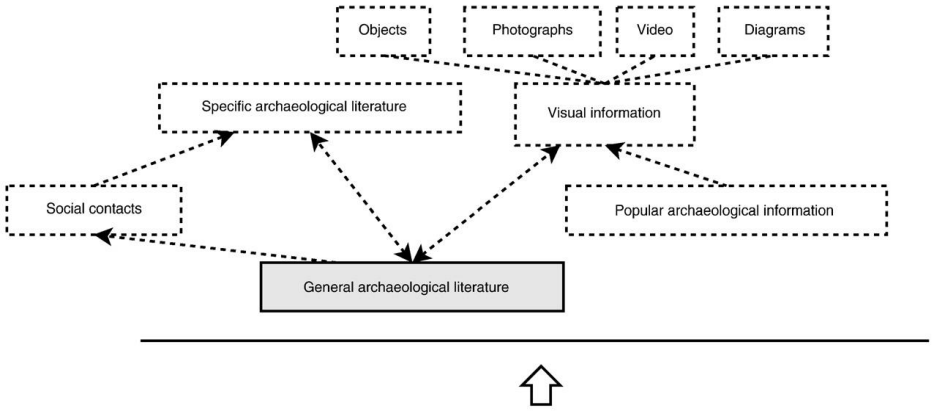
Notation Used in Analytical Information Horizon Maps (AIHMs)



Note. Reprinted with permission from "Analytical Information Horizon Maps," by I. Huvila, 2009, *Library & Information Science Research, 31*(1), p. 22 (DOI: 10.1016/j.lisr.2008.06.005). Copyright 2008 by Elsevier Inc.

Figure 23

Information Horizon of the Academic Teaching Work Role



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Information Source Horizons

Building on Sonnenwald, Wildemuth, and Harmon's (2001) technique, Savolainen and Kari (2004) introduce the concept of an information source horizon. The information source horizon is a spatial metaphor, in which "an imaginary field... opens before the 'mind's eyes' of the onlooker, for example, information seeker" (Savolainen & Kari, 2004, p. 418). Focusing on relevance as measured by the accessibility and quality of a source, the information seeker can place the most significant sources nearest to themself, then the next most significant slightly further, with the least significant sources close to the horizon line "indicating the outmost boundary of his or her area of interest" (Savolainen & Kari, 2004, p. 418). These horizons are situated within a perceived information environment, in which all the sources of which the seeker is aware or has used are present.

The information source horizon "covers only a part of the actual information environment" (Savolainen & Kari, 2004, p. 418). Savolainen and Kari illustrate the concept using an information source horizon map that features three zones (Figure 24). They point out that information source horizons can be stable, depicting how an individual values sources across a variety of situations, or dynamic, depicting how an individual values sources while pursuing a particular problem or information need. The same source may be located in different zones depending on the information need, and different information horizons may overlap and share information sources.

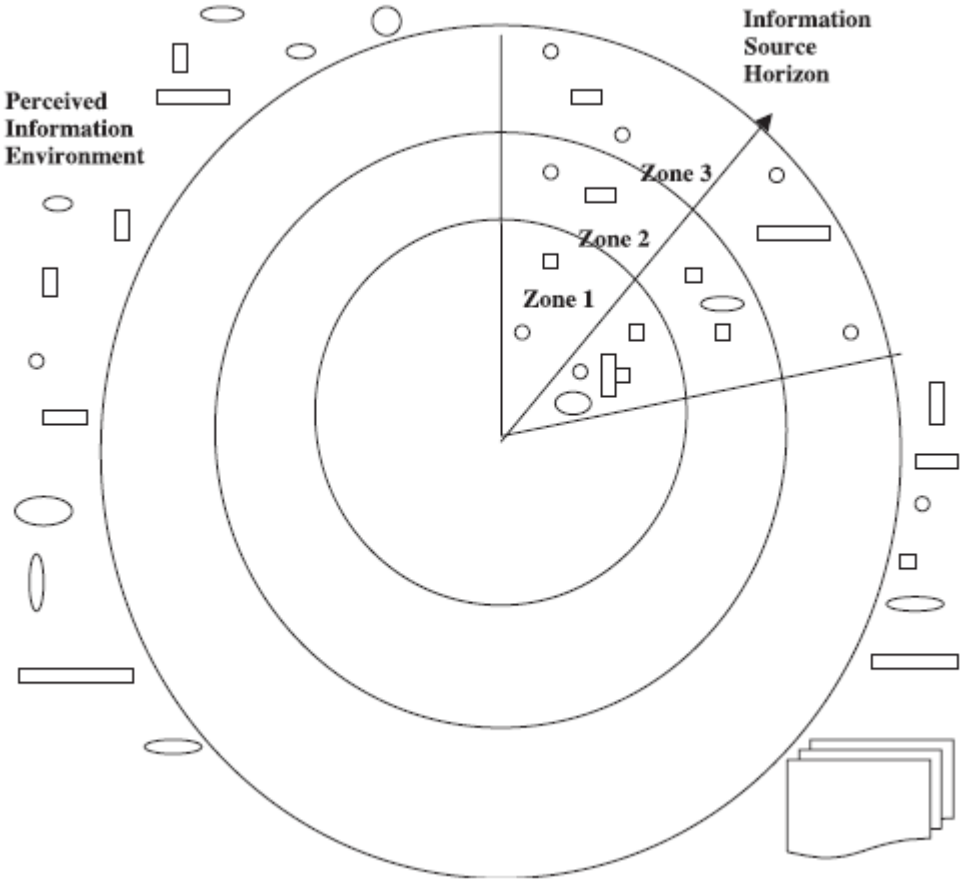
Savolainen and Kari (2004) recruited participants by asking public libraries, adult education centers, and a computer club for senior citizens to forward a recruitment email to their own connections and advertise the study on their websites. They recruited eighteen participants, twelve females and six males, between the ages of 10 and 70 to explore how

they judged sources on the Internet that they used for personal development projects such as hobbies or recreational studying. They conducted semi structured interviews, asking participants "to describe their ways of using the Internet in everyday information seeking" and to draw a picture on a provided diagram (Figure 24) with three nested circles placing the most important circles in the center circle (Zone 1), the next most important sources in the middle circle (Zone 2), and the least important sources in the outer circle (Zone 3). In the innermost circle, human sources (31%), networked sources (29%), and printed media (26%) were all preferred about equally. A greater variety of sources were preferred in the middle circle, and participants placed the greatest variety of sources in the outer circle. Only three participants placed the Internet in this outer zone.

Many participants struggled with determining which sources to place in Zone 2. Savolainen and Kari point out that "People tend to value a limited number of really important sources (Zone 1), and the number of sources deemed peripheral (Zone 3) also remains low because there is no particular interest to enumerate them" but that criteria for placement in Zone 2 may be less rigorous than that for placement in Zone 1 or " because Zone 2 is conceived as a broader repertoire of potentially useful sources, which may be taken into use if sources placed in Zone 1 fail to meet one's information needs" (2004, p. 427).

Figure 24

Information Source Horizon and Zones of Source Preferences



Note. Zone 1 = most strongly preferred information sources; Zone 2 = information sources of secondary importance; Zone 3 = peripheral information sources. The shapes such as T illustrate various types of information sources; however, the individual shapes were selected arbitrarily, and thus they do not stand here for specific types of sources, for example, printed media. Reprinted with permission from "Placing the Internet in Information Source Horizons. A Study of Information Seeking By Internet Users In The Context Of Self-Development," by R. Savolainen and J. Kari, 2004, *Library & Information Science Research, 26*(4), p. 420 (DOI: 10.1016/j.lisr.2004.04.004). Copyright 2004 by Elsevier Inc.

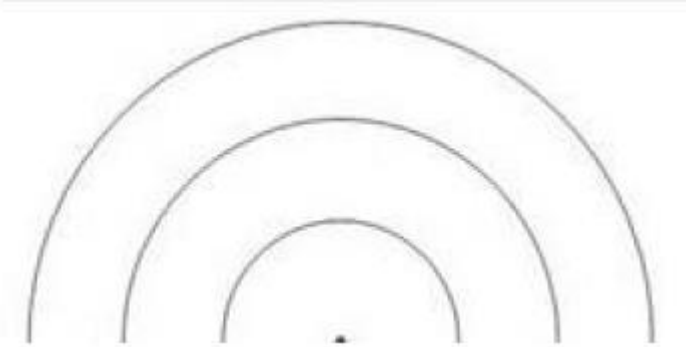
Comparing Information Horizon Maps, Information Source Horizon Maps, and Analytical Information Horizon Maps

Hartel (2017) compares and critiques the three variations of the information horizon map method. The original method, Hartel points out, provided a vivid way of visualizing undergraduates' information resource preferences. Sonnenwald and colleagues' (2001) study demonstrates that individuals are capable of drawing their information horizons. Hartel points out that there are many ambiguities in the method as originally described. It does not specify a particular writing instrument, a particular writing surface, a preferred dimension or orientation of that writing surface, or whether multiple colors can or should be used. Hartel also points out that the instructions for drawing the map do not provide guidance as to whether participants should use text, graphic objects, or both. Hartel suggests, "These seemingly inconsequential variables actually impose a relative size, shape, and character to the information horizon diagram that gets generated" (2017, sec. "Sonnenwald's information horizon").

Hartel (2017) indicates that Savolainen and Kari's (2004) information source horizon map provides the researcher with more control over the production of the graphical representation. This more precise method may be especially appropriate "when source identification, preference, and relevance are the research goals" (Hartel, 2017, sec. "Savolainen's information source horizon"). Hartel critiques Savolainen and Kari's use of a full 360-degree circle to represent the information source horizon, as this surrounds the participant rather than depicting a field opening in front of them. Hartel proposes a modified template for the drawing that resolves this contradiction between the definition of information source horizon and the graphical depiction of it (Figure 25).

Figure 25

Potential Modification of the Data Gathering Instrument for an Information Source Horizon Interview



Note. The panoramic drawing canvas more closely resembles the information source horizon as described by Savolainen and Kari (2004). From "Information Behaviour, Visual Research, and the Information Horizon Interview: Three Ways," by J. Hartel, 2017, *Information Research, 22*(1), "Savolainen's information source horizon" (http://informationr.net/ir/22-1/colis/colis1635.html). Copyright 2017 by Jenna Hartel.

Hartel describes Huvila's (2009) creation of analytical information horizon maps as "a deft act of metatheoretical gymnastics," pointing out that it takes Sonnenwald and Savolainen's focus on an individual's mind and shifts it "to a socio-cognitive (Jacob and Shaw, 1998) or domain analytic perspective (Hjørland and Albrechtsen, 1995) that represents the information practices of a social world" (Hartel, 2017, sec. "Huvila's analytical information horizon map"). Huvila's construction of these maps results in a more precise graphical representation than Sonnenwald's or Savolainen's methods. Hartel notes, however, that such attention to graphical precision requires a great deal of time "to master and apply

the complex theoretical framework" and a "need for significant skill and fluency in the visual realm" (Hartel, 2017, sec. "Huvila's analytical information horizon map").

Given the differences between these three methods, Sonnenwald and colleagues' (2001) original information horizon mapping methodology is most appropriate for the current study. This dissertation study focuses on how individuals situate themselves in the constellation of information surrounding the cosplay affinity space. This exploratory and individual focus makes the information horizon mapping method appropriate because it relies on participants' own depictions and it allows them to create their own visual and spatial metaphors. The simplicity of the approach fit within the limits of this study, requiring only that participants have a writing surface and writing utensil of their choosing; to implement Savolainen and Kari's method (2004), the researcher would have needed to find a way to either provide physical copies of the information source horizon zone diagram or have participants create their graphical representations digitally. Sonnenwald's method is also a better fit than Savolainen and Kari's for the current study because the study is less about identifying relevance and more about describing an information landscape. Huvila's (2009) method may be useful for future studies that seek to document shared information practices in the cosplay affinity space, while Savolainen and Kari's method may be useful for studies that focus on identifying the importance of particular resources in the space.

Conclusion

While Sonnenwald's (1999, 2005) description of the framework uses the phrase "human information-seeking behavior" to describe individuals' activity in an information horizon, this framework's focus on situation, context, social networks, and relationships aligns with the sociocultural perspective on information practices discussed in the

information literacy practices chapter of this dissertation. Information horizons, in particular, are consonant with Lloyd's concept of information landscapes (Lloyd, 2006). Information horizons consist of different resources, relationships, and boundaries depending on their situation and context. They can expand as one resource provides access to another. Different information landscapes require different skills, practices, and affordances to be accessible and different "modalities of information are valued, used and contested" (Lloyd, 2010c, p. 45). One way to imagine the information horizon in relationship to the information landscape is that the information horizon depicts a particular set of resources, and the situation and context within the horizon is situated may be considered an information landscape with its own topography, climate, and ecology depending on the other actors in that landscape. Information literacy can be considered "the ability to know what there is in a landscape and to draw meaning from this through engagement and experience with information" (Lloyd, 2006, p. 570). The information horizon might be considered a graphical representation of the "what there is" part of this description.

This dissertation study serves as an introductory exploration of the possibility that information literacy practices individuals enact in pursuit of their personal interests may be relevant to other spheres of life as well. It asks how cosplayers situate themselves within the constellation of information surrounding the cosplay affinity space. A key assumption underlying this study is that cosplayers successfully navigate their information horizons to meet their cosplay-related information needs. Samuel, drawing on Sonnenwald and colleagues' (2001) research, suggests that "Librarians or academics studying information seeking or teaching bibliographic instruction should initially consider how students actually search for information independent of a library's context" (2001). Samuel suggests that

information horizon maps are a powerful way to understand an individual's current information practices and can guide information literacy instruction. Samuel's assertions support the adoption of the information horizon theory and mapping method for this dissertation study.

CHAPTER 6: METHODOLOGY

This study addressed the following research question:

How do cosplayers situate themselves within the constellation of information available around their affinity space?

The study described below is informed by Dr. Crystle Martin's methods in her study of the information literacy practices of *World of Warcraft* players (2012a, 2013). The original study was designed to apply Dr. Martin's methods to another affinity space, the cosplay affinity space, providing validation or extension of her original framework. Due to limitations from the novel coronavirus (COVID-19), the original design of the study was curtailed so that the resulting study focuses only on one method of capturing the information literacy practices of cosplayers: the information horizon interview and map methodology. These limitations are discussed further in the limitations section of this chapter.

Participants for this study included cosplayers who had been cosplay guests at fan conventions in the Triangle or Triad area of North Carolina and other cosplayers recommended by cosplayers in the initial sample. In a video call conducted through Microsoft Zoom, each participant responded to a graphic elicitation question about their cosplay-related information horizon, participated in a semistructured interview that asked about a variety of information-related experiences connected to their cosplay, and had the opportunity to revise their map after the interview. Data analysis consisted of analyzing the information horizon maps as described in the earlier "Information Horizons" chapter and

reviewing transcripts for detailed descriptions of the sources on the information horizon maps to support conclusions drawn from the maps.

Sampling

"Cosplayers create individual and shared environments and communities both online and in person" (Winge, 2018, p. 11). This study seeks to capture both individual and shared information literacy practices in both online and face-to-face environments but focuses on data collected in interactions with individuals to do so. I set out to conduct information horizon interviews with 10 cosplayers using Microsoft Zoom teleconferencing software. I chose this number based on Martin's (2012a) sample size.

Instead of using purposive sampling "to identify those participants who [could] provide [me] with the richest data" on cosplayers' information literacy practices (Wildemuth, 2009, p. 130), I used convenience sampling due to limitations placed on my time by the COVID-19 pandemic and related caregiving responsibilities. The primary qualification for inclusion in the study was that a potential participant had to be currently working on a cosplay project or have cosplayed at least once since 2012, when the diffusion of smartphones changed social networking and how Internet users communicate (Shah, 2014).

To recruit participants for the study, I used Instagram's direct messaging feature (Figure 26), posts to my personal cosplay-focused Instagram account (Figure 27), and snowball sampling methods.

Data Collection

To address the research question, "How do cosplayers situate themselves within the constellation of information available around their affinity space?", I conducted information horizon interviews with 10 cosplayers (Sonnenwald et al., 2001). The information horizon

map and interview methodology is designed to capture the following data about human information behavior:

- decisions made and activities undertaken during the information seeking process;
- when and why information resources, including individuals, are accessed (and not accessed);
- relationships or interconnectedness among information resources;
- individual preferences and evaluation of information resources;
- the proactive nature of information resources;
- and the impact of contexts and situations on the information seeking process. (Sonnenwald et al., 2001, p. 68) (bullets added)

Figure 26

Instagram Direct Message for Recruiting Purposes

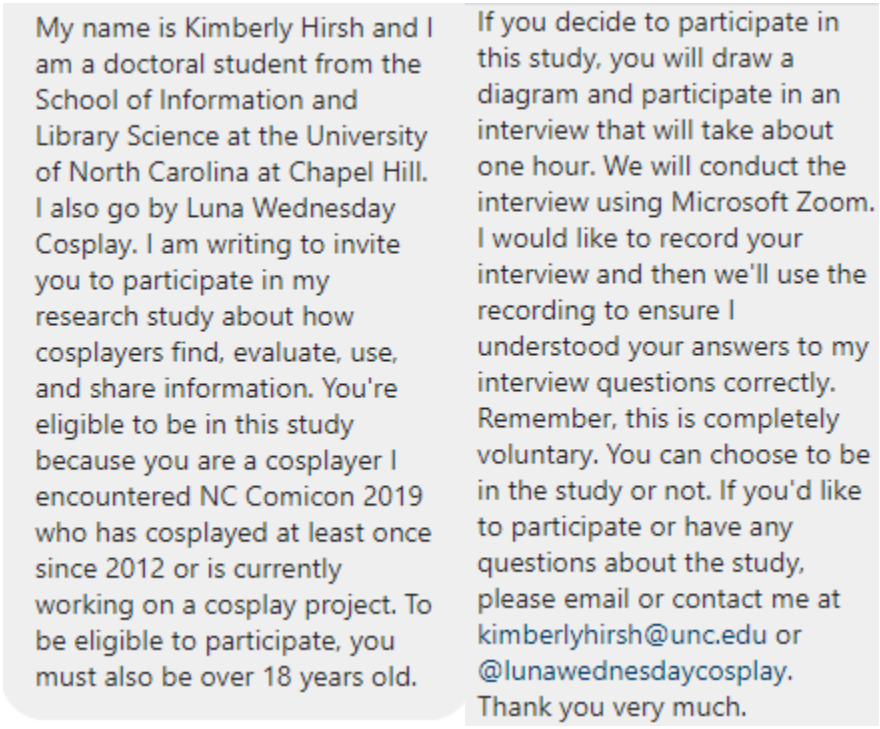


Figure 27

Images Shared in an Instagram Post for Recruiting Purposes

These interviews asked participants to create information horizon maps using the following instructions:

> "I would like you to draw an information horizon map. Locate yourself somewhere on the map and mark resources you use when you have an information need around

> cosplay situations, as well as connections you see between the information sources. The map can be whatever you want it to be; it is your visualization of your information horizon." (Modified from Martin, 2012, p. 44)

I encouraged the participants to talk about the map as they created it, using a think-aloud technique (Wildemuth, 2009). I then asked participants questions about their information seeking process and their maps using the semi-structured interview protocol in Appendix A. I took notes on and recorded these interviews, using the digital artificial intelligence transcription service Otter.ai to create an original transcription which I then corrected in preparation for data analysis. Participants held their map up for me to see on video during the interview and also either emailed or DMed me photographs of their maps.

I followed Sonnenwald's (2005) and Martin's (2012a) process, conducting the interview after the graphical task of drawing the information horizon map, but added an opportunity at the end of each interview for participants to revise their maps. The second participant I interviewed suggested that I ask participants to share specific resources they use, rather than just types of resources; I began to incorporate this into the map revision part of the interview, asking participants to include specifics during the revision time as well as noting specifics mentioned in the interview that were not on the original map and asking participants to add them to their maps.

Data Analysis

I used MaxQDA qualitative analysis software to analyze the data. This software allowed me to incorporate both text and multimedia data. I loaded the video recordings of interviews into MaxQDA and was able to link the associated transcripts to those files. I also loaded all information horizon maps into MaxQDA, including revised versions for those participants who created them.

As Martin (2012a) did in her study, I analyzed the information maps both as an aggregate and by participant. The first step was to create a list of all the terms participants used in the information horizon maps with the frequency of use. The next step involved creating categories from this list and tallying their frequency of use. Having created these categories, I followed Sonnenwald and colleagues' technique (2001), generating a matrix with resource categories as rows and participant names as columns and placing in each cell the order in which the participant mentioned that particular resource (see Figure 28 for example from Martin's 2012 study).

Figure 28

Participant-Resource Matrix

Resource	Noel	Nick	Neil	Aidan	Brandon	Roger	John	Walton	# Students
Knowledge Compendium	1	2	1	3	1	3	2	1	8
Forums		2				4			2
Corporate Site		2							1
Guild Websites			2						1
General Search		1			2	1	3		4
Speculation Sites	4								1
Guides	2								1
Opinion Sites	3								1
Chat						5			1
In-Person				2		2	1		3
Strategy Guide		4							1
links from preferred sites		3							1
In-game resources				1			4		2
blog								3	1
Youtube								2	1

Note. Reprinted with permission from *Information Literacy in Interest-Driven Learning Communities: Navigating the Sea of Information of an Online Affinity Space* (p. 57), by C. Martin, 2012. Copyright 2011 by Crystle A. Martin.

I examined this matrix for patterns in information seeking, such as those Sonnenwald and colleagues (2001) identify. These include four patterns: sequential chain, breadth-first, cyclic, and branching/fan. In the sequential chain pattern, participants use resources sequentially. In the breadth-first pattern, participants prefer to access multiple resources initially, having more than one resource in their first or second tier. In the cyclic pattern, participants move through multiple loops of using information resources. In the branching or fan pattern, participants have multiple resources at multiple levels of preferences. I also analyzed the data with an eye toward patterns that Sonnenwald and colleagues may not have identified.

Based on this matrix and the participants' information horizon maps, I created an aggregated information horizon map. When participants indicated a directional relationship between resources, those resources were connected on the map by an arrow. If there was not a specific directional flow between resources, they were connected by a line.

Sonnenwald and colleagues (2001) examined what types of nodes were present in the information horizon maps in their study. This involved creating a matrix with the information categories as the rows and the following columns: total times mentioned, total number of links, unique links, outgoing links, and incoming links (Figure 29). By examining this matrix, they identified five types of nodes: ending resource, starting resource, balanced resource, recommending resource, and focusing resource. An ending resource has connections coming into it but none going out from it. A starting resource has connections going out from it but none coming into it. A balanced resource has connections both coming into it and going out from it. A recommending resource has more connections going out from it than coming into it, while a focusing resource has more connections coming into it than going out from it.

Figure 29

Links Between Nodes as Representing Node Types

	Total times mentioned	Total # links	Unique links	Outgoing links	Incoming links	Node type
Internet	14	20	8	13	7	Recommending
Faculty	9	19	7	7	12	Focusing
Friends	6	13	6	7	6	Balanced
Univ Library	6	11	6	3	8	Focusing
Experts	6	12	8	4	8	Focusing
"Info Places"	7	14	9	5	9	Focusing
Family	4	8	6	6	2	Recommending
Other Univ Libraries	3	7	5	5	2	Recommending
Employer	4	6	4	3	3	Balanced
Local Library	2	2	1	0	2	Ending
Popular Magazines	2	4	4	1	3	Focusing
TV	1	1	1	1	0	Starting
Univ Catalogs	1	3	3	3	0	Starting

Note. Reprinted with permission from "A research method to investigate information seeking using the concept of information horizons. An example from a study of lower socio-economic students' information seeking behavior," by D. H. Sonnenwald, B. M. Wildemuth, and G. L. Harmon, 2001, *The New Review of Information Behaviour Research, 2,* p. 75. Copyright 2001 by Taylor Graham and contributors.

Sonnenwald and colleagues (2001) also examined places on the map where links were absent. A matrix can be created to examine this that has the categories as rows and the following columns: no connections with, no outgoing connections with, no incoming connections with, incoming and outgoing connections with (Figure 8). Martin did not use either of these types of analysis because "most participants viewed all connections as non-

directional" (2012a, p. 45). I planned to use these two types of analysis only if the aggregated information horizon map heavily featured directional relationships.

Figure 30

Relationships Among Information Resources and 'Incoming' and 'Outgoing' Connections

Resource	No Connections with:	No Outgoing Connections with:	No Incoming Connections with:	Incoming & Outgoing Connections with:
Faculty	Employers Local libraries Other univ libraries TV Popular magazines	Experts Univ catalogs		Info places Internet Univ library Friends Family
Internet	Univ catalogs Other univ libraries Local libraries TV	Family Friends	Info places Popular magazines Univ library	Faculty Experts Employers
Info Places	TV Popular magazines Local library	Employers Internet Other univ libraries Univ catalogs	Univ library Experts	Faculty Family Friends
Friends	TV Local library Other univ libraries Family Univ catalogs	Popular magazines	Univ library Internet	Experts Info places Employers Faculty
Experts	TV Popular magazines Local libraries Employers	Univ catalogs Other univ libraries Info places Family	Faculty Univ library	Friends Internet
Univ Library	TV Popular magazines Local libraries Employers Family Univ catalogs	Experts Info places Friends Internet	Other univ libraries	Faculty

Note. Reprinted with permission from "A research method to investigate information seeking using the concept of information horizons. An example from a study of lower socio-economic students' information seeking behavior," by D. H. Sonnenwald, B. M. Wildemuth, and G. L. Harmon, 2001, *The New Review of Information Behaviour Research, 2,* p. 77. Copyright 2001 by Taylor Graham and contributors.

Trustworthiness

Sonnenwald and colleagues (2001) discuss the trustworthiness of the information horizon map method in terms of validity and reliability, terms that are traditionally used to describe quantitative research. Martin (2012a) does likewise. While the number of people who mention a given resource on their maps is reported in the findings, this is still a qualitative study. For this reason, it is more appropriate to consider trustworthiness criteria designed for qualitative research: credibility, transferability, dependability, confirmability, and originality.

Credibility

To address credibility, a researcher must demonstrate that they have represented the multiple mental constructions of participants adequately (Lincoln & Guba, 1985). One method of doing this is to triangulate data sources, using different sources, methods, investigators, or theories. This study uses information horizon maps to consider participants' maps and interviews together, thus using different sources. The combination of a graphical representation and a verbal interview provides different methods for addressing the research question. Participants' revised maps can be considered a third data source, increasing the depth of representation of participants' mental constructions of their information horizons.

Another method of demonstrating credibility is by conducting member checks, "whereby data, analytic categories, interpretations, and conclusions are tested with members of those stakeholding groups from whom the data were originally collected" (Lincoln & Guba, 1985, p. 314). In this study, participants had the opportunity to review the transcripts of their interviews and offer any additions or corrections, though none did so. They also had the opportunity to review the findings and provide insight as to their accuracy.

Transferability

Transferability addresses whether the methods or findings from this study can be transferred to other contexts. The methods in this study have the potential to be transferred for use with a variety of populations and affinity spaces. They might be used to investigate the information literacy horizons of almost any group of people. I have included thick description of both my methods and my findings to ensure transferability, so that others may readily replicate my methods and compare their findings with my own.

Dependability and Confirmability

Dependability and confirmability assess how stable the research process is and whether its findings can be confirmed by those who read the research. To address dependability and confirmability, I have kept detailed memos of the research process, documenting my decisions during data analysis, my positionality, and how my own experiences influence my findings.

Originality

To be original, research must provide a unique contribution to the field. This study provides a unique contribution on multiple fronts. The participants in this study are adults, while participants in earlier studies examining similar settings with the same methods have focused on teenagers (Bebbington, 2014; Bebbington & Vellino, 2015; Martin, 2012a, 2012b, 2013). The affinity space explored in this study is a blended space of online and in-person interactions, while many other affinity space studies have exclusively investigated online interactions (Magnifico et al., 2013). Finally, this study takes a sociocultural approach to information literacy research, an approach that has been used primarily in workplaces (Lloyd, 2006).

The Role of the Researcher

In qualitative research, the researcher herself is the instrument. As such, it is important that I disclose my biases, values, and background as they relate to the study. These issues had the potential to impact not only the design of my study, but also how I carried it out. Throughout the study, I maintained reflective notes documenting where I noticed my positionality impacting the study.

First, as a former school librarian who has myself provided information literacy education, I have my own views on what information literacy is, how it is best practiced, and how it is best taught. To mitigate this bias, I used *in vivo* coding to generate my original list of codes for the information horizon maps and interviews.

With respect to cosplay, my position is that of a lonely novice. By novice I mean that while I have, for twenty years or more, created costumes from ready-to-wear clothing and items I could craft myself using my knowledge of crochet or minor alteration, I do not have experience with advanced techniques such as crafting armor, sewing elaborate costumes, or creating props. The kind of cosplay I do is often called "closet cosplay" or "casual cosplay." By lonely, I mean that I did this primarily for parties at home and charity film screenings I attended with my family and close friends; I did not attend my first convention in costume until October 2017, and have only attended two other conventions in costume since that time. I have admired more advanced cosplayers for years, but have not interacted with them significantly online or in person. I have only recently begun engaging more deeply with the cosplay affinity space, rather than simply being an audience for other cosplayers.

My relative inexperience with cosplay as a social phenomenon places me in a position that has both benefits and drawbacks. As a novice, I am not in a position of power

within the cosplay affinity space itself. There was no concern that potential participants would worry that I might, for example, judge them harshly in a cosplay contest if they refused to participate in my study, as I am not experienced enough to be a contest judge. I am an insider to the community in some ways, and an outsider in others. I have gained familiarity with cosplay-specific vocabulary such as *costest* (trying a cosplay at home before performing it), *crossplay* (cosplaying a character of a different gender than your own), *genderbending* or *Rule 63* (cosplaying a character of a different gender than your own as if that character was your gender), and *racebending* (cosplaying a character of a different race than your own as if that character was your race). I am still learning other norms and practices, however, such as what platforms cosplayers use to interact online and how they organize group photographs.

As I remain somewhat of an outsider to this community, I needed to take care that I was not violating the community's cultural norms and values as I undertook this research. For example, the cosplay community has norms about photographing cosplayers, how those photographs may be used, and how they should be credited when shared. I included a release form along with my consent form to ensure that I did not violate participants' expectations or desires for the use of their image. Images of other cosplayers are used with permission or under fair use; all images of cosplayers are publicly accessible photos and most are featured in articles about cosplay.

Limitations and Conclusion

Information Horizon Maps and Interviews

While information horizon maps and interviews can provide detailed insight into how participants perceive their relationship to information resources and those resources'

relationships to each other, the method does have some limitations (Samuel, 2001). Participants' ability to create an information horizon map relies on their ability to recall past information seeking events as well as, potentially, to abstract from multiple information-seeking events. Using the think-aloud technique may mitigate some tendencies to leave things out, but there is always a possibility that a participant will forget a resource they have used or, depending on which scenarios they are recalling, highlight resources that may have featured more heavily at some times than others in their information-seeking process.

There is also the potential for fabrication on information horizon maps and in information horizon interviews. If participants believe the researcher has specific expectations of their responses, they may include resources that reflect that perception rather than what they actually use. It is not safe to assume that an information horizon map is a direct representation of a participant's cognitive understanding of an information horizon, as the very act of conducting an interview means that the map is shaped by a social interaction.

The current study was further limited by the technology used for the interviews. In a face-to-face setting, the researcher would be able to watch the participant drawing the map. In a virtual setting, this is only possible if the participant has the technology for digital drawing or to have a camera overhead as they draw. One participant in this study shared her screen as she digitally drew her information horizon map, but all others drew theirs on paper and were only able to share it with the researcher when they had completed the drawing.

COVID-19

This study met with a number of challenges, primarily due to its occurring during the COVID-19 pandemic that reached North Carolina in early 2020. In the original design for this study, information horizon maps and interviews were planned to be used alongside other

data collection techniques including face-to-face and online observation and artifact analysis. Sampling was intended to be purposive, selecting individuals who varied in their knowledge and experience related to cosplay and observation sites that were situated in information-rich environments. Data analysis would have involved not only analyzing the information horizon maps, but also conducting generic qualitative coding of field notes, transcripts, and artifacts using *a priori* coding developed by Martin (2012a) as she created her information literacy framework. This design would have aligned more closely with connective and affinity space ethnography, involving following links and participants across the various portals of the cosplay affinity space.

The first part of this research design that had to be set aside was face-to-face observation, as the University of North Carolina prohibited in-person fieldwork on March 13, 2020 (C. J. Myers, personal communication, March 13, 2020). Even had the university not banned this type of research, observation as originally designed would have been impossible, as it was set to take place at in-person fan conventions, all of which were cancelled over the course of the spring and summer of 2020.

My caregiving responsibilities changed during this time as well, so that I did not have the time or energy to devote to purposive sampling for interviews and online observation and artifact analysis. I conducted convenience sampling for the information horizon mapping interviews and planned to use the data analysis from that phase to inform the next phase of the study and point me to appropriate online portals for observation and artifact analysis.

As data analysis for the information horizon mapping interviews proceeded, I realized that it was providing rich data and there would not be enough time to collect further data and complete this dissertation as scheduled. For this reason, I chose to focus the dissertation on

the information horizon mapping interviews and conduct the other portions of the study as part of future projects.

While the information horizon maps and interviews provide rich data, that richness is limited both because of its source and its scope. This method of data collection provides a strong perspective on individual information literacy practices and hints at collective information literacy practices, but the observation and artifact analysis would have enriched the study's depiction of collective information literacy practices (Martin, 2012a).

The challenges brought about by COVID-19, however, are not exclusively limiting. Taking this opportunity to focus on the information horizon maps and interviews allowed me to describe in great detail the nuance of participants' use of particular information resources in a manner that may not have been possible had the study included other data. In addition, the study's original design provides a clear direction for future research focused on the information literacy practices of cosplayers.

CHAPTER 7: FINDINGS

Findings from the information horizon maps and interviews are presented in this chapter. The chapter begins with information about the recruitment process and participants. It then proceeds to show all participants' information horizon maps, both original and revised. Descriptions and quotes provide more details about the participants' information seeking processes and experiences, as well as their information sharing practices. The next section explores the resources mentioned, describing the data analysis process, elucidating categories based on all of the terms used in the information horizon maps, identifying patterns in resource use, and identifying information that participants discussed in their interviews but did not include in their information horizon maps. It ends with a set of examples of the uses of each resource and a conclusion.

Participants

Recruiting

Using Instagram's direct messaging (DM) feature, I contacted 8 cosplayers whom I had met or whose panels I had attended at two fan conventions in 2019. Another cosplayer was referred to me by a friend; this cosplayer initiated contact with me, also using Instagram DM. Of these 9 cosplayers, 8 responded to my initial invitation to participate; 7 agreed to participate and one asked for more information. Of the 7 cosplayers who agreed to participate, I was able to schedule interviews with 4. The others either did not have the time to participate during my initial recruitment period or did not respond to follow up messages

about scheduling an interview. I also posted a general call for participants on my Instagram account; this post received 8 likes and 0 comments. No participants were recruited via this method.

In each of the first 4 interviews, either I asked participants to recommend other possible participants or they recommended them unprompted. This resulted in another round of recruiting in which I contacted 10 cosplayers, again through Instagram DMs. In this round, all 10 responded and 6 scheduled interviews.

Participant Demographics

The participants in this study range from 22 to 45 years old and are all cosplayers with between 2 and 16 years of cosplaying experience. Of the ten participants, eight are female, one is non-binary (specifically genderfluid), and one is male. Seven described themselves as white or Caucasian, two as Black or African American, and one as Mixed. All have at least some college education, and participants live mostly in urban or suburban areas, with one living in a rural area near a medium-sized city. Most participants live in North Carolina or Virginia, but one lives in Chicago, Illinois. Specific demographic information about the participants is shown in Table 9.

Each participant chose the name that would be used for them in the study; some chose their real names and others chose the names they use in cosplay settings, but none chose a pseudonym aside from the ones they use for cosplay. If they chose to use their real names, I only use their first name or first and middle initials in this chapter.

Participants had complete control over what they chose to include or not include in their initial map. Their revised maps feature resources they mentioned in their interviews that

I asked them to add to their maps at the end of the interview as well as resources they thought of during the interview.

Table 9

Demographic Information for Participants

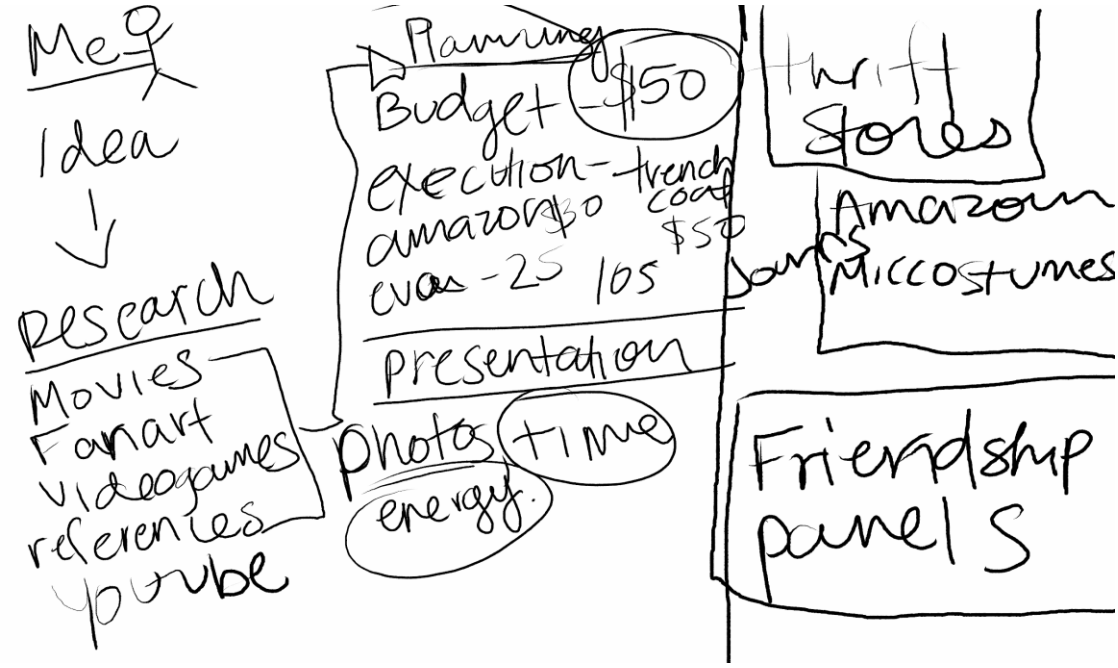
Participant Name	Years Cosplaying	Gender	Age	Level of Education	Race/ Ethnicity	Location
Damaris	2 - 3	Female, but sometimes presents as masculine	22	Bachelor's	Black or African-American	College town, urban area that is "turning suburban"
Amanda	10 - 11	Female	27	Undergraduate	Mixed	Suburban
G. C.	7	Non-binary genderfluid	32	Bachelor's	White, German/ British/ Scotch-Irish	Suburban
Kit	4 - 5	Female	24	Bachelor's	White	Suburban
Taylor	6	Female	28	Bachelor of Arts	Caucasian	Urban
Darth Claire	16	Female	36	College graduate	Caucasian	Urban
Allie	12	Female	32	Master's, two bachelor's	Caucasian	Rural
Caz	9	Female	45	Master's	Caucasian	Suburban
Norman	4	Male	26	Some college	African-American	Urban
Red Baran	5	Female	27	Bachelor's	Caucasian	Urban

Information Horizon Maps and Interviews

Damaris

Figure 31

Damaris's Information Horizon Map



Note. Damaris's revisions are to the right of the vertical line.

Damaris locates herself in the top left corner of her map, representing herself with a stick figure (Figure 31). Damaris's map is sequential: she begins her map with the idea for her costume, organizing the rest of it in sequence according to the different phases of the creation process. Damaris focuses heavily on the various types of reference material she might use to create the design of her costume. As an example, she discusses the reference material she might use to create a cosplay of the character Sephiroth from the video game Final Fantasy VII, which was released in 1997 with a remake released in 2020:

> In this case, because it's a video game it’s going to come in several different forms. And since it's a video game, that's also 20 plus years old, I have a ton of resources that I can go to, um, we're lucky to live in an age where we have movies, especially in Final Fantasy right now there's a lot of movies, we've got fan art, I count as research because a lot of times with fan art they also do in exorbitant amount of research before creating the art because they sometimes they want to get accurate sometimes they want to take a creative liberty, it really depends on the artist varies in that sense. Let's see what else obviously the video games and references. I typically will make a Pinterest board or a folder on my phone when I see an image that I like when I see a screenshot that I like if it's something that's harder to get a reference for. I might watch the media and take my own screenshots in between whenever like, oh, he turned around in this shot. Let me take a picture of that because it's hard to find back shot images of whatever it is...And this may or may not amount to anything. It doesn't always amount to anything. But you have to culminate all of that research into an idea and then try and execute it based off of that.

Beyond that, she emphasizes considerations such as budget, time, and energy over resources or types of resources. In her interview and in follow-up emails, Damaris mentioned several resources she uses including Google, a variety of resources created by famous cosplayer Kamui Cosplay, thrift stores, both in-person and online retailers, conventions, and panels. I asked her to add these to her map. She drew a line to the right of her initial map and added the other resources she mentioned, grouping them by thrift stores, retailers, and people-related resources.

Damaris views thrift stores and retailers as a source of inspiration for construction. Because they are not from the original source media for the costume, they are not the same as the references she describes earlier in the interview. They do offer her ideas, especially related to executing the costume through construction. She might look at a retail version of the costume she is trying to create for ideas with respect to how to build hers, as well as for areas that she wants to be sure to improve upon over the retail option:

> Miccostumes is a good reference because you can sort of see how they execute these costumes. And typically store-bought costumes always have something that's just a little bit tacky, or that's just not great because they're cheaper and they're not always the best quality. ...so I like to go there and see like, Okay, um, I would do this but this

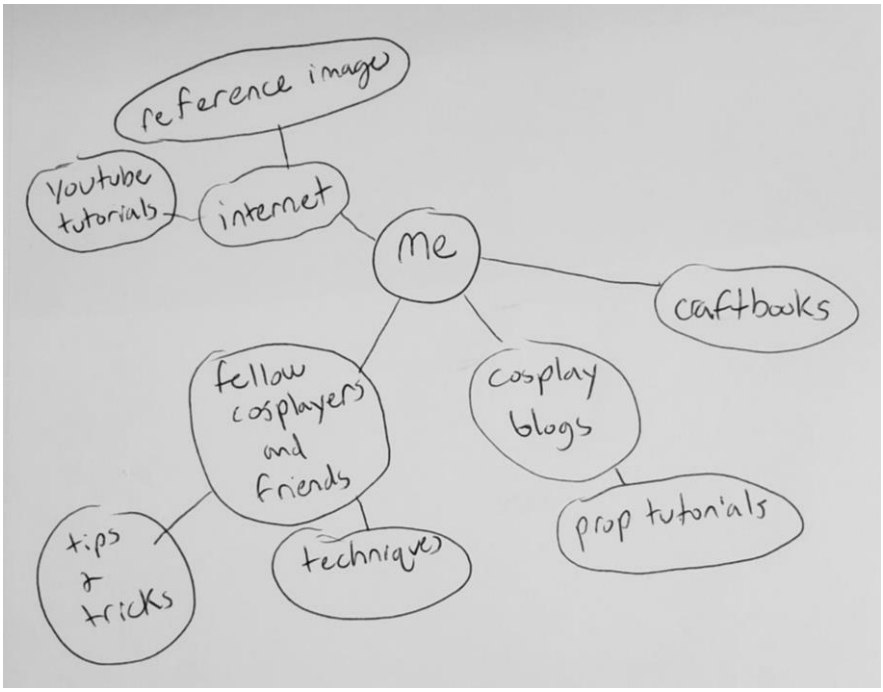
is what I'm going to change here. Because I don't like the way that looks, or maybe in terms of armor with Sephiroth, in particular, if you order a Sephiroth costume online his pauldrons are not going to be built foam armor like I've been making here. You know, his pauldrons are going to be some kind of fabric or something that's gray and flimsy. And so I can say okay, I like… this about the costume, but those pauldrons, they've got this shape. They've got this... but they're not what I'm looking for in this case. So here's how I'm going to change it.

From YouTube videos, convention panels, and brainstorming sessions with friends, Damaris learns specific construction techniques. With respect to YouTube, she references Kamui Cosplay and Kinpatsu Cosplay, two channels where cosplayers offer step-by-step instructions for creating a variety of props and costume pieces. She has, in the past, created similar tutorials and shared them on YouTube herself.

Amanda

Figure 32

Amanda's Information Horizon Map



Amanda has placed herself at the center of the map (Figure 32) and identified the four types of resources she uses: Internet, fellow cosplayers and friends, cosplay blogs (a separate category here from internet), and craft books. Each of these resources except for craft books is expanded with the type of information she is looking for in these locations: on the internet she looks for YouTube tutorials and reference images; she goes to fellow cosplayers and friends for tips and tricks as well as techniques; and she goes to cosplay blogs for prop tutorials.

Amanda explains the benefits of using a YouTube tutorial for wig styling:

> ...when I was styling a wig for one of my cosplays it was about when I started styling I hadn't really done a lot and it was terrifying because you know, you cut away and you can't really grow it back. But I went to I think it was it was either YouTube or it was Arda Wigs YouTube… and people had just posted oh here's how we cut bangs and here's how we make them stay up straight and that was nice because it was literally a step by step tutorial and I just had a lot less nerves about it and got the results I was looking for.

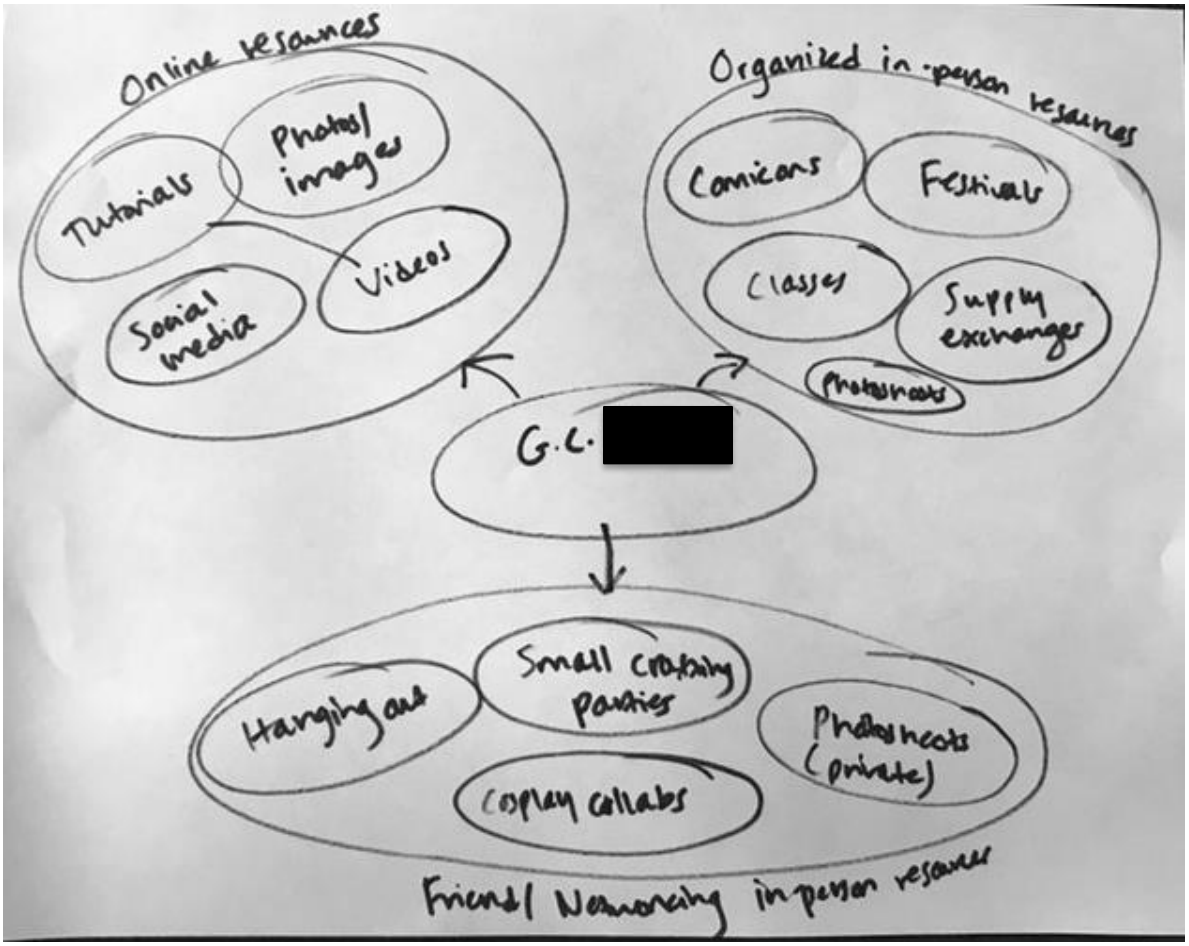
Amanda offers an example of the type of technique she might learn from a cosplayer friend:

> -I have never done body paint before and it was on my list of things I want to do. So I talked to one of my cosplay friends… because she's done full on body paint very successfully, and she told me the brand she likes and how she applied it and where she got it. And the pluses and minuses and which ones she found stayed on better, which ones left streaks of color everywhere. And that was really nice because I just had one conversation and I just got all the answers I needed at the time.

G.C.

Figure 33

G.C.'s Original Information Horizon Map



G.C. places himself at the center of the map with resources moving out from him in a star shape (Figure 33). He organizes his resources into three categories: online resources, organized in-person resources (i.e. formally organized), and friend/networking in-person resources (i.e. informally organized). Online resources include tutorials, photos/images, social media, and videos. Organized in-person resources include Comicons, Festivals, classes, supply exchanges, and public photoshoots. Friend/networking in-person resources

include small crafting parties, private photoshoots, hanging out, and cosplay collaborations where two or more cosplayers work together to create related costumes.

G. C. goes to tutorials first when he's learning how to do something for the first time. He uses social media to connect with other people and identify new sources of information. He connects tutorials and videos because, in his words, "I find video versus written tutorials to be, of course similar and what they're teaching me but very different as far as what I get out of them." When he finds an abundance of tutorials aimed at achieving a particular result, G. C. combines techniques from several tutorials to achieve his desired outcome:

> I think a concrete example of that would actually be Kirishima from *My Hero Academia*. And I've done a few different versions of him. And actually two different wig styles because I did like a punk version where I wanted a very kind of like stylized, spiky wig. And then I did just sort of like the more canonical version where I wanted it to look more like a realistic what his hair would look like. And so because that series is so popular, and that character so popular, there were a ton of really good wig styling tutorials out there that I could use. There were also just a ton of good like wig spiking general tutorials that were not character specific, but just tell you you know, if you've never done spikes on a wig before, you know if you're doing an anime character that has very spiky hair, or if you're doing sort of like this punk style spiking, here are some tips and tricks and so I probably, I probably read like 10 or so different spiking and also like maybe several more Kirishima-specific spiking tutorials that really helped me figure out how to get each wig looking the way I wanted it to. And that was nice just because I was able to incorporate elements from different tutorials to kind of get the overall finished product that I wanted so that it's a little bit different from anything else that I saw out there, but it still played on it and used some of the knowledge that had come before…

G. C. also discusses combining information gained from tutorials with information from friends:

> ...one character that I wanted to incorporate prosthetics for is Hades from Disney's *Hercules*...He has this very long chin, this very pointy nose and sharp teeth and so I was just like, Okay, how am I gonna achieve this look, and and not just sort of through makeup but through prosthetics as well. And what I was able to find I was able to build some pieces, just from, you know, sculpting a chin and a nose brushing liquid latex over them, and then filling them with cotton and sticking them on… I actually found out about that through a friend who had kind of gone through I think some similar issues and like I was just at a crafting party… my friend had done some

> things with like mixing latex and cotton to form sort of a sculptish material to make masks and prosthetic pieces... I'd also found a few tutorials on how to do prosthetic chins and noses that were similar method to that as well.

G. C. does a lot of visual research using photographs and other images as reference materials. In some cases, these reference materials may be used to ensure accuracy to a character's costume, but in other cases they may be used to inspire an original costume idea:

> So one ongoing project I've been working on is I'm doing a Victor Nikiforov wedding dress. So this is kind of an alternate universe sort of thing where I'm imagining, you know, since Victor and Yuri get engaged on *Yuri on Ice*, I'm like, what would their wedding outfits look like? And so my friend and I are going to actually visualize this. And I had to do a lot of research into, you know, kind of traditional things that you see in Russian style wedding ball gowns… my process was kind of you know, first gather all the visual references and so, you know, I started with just looking at actual wedding dresses in Russia, looking at kind of different elements that are common, you know, versus just things that I wanted to have for the character, and using that... I gathered a lot of images and resources on materials from all over the web.

G. C. tends to use Google Images and Pinterest to search for this type of visual resource.

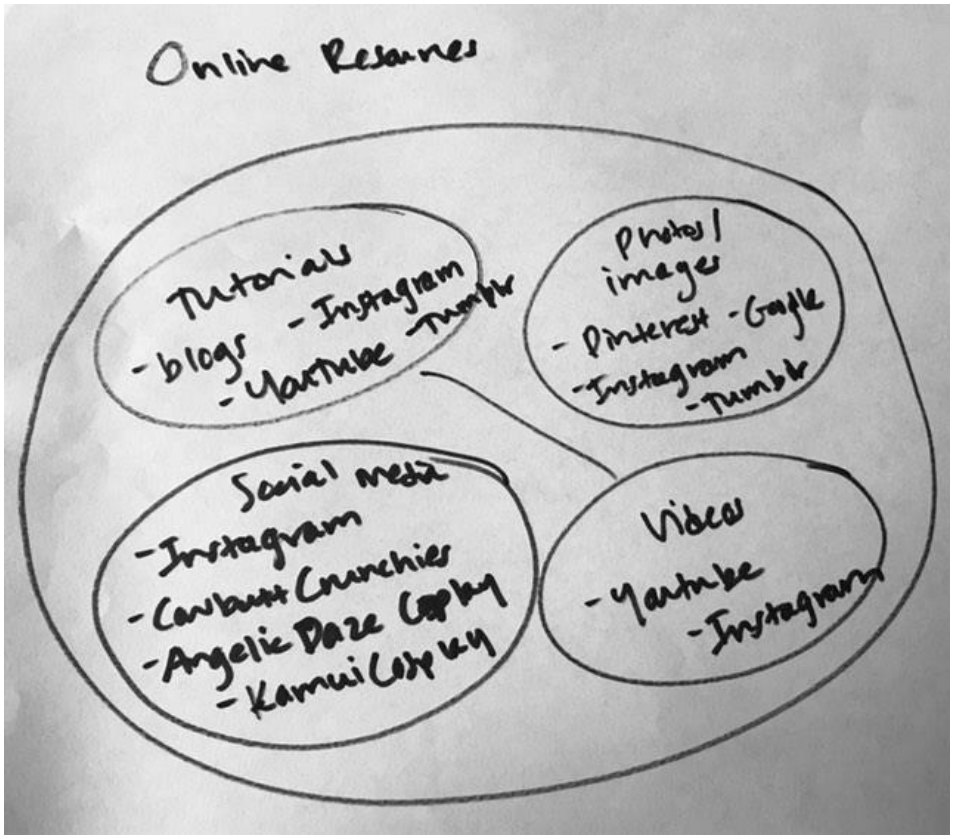
G. C. creates and shares information as well as seeking it. He described the process of making an arm covering to appear to be a prosthetic arm like that worn by the character Bucky Barnes in the Marvel Cinematic Universe films. He found several tutorials but none of them used the materials he wanted. Through trial and error and multiple iterations of the costume, he found a process that achieved the desired result and was relatively comfortable to wear. G. C. created a tutorial and shared it on the hybrid blogging/social networking service Tumblr. G. C. sees this as a way of giving back to the cosplay community:

> I look for resources like that, so I try to put them out there if I've learned something, especially if it's something where I've seen that there's an information gap, and I have not found another tutorial quite like the one I'm going to write, I'm like, okay, there's clearly a need for this to exist, so I'm going to make it happen.

After I asked him to add to his map specific people and platforms he goes to for cosplay-related information, G.C. revised his map (Figure 34) to include a number of specific platforms and content creators in the Online Resources category.

Figure 34

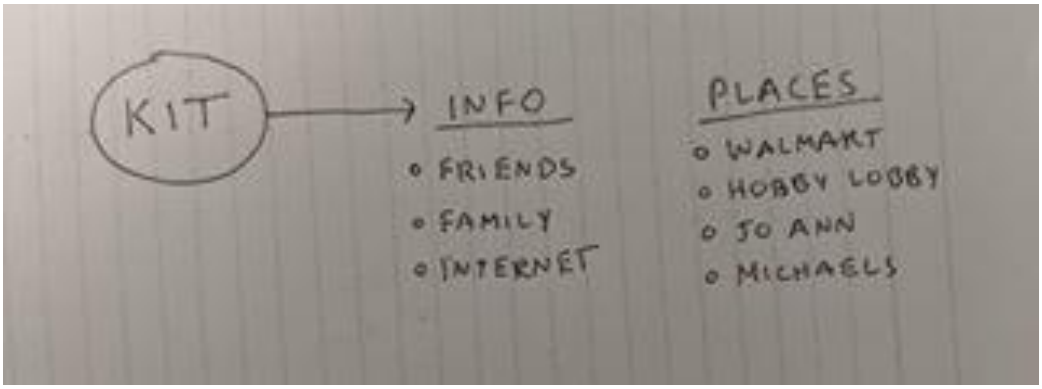
G.C.'s Revised Online Resources Information Horizon Map



Kit

Figure 35

Kit's Original Information Horizon Map



In her initial map (Figure 35), Kit places herself at the left side of the map and divides her resources into two lists: information resources and places. Information resources include friends, family, and the internet. Places include Walmart, Hobby Lobby, Jo Ann, and Michaels.

Kit offers an example of asking a family member for help:

> ... I recently built a armored Sylveon, which is a Pokemon, so I built an armored version of that Pokemon. And one of the problems I had was putting together all of the pieces of the costume... I had shoulder pauldrons... and I had to figure out how to put the shoulder pauldron on the costume. Because it wasn't fitting right. And I wasn't confident with the way it looked. So I went to my dad... And I said, "Hey, Dad, help me figure out how to put this on here." We ended up deciding not to put it on the costume at all, which is a little bit sad for me because I worked so hard on it. But at the same time, he helped me to figure out that problem and it turned out the cosplay was great.

Kit also described an occasion when she relied on another cosplayer's photographs of the process of building their costume to figure out how to build her own:

> So my first cosplay that had armor that I made was a armored Sailor Jupiter… Basically, what happened is I was traveling the world at the time. So I only had

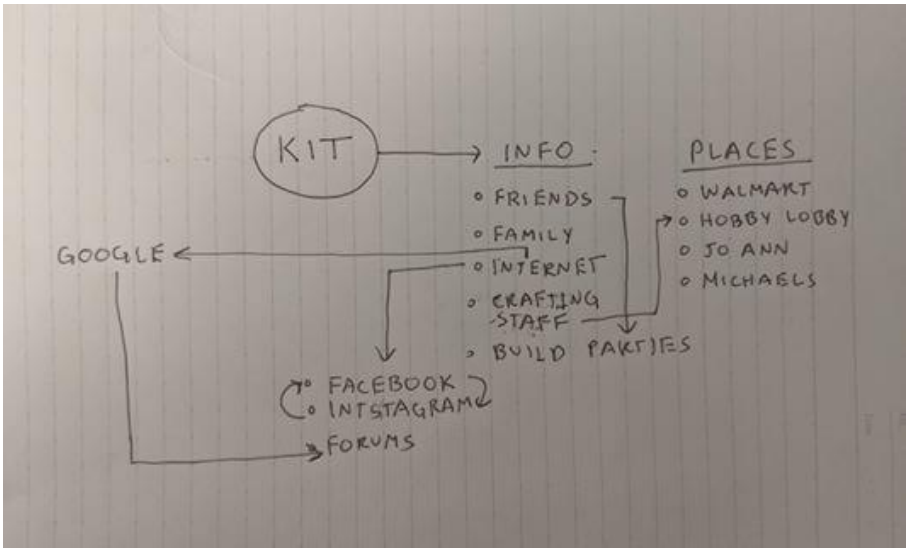
> limited time at home. So I had a grand total of three weeks to make the costume and I was like, “Okay, I have fan art of this costume. How do I make it? I don't know how to make this. I've never worked with armor before.” That kind of thing… So in order to figure out how to make the costume, I did some research. And I found out that there was somebody who already made that costume and I used their pictures of their progress to aid in my creation of the armor and it turned out great.

Kit found Facebook especially useful for finding these kind of progress photos, as a cosplayer could create an album on their Facebook page and add many pictures to it over time, in contrast with Instagram which has a limit of 10 photos in one post and no easy way to link multiple posts over time. Kit also used this affordance of Facebook to share her own progress photos and direct cosplayers who needed help to look at them.

When I prompted her at the end of the interview to revise her map to include specific platforms, people, or organizations, Kit added several details and relationships that were not in her original map, indicating a complex web of connections she uses to find cosplay-related information (Figure 36).

Figure 36

Kit’s Revised Information Horizon Map

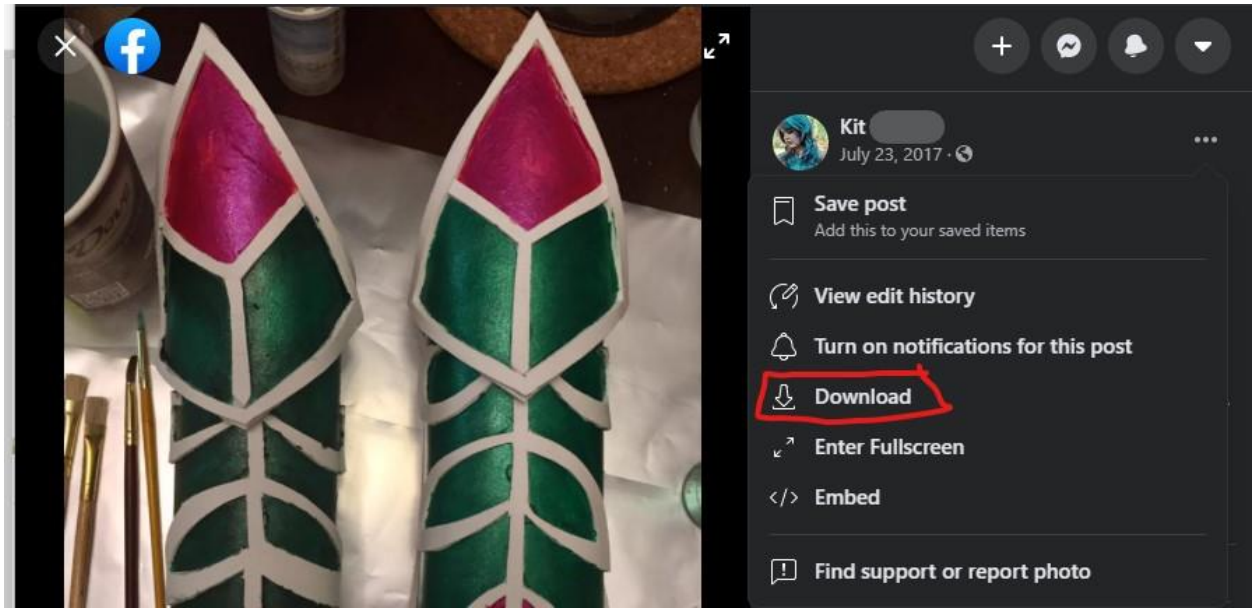


Kit visits Walmart, Hobby Lobby, JoAnn, and Michael's, all of which are stores, primarily to purchase supplies, but the connection between "Crafting Staff" in her "Info" column and "Hobby Lobby" in her Places column depicts the fact that in some of her interactions with staff at Hobby Lobby, she has asked for help determining which fabric is most appropriate for a project depending on features such as how the fabric drapes and whether it is likely to wrinkle; employees there have been able to assist her.

Kit describes the relationship between Facebook and Instagram as "basically like a wheel." She might find a cosplayer on Instagram and look for a link to or ask if they have a Facebook page. She uses Instagram to follow updates, whereas she uses Facebook to look at progress photos, as described above. Similarly, if she finds a cosplayer while looking for progress photos on Facebook, she might track down that cosplayer's Instagram account and follow it. In this way she can both keep up with a cosplayer's latest work and their progress over time, learning about what they are up to recently and also leveraging any resources they may have provided that would help with costumes she herself is constructing. One thing Kit can do on Facebook that is not possible on Instagram is to directly download photos from other people's progress photos. Facebook has a link to download a photo (Figure 37). On Instagram, a user can create a capture of their screen or inspect the code on the backend of a post to find a URL for the image. The direct download from Facebook is much simpler than trying to get an image from Instagram.

Figure 37

A Progess Photo on Facebook



Note: This is pne of Kit's Sailor Jupiter progress photos with the Download link indicated

Kit connects Google with forums in her map because the only time she goes to forums is when they come up in a Google search. She connects friends to build parties because they are small events organized by a group of friends and can be a rich resource:

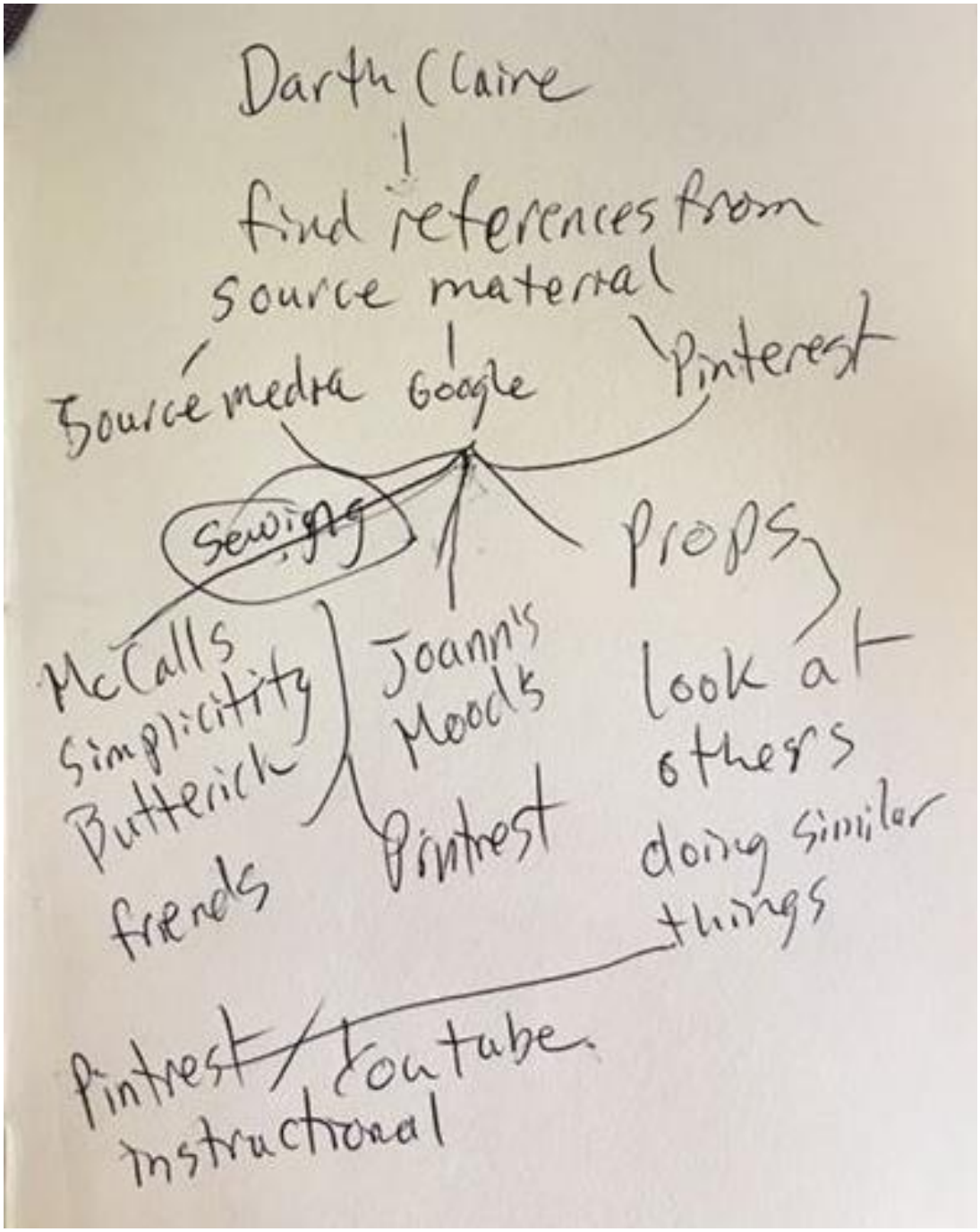
> I basically do with my friends, we do what are called build parties, where we take our costumes, all of our individual costumes that we're working on in progress stuff, and we all get together in someone's house, and we work on our costumes together. And from there we can exchange like if I'm having issues with foam one of my friends [can] be like, "Hey, you could try this." Someone else is having an issue with sewing. I can help them maybe, that kind of thing. So… that's a big source for information…

This echoes G. C.'s story about getting information on how to do the prosthetic nose and chin for Hades at a small crafting party and Damaris's reference to having "sessions" with her friends where they get together and work on projects.

Darth Claire

Figure 38

Darth Claire's Information Horizon Map



Darth Claire places herself at the top of the map (Figure 38). Her map is a hybrid of a sequential map focused on the creation process and a map that is more focused on where she finds resources. She indicates that she uses the source media, Google, and Pinterest to find references from the source material. Her costumes tend to involve sewing; reference images from the source material help her determine what kind of pattern she needs and whether she can use one that exists or will have to draft one herself:

> ...my General Leia cosplay, I had a difficult time trying to figure out how to do the neckline on that one. And I had to take a pattern that had the same general silhouette, but the neckline was a single seam. It wasn't a sewn-in collar... I couldn't find anything that was like that. And so I had to just kind of draft that myself more or less I made like a mock up off of the base pattern and then just kind of left extra length in the collar to, you know, try and figure that out myself. And yeah, that one was a little tricky because I couldn't really find any good tutorials or anything that really was helpful in solving that problem… she's got a coat over a dress. And actually, I found set photos where she's not wearing the coat. So that helps me because you don't see a lot of the dress. So sometimes those underlayers are really hard to find reference images for so you just have to based on what you can see, take your best guess.

She uses Google to find further resources for two cosplay-related activities: sewing and prop-making. For sewing, she indicates that she relies on pattern companies, fabric stores, friends, and Pinterest. For example, she uses Pinterest to find sewing blogs with tutorials when she needs help adjusting a pattern for a more custom fit:

> I had to do a full bust adjustment for several cosplays because patterns are not drafted for large chests. And so I had to go in and... figure out how to accommodate that without like the gapping up the shoulders. Because with a commercial pattern it's either too tight in the chest or it's too wide in the shoulders… didn't take me long to find multiple tutorials and various ways on how to do that… there were a bunch of sewing blogs that people linked on Pinterest that were very useful for that.

She does not need a great deal of instructional help here because she is an accomplished sewist. She is less confident in her prop work, so she looks at others doing similar things to what she wants to do, looking specifically for instructional resources on Pinterest and YouTube. This isn’t always successful:

> ...with my Wonder Woman shield, the answers that I found weren't necessarily things that I could do. I had like a big sheet of foam. And I was trying to cut out a foam circle and then I covered it in Worbla which is a thermal plastic, and I just had a hard time molding it to the right shape, just mostly due to the size of the piece of Worbla that I was working with. There just wasn't a good way to heat it to a consistent temperature while keeping it in the shape that it needed to be…. I think the answers I found were like, you can put this in the oven and let it settle. No, I can't, it's too big or, you know, strap the foam to a yoga ball. And I'm like, I don't have a yoga ball. And I'm not going out to get one so the solutions were there. They just weren't things that I was able or willing to do.

Darth Claire shares information mostly through informal one-on-one conversation, especially at conventions or via Instagram direct message. She also points out that when she is collaborating with someone, she is able to work together with them to share ideas and make plans together. She often collaborates with G.C.:

> ...if I'm working with somebody like G.C. we share information, compare ideas, especially when we did the matching Victor and Yuri costumes, we had to decide on the same process and materials so that it would match appropriately. So we worked together, compared notes.

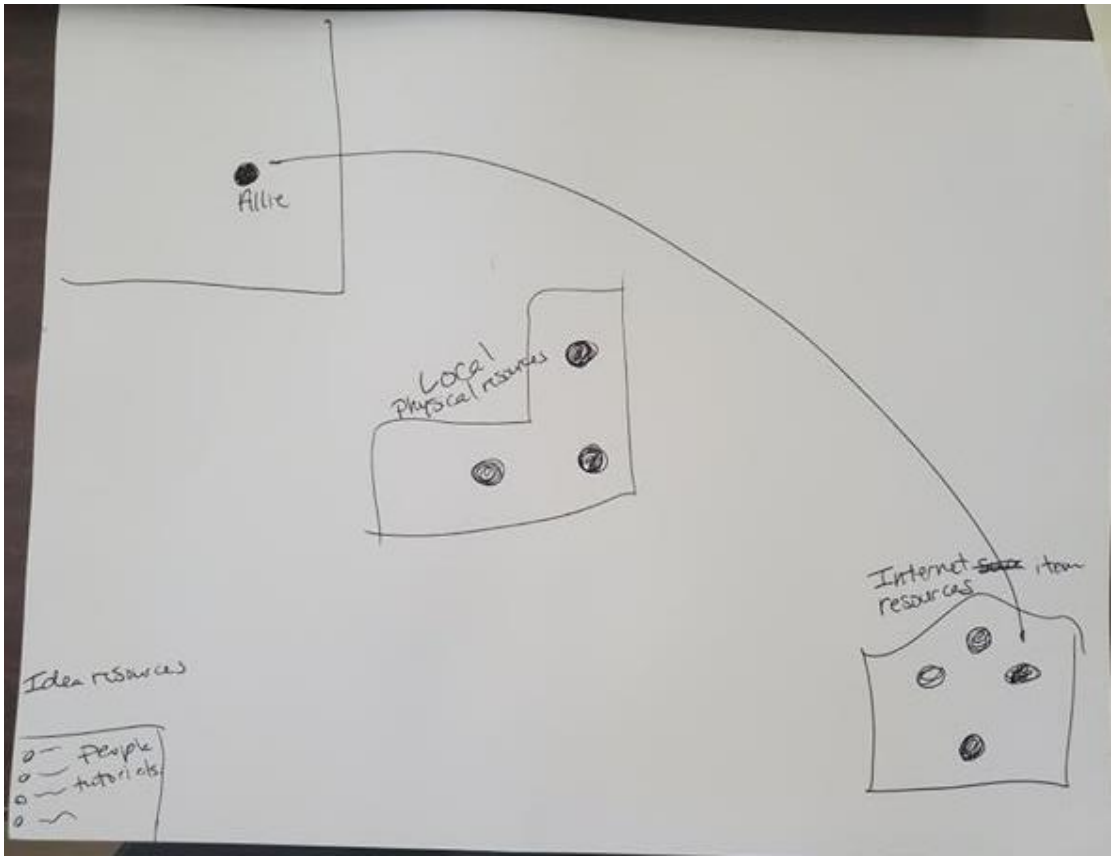
Darth Claire occasionally also posts information to Instagram in hopes of helping other cosplayers.

Darth Claire did not revise her map after the interview. When asked if there were any specific creators she wanted to include, she said, “I rarely go to the same source for information.”

Allie

Figure 39

Allie's Original Information Horizon Map



Allie has arranged her map using both a physical framework and a conceptual framework (Figure 39). She places herself in the upper left corner. Local physical resources are placed at the center of the map, some distance from her, representing the distance she has to drive from her home to reach them. The three retail craft supply stores she identifies on the map are within a 2--mile radius of each other, and are all about 20 miles from her home. Allie focuses on horror costumes as opposed to superheroes, science fiction, fantasy, or beauty-focused cosplayers. A line between herself and Internet item resources indicates that she often must go to these resources to find the supplies she needs, since local resources do not

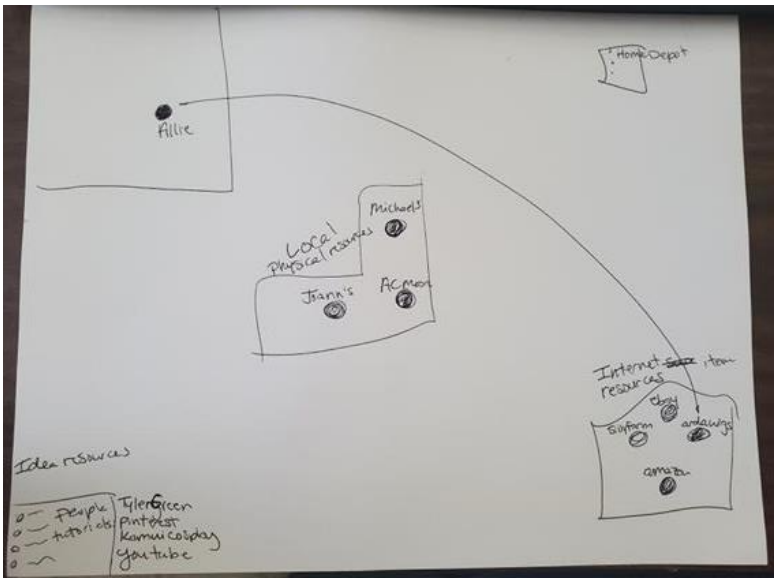
provide the advanced makeup and prosthetics tools she needs for horror cosplay. She sees "Idea resources" as different from supply resources but does not separate them out as to whether she accesses them in person or online.

Allie pointed out that for the kind of horror makeup she does, there aren't a lot of YouTube tutorials. The most useful information she finds online often directs her to makeup design textbooks. She also uses Instagram to connect with a makeup artist via direct messaging. Allie offers an example of a time when she needed to create a piece for a horror costume and was able to leverage these resources:

> I needed to make a headpiece. It was meant to look like hair... coming out of this old nasty scalp. So I needed to learn how to make my own scalp and hair. What I ended up doing was I looked through online books that talk about how to make your own bald cap and scalp and talk to the online person resource of types of latex that are good for something like that. And he gave me ideas of mask latex versus liquid latex. And then the book told me ideas of how to use stockings placed on a plastic wrapped wig head and then start coating it in latex. And I used both of those resources to start creating and then I did have to use my own trial and error to figure out how to then turn it into not just a bald cap, but the base of a wig.

Figure 40

Allie's Revised Information Horizon Map



Allie revised her map, adding details on both people and platforms she uses to access ideas and materials (Figure 40). While most of her additions were adding names or details to resources she had already mentioned, Allie added the hardware store Home Depot to this map. She placed it in a distant corner because it was a hardware store rather than a craft store or a makeup supply store. Allie's experience encountering retail staff in Home Depot offers a stark contrast to Kit's experience at Hobby Lobby:

> ...there has legitimately been a time when I walked in there and grabbed a piece of pipe and stood in the middle of the Home Depot... trying to see if it would be an appropriate size pipe to wield as a murdering Silent Hill nurse. It was not the most prideful moment of my existence. You go into someplace like that where they don't know what cosplay is and you're not comfortable saying what it is. You just sort of have to know when someone comes up and says, "Can I help?" It's like, no, because I'm looking at PVC pipe pieces. But I'm not trying to fix my toilet. I'm trying to make a big sister from *Bioshock.* You don't know what that is. And I'm not going to show you a picture because you're gonna think I'm crazy. So approaching physical resources as a costume, and not a normal builder is hard. Because they don't know if you can use this kind of paint on your Mandalorian. [It's really different] especially as a woman, because they come up to you right away because they're sure you don't know why you're here. Did you get lost on your way to try to make a copy of your key? Like, you know what, what are you even doing here? The flowers — you do get more attention and it's like, I really don't want to ask you a question because you already think I'm lost.

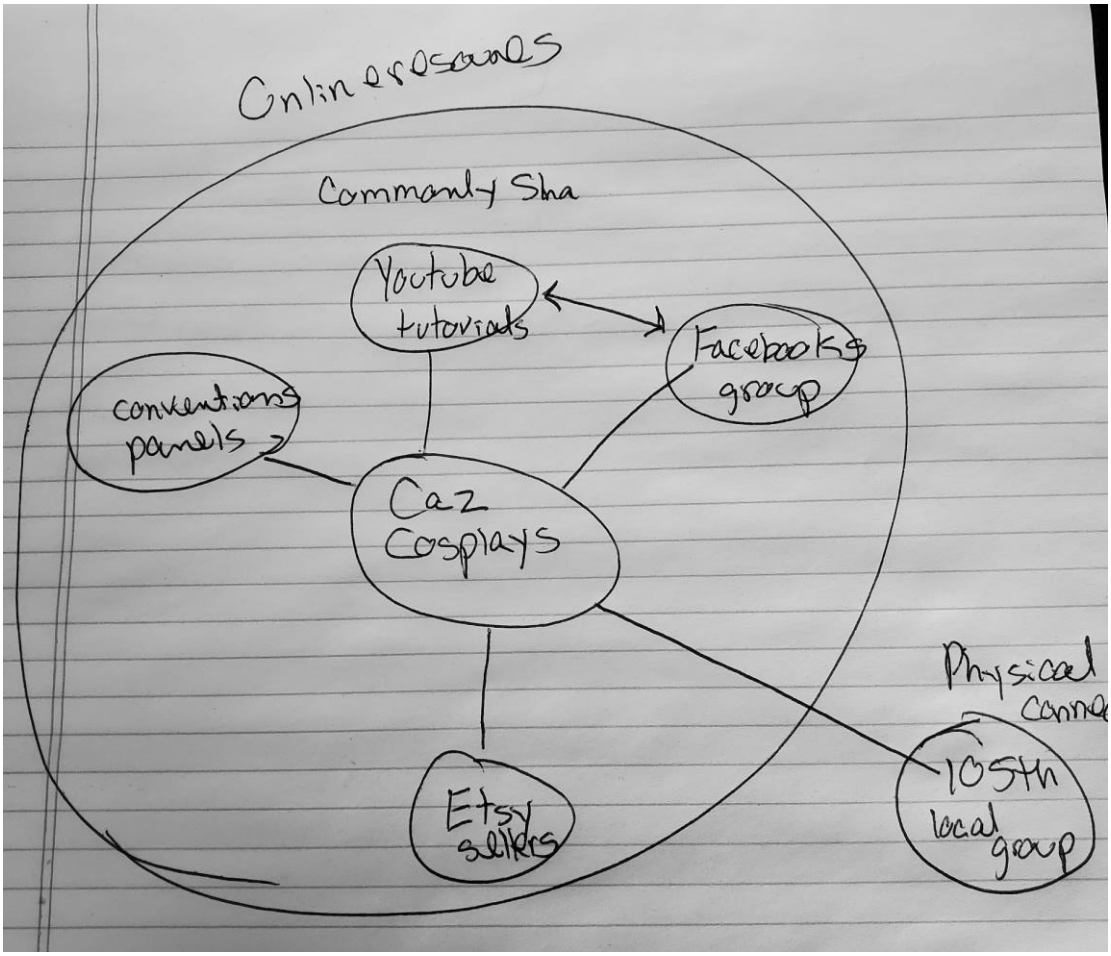
Allie's experiences at craft stores are more similar to Kit's:

> … Joanne's especially since in the last few years, they've started working with cosplayers… There I have found people working there that when they ask you at the fabric cutting counter "What are you working on?" I don't have to say a quilt. I can say "I'm working on this, this character" and they'll say, "Oh, great." … and then I can ask, "What kind of fabric would you recommend for something like this?" and I can show you a picture without feeling ridiculous. So that's kind of satisfying because that's relatively new… that is satisfying going to a place like that where you know that they will accept your question for what it is. You don't have to pretend you're there buying something else.

Caz

Figure 41

Caz's Original Information Horizon Map



Caz has placed herself at the center of the map (Figure 41), inside a large circle that also encompasses four resources in a star pattern: conventions and panels (together in one bubble), Etsy sellers, YouTube tutorials, and Facebook groups. There is a double-ended arrow between YouTube tutorials and Facebook groups because she often finds videos recommended on Facebook:

> So the first thing I think about for resources is YouTube tutorials. I tend to find those usually from Facebook groups. So I'm actually drawing two of those as two different bubbles, but they're connected because I often find that the YouTube references or recommendations for channels or cosplayers to watch from the different Facebook cosplay and crafters groups I belong to.

Etsy sellers serve as an informational resource because Caz can use patterns she buys from them to help her conceptualize her own designs, even when she doesn't use the patterns exactly:

> ...a pretty valuable resource for me is Etsy. So, I sell on Etsy. But even more importantly, I use Etsy to find other makers and open up dialogues with them or purchase mostly patterns from them. Because a lot of times, I have an idea how I want to accomplish something, but I'm not sure technically how to get there. So a lot of times, I'll scan Etsy for cosplays that have something in common with what I'm looking for, or look for patterns that have similar shapes. So then often I'll purchase those patterns and use those to help me kind of figure out my own project, whether or not I actually use that pattern itself or somehow the geometry of the pattern helps me figure out my own patterns.

She has placed her physical resource, the 105th local group with whom she used to meet in person, outside of the circle containing the other resources because she doesn't consider it commonly shared as it is limited by geography. Caz first learned about the 105th when a member at a convention was working at a table sponsored by the organization:

> I ran into them at a convention, they had a table. And one of them basically saw me walking by in a Shatterstar cosplay. And like, practically leapt over the table to get me and was like "You come over here, talk to us. We have a group," and I'm like, "You mean there's like an organized collection of other creators like right here?" And they're like, "Yeah, we actually primarily work out of the founder's house in Durham, and I'm like, in Durham in my town…"

Caz's experiences with the 105th echo what a lot of other participants mention about time spent building together as a valuable information resource:

> ...they actually had a lot of organized activities like large build parties, where there would be anywhere from 10 to 40 other people congregating at someone's house in their yard, building and sharing their ideas. And sometimes I would spend half the party working on my own work and the other half walking around and looking at what other people were working on and picking their brains.

In Caz's case, face-to-face experiences with cosplayers like other members of the 105th drove her to create her own social media presence and begin presenting at convention panels:

> ...I didn't have an Instagram or a social media page or presence at all except for my friends and family Facebook, before I met the 105th, and then after that by meeting other cosplayers locally and seeing how they're able to find other people and other creators that had me develop my own social media, like my Facebook, my Instagram, things like that, so and then it also was what kind of encouraged me to start doing my own panels and sharing these resources with other people.

Most of the panels Caz presents at conventions involve her demonstrating armor-building techniques. At the convention where I first encountered her, I attended a demonstration she gave where she invited a volunteer for the audience to join her and she used plastic wrap, cardboard, and tape to demonstrate how to create a custom armor pattern from one's own body to then use the pattern with an armor-smithing material such as foam or Worbla.

Like other cosplayers, Caz sometimes combines information from two or more sources to meet her information need. She takes on commissions to build armor pieces for other cosplayers and uses resources like YouTube and Facebook to help her determine the feasibility of completing a particular commission:

> …[this repeat customer] asked me if I could make him a torso piece and I know I have the ability to make torso pieces. But what I don't have the ability to do is make the torso piece for someone who is not physically in front of me… So I told him I would think about it. I watched a bunch of YouTube videos. I talked to some people on some Facebook groups, and they all have different ideas. Some of them are seamstresses, so they're a lot more experienced working simply from getting measurements mailed to them or emailed to them. And some people were like "Have the guy make a dress form of his own body, like make a duct tape dress form of his torso," which I've done myself. But… the client doesn't know how to do any of that stuff. So I'd be asking him to do a fairly important thing, without a lot of confidence that he would have the ability to do it accurately to help me. So I just had to sort of admit that this was not something I was currently capable of. And I did not feel that it

was appropriate for me to try it out on a customer who lives on the other side of the country.

In addition to leveraging a variety of platforms to get multiple opinions about how to accomplish a task, Caz has also used a combination of platforms to track down a single person she knew she needed to reach. She describes a time when she wanted to make wings that mechanically opened and closed, but didn't know where to begin:

> I stumbled across a maker in a Facebook group, who was just sort of casually showing on video, how his company had made three or four different sets of wings… When he opened it, I saw the mechanism. That was the one I wanted. But I hadn't been able to figure out how to describe it. But I just I knew when I saw it that that was the one I wanted to do. And it was literally the only thing I could find online. So I reached out to the maker from their YouTube channel, I found their social media. And then I reached out to them and I said, "I'm interested in building a set of wings, but not necessarily the type that you sell as your finished product from your studio. But this video prototype number three, it had a really cool, you know, movement. Can you tell me more about it?" and they were really cool. They actually went and dug up that old set of wings that they just had laying in their workshop not being used, and they actually took a video of them sort of spreading the feathers apart and opening and closing it so I could see the mechanism and from there I sort of reverse engineered how to do it myself. So I had to do some kind of a deep dive investigation, using a lot of different online resources to find the one person that I could connect with, like, directly to ask some very detailed questions.

Sometimes, in addition to providing direct instruction in how to construct a particular costume piece, a tutorial might introduce a cosplayer to a technique that they use to construct a totally different piece. Caz experienced this when she learned to create foam costume pieces using pepakura patterns, which are designed to be used to create paper costume pieces:

> I wanted to make a Blue Beetle Jaime Reyes face like a helmet. And I couldn't find a foam pattern anywhere. I was just scrolling through YouTube one day, just sort of looking at different videos and I clicked on Kamui Cosplay. One day she said she wanted to make… a stormtrooper helmet, but she wanted to try it a different way. She wants to try taking a pepakura pattern, which is for cardstock paper and translating it into a foam pattern which is very, very different. So her husband printed out a pepakura Stormtrooper pattern for her, she then assembled the entire pepakura pattern, which is very, very tedious. And then with her own knowledge about how the

> material of EVA foam, which is what we both work with. understanding the unique properties of that material, she was able to take this extremely complicated pattern which had something like 160 joins in it and simplified it down to a pattern that only had about 22. And I was incredibly impressed by that and I thought, you know, I understand what she's talking about, I understand what she's doing. So I found a pepakura pattern of this Blue Beetle helmet, which had, I think 32 joints in it and I managed to streamline it down to five and made my own pattern out of it using EVA foam.

Caz shares information via Instagram as well as via convention panels. At first, she shared information via Facebook, but she found that a lot of the younger members of her fandoms who admired her designs at conventions didn't use Facebook but still wanted to learn from her:

> … I'll be 46 soon. I'm quite a bit older than a lot of cosplayers that you see at conventions. I mean, there's still plenty of others that are my age and older parents who are getting into it with their kids. But some of the fandoms I joined like Voltron, the fandom skews kind of young. There's a lot of college and a lot of high school kids super into Voltron… I realized that I needed to engage a little more on the platforms that they were using, if I wanted to share the information that I had with them, because a lot of them wanted to learn how to make the Voltron Paladin armor that I was wearing. Because most of them, they were just wearing like the casual outfits, which are much easier. You can buy those online. But they're like, "How do I make Paladin armor?" And I was like, "Well you're not on Facebook." And they're like, "No, no, not on Facebook, I'm on, got Kik" or whatever, musically I think is now Tik Tok. I was like, okay, I'm just gonna do Instagram and that's it, cuz I can't I can't keep up with all the different platforms that the younger people are using. So I'll just stick with Instagram.

Like Kit, Caz has found that Instagram has some limitations on what she can do. While Kit will use Instagram but refer people to her Facebook page for more details, Caz finds ways to share on Instagram:

> ...there's been a couple of things I've done to sort of get around the limitations of Instagram, because while you can do a live video, and it could be pretty long, it doesn't really preserve the video. You could put in your highlights, but people can't necessarily see it unless they go to your page and sort of poke through your highlights... sometimes I'll ask people like, what do they want to see? ...what do they want me to demonstrate? So sometimes they'll be like, "Hey, could you demonstrate how you heat form a helmet?" Or what kind of, what are the basic five tools or

> materials that you would tell a beginner to get if they're gonna start doing building armor?" And so I'm happy to do those little things.

Caz has also used Instagram to offer to do in-home workshops:

> ...I've just put out a call on Instagram or social media saying if anyone wants to learn how to build your own dress form, so you can pattern armor, or you know who wants a workshop on how to put a helmet together, like, I'll be doing this at my house on Saturday. And so, sometimes I've had like four or five people come over.

This seems to be a variation on build parties; instead of all getting together to work on projects, the attendees are there explicitly to receive instruction. Unlike a convention panel, however, the event takes place in an informal environment.

Caz not only extends offers to do these workshops; she also takes requests:

> And then one time I had a parent who had a young cosplay kid named Quinn, who's local… And her dad came to me and said, "For her birthday, I would like to if you're into it, because you think she's great, you're always like chatting with her and answering her hundred questions… Would you be willing to give her a one-on-one lesson?" … So they came over my house back in December, on a Saturday for six hours [for] sort of a soup to nuts tutorial on basically everything from patterning basic patterns off of your own body parts, to how to glue, heat form and use some specialized equipment like rotary tools, and things like that. And it was really rewarding for me to do that, too.

While Caz charges for items people commission her to build, she offers instructional workshops at no cost.

Caz revised her map to add specific names of creators and groups she regularly relied on via platforms such as YouTube and Facebook (Figures 42 and 43). She mentioned three Facebook groups specifically, organizing them by whether they were best for novice cosplayers, advanced hobby cosplayers, or professional costumers or propmakers:

> ...the RPF… there's a lot of knowledge there, but it's very one way like just read it. Absorb it. Download everything you can, but don't necessarily interact with people in there because they're really stuck up on themselves because… a lot of them are professionals…

… Evil Ted's Foam Fanatics… It's nice because it's very limited by just primarily EVA foam, and it's all just cosplayers like me, just sort of having fun and exploring. That's a great place for novices to hang out. It's very community oriented…

… Kamui's group is sort of in between the two. So it's sort of like an advanced group. Because a lot of her videos these days are no longer "This is how a beginner starts." It's more like, "Let's make a Mandalorian rifle and here's a 25 minute video contracting three days of crazy ass effort." So her stuff is more like, buy her books, and then you can see how the techniques she teaches you in her books is reflected in her videos. But her videos themselves are more advanced. But she's a super sweet and quirky cosplayer. And I think that personality has sort of reflected itself in that Facebook group…

Figure 42

Caz's Revised Information Horizon Map, Left Side

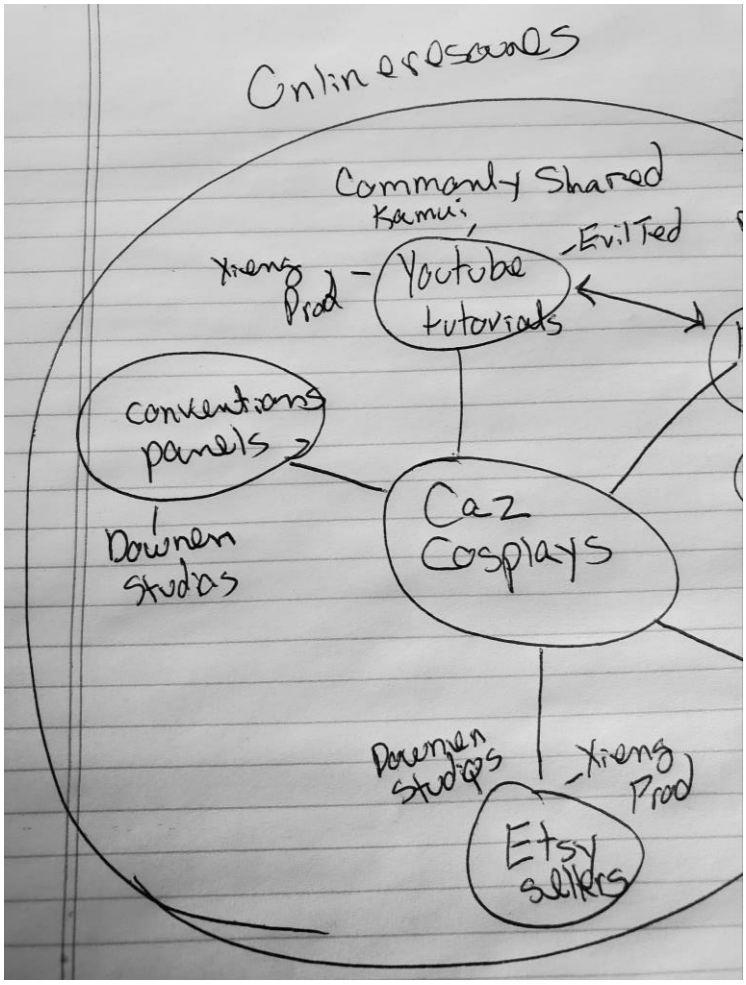
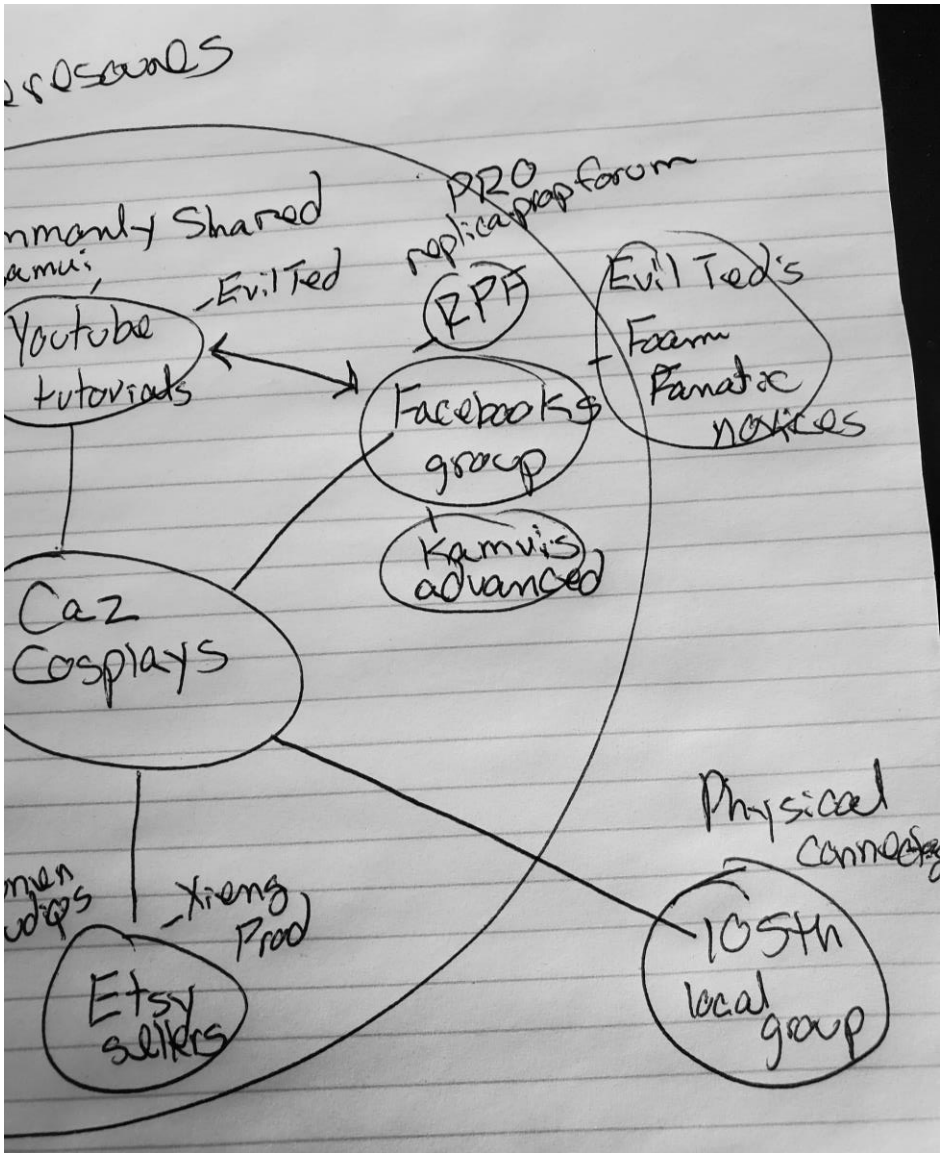


Figure 43

Caz's Revised Information Horizon Map, Right Side



Caz provides a strong example of the way cosplayers can leverage the collective intelligence available in these Facebook groups by describing the result of a member in Kamui Cosplay's Facebook group trying to find a particular color of paint:

> … they showed a picture of the Mandalorian rifle [Kamui created]. And they said "This color purple along the energy blade is the perfect color for a project I'm working on. Does anyone know what it is?" And what people said was, "Oh, well, this is the link to the video where she built it. So you can see that this color purple was actually the result of a paint job with these three colors. These are the brand names and this is how they were applied." Someone else chimed in and said "But if you don't have an airbrush and you don't want to buy those three airbrush paints in the hopes that you can recreate that purple, here are some purples that I have found." And then someone else came in and was like, "Yeah, but it looks like she wants an iridescent metallic. So, you know, here's some iridescent metallics or here's a medium that you can mix with a flat paint to make it metallic or iridescent or shiny." So you saw people come in and all she said was "Where can I find this color purple?" And people came in with like four different solutions… And I just was watching it and I just was like, everybody's so helpful, you know?

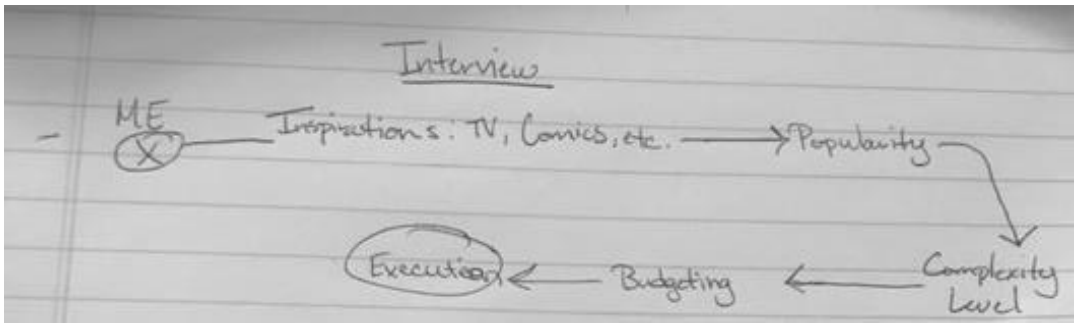
For Caz, the value in finding information about cosplay is the satisfaction she gets from implementing that information:

> … the real satisfaction hinges on looking around my cosplay studio… looking around and seeing everything that I can accomplish in there… I've got that giant set of wings hanging out in the studio right now… for me, a lot of it is that investment in being able to have a completed product that I can lay my hands on, and pat myself on the back.

Norman

Figure 44

Norman's Original Information Horizon Map



Like Damaris, Norman takes a sequential approach and focuses his initial map more on his costume creation process than his information seeking process (Figure 44). The only resources he includes on the map are the source materials that inspire his work: TV, Comics, etc. When discussing his budget, Norman mentions that one way he learns about the most affordable way to achieve an effect is by talking to other cosplayers:

> And with [Nightcrawler], of course, I have to find a way to make my five fingers into three… instead of going to, obviously Amazon and other out of country manufacturers so I ask around, see other people who've done this cosplay and ask around like that. Luckily, I know someone who actually used Yoda hands to make them blue…

Norman first connected on Instagram with this other cosplayer who used Yoda hands for a Nightcrawler costume:

> ...one day when I was looking up Nightcrawler cosplays to see if I can find myself so I can repost them, I come across another cosplayer who did the same who does a Nightcrawler too, but his hands, they look absolutely more real. And I am saying I love his Nightcrawler. "How did you make his hands?" And he told me he got them on Amazon but they're Yoda hands… And I thanked him 1000 times. We're good friends on Instagram. We like each other's posts when it comes to Nightcrawler. And, you know, ever since then, people have been asking me 1000 times. Where did you get the hands? Where'd you get the hands? And I say, Amazon, Yoda hands, Yoda gloves and of course Yoda's hands were green. So I had to, you know, paint it blue,

> make the nails more detailed. And ever since then I've been getting some crazy comments about it.

He had a similar experience finding the tail for the same costume:

> … it's an animatronic tail… I got that from, it's called the Tail Company… I knew a friend who did another Nightcrawler in DC, his tail moves. And I was like, dude, where did you get that? He told me the Tail Company and they actually have tails that caters to Nightcrawler.

Norman emphasizes the importance of other cosplayers in finding information when he is creating a new costume:

> It all comes down to who else has information because there is a lot of cosplayers who, you know, they've been cosplaying for decades, and they have tons upon tons of information, how to find something when you want some help, or when you're looking for someone to help you accomplish this cosplay.

Norman was the only participant to mention the value of costesting as a venue for feedback from other cosplayers:

> You just take a picture and you show it off on Instagram or Facebook, or any social media site… And then you ask your very adept friends who know how to do this, who knows how to cosplay or how to put together cosplay… And you ask them for advice, information, how can I do this better, and stuff like that.

Though he doesn't include it on his map, Norman often relies on trial and error or personal experience. He describes one learning experience he had at a convention:

> There is one I will never forget. It's my Thor cosplay. And of course, everybody remembers the giant Stormbreaker [ax] that I made. Stormbreaker is actually made out of different pieces of 3d plastic. So when it came in, of course, it was in pieces and I had to find a way to glue and stabilize the structure. So I took it out to DC last year. I was walking and they had these like steps to walk towards the con. Luckily, I wasn't too close to it so no one could see, but as I was walking, the Stormbreaker just started breaking apart…. So I pick up pieces, go back to my car… I put the Stormbreaker back in the car. And after the con, I went to a hotel. luckily I brought some glue with me and I managed to put it together… So from then on, I realized what was wrong. It was the glue that I was using. It wasn't bad glue, but it wasn't glued enough. From then on, I was like, Okay, if I want to bring Stormbreaker I need to bring glue with me, I need to be careful how you're holding it, you know, swinging around. Do I want people to hold it, use it, whatever the case may be.

Norman uses spray paint to paint most of his props, relying on reference materials such as images from movies and comics to determine what the finished product should look like. He has learned a great deal about using spray paint through trial and error:

> I pretty much use spray paint for almost everything. I'm good at detail work. With spray paint, I know how to cut off the tape. Where to put it. How long do I need to let it stand before I start painting again, add a second coat, add different colors and especially what kind of tints. You have to use stuff that bonds well to plastic, metal, whatever the case may be. Do I want it a solid color? Do I want it shining, do I want it glimmering? So, you know when it comes to those things I'm pretty much a pro at that.

Norman doesn't have his own 3D printer, so when he wants to use a prop that is 3D printed, he purchases the prop from someone else who prints it. In the case of the Stormbreaker ax, he purchased it on Etsy, and used a lot of Etsy's specific retailer affordances as an information source to determine if this was the prop he wanted to buy:

> ... before I buy it, I look at the reviews, look at the measurements, the descriptions of Stormbreaker and if they're favorable, and their reviews are good enough, I'll go with him.

Norman shares information primarily through answering questions he gets from other cosplayers on Instagram and Facebook:

> Everyone asked me how did I do this? How'd you do that? Where'd you get it from? Who told you and of course I helped them out… cosplaying is a hobby, and I love sharing a hobby. It's something I love. And, you know, and I'm just a nice guy like that, you know, I don't really expect anything in return.

In his revised map (Figure 45), Norman goes into great depth about the questions he asks himself at each stage of the cosplay building process. He also specifically names the two cosplayers on Instagram who helped him find the hands and tail for the Nightcrawler costume (Figure 46).

Figure 45

Norman's Revised Information Horizon Map

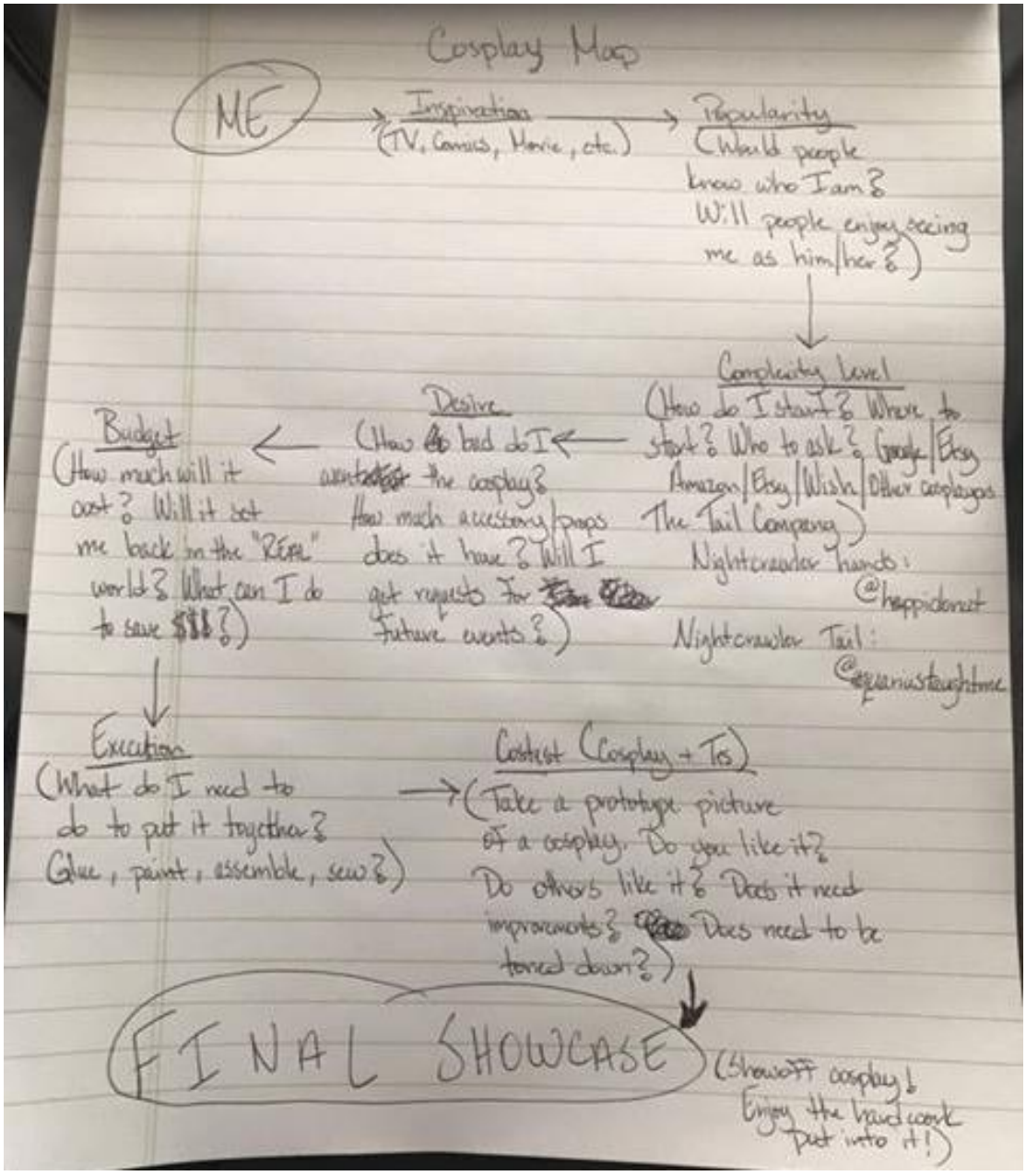


Figure 46

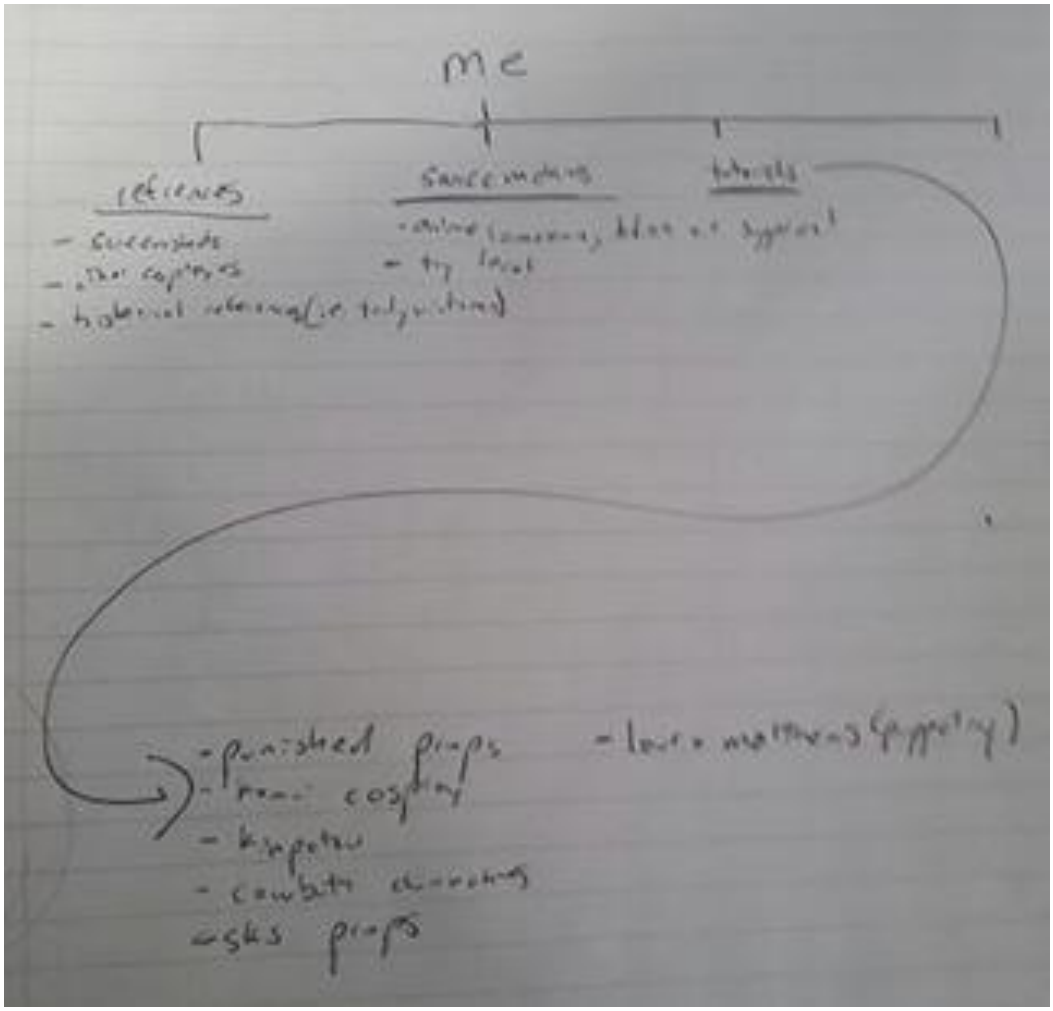
A Digitally Edited Photo of Norman in His Nightcrawler Costume

Note. Edit by @blackcaptnkirk on Instagram.

Red Baran

Figure 47

Red Baran's Original Information Horizon Map



Red Baran indicates three types of resources she looks for (Figure 47): references (either to original source or related historical sources), source materials (places to acquire supplies), and tutorials (places to receive instruction). For references, she looks at screenshots, other cosplayers, and historical references; the goal is to create either a look that

is either very accurate to the source or an original look that relies on historical techniques. For supplies, she tries local suppliers first but also buys online.

Red Baran looks for tutorials to help her understand specific methods for making pieces for the cosplay. She indicated specific "famous cosplayers" that she goes to for tutorials: Punished Props, Kamui Cosplay, Kinpatsu, and Cowbutt Crunchies. These creators have video tutorials accessible via Patreon or YouTube; Red Baran says "all of their content's really good and versatile, anything from LED to seamstress work to servos and Arduinos electronics to foam to painting and weathering." She also mentions that SKS Props offers tutorials through books they publish.

Red Baran explicitly draws on makers who work in disciplines other than cosplay to learn techniques she can then adapt to cosplay:

> A big thing I like to do for tutorials lately is I like to look at puppeteers and also other makers that are specialized and other things that can be applied. So there's a lady, I follow on her Patreon, called Laura Matthews. And she's based in the UK, but she'll make these beautiful anatomically correct animals and they're fully posable puppets… she makes these really beautiful, articulated wing structures and stuff like that for all different types of birds, and all sorts of other animals. And so it's really cool to look at those things and try to incorporate those in cosplay purposes.

Another example of venturing outside the cosplay affinity space to obtain information is when Red Baran was trying to make moving fairy wings using servomechanisms (abbreviated servos), which use motors and sensors to control an object's position, velocity, and acceleration. She found several cosplayers demonstrating their wings but claiming that the mechanism of motion was a "trade secret." Red Baran learned when ordering the servos that other purchasers had purchased materials for remote control cars, so she looked to that community for ideas:

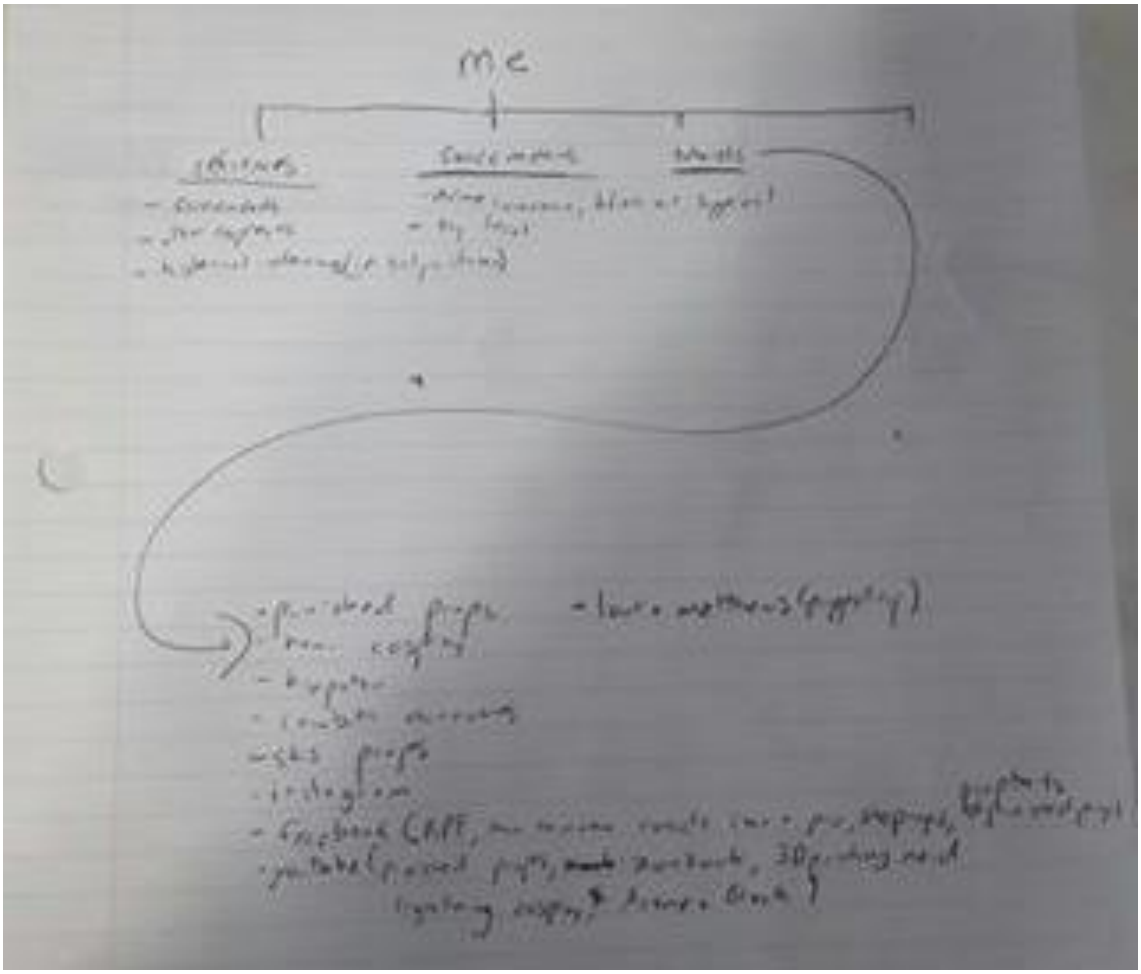
> I have to go outside of where I usually think of and go to like engineering places or how people make RC cars and program servos for RC cars or other stuff completely

> different and try to adapt it to my situation specifically, and how to program the servos go to specific speed and how to keep them going at the same rate. So you don't have one wing going faster than the other wing and stuff like that. So it was super difficult and the lingo was like I didn't understand a lot of the electronic language. I still don't understand all the electronic language that those other sites were going into. It wasn't the most beginner-friendly, but the information's out there, it was just a lot to dig through. It was pretty difficult.

At the time of our interview, Red Baran had recently started dating an engineer and could rely on that person for help with these techniques that she had previously had to figure out on her own.

Figure 48

Red Baran's Revised Information Horizon Map



In her revised map (Figure 48), Red Baran adds that Instagram and Facebook are specific platforms she uses to find cosplay-related information, and names several Facebook groups she relies on for information. Red Baran describes using the hashtag feature on Instagram to locate tutorials for a particular embroidery technique called goldwork:

> I want to learn how to do goldwork embroidery, which is a very specific specialized kind of way of doing embroidery. You take little tiny metal tubes and sew them all one by one. But I have no idea how to do this. It looks so so cool but there's not really that many references out there. So I looked at some historical sites, but what I ended up doing mostly as I found I basically would just on Instagram, and looked up the hashtag #goldwork and saw a lot of people will do video tutorials and then I found a couple cosplayers that had done full tutorials on where they got their materials from because there's some places you can get it at super expensive and some that's super cheap. And then they went into pretty good detail about all the different methods. There's a lot of different methods that you can apply the gold.

Since using this method to find information about the goldwork technique, Red Baran has used hashtags to find other tutorials on Instagram with some success. She also mentions relying on notes from a goldwork panel she attended at the Cosplay America convention, but does not include this in her information horizon map.

Like Caz, Red Baran found that the Replica Prop Forum Facebook group was not very welcoming to beginners:

> I'll be like, “Oh, well, I'm trying to print this spike on my 3d printer, but I'm having this extrusion issue. What should I do?” “Well, I don't even know why you would use them.” They'll put out some ridiculous spec and then they won't answer your question and they just belittle you the entire time.

In contrast, Red Baran has seen a community that began as exclusionary of beginners open up and become more helpful and friendly, resulting in a community with a similar feel to Kamui Cosplay’s Facebook group:

> I'm part of a Facebook group as well that's called Making Corsets Like a Pro. And when I first started, they were very much the same way as Replica Prop Forum, but they changed all of their rules and guidelines, which is very nice. And now I can ask a question even as a beginner making corsets and they are very, very nice and I just

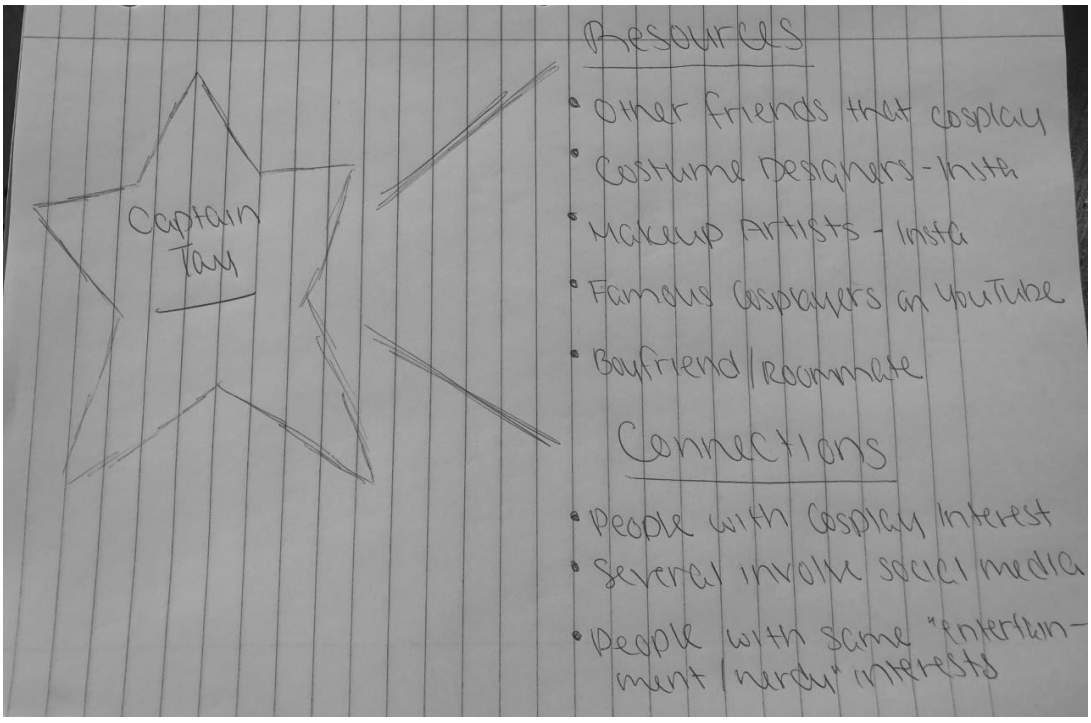
> immediately get the answer I want within like five minutes. On my post I'll be like, "Oh well, I want to make this corset with these specifications." They're like, "Alright, you need this kind of spiral steel, this kind of flat steel" and exactly what you need. "This is the site I use to go get it, this is what I prefer in the LA fashion district." And they're super helpful and just super quick. And it's nice to see how supportive the community has become compared to how it used to be.

Red Baran shares information through private communications and at conventions. People may direct message her on Instagram or stop her in the hall at a convention to ask how she achieved a particular effect; she has presented convention panels that offer instruction on how to make foam props or do basic sewing. She documents all of her progress with photographs for the purposes of submitting the documentation when she enters cosplay competitions and will share that documentation with other cosplayers who ask her for help.

Taylor

Figure 49

Taylor's Original Information Horizon Map



Taylor's map consists of a list of resources and a list of connections (Figure 49). Resources include other friends that cosplay, costume designers' and makeup artists' accounts on Instagram, famous cosplayers on YouTube, and her boyfriend and roommate, both of whom are 3D designers. She interpreted connections to mean shared characteristics across resources, rather than specific relationships between resources. She listed features she believes her resources have in common: they are all people with an interest in cosplay, several of the resources rely on social media to make connections with each other, and they are people who share similar interests in addition to cosplay, such as similar taste in movies or comics.

Like many other cosplayers, Taylor sometimes uses a combination of resources to tackle a particular problem:

> … the most recent problem that I had was when I was building my Endgame Captain America and I made all of these plastic scales… and then I glued them all together one by one and they all stuck together really well… when I glued them into the actual suit since there was vinyl backing in the suit, I was having a lot of trouble getting them to stick so looking up different methods of how to adhere things… I asked a lot of my friends because they had done a lot of things that required adhering weird objects recently, like my friend had to glue a bunch of flowers to a hoop skirt. So she recommended that stuff E-6000 to see if that would work. That didn't work. Um, there was someone in YouTube videos who was using superglue gel. So tried that and it did a little bit better, but it still doesn't hold for very long and then obviously just googling, hey, what are adhesives that exist…

Other participants mentioned Google without much commentary or indicated they might begin their information-seeking process with a Google search, but Taylor said that for her, Google is a “last resort.”

Like Norman, Taylor turned to another cosplayer creating the same costume as her for help when she had trouble getting the information she needed:

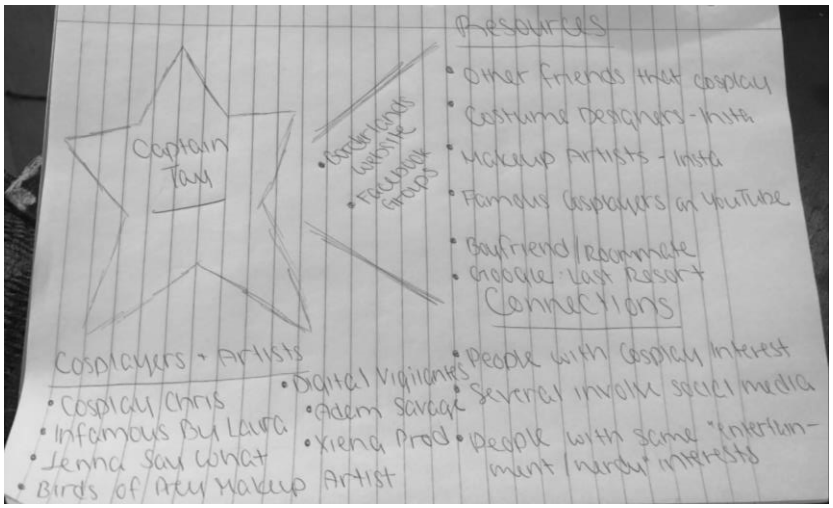
> … there were three set photos out from [the film] *Birds of Prey*. And there was this outfit that I just really wanted to do, didn't want to wait until the movie came out… And I had a friend who was trying to make the same outfit at the same time, who cosplays Harley Quinn all the time. So she was definitely an awesome resource. She was the one who at the end of the day sent me a bunch of links of like, you know, different boots that I could use, different belts that looked the best, different body suits you could pick out and then different fabrics that she thought would work for the stars on the body suit. So at the end of the day, that was mostly my brain working and then help from another Harley Quinn cosplayer…

She revised her map to add the names of specific artists' whose work has helped her and to indicate that she goes to both Facebook groups and, for one costume, the website for the video game series Borderlands (Figure 20).

Taylor shares information by responding to direct messages she receives on Instagram or through participating in Facebook groups. While Red Baran leveraged the hashtag feature on Instagram to find tutorials, Taylor adds hashtags such as #captainamericacosplay to her posts. Other cosplayers who are following that hashtag so it shows up in their Instagram feeds or who are searching for that hashtag then sometimes see her posts and send her direct messages to ask her for information.

Figure 50

Taylor's Revised Information Horizon Map



Resources Mentioned

Data Analysis Procedures

I used MaxQDA qualitative analysis software to analyze the data. This software allowed me to incorporate both text and multimedia data. I loaded the video recordings of interviews into MaxQDA and was able to link the associated transcripts to those files. I also loaded all information horizon maps into MaxQDA, including revised versions for those participants who created them.

As Martin (2012a) did in her study, I analyzed the information maps both as an aggregate and by participant. The first step was to create a list of all the terms participants used in the information horizon maps with the frequency of use. I began by coding all the words that appeared on every version of the map, using *in vivo* coding to capture the participants' own words. Participants sometimes included words on their maps that didn't directly reference resources. These might include categories (e.g., "in-person resources," "novice"), references to a particular phase of creation (e.g., "research," "planning," "presentation"), and considerations that influenced costume-related decisions (e.g., "budget," "time"). I sorted these terms into these three groups and then set them aside so that, for my primary analysis, I could focus exclusively on the resources participants included in the maps.

In many cases, participants repeated resources on their revised map. I removed these duplicates after coding them so that I would have results indicating the number of participants who mentioned a resource, rather than the number of times it was mentioned regardless of which participant mentioned it. If a resource was mentioned multiple times on the same map, I only coded it once.

The next step involved creating categories from this list and tallying their frequency of use. This was the most challenging part of the data analysis. After analyzing both the original and revised maps, I had over 150 terms for resources cosplayers used. Even after collapsing duplicate spellings or slightly different terms for the same concept (e.g. "YouTube" and "youtube," "other cosplayers" and "fellow cosplayers"), I still had more than 60 terms (Table 10). For purposes of comparison, Sonnenwald, Wildemuth, and Harmon's (Sonnenwald et al., 2001; Sonnenwald & Wildemuth, 2001) participants provided a total of 13 terms. Martin's (Martin, 2012a, 2012b) participants provided a total of 32 terms which she collapsed into 15 categories.

After weeks of toying with the terms and codes in MaxQDA, I chose to take a more analog approach: I wrote each term on an index card or Post-it note (Figure 51). I then experimented with different combinations of these terms until I arrived at 17 categories (Figure 52). After further consideration, I was able to narrow this down to 15 categories (Tables 11 and 12).

Table 11 aggregates the specific terms from Table 10 into fifteen categories and shows how many participants mentioned each category. As illustrated in Table 12, participants reported they used 15 different categories of information resources, including people, YouTube, reference materials, suppliers, Instagram, specific content creators, the Internet, Google, events, social media, tutorials, Facebook, blogs, forums, and books. People were the most frequently referenced resource, whether they were friends, family, or other cosplayers. YouTube and Instagram were mentioned by more than half of the participants; these are both examples of peer-produced information sources, as are less-frequently mentioned resources such as social media, tutorials, Facebook, blogs, and forums. In the

cosplay space, even books can be considered peer-produced media, as they are often written and published by cosplayers themselves.

Table 10

Totals of Resources by Name

Code	Frequency	Code	Frequency
YouTube	8	Boyfriend/Roommate	1
instagram	6	build parties	1
friends	6	Kinpatsu	1
Google	5	laura matthews (puppetry)	1
Amazon	4	Lightning cosplay	1
Joann's	4	McCall's	1
KamuiCosplay	4	miccostumes	1
tutorials	4	Butterick	1
Facebook	4	Mood's	1
pinterest	3	Movies	1
references	3	online	1
fellow cosplayers	3	people	1
comicons	3	photos/images	1
Michaels	2	photoshoots	1
cowbutt crunchies	2	classes	1
punished props	2	AC Moore	1
internet	2	Cosplay Chris	1
Etsy	2	screenshots	1
XiengProd	2	Silly Farm	1
blogs	2	Simplicity	1

Code	Frequency	Code	Frequency
crafting staff	1	sks props	1
Digital Vigilantes	1	small crafting parties	1
Downen studios	1	social media	1
eBay	1	source materials	1
105th local group	1	source media	1
EvilTed	1	supply exchanges	1
Angelic Daze Cosplay	1	The Tail Company	1
family	1	thrift stores	1
Fanart	1	truly victorian	1
Aranea Black	1	try local	1
festivals	1	Tumblr	1
forums	1	cosplay collabs	1
Arda Wigs	1	TV, Comics, etc.	1
blicks art supplies	1	TV, Comics, Movies, etc	1
Hanging out	1	TylerGreen	1
historical references (e.g. Truly Victorian)	1	video games	1
hobby lobby	1	videos	1
Home Depot	1	walmart	1
Infamous by Laura	1	Wish	1
3d printing nerd	1	Adam Savage	1
Borderlands website	1	craftbooks	1
Jenna Say What	1	Zon Zombie	1

Figure 51

Terms Used by Participants Written on Index Cards and Post-It Notes

Figure 52

Terms Used by Participants Sorted into Categories

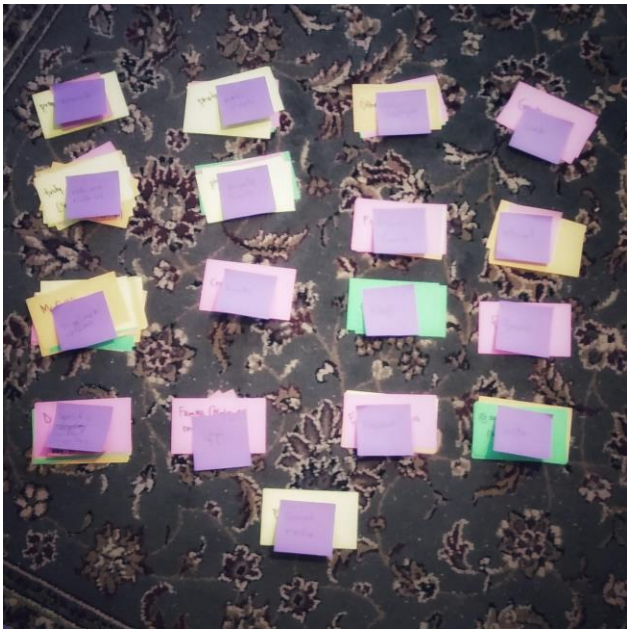


Table 11

Totals of Resources by Category

Resource/category	Frequency
people	10
YouTube	8
reference materials	8
suppliers	8
instagram	6
specific content creators	6
internet	5
Google	5
events	4
social media	4
tutorials	4
Facebook	4
blogs	2
forums	1
books	1

Table 12

Categories and the Codes They Include

Category	Included Codes
blogs	blogs, cosplay blogs
books	books, craftbooks
events	build parties, small crafting parties, comicons, classes, festivals, supply exchanges, photoshoots
Facebook	Facebook, sks props [Facebook group], replica prop forum, proptarts, Kamui's [Facebook group], how to make corsets like a pro, Facebook groups, EvilTed's Foam Fanatics
forums	forums
Google	Google, Google Last Resort, Google Images
Instagram	instagram, Makeup Artists - Insta, Costume Designers - Insta, Birds of Prey Makeup Artist, @aquariustaughtme, @happidonut
Internet	Internet, Borderlands website, online, videos
people	people, friends, family, Boyfriend/Roomate, cosplay collabs, Hanging out, other friends that cosplay, Friendship, fellow cosplayers, 105th local group, Other cosplayers
reference materials	video games; TV, Comics, Movies, etc.; TV, Comics, etc.; source media; screenshots; Fanart; Movies; photos/images; historical references (e.g. Truly Victorian); references
social media	social media, pinterest, Tumblr

Category	Included Codes
specific content creators	3d printing nerd, Adam Savage, Angelic Daze Cosplay, Aranea Black, Cosplay Chris, cowbutt crunchies, Digital Vigilantes, Downen studios, EvilTed, Infamous by Laura, Jenna Say What, KamuiCosplay, Kinpatsu, laura matthews (puppetry), Lightning cosplay, punished props, sks props, TylerGreen, XiengProd, Zon Zombie
suppliers	source materials, AC Moore, Amazon, Arda Wigs, blicks art supplies, Butterick, crafting staff, eBay, Etsy, hobby lobby, Home Depot, Joann's, McCall's, Michaels, Mood's, Silly Farm, Simplicity, The Tail Company, thrift stores, try local, walmart, Wish
tutorials	tutorials, prop tutorials
YouTube	YouTube, YouTube tutorials, Famous Cosplayers on YouTube

Most of these categories are self-evident, but a few require further explanation. While the Internet does encompass blogs, Facebook, forums, Google, Instagram, social media, tutorials, and YouTube, I pulled each of those out as their own category because they imply a distinct set of features or affordances. In the case of the specific social media platforms Facebook, Instagram, and YouTube, they are separated out from social media because 5 or more participants (50%) mentioned them. Pinterest and Tumblr are collapsed into social media because 3 or fewer participants mentioned them. This dividing line may appear arbitrary, but the 50% turning point has been used in similar studies when selecting which media properties to consider separately (Floegel & Costello, 2019).

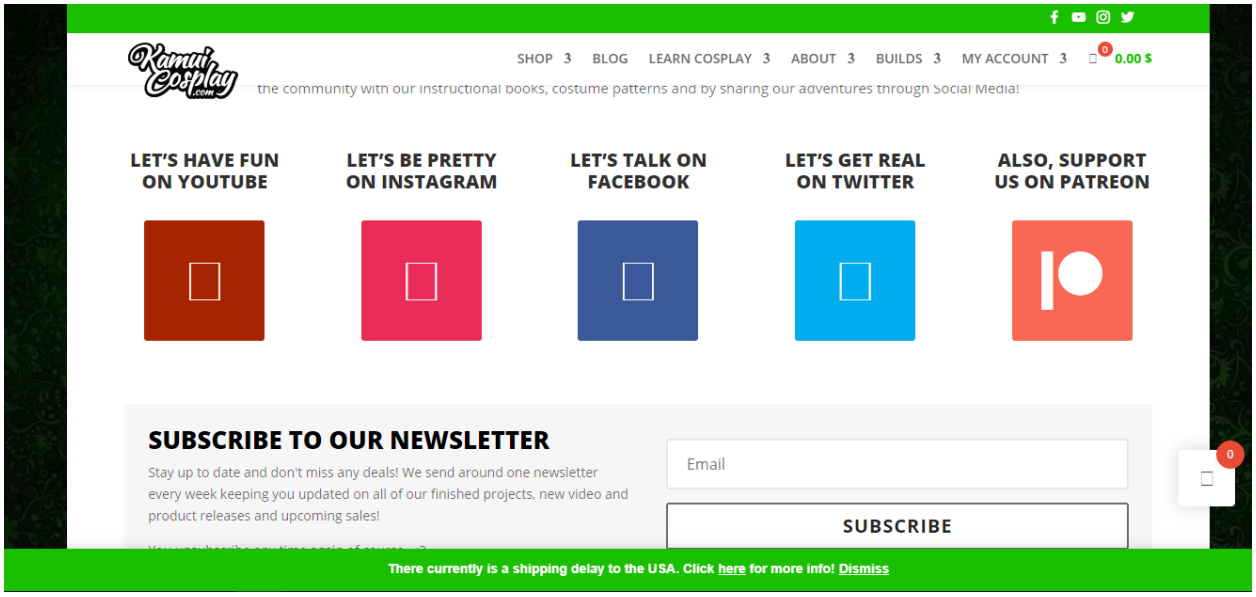
Reference materials is another confusing category; some participants mentioned using images from retailers that I have included in the suppliers category. For the purposes of this set of categories, I have considered reference materials to include those materials cosplayers turn to to help them approach the accuracy of a desired look or to use a starting point for their

own original design. In the case of participants discussing looking at suppliers' versions of designs, I consider that to be more akin to looking at how other cosplayers have constructed their own costumes than looking at a screenshot from a movie or a video game, or fanart that they are looking to recreate in their costume.

Specific content creators include all the "famous cosplayers" or other creators that participants mentioned by name. Many of these creators leverage the other categories of resources, especially Facebook, YouTube, and Instagram, to share their content (Figure 53). I add them as a separate category because participants indicated that sometimes they sought out content from these specific creators, while other times they used a platform's search or tagging features to find content regardless of its creator.

Figure 53

Kamui Cosplay's Website



Note. KamuiCosplay's website features small icons with links to her social media profiles at the top right, as well as large links to her social profiles when users scroll down the page.

Having created these categories, I followed Sonnenwald and colleagues' technique (2001), generating a matrix with resource categories as rows and participant names as columns and placing in each cell the order in which the participant mentioned that particular resource. I determined the order first by looking at maps; for participants who did not indicate order on their maps, I referred to the transcripts of their interviews to determine the order in which they mentioned resources. A tool in MaxQDA called "Codeline" facilitated this technique; it creates a grid of the paragraphs in the interview and the codes/categories and shades the boxes where a paragraph and a code intersect to indicate the code is used in that paragraph (Figure 54). This enabled me to quickly identify the order in which terms were mentioned; in some cases, a participant mentioned more than one resource in the same paragraph. When this occurred, I referred directly to the text of the transcript to determine the order.

Figure 54

Codeline Tool in MaxQDA

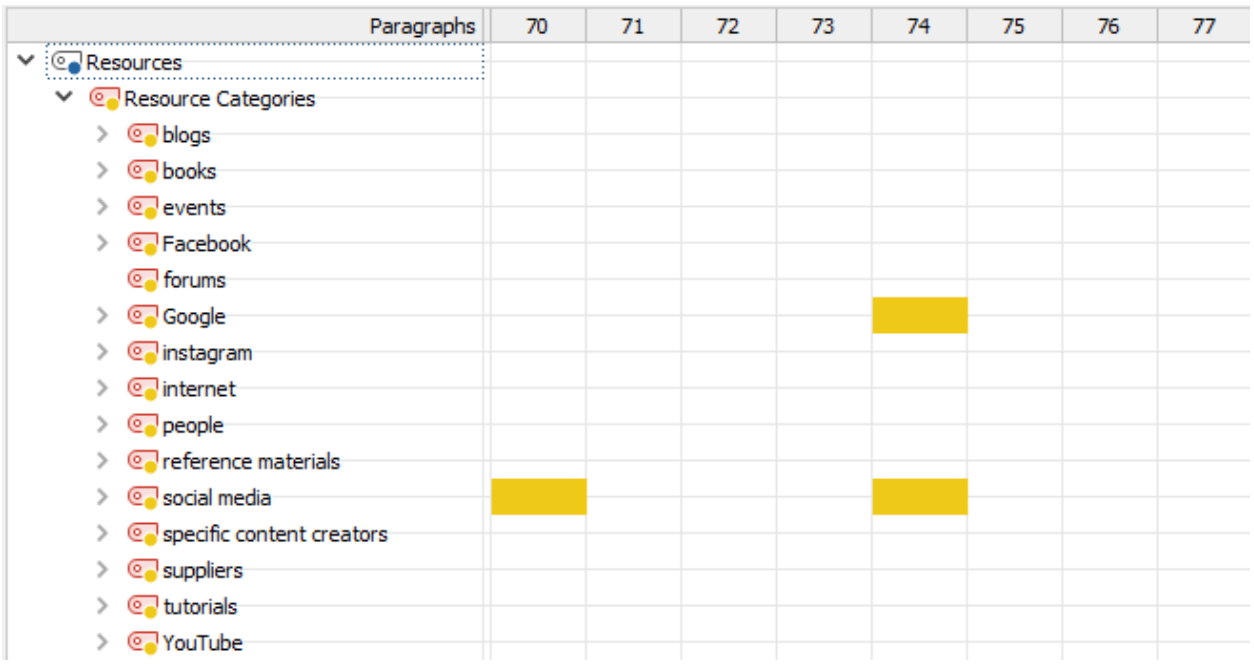


Table 13 shows the order in which each participant mentioned the resource category in their interviews. The numbers in the columns use 1 to indicate the first mentioned resource category, 2 for the second, 3 for the third, and so on. A number can be repeated when a participant mentioned multiple resources at the same step in their map drawing process. For example, Darth Claire mentioned going to Google, reference materials, and social media all in the first step of her process. This matrix does not represent the number of times a participant mentioned the category. The "# Participants" column on the right hand side shows the total number of participants who used resources from a particular category.

Patterns in Resource Use

The matrix indicates that 3 of the 10 (30%) participants had more than one first choice for seeking cosplay-related information. Five of the 10 (50%) participants mentioned reference materials as their first choice of information resource; this makes sense because cosplayers often use reference materials to create their initial plan for a cosplay. Other first choices include the internet, social media, Facebook, Google, people, suppliers, tutorials, and YouTube. Most of these resources involve computer-mediated communication, an important method of information seeking for cosplayers, who might not have access to local resources to support their hobby.

The matrix also reveals participants' patterns in their preference of order for accessing information resources. Most participants (70%) preferred what Sonnenwald and colleagues (Sonnenwald et al., 2001) call a *sequential chain* pattern, in which they use 4 - 8 resources in a specific order of preference. The participants who had more than one first

choice exhibit what Sonnenwald and colleagues call a *breadth-first* pattern, preferring to access multiple resources initially.

Table 13

Aggregated Resource Categories by Participant

	Allie	Amanda	Caz	Damaris	Darth Claire	GC	Kit	Norman	Red Baran	Taylor	# Participants
blogs						4					1
books		4									1
events			2			2					2
Facebook			1	5			4		7	6	5
forums							6				1
Google					1		7	2		4	4
instagram						5	5	5	6	2	5
internet	2	1				1	1			5	5
people	3	2	4	4	3	3	3	4	4	1	10
reference materials		3		1	1	1		1	1		6
social media					1	1					2
specific content creators			5			7			5	7	4
suppliers	1		3	3	2		2	3	2		7
tutorials	4					1			3		3
YouTube		5	1	2	4	6			8	3	7

Because most of the connections between information resources were not directional, I did not analyze them to identify different nodes within the information horizon maps or where links were absent on the information horizon maps.

Aggregated Map

An aggregated map combining the information horizon maps of all participants appears in Figure 55. Arrows with lines indicate a connection between resources that participants perceived as directional, while lines without arrows indicate that participants did not suggest a direction for the relationship. Specific content creators such as Kamui Cosplay have connections with many of the other resources, as they leverage those platforms to share their content and interact with the cosplayers who consume it. The internet writ large is also an important resource, as all of the resources except for some events and people rely on it to be accessible to participants. As with the gamers in Martin's study (2012a), most of the resources on the map require participation from cosplayers themselves. Tutorials, social media posts and groups, videos, blogs, and forums all rely on the creation of information by members of the cosplay community. Even books in this space tend to be created by members of the community. As Martin points out, "even participants who do not ask people directly for help with information needs are still always querying the collective intelligence (Levy, 1997) of the community for information" (2012a, p. 57).

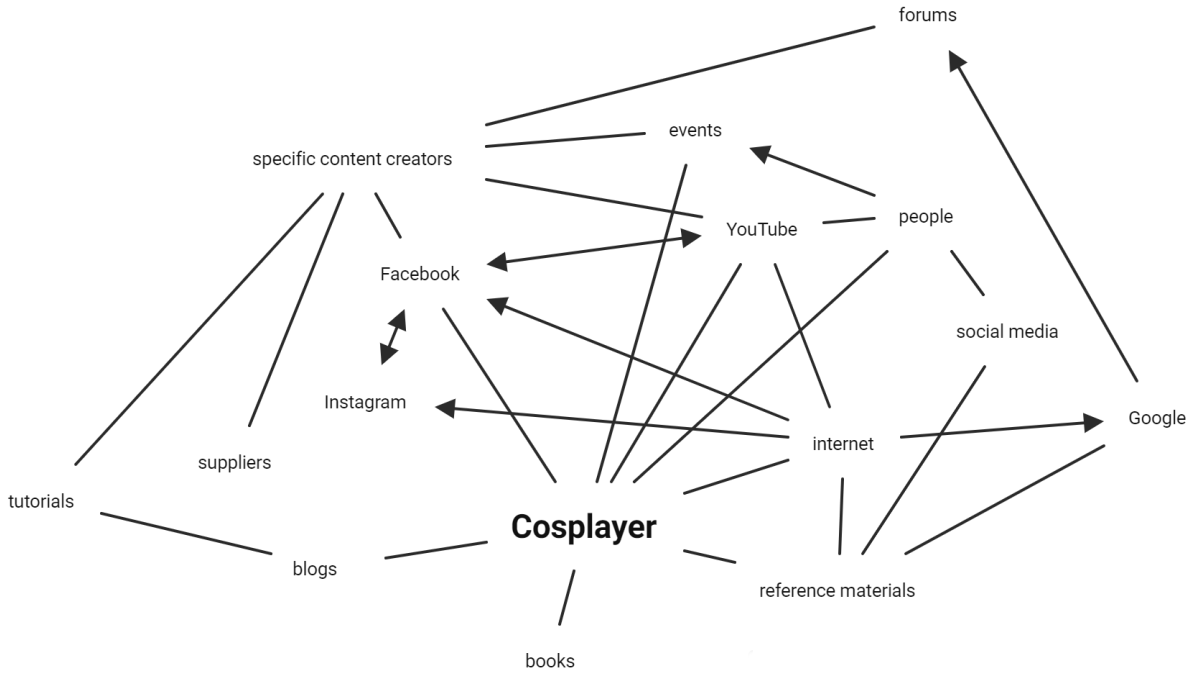
Trial and Error

One term participants mentioned in interviews did not fit in any of the categories depicted on the information horizon maps. Four of the ten participants mentioned "trial and error" as being key to their cosplay process. GC described how he liked to create resources to share the things he learned via trial and error:

> ...if it's something where I've seen that there's an information gap, and I have not found another tutorial quite like the one I'm going to write, I'm like, okay, there's clearly a need for this to exist, so I'm going to make it happen.

Figure 55

Aggregated Information Horizon Map



Allie refers to trial and error as something she used in her earlier cosplay days, before tutorials were widespread:

> When I first started getting into the makeup side of cosplay was back in 2010, 2011 and I was working on making a character from Silent Hill. She is a nurse character that has really messed up eyes. She's got wings coming out the side of her face. And I knew I wanted to try something with wax, but I didn't know how to really make those scars and make everything stay. YouTube tutorials were not a thing. It was, it just hadn't taken off yet. And it wasn't you know, YouTube was more of a just hadn't become this. This big widespread thing yet. So I really had to go towards trial and error. Like to be honest, I didn't really use any resources. I messed up and try it again and mess up and try it again until it worked. And, frankly, you know, now, I would use a completely different method. But there just wasn't the resources.

Norman described himself as a pro at spray painting; when I asked how he learned that, he said it was trial and error:

> **N**: I pretty much use spray paint for almost everything. I'm good at detail work. With spray paint, I know how to cut off the tape. Where the where to put it. How long do I need to let it stand before I start painting again, add a second coat, add different colors and especially what kind of tints you have to use stuff that bond bonds well to plastic, metal, whatever the case may be. Do I want it a solid color? Do I want it shining, do I want it glimmering? So, you know when it comes to those things I'm pretty much a pro at that.
>
> **K**: How did you learn that?
>
> **N**: It's pretty much trial and error. When I first got my Steven Universe shield, you know, the yellow, the blue and yellow pink one. You know, I knew immediately I wasn't - It was my first, the first of all, it was my first project I ever spray painted. But again, it's kind of kind of self explanatory. when you get into it like, do you want it shining? Do you want it solid? Do you want it light, do you want it dark?

Both Kit and G.C. indicated that they used trial and error when they couldn't find information related to the materials they had available or the only information they found required them to work beyond their current skill level. Kit described this experience with creating a bow for her armored Sylveon:

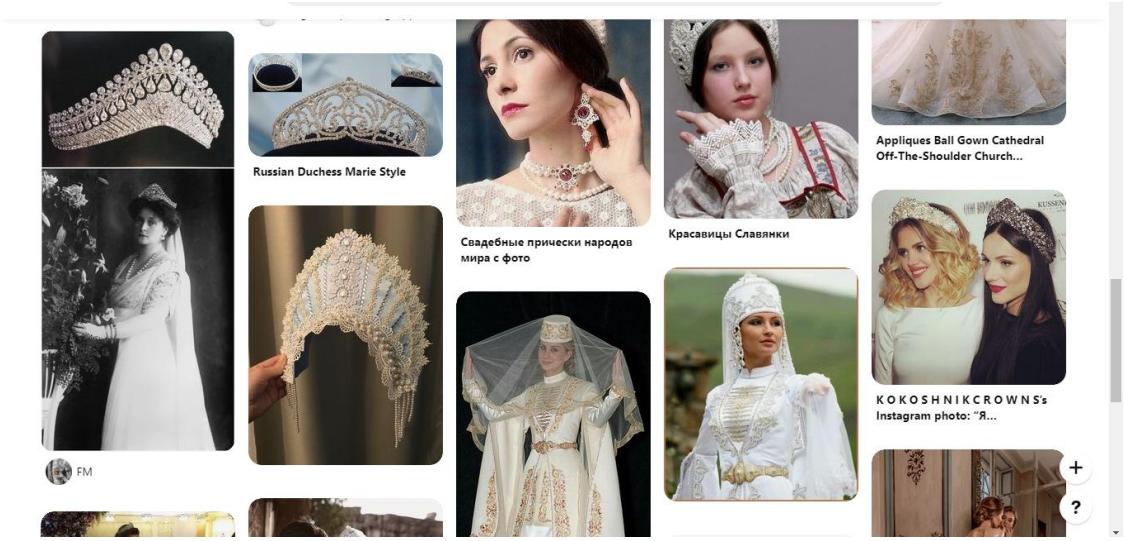
> ...so for my Sylveon she's supposed to have a bow. She's a Valkyrie. It's a Valkyrie-style armor build. And I could only find one person who made a bow for the costume. And the bow was so complicated, and there weren't enough progress pictures, so I couldn't figure out how to make it. A lot of people have made it based off that but I couldn't make that because my skill level wasn't that high at this point. So what I did was I made a totally different bow, but it still wasn't it. It wasn't as pretty as that one if I'm being honest, but it still works. But I mean, I tried to find anyone else who did a bow that was beside this main person who did their bow and I could not find anyone else. So that was really frustrating. So I was left on my own to figure out what to do.

Curation

While they did not include this information on their maps, two participants discussed how they curate information once they find it. Both Damaris and GC mentioned using Pinterest to keep track of reference images after finding them (Figure 56). Damaris then uses these images with graphic design software to create a plan for her costume (Figure 57).

Figure 56

A Pinterest Board



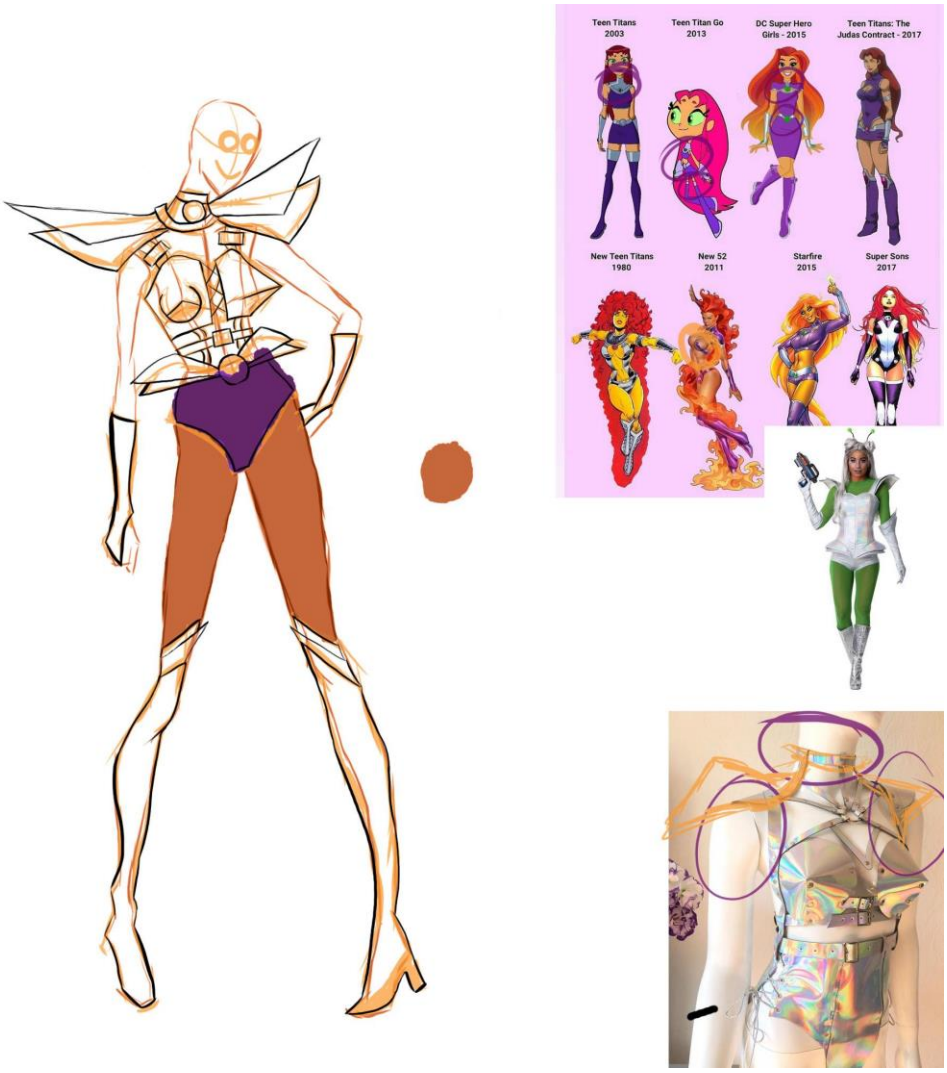
Note. G.C. created this Pinterest board to collect inspiration for a cosplay using Russian wedding attire.

Examples of Resource Use

While information horizon maps and lists of terms used offer a picture of the constellation of information surrounding cosplay, the information horizon interviews provide a more detailed understanding of the varied ways participants use given resources. The rest of this chapter explains some of the ways participants use some of the resources mentioned, offering visual examples when they are available.

Figure 57

Inspirational Images and a Draft Design



Note. Damaris used images she collected to inspire her design for this cosplay

People

The category “people” includes family, friends, and other cosplayers. This refers to direct contact with another person, rather than using a resource that another person has generated. This contact may be in person at a convention, whether in a panel or simply while walking around, or via a networked platform such as Instagram. For example, Amanda mentioned that she was interested in doing body paint; she might see a cosplayer walking the halls at a convention and say, “I like your body paint. How did you do it?” She might see another cosplayer in a costume requiring body paint on Instagram and direct message them to say the same thing. If she notices a panel at a convention that’s title or description indicates it will involve discussion of body paint, she may go to that panel and ask the panelists questions during or after the session.

Family and friends who help a cosplayer may or may not be cosplayers themselves. They may have expertise in a specific set of techniques, such as sewing, 3D design, or engineering. Cosplayers will sometimes confer with a friend who is currently creating the same costume as them or has created that costume in the past. They may exchange cosplay-related information with friends when spending time together, even for non-cosplay purposes, or when explicitly working together on a “cosplay collab,” in which two or more cosplayers work together to build a set of thematically linked costumes that may require matching supplies or rehearsed photography poses or performances. Other cosplayers may include members of a local cosplay organization (Figure 58) or cosplayers who the participant first encountered via seeing images or video of their cosplay online.

Figure 58

Members of the 105th Squad

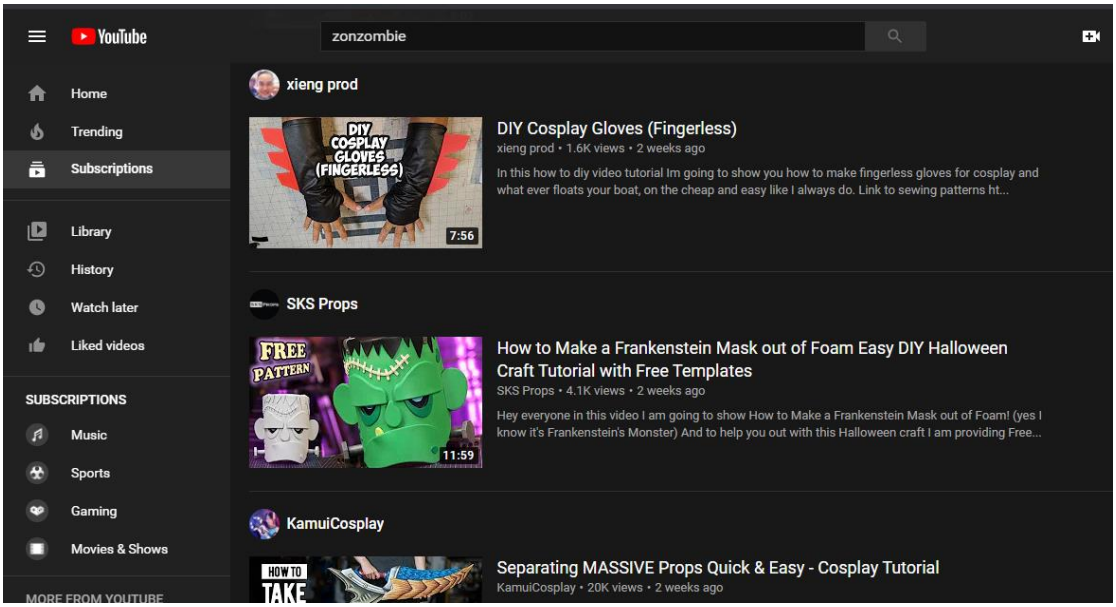
Note. The 105th Squad is , a cosplay organization with local groups in Durham, NC and Phoenix, AZ. From *The 105th Squad*, date unknown, photographer unknown. (http://www.105thsquad.com/). Copyright date unknown by The 105th Squad.

YouTube

Cosplayers use YouTube to both seek and share information. Participants primarily described it as a source for tutorials, videos with step-by-step instructions on techniques like applying makeup, styling wigs, or creating armor. Participants found relevant YouTube videos through Google Search or direct search in the YouTube interface, as well as through subscribing to specific creators' YouTube channels and "scrolling" through their new content on the YouTube subscriptions page (Figure 59).

Figure 59

The Youtube Subscription Page

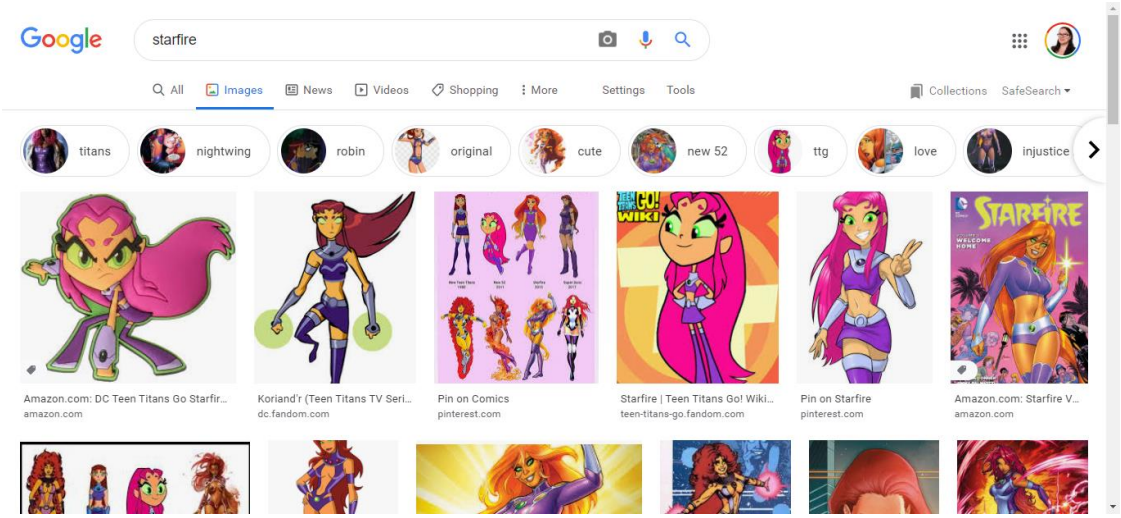


Reference Materials

As cosplayers begin a project, they find and use reference materials, especially through image-focused tools like Google Image Search (Figure 60) and Pinterest (Figure 61), to guide their creation. They often refer to materials from the source media of the character they're cosplaying. They may look at the pages of a comic book (Figure 62) or find or create screenshots from a movie, TV show, or video game (Figure 63). Cosplayers may use other reference materials from official sources, such as concept art (Figure 64), action figures (Figure 65), set photos (Figure 66), and websites for the source material (Figure 67).

Figure 60

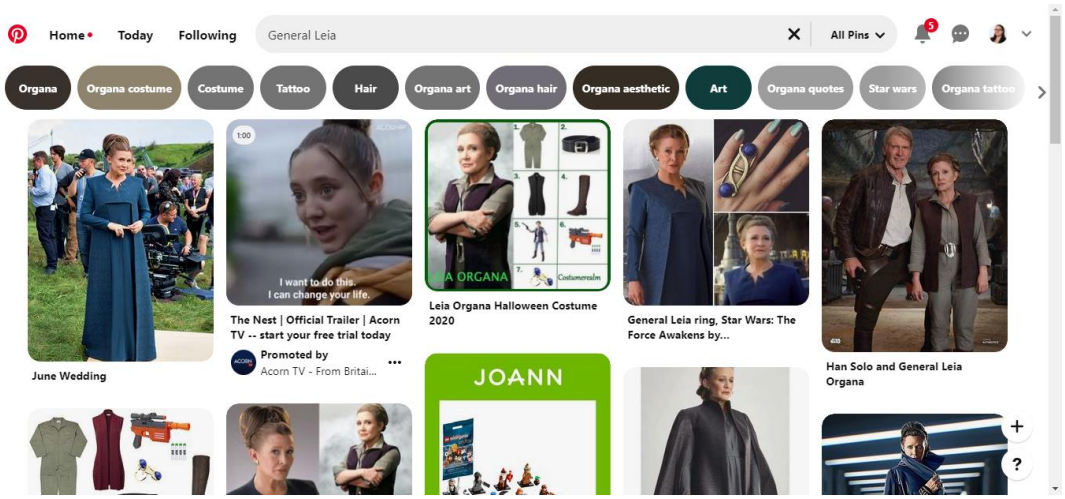
Google Image Search



Note. This is a search for Starfire, a DC character Damaris was planning to cosplay

Figure 61

A Pinterest Search



Note: This is a search for General Leia, a Star Wars character Darth Claire cosplayed.

Figure 62

A Comic Book Page

*Note.*The researcher used this page as reference for a Spider-Woman cosplay. From *Spider-Woman* #5, by D. Hopeless and J. Rodriguez, 2016, p. 21, Marvel. Copyright 2016 by Marvel Characters, Inc.

Figure 63

A Video Game Screenshot

Note. The researcher used this screenshot from the video game *Final Fantasy VII* to plan a costume of this character, Tifa. From *Final Fantasy VII*, directed by Yoshinore Kitase, 1997, Square Enix. Copyright 1997 by Square Enix.

Figure 64

Concept Art of Captain America in the Movie Avengers: Infinity War

Note. Taylor created a Captain America Infinity War costume but chose not to use concept art for reference because it often differs from the costume in the actual film. In this image, Captain America wears shields on his arms that have a different design than the shields he wore in the film. From *Avengers: Infinity War*, directed by A. Russo and J. Russo, 2018, Marvel Studios. Copyright 2018 by Marvel Studios.

Figure 65

An Action Figure of Captain America in the Film Avengers: Infinity War

Note. As with the concept art, Taylor chose not to use this as a reference because she feared it might differ from Captain America's look in the finished film. From *Captain America (Infinity War Version)*, artist unknown, date unknown, Medicom Toy. Copyright date unknown by Medicom Toy.

Figure 66

A Photo from the Set of the Film Birds of Prey

Note. Taylor used a set photo like this one from Birds of Prey to create a cosplay of this costume for the character Harley Quinn. From *Birds of Prey* publicity photographs, 2019. *Birds of Prey*, directed by Cathy Yan, 2020, DC Entertainment. Copyright 2020 by DC Entertainment.

Figure 67

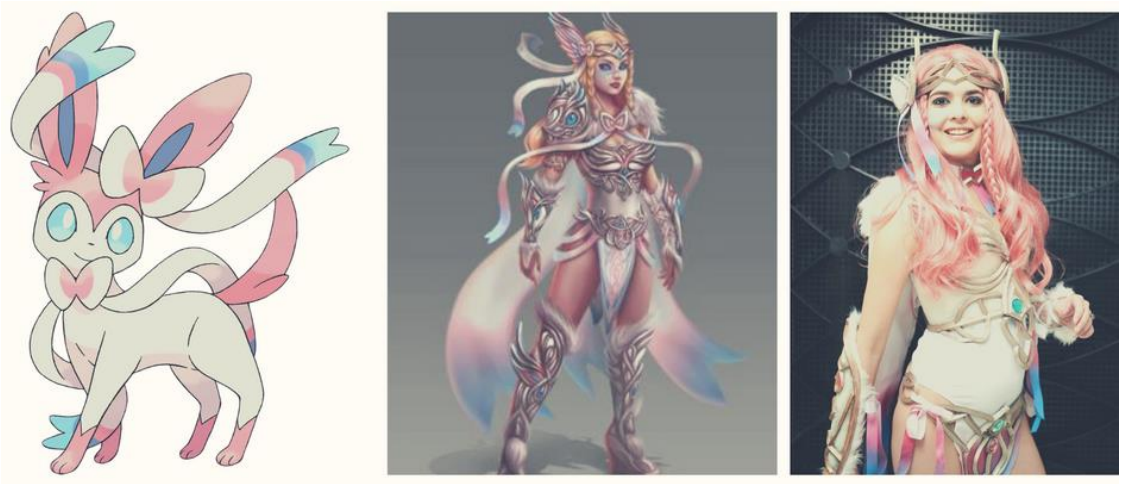
A Page from the Official Borderlands 3 *Cosplay Guide*

Note. The website for the video game Borderlands 3 features detailed, multi-page PDF cosplay guides for many of the game's characters, featuring 360º full body images as well as detailed images of accessories and makeup. This is a page from the guide for the character Moxxi. Taylor used the guide to plan a Moxxi cosplay. From *Moxxi*, 2019, 2K. Copyright 2019 by Iperion LLC.

Cosplayers may use fan-created art as references. In some cases, they may not be cosplaying the character as portrayed in the source material for the character, but instead as portrayed in the fan art, which then itself becomes the source material for the costume. For example, Kit mentioned creating costumes inspired by Pokemon fan art in which the characters, which are normally drawn as cute animals, were portrayed as armored women (Figure 68).

Figure 68

Cosplay Based on Fan Art



Note. A comparison of the original Pokemon design for Sylveon, a digital painting by Gladzy kei based on Becka Noel's illustration of Sylveon as a Valkyrie, and Kit's cosplay based on the digital painting. First image from "Sylveon," by Ken Sugimori, 2013, *Pokemon X and Y*, Nintendo/The Pokemon Company. Copyright 2013 by Nintendo/The Pokemon Company. Second image from https://beckanoel.tumblr.com/post/140179657869/celebrating-20-years-of-pokemon-last-but-not by Becka Noel and Gladzy kei, 2016. Copyright 2016 by Gladzy kei.

Cosplayers may look at other costumes, either those created by cosplayers drawing on the same source material, or those sold by retailers (Figure 69), and use those costumes to guide their own design and construction; in this way, suppliers can cross over into offering reference materials. For the purpose of categorization in analyzing the information horizon maps, however, I grouped this use as falling into the supplier category.

Figure 69

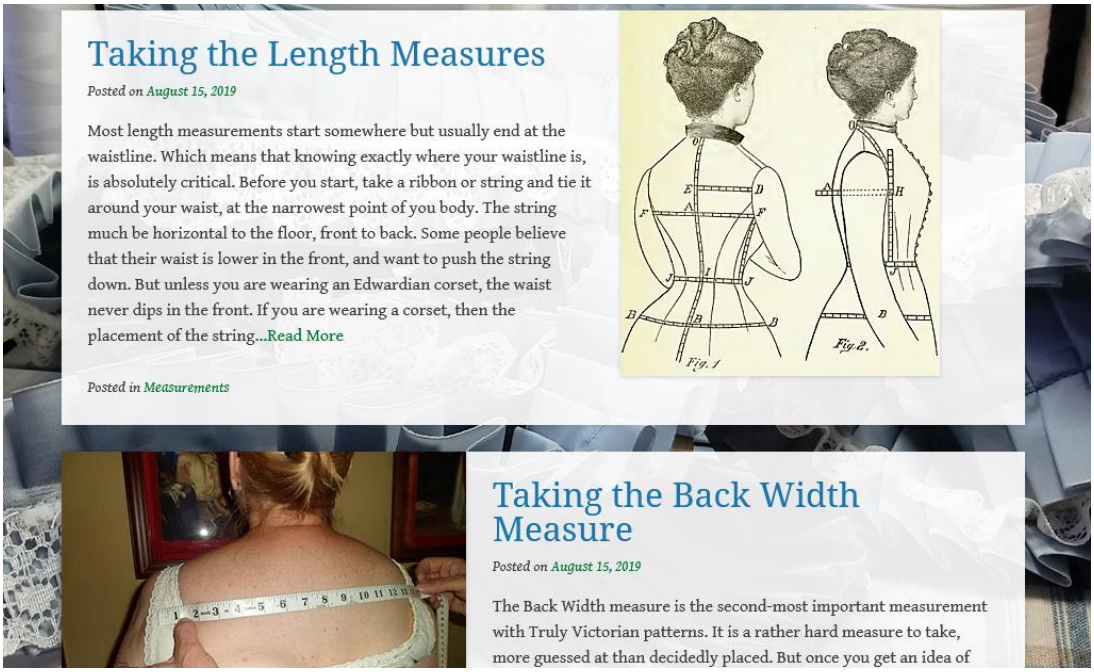
A Costume Sold on Amazon

Note. Damaris mentioned looking at retail costumes for this character, Sephiroth from the video game *Final Fantasy VII*, and using them to help her plan her own builds.

If the source material takes place in a specific historical period or the cosplayer is setting the character in a particular historical period as part of their interpretation, they may consult historical reference materials (Figure 70). For example, Red Baran mentioned going to a website called Truly Victorian for support with creating Victorian-style costumes while GC and Darth Claire mentioned looking at Russian and Japanese historical materials, respectively, for a *Yuri on Ice* wedding cosplay collaboration they were creating.

Figure 70

Truly Victorian



Note. Red Baran mentioned using this website as a historical reference

Suppliers

Cosplayers may use suppliers, primarily retailers, as information resources. As mentioned above, they may use images of costumes for sale through a particular retailer either to form the base of their own costume or as inspiration for their design. At local retailers, staff can support a cosplayer by helping them find a particular type of fabric that is suitable for their project; Allie pointed out that staff at craft stores were more likely to help in this way than staff at other stores, such as hardware stores, because they are more familiar with the use of materials in their store for costuming purposes. Suppliers also sometimes provide tutorials, such as Arda Wigs, which provides YouTube tutorials on how to cut and style their wigs to achieve particular looks (Figure 71).

Figure 71

A YouTube Wig-Styling Tutorial

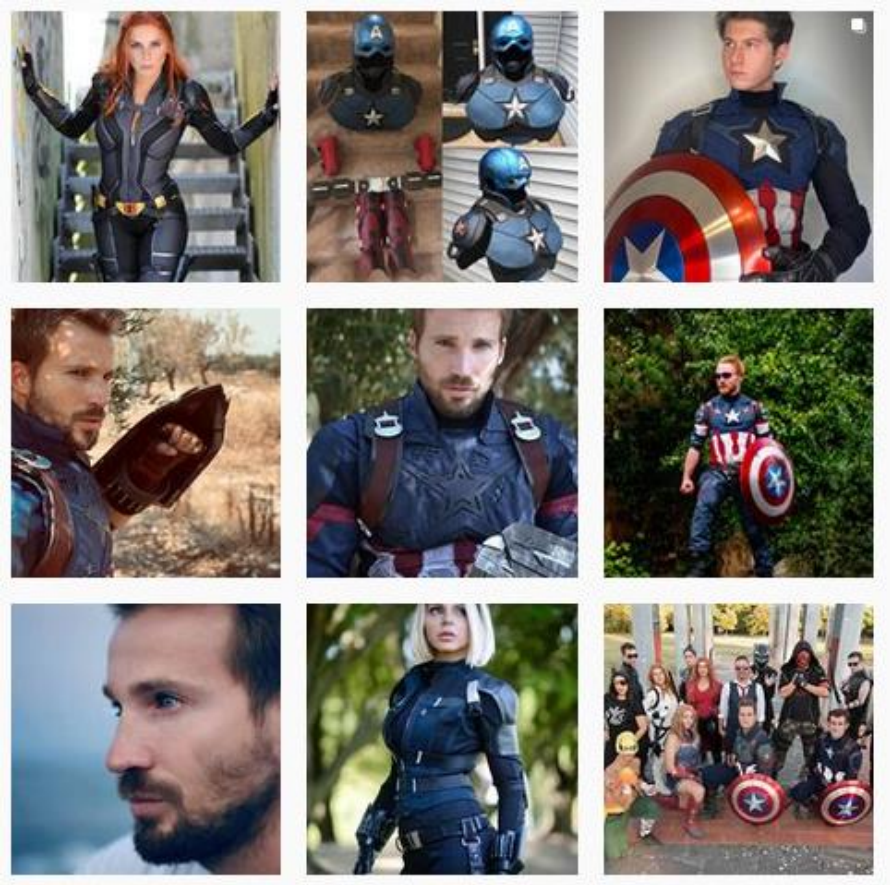
Note. This YouTube tutorial from the retailer Arda Wigs explains how to achieve the hairstyle of Deku, a character from the manga and anime *My Hero Academia*.

Instagram

Instagram offers cosplayers the opportunity to connect with other cosplayers, share their own work, and find reference materials that might not be available elsewhere. They can share their costumes, create informational posts by posting several text-heavy images, provide short video tutorials, or post photos of their progress building a particular costume. Cosplayers can follow other cosplayers on Instagram; they might have met these cosplayers at conventions or found them via the use of cosplay-specific hashtags such as #cosplay, #cosplayer, and #captainamericacosplay (Figure 72).

Figure 72

Top Results from a Search for #Captainamericacosplay on Instagram



Note. Taylor mentioned meeting other Captain America cosplayers by following this hashtag.

Cosplayers might also use hashtags as reference for certain techniques; for example, Red Baran was doing some goldwork embroidery on a costume, a technique that involves using metallic thread as well as sometimes beads, pearls, sequins, or gems. By searching the hashtag #goldwork, she found video tutorials for the technique and information about where to acquire materials.

Following entertainment industry professionals such as makeup artists and costume designers can yield reference materials that might not be available elsewhere; for example,

Taylor learned from professionals working on the film *Birds of Prey* who shared product lists for the makeup they used on set and set photos of costumes that were only briefly featured in trailers or official promotional materials. This enabled Taylor to create a detailed Harley Quinn cosplay of a particular costume from *Birds of Prey* ahead of the film's release.

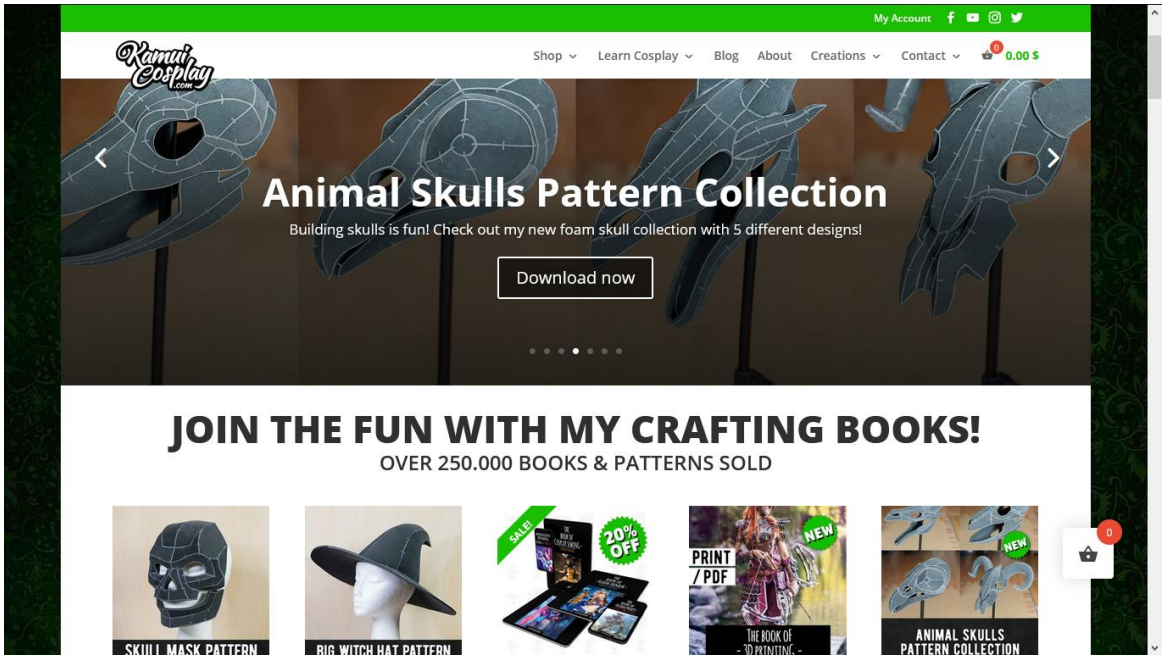
Cosplayers both share and seek information via Instagram's direct messaging feature, through which users can privately converse. Allie and Amanda both mentioned messaging other Instagram users to learn techniques from them. Amanda sometimes meets cosplayers at conventions and asks them for their Instagram usernames so she can follow them and later message them with questions about what they were wearing at the convention.

Specific Content Creators

Over half of participants included on their information horizon map the name of one or more specific content creators who provide resources that they use for cosplay; some of those who didn't include them on their maps mentioned them during the interviews or in follow-up emails. Most of these creators are "cosfamous," meaning they make all or part of their living from cosplay-related activities (Kroski, 2015). Those mentioned by participants sell or give away books and patterns, create video tutorials, and present on panels at conventions (Figure 73).

Figure 73

The Website of Kamui Cosplay



Note. Four out of 10 participants mentioned using resources created by Kamui Cosplay.

Events

Participants mentioned a variety of event types, including build parties, small crafting parties, conventions, classes, festivals, supply exchanges, and photoshoots. Build parties are events where a number of cosplayers, sometimes as many as 40, gather at one cosplayer's house, bringing a current project and working on it in the presence of other attendees who are also working on theirs; this is a good opportunity to get information, share ideas, and get help with tasks that might require more than one person to accomplish. Small crafting parties are similar but involve a smaller number of participants, up to about 15 people. Supply exchanges are another opportunity to interact with local cosplayers, gathering to exchange supplies such as fabric and foam but also to share skills.

Conventions. Conventions are a particularly important type of event for cosplayers. Historically, fan conventions have been where cosplay's primary activity, wearing costumes, takes place (Ashcraft & Plunkett, 2014; Lamerichs, 2011; Lotecki, 2012; Winge, 2006; Winge, 2018). In addition to viewing and displaying their costumes, cosplayers both seek and share information at conventions. Cosplayers often will ask each other about their costumes, inquiring about techniques or materials. Darth Claire and Red Baran both mentioned sharing information in one-on-one conversations of this nature. The other primary way cosplayers seek and share information at conventions is by attending or presenting on panels. Allie, GC, and Caz mentioned that they share information by presenting panels; for example, GC has repeatedly presented a panel called "In Just 7 Steps I Can Make You a Man," in which he shares information about how people who might not always present as masculine themselves can use body shaping, makeup, costuming, and movement techniques to present masculine characters. Damaris, Amanda, GC, Caz, and Red Baran all mentioned attending convention panels as a way of learning new techniques. Red Baran not only discussed attending panels, but also referring back to notes from a panel later when she needed information about the covered topic.

Amanda, GC, and Red Baran all mentioned one convention in particular, Cosplay America. At many fan conventions, fans can apply to present panels. Some of those panels may focus on cosplay, but a person attending the convention probably will not know how much cosplay-related programming will be available. Cosplay America, however, focuses exclusively on cosplay-related programming. GC articulated the ways this convention offers cosplayers more than many other conventions do:

> ...it gets in some really big names from the cosplay community and it is all about learning… all the panels are focused on learning a new skill… talking to different cosplayers about their experiences. They have a lot of workshop classes as well. So the first time I went to it, I did a three day workshop on prosthetics... So it started off like pretty small… they do these where you kind of just like you pay for the materials and then you go to that workshop for however many days it lasts, and you get that hands on experience... not only are there the panels, but a lot of times these cosplayers will just be… hanging around for you to talk to. And so it's… one of the most helpful places to pick up new skills and new information.

Facebook

Cosplayers use Facebook to promote their own work on Facebook Pages, to follow the work of others on Facebook Pages, and to communicate with others via Facebook Groups. A Facebook Page allows a user to share updates with people who have followed the page, whether or not they are Facebook friends with the user. Kit likes using Facebook Pages because they allow the Page owner to share a large number of images collected together in one album. Kit specifically mentioned that this was helpful for sharing progress photos, photos captured during the process of building a cosplay (Figure 74):

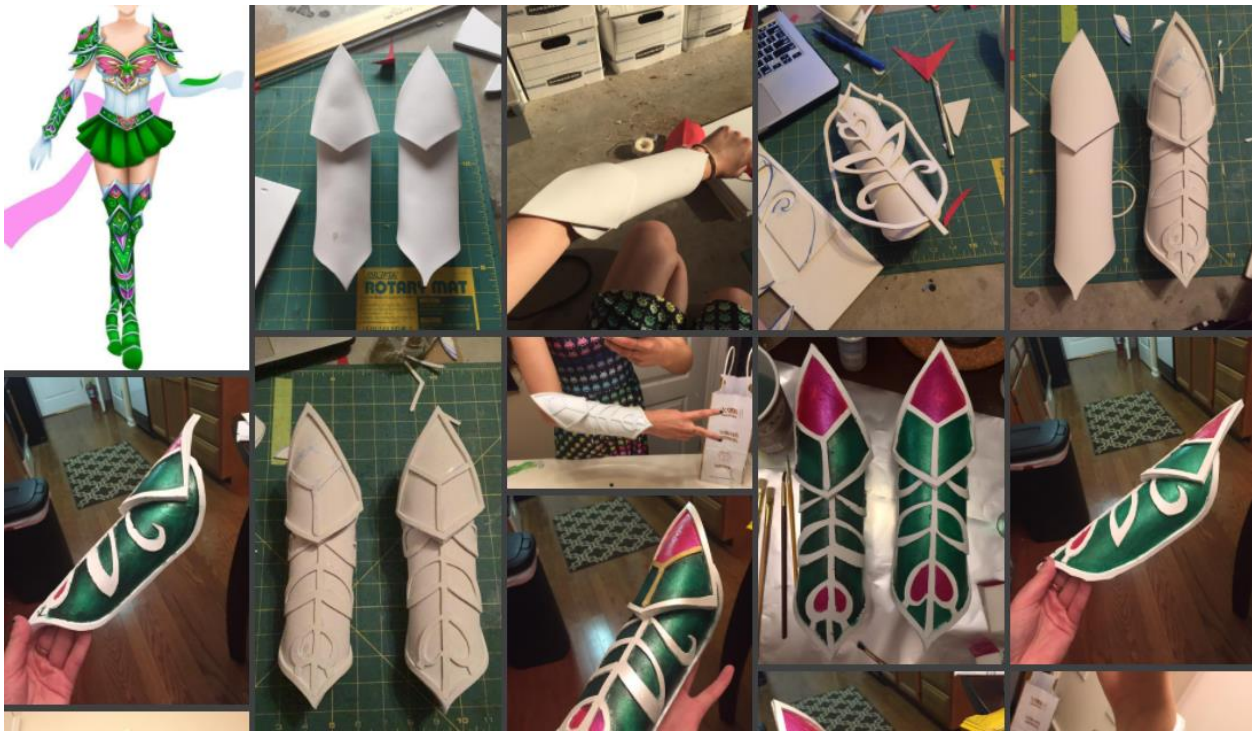
> So one of my friends actually wanted to do an armored sailor scout cosplay, a different version from the same series that I did. But I was able to tell her, Hey, go to my Facebook page. I've posted progress photos of my own armor. So I think if you can get - figure out the process from that…

Facebook Groups are similar to forums. Members of a Facebook Group can create and reply to posts, share photos and files, and create polls and events. Facebook Groups in the cosplay affinity space might focus on the work of particular creators (groups devoted to cosplay creators such as Evil Ted's Foam Fanatics or groups devoted to particular fan artists, such as an artist who draws armored designs based on Pokemon characters), particular characters (such as a group Taylor is part of that is dedicated to Captain America), particular

costume creation techniques (such as How to Make Corsets Like a Pro, a group Red Baran is part of), or be an offshoot of another website, such as The Replica Prop Forum (Figure 75).

Figure 74

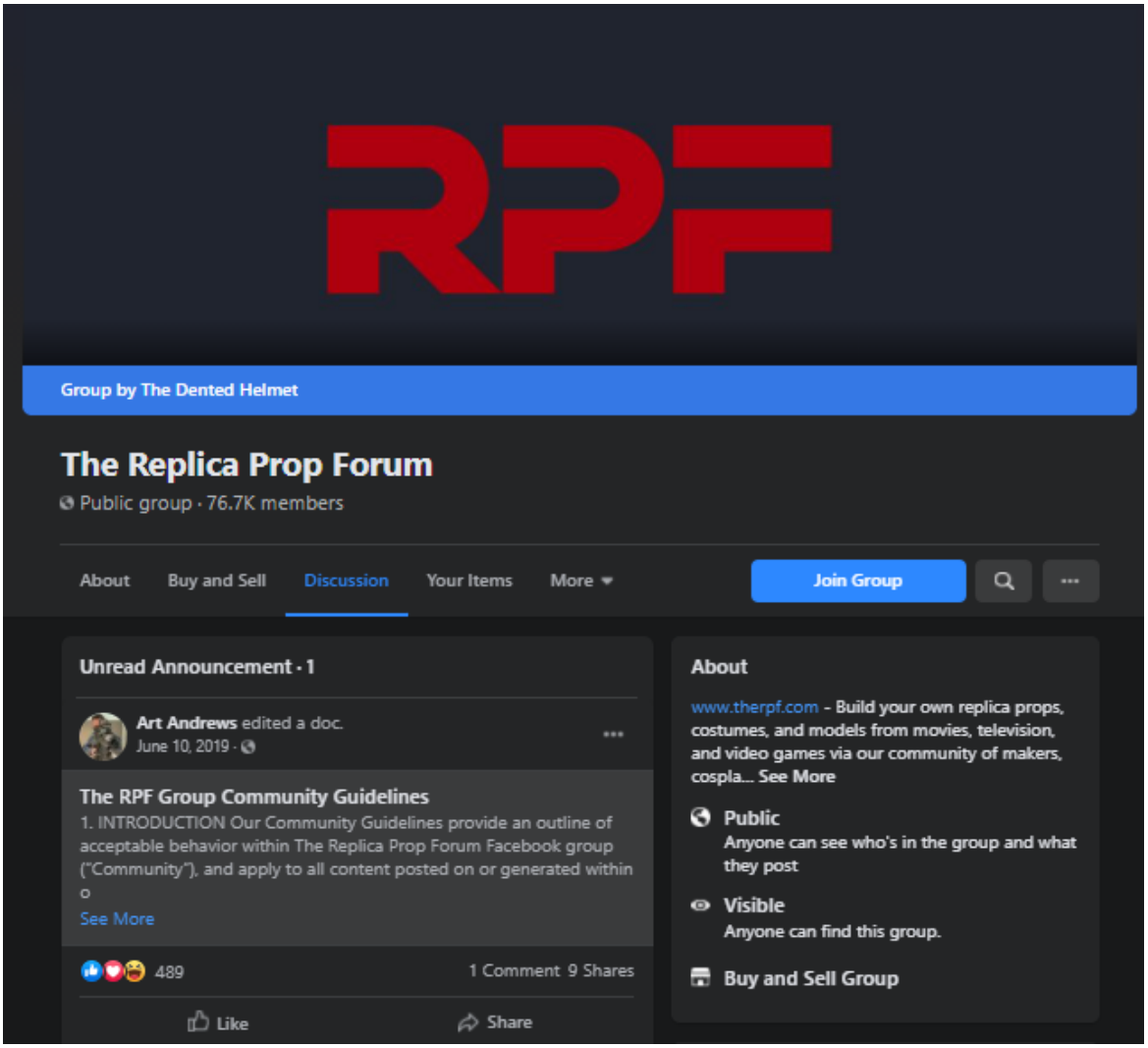
A Facebook Album of Progress Photos



***Note*.** These images document Kit's progress on her armored Sailor Jupiter costume**.**

Figure 75

The Replica Prop Forum Facebook Group



Note. Members can use Facebook groups like this one to buy and sell costumes and props, share their work, and ask questions.

Caz organized three Facebook Groups she uses according to her perceived audience for them: EvilTed's Foam Fanatics for novices, KamuiCosplay's Facebook group for advanced makers, and the Replica Prop Forum for "pro" makers. She said that EvilTed's group is "just cosplayers like me, just sort of having fun and exploring" and "very

community-oriented." She contrasted this with the Replica Prop Forum group, which "would be sort of considered one of the pro groups because there are people in there who work in the entertainment industry… maybe they're not the best person for a newbie to talk to, because they're so far above that they a) can't teach a novice and b) kind of talked to novices like, they're idiots." KamuiCosplay's group's audience falls somewhere between these two levels of expertise, because Kamui's books provide introductory material and her videos share more advanced techniques; "she's a super sweet and quirky cosplayer. And I think that personality has sort of reflected itself in that Facebook group," Caz said.

Cosplayers can use Facebook Groups to crowdsource ideas for how to deal with a situation, as Caz did when another cosplayer asked if he could commission her to create something for him even though he lived far away and would not be able for face-to-face fittings:

> I talked to some people on some Facebook groups, and they all have different ideas. Some of them are seamstresses, so they're a lot more experienced working simply from getting measurements mailed to them, or emailed to them. And some people were like have the guy make him make a dress form of his own body, like make a duct tape dress form of his torso, which I've done myself. But I didn't. The client doesn't know how to do any of that stuff.

Facebook is one of the few resources that has directional relationships with other resources. Caz often learns about YouTube videos from Facebook Groups, while Kit will often seek out the Facebook Page of a cosplayer she first learned about on Instagram in hopes of finding more photos of that cosplayer's work.

Conclusion

This chapter has described the resources participants mention in their information horizon maps, the order in which they mentioned them, and the relationships they described between them. It provides a look at both individual and collective information practices and

demonstrates that even when individuals are seeking information without directly querying other people, they rely on the collective intelligence of other cosplayers to meet their information needs. The next chapter discusses the implications of these findings, the limitations of this study, and proposes directions for future research and practice.

CHAPTER 8: DISCUSSION AND CONCLUSIONS

In this chapter, I will discuss the findings of this study from a variety of perspectives related to information horizons and information literacy, offering suggestions for future research throughout. I will begin by addressing the types of questions the information horizon map and interview method are designed to answer. I will then discuss the relationship between this research and other research on information literacy practices. I will also explore how the findings of this research reinforce or depart from sociocultural models of information literacy, including embodied information literacy as discussed by Lloyd (2005a, 2005b, 2006, 2007a, 2007b, 2009, 2010a, 2010b, 2010c, 2011, 2012; Lloyd & Somerville, 2006), Papen (2013), and Harviainen (2015). Next I will discuss the implications of this study's findings for the concept of affinity spaces. I will use Martin's framework of information literacy, developed by studying affinity spaces, as an analytical lens and discuss possible revisions of the model. Finally, I will discuss this study's limitations and provide recommendations for future practice.

The research question addressed in this study is:

How do cosplayers situate themselves within the constellation of information available around their affinity space?

To answer this question, I asked ten cosplayers to situate themselves on an information horizon map, depicting the resources they use for cosplay and the relationships among themselves and the resources and the resources and each other. Information horizon maps illustrate the constellation of information, "the information available in and around" the

cosplay affinity space (Martin, 2012a, p. 5). Semistructured interviews paired with the information horizon maps asked participants to describe cosplay problems they had, and times when it was difficult, easy, satisfying, and unsatisfying to resolve a cosplay-related information need. Responses to these questions provided details to further illustrate the experiences participants captured on their information horizon maps.

Information Horizons of Cosplayers

In this section, I will discuss how participants' information horizon maps and interviews illustrate how cosplayers situate themselves in the constellation of information surrounding cosplay. This discussion will focus on the types of data the information horizon map and interview are intended to collect:

- decisions made and activities undertaken during the information seeking process;
- when and why information resources, including individuals, are accessed (and not accessed);
- relationships or interconnectedness among information resources;
- individual preferences and evaluation of information resources;
- the proactive nature of information resources;
- and the impact of contexts and situations on the information seeking process. (Sonnenwald et al., 2001, p. 68) (bullets added)

Participants describe a wide variety of decisions made and activities undertaken as they seek cosplay-related information. For most participants, as soon as they settle on an idea for a cosplay project, their first decision is about where to look for reference images. As mentioned in the findings chapter, they may turn to Google images or Pinterest, to social media accounts of film and television professionals working on the media property the cosplay character comes from, or go directly to the source media itself. Cosplayers planning to create a cosplay accurate to the original character design use reference materials such as screenshots and set photos, while cosplayers innovating to create a new perspective on a character might use historical references or fashion-related information.

As they make a plan for the cosplay project, cosplayers must determine which pieces will require them to seek information. At many different stages in the process, they must decide where to look for information, in what order to look for it, and when to stop looking. Many of the cosplayers indicated that they would rather go directly to a person with experience that would help them before they go to any other source of information; doing this can radically shorten the information seeking process as one person may be able to provide information on what to do and where to acquire materials. Sometimes, a cosplayer can't find any information that helps them; in this case, they must determine how much longer to search. After an extensive review of several YouTube tutorials, Darth Claire determined that she needed to work out for herself how to create a Wonder Woman shield. G. C. Kinsey had a similar experience with his Winter Soldier arm.

As for activities undertaken during the process, they vary widely. Participants describe creating their own reference images from source material. They might go shopping and see the retailer as a source of information. A lot of the activity participants described happened through searching behaviors, whether on Google, YouTube, Pinterest, or elsewhere. A lot of the information seeking process for most participants involved talking to other people. Participants might watch videos, browse websites, or read books. They might need to try out different techniques, using their own experience and trial and error as an information source. Several cosplayers mentioned attending cosplay-related events, whether they were formal events like a convention or casual events like a crafting party among friends. Throughout the process of conducting all these activities, cosplayers might curate a collection of materials, tutorials, and contacts to support the creation of the cosplay project.

Cosplayers tend to access information resources because they need assistance

completing a particular component of a cosplay project. They often access reference materials for initial inspiration, but other instances of information access are related to needing to learn a particular technique to achieve a specific effect. For example, both G.C. and Allie discussed needing prosthetics to achieve the desired effect in a cosplay and seeking out information specifically to fill the gap in their understanding about how to create prosthetics. Sometimes cosplayers will access information when they have an idea for a project or know they will want to try a technique someday even if they aren't currently working on the project, as was the case when Amanda asked another cosplayer for advice on using body paint. Occasionally, participants serendipitously access information in their social media feeds because they have followed particular other cosplayers or specific hashtags.

The strongest relationships participants described between information resources were those between various social media platforms and the users of those platforms. Caz described using Facebook to find recommendations for YouTube videos. Kit described first learning about a cosplay on Instagram and then going to track them down on Facebook. Norman and Taylor both described specific instances of connecting with other cosplayers using Instagram as a platform, while Amanda and Red Baran said they connect this way as well.

The other linchpin of relationships between information resources is the fan convention. At conventions, cosplayers can attend panels, approach other cosplayers in the hall or on the exhibit floor to learn from them, or meet cosplay guests and get information on how to connect with them outside of the convention, such as on Instagram. Building or crafting parties can sometimes serve a similar purpose, acting as an information resource themselves but also giving cosplayers the opportunity to meet each other and potentially

serve as resources for each other in the future.

The variety of information seeking patterns described on participants' information horizons and in their interviews demonstrate that individuals do have particular preferences for accessing information. This supports Martin's (2012a, 2013) assertion that information literacy is not a standardized, linear process that can be universally applied to all information seekers. Participants also indicated that they evaluate information according to personal preferences, such as the materials they have on hand or techniques they are interested in learning.

Information resources in the cosplay affinity space can be seen as proactive because creators often share information through YouTube tutorials or progress photos without being asked. They can also be reactive, as when one cosplayer reaches out to another to ask for information about a technique or costume piece or a group of cosplayers provide responses to another cosplayer's question. Both of these methods offer value to information-seeking cosplayers.

Contexts and situations have a great deal of impact on cosplayers' information seeking process. Contexts in particular drive whether a cosplayer reaches out to another person for help directly or begins by searching for resources others have created. In the context of the convention or the build party, it is easy for cosplayers to casually seek information from others attending the event. When cosplayers are at home, they might reach out directly, but they also might need to spend more time working with resources like tutorials or social media platforms if they do not have anyone they can directly contact.

The context of participants being at home in the situation of quarantine due to COVID-19 has both limited cosplayers' options for information sharing and provided new

opportunities. Both fans and professional convention companies have hosted virtual conventions and offered the opportunity for cosplayers to share information through panels; the opportunity for a serendipitous, informal interaction in a hallway or on an exhibit floor is not present in the same way at a virtual convention as it is at a physical convention. Cosplayers do not have the opportunity to showcase their costumes in the same way they would at a convention through contests, parades, or masquerades.

Cosplayers still find ways to engage in their hobby, however, and even have found new areas of learning and information seeking to explore in this situation. G.C., Kit, and Darth Claire often work collaboratively on cosplay projects, but as they are each separated in their homes, they have had to find new ways to collaborate. Both G.C. and Kit mentioned using techniques of self-photography and sharing information about those techniques with others. G.C. and Darth Claire put those techniques into play to create a photoshoot of two characters from the anime *Yuri on Ice* making dinner together, even though each of them was at their own home. G.C., Darth Claire, Kit, and other friends also created a cosplay video of them hosting a virtual class on Zoom in character as characters from the anime *My Hero Academia*. This situation has allowed cosplayers to find new ways to pursue their hobby and new opportunities for finding and sharing information.

One limitation of the information horizon framework and method is its focus on information seeking and evaluation to the exclusion of other components of information literacy such as disseminating or creating information. Adding a phrase to the prompt about including resources where cosplayers disseminate or share information they have created might address this. The interview protocol used for this study added the question, “Do you share information about cosplay? How? Why?” to the original protocol. Future research

might also use the critical incident technique relied upon in the rest of the interview, asking participants to describe a specific time when they created, shared, or disseminated information about cosplay. Participants could be prompted to include the resources provided in the answer to this question on their revised information horizon map.

Cosplayers' Embodied Information Literacy

Participants in this study illustrate the variety of elements of information literacy that Lloyd identifies: they are "engaged, enabled, enriched, and embodied by social, procedural, and physical information that constitutes an information universe" (Lloyd, 2004, p. 223). Cosplayers are engaged with the information landscape surrounding cosplay, which extends beyond conventions to online resources and personal relationships. Others in the information landscape often enable them to navigate it; for example, in the convention panel he presents called "In Just 7 Steps I Can Make You a Man," G.C. recommends a variety of additional resources for cosplayers to explore, including pointing to specific tutorials. Cosplayers are enriched by their ability to use information in the cosplay landscape to produce meaningful outcomes: they use information to complete cosplay projects. They are embodied through the process of cosplay, using their body as a canvas to produce art and engaging with textual, social, and physical sources of information to create an embodied outcome.

Cosplayers engage with a variety of textual sources such as books and blog posts; they also engage with visual sources such as progress photos and instructional videos. These visual sources may be folded into Lloyd's (2007a) category of textual sources, as they provide insight into community discourse and can be accessed through activities like searching. Future research might investigate these visual sources further to determine whether they should instead stand alone as a separate category.

Cosplayers engage with social sources extensively, communicating with other cosplayers and with others who can help them. “People” was the only category of information source that all participants included on their information horizon maps. They may access these sources through casual contact on a convention floor, through attending panels and asking questions, through making contact online, or through attending building or crafting parties. Even people who are not cosplayers themselves can be seen as social sources in the information landscape, as Kit’s relying on her father’s assistance or turning to retail employees for help selecting fabric indicates.

Cosplayers receive physical information from their own bodies and the bodies of others. When G.C. built his arm for his Winter Soldier costume, he initially built it so that it was stiff at the elbow. When he first wore it to a convention, he learned that this made movement difficult and felt uncomfortable. He iterated on that design over time, each time learning from his body what worked and what needed improvement. Cosplayers learn from others’ bodies when they watch a tutorial video or attend a convention panel in which the cosplayer demonstrates the technique using their own body. They also read each other’s bodies as indicators of where information might be available, such as noticing when another cosplayer is wearing body paint and may be able to provide advice on doing so.

A key piece of Lloyd’s (2007) framework of embodied information literacy is a shift from *acting* as something (in Lloyd’s case, a firefighter) to *being* something. The data for this study does not provide examples of how this type of transition happens in the cosplay affinity space. Future research, especially in-depth ethnography, might use this transition as a sensitizing concept.

Connections to Other Information Literacy Research in Affinity Spaces

In the only study aside from this dissertation study to investigate the information practices of cosplayers, Vardell, Thomas, and Wang (2020) found that cosplayers relied heavily on reference materials as part of their information practice. This reinforces the findings of the current study, in which 8 of 10 participants included reference materials on their information horizon maps and 6 of those participants named reference materials as the first information resource they consult.

Another finding that echoes other research is this study's finding that participants rely on trial and error as an information source. Bebbington and Vellino (2014; 2015), in their study of Minecraft players' information literacy practices, found that participants used trial and error as a method of evaluating the information found in sources such as wikis and YouTube. The participants in this dissertation study tended to rely more on trial and error for the creation of information than for the evaluation of it, such as Norman teaching himself how to use spray paints to paint cosplay props. Trial and error will be discussed in more depth later in this chapter.

The study with methods most closely aligned with this study is Martin's study of the information horizons of World of Warcraft players (2012a, 2012b). As in Martin's study, the participants in this dissertation study included a wide range of resources on their information horizon maps and described varied information seeking and sharing processes. This variability demonstrates that information literacy can be a unique and individualized set of competencies and processes, contrary to the assumptions of traditional models that applying information literacy is a universal and linear process (American Association of School Librarians, 1998; American Library Association (ALA) Presidential Committee of

Information Literacy, 1989; Association of College and Research Libraries, 1998; Association of College and Research Libraries (ACRL), 2000; Bruce, 1997; Bundy, 2001, 2004; Candy, 2002; Clausen, 1997; Doyle, 1992; Edwards, 2006; Lau, 2006; Spitzer et al., 1998).

Martin's (2012a, 2012b) major finding from her study of information horizons was that participants' information literacy processes reflected their identity production processes, with the information horizon maps reflecting both players' experience and play style through the choice of included resources and the patterns of using those resources. While this dissertation study did find some variability in how sewists such as Damaris and Darth Claire sought and shared information in contrast to how props makers and foam smiths such as Norman and Caz did so, as well as a difference between the resources a horror-focused cosplayer such as Allie used as opposed to a more beauty-focused cosplayer such as Amanda, these distinctions were not widely represented in the data. One possible explanation for this difference between Martin's findings and this dissertation's findings is that Martin's participants were adolescents, while the participants in this dissertation study were adults. Adolescents are often more focused on identity production than adults, whose identity production may be moving at a more relaxed pace and have a more peripheral place in their lives than is the case for adolescents (Erikson, 1968).

Drawing on Martin's (2012a) research design, the original design for this study involved using a coding scheme that mapped characteristics of collective intelligence onto elements of participatory culture, applying that scheme to online artifacts such as YouTube comments and Facebook Group posts and comments. While this piece of data collection ended up being deferred to a later study, the information horizon maps and interviews reveal

the presence of collective intelligence in the cosplay affinity space; peer-produced resources dominate both the full list of resources mentioned on information horizon maps and the categories included on the aggregated map. Forum posts, YouTube videos, social media including Facebook and Instagram, blogs, and tutorials all rely on information produced by fellow cosplayers. Reference materials and books might be created by cosplayers, as well. Conventions, while sometimes produced by corporate entities, usually rely on cosplayers to provide information via panels or on the convention floor. At building and crafting parties, cosplayers share information with each other.

The Shifting Nature of Affinity Spaces

In addition to this study's findings about information literacy practices in affinity spaces, the study also illuminates the shifting nature of affinity spaces themselves. When Gee (2004) first introduced affinity spaces, most portals and generators were dedicated to the shared interest or endeavor for which affinity space participants had an affinity. The authors of the Leveling Up Study of the Connected Learning Research Network (Ito et al., 2019) use the term "network" rather than "space" to capture a wide spectrum of participation from casual to serious. Bommarito (2014) suggests that the relational nature of affinity spaces is a key part of their participants' experience and the sustainability of the space, while Lammers, Curwood, and Magnifico (2012) suggest that multiple and varied portals must be kept in mind when studying an affinity space.

The data from this study supports the conceptual shift from affinity spaces to affinity networks. Participants rarely mentioned engaging with a portal or generator that was specifically dedicated to cosplay. They much more frequently mentioned using networks that had been appropriated for cosplay purposes, such as YouTube, Instagram, and Facebook.

While particular channels, groups, or accounts on these networks may focus on cosplay, the networks themselves have many possible uses. Participants might follow one particular creator's work across multiple networks; for example, they might buy books from Kamui Cosplay's website, follow her on Instagram, watch her videos on YouTube, and participate in her Facebook group. Further, the ability to network individual accounts through the use of hashtags provides more of a sense of a network where each account is a node, rather than a space people enter, share, and leave. This study provides only an introduction to the structure of cosplay affinity networks; a more in-depth ethnography would illuminate these structures further.

Martin's Framework for Information Literacy as an Analytical Lens

This study was originally designed to apply Martin's (2012a, 2013) information literacy framework, developed from research in the *World of Warcraft* affinity space, to evidence gathered in a new affinity space. While this study does not include the analysis of discussion in online portals or at conventions as was originally planned to parallel Martin's investigation of in-game chat and game-related forums, Martin's framework provides a useful analytical lens for the details participants revealed about their information practices in their information horizon interviews.

Review of Framework

Martin's (2012a, 2013) framework for information literacy is discussed at length in Chapter 2 of this dissertation, "Information Literacy Practices." In this section, I will briefly review major elements of the framework. Derived from a study of the information literacy practices of *World of Warcraft* players, Martin's framework identifies a variety of information literacy practices:

- Recognize Information Need
- Determine the Extent of Need
- Construct Strategy
- Evaluate Information and Source
- Construct New Concepts
- Use Information Effectively
- Disseminate Information

Unlike traditional models of information literacy, which feature similar steps but present them in a linear or cyclical fashion (Figure 76), Martin's framework connects these practices in a variety of ways, indicating that information seekers and creators can move through them in almost any order, returning to other practices over and over again without completing a particular information-seeking cycle (Figure 77). The phases Martin uses in the framework are defined in Table 14.

Applying Martin's Framework to This Study

The time-related limitations placed on this study due to my caregiving responsibilities in light of the COVID-19 pandemic prevented me from being able to use Martin's coding scheme to analyze the full text of all of the interviews, but the fragments of the information horizon interviews featured in the findings chapter offer several instances of participants mentioning stages present in Martin's framework.

For most participants, they *recognized an information need* immediately upon deciding to construct a particular costume. This need was for resources that would help them design the costume, most frequently described as reference materials such as movie or video game screenshots, comic pages, or set photos. This was not the only time participants

recognized an information need, however. They repeatedly returned to this stage throughout the costume construction process. At any point in the process, participants may recognize a gap in their knowledge or skill set that they need to fill. For example, Amanda describes, after already having settled on a particular character to cosplay and identified reference images, not knowing how to create the wig style necessary for the character. She recognized this need and then *constructed a strategy* for meeting it; in this case, that strategy was to look at wig styling video tutorials.

Figure 76

Standard Model of Information Literacy

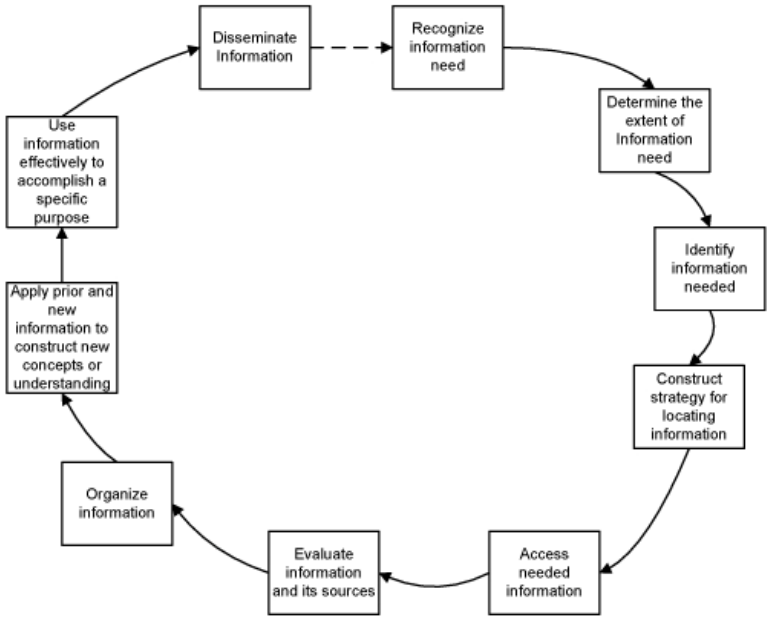


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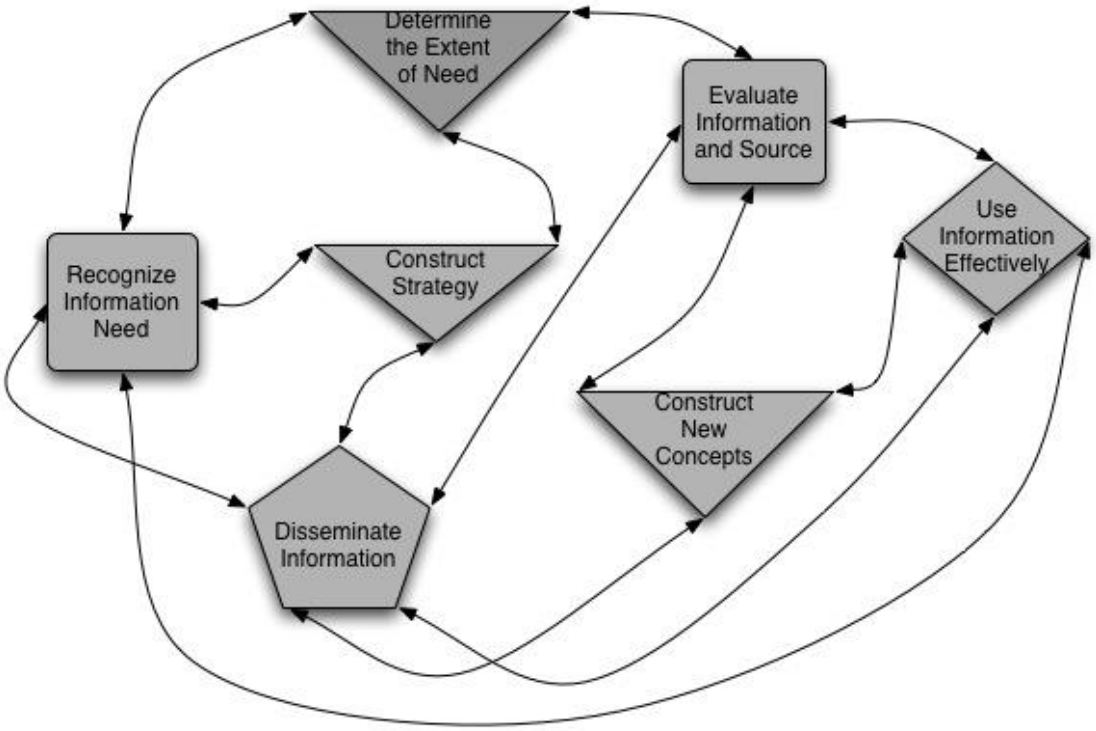
Figure 77

Martin's Information Literacy Analytic Framework



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Participants describe *constructing strategies* in a variety of ways, often dependent on what information they knew was available to them. The decision of which strategy to pursue depends on a cosplayer's familiarity with their information landscape; for example, Taylor knew that if she needed help with 3D design, she could go to her boyfriend or roommate. Red Baran's information landscape changed when she started dating an engineer; at first, she had to turn to strangers and online resources for assistance with engineering questions, but after beginning to date the engineer she was able to see that person as an information resource. Damaris described turning to YouTube to learn new sewing techniques, because she knew she would be able to find them there.

Table 14

Definitions of Information Literacy Stages

Stage	Definition
Recognize information need	To recognize needed information for a particular problem
Construct strategy	To construct a strategy in order to locate and access needed information to fulfill the information need
Determine extent of need	To determine the extent of information and the resources needed to fulfill the information need
Disseminate information	To disseminate information to others who have an information need or as a way of sharing results of the information literacy process
Construct new concepts	To apply prior and new information to construct new concepts or understanding
Evaluate information and source	To evaluate information both for its applicability to fulfill the information need and the reliability of the source itself
Use information effectively	To use information effectively to fulfill the information need

Note. These definitions are drawn from Martin's information literacy coding scheme (2012a, p. 84).

Participants often *constructed new concepts* by combining information they had obtained from a variety of sources and then *used information effectively* to put those concepts into play. For example, when G. C. wanted to create prosthetics for a Hades costume, he used information he acquired through tutorials and from a friend and combined them to create a process to create and apply a latex nose and chin. Allie describes a similar experience combining information from books with information she obtained by connecting with a makeup artist online to create a custom scalp as a base for a headpiece.

Many participants discussed *disseminating information*, though usually referring to information they had learned through their own trial and error rather than through exploring other information sources. Damaris has shared what she learned through YouTube tutorials. G. C. shared his experience on Tumblr. Kit shared progress photos on Facebook. Darth Claire, Red Baran, and Norman share information through direct one-to-one contact, answering other cosplayers' questions. Caz shares information through panels, Instagram, and at-home workshops.

Participants often *evaluated information* based on whether it achieved the look they desired or used materials they were able to access. G. C. and Darth Claire both mentioned finding tutorials for costume pieces or props they were planning to create and rejecting those tutorials based on the materials or techniques they suggested. Caz evaluated a variety of information when a client asked her to create a custom torso piece for him, but decided that the information couldn't make up for the challenge of not having the client located physically nearby enough for her to do in-person fittings. Norman uses customer reviews as a source of information to help him evaluate suppliers. Taylor evaluates information based on how likely

it is to provide her screen accuracy; for example, she does not use action figures as a reference, but does use set photos.

Participants rarely described *determining the extent of the information need* as separate from other stages. This step tended to be combined with *recognizing an information need* when identifying reference materials or *constructing a strategy* when investigating possibilities for creating a particular costume piece.

One question worth considering is the extent to which the construction of a single costume generates multiple information needs. Future research based on this study might, as Martin suggests, focus "in depth on the information literacy practices of a few individuals for a specified time period, framing the study as an ethnographic study or possibly a case study." For example, a case study might follow a particular cosplayer through the process of creating a specific costume, documenting the information literacy practices the cosplayer uses during that process. As the cosplayer moves through this construction process, should each information need that arises be considered a separate instance of the information seeking process, or are they all movement between different stages in one larger process? Future research might answer this question and provide possibilities for an appropriate unit of study in other research that examines cosplayers' information literacy practices.

Gaps in Martin's Model

Martin admits that her model is limited by the data she analyzed for her study:

> My data does not capture elements of information literacy that do not leave a visible trace in these contexts… Consequently, my codes only include information seeking practices that are communicated in text. However, this does not mean that the practices are not taking place just that they do not leave visual evidence in this format. (2012a)

Martin's (2012a) first iteration of the new model of information literacy (Figure 78) includes stages that she eliminated from or collapsed with other stages in her final model, due to finding few or no instances of these stages in her data. These stages include *Organize Information* and *Access Information*, both of which she eliminated, and *Identify Information Needed*, which she collapsed with *Determine Extent of Need.* The two omitted codes are both present in the interviews for this study. Multiple participants mentioned curation, a method of *organizing information*, in their interviews; Damaris and GC in particular referenced using Pinterest for this process. Descriptions of times when cosplayers *accessed information* are woven throughout the interviews; examples include Red Baran's use of hashtags on Instagram, Taylor and Norman reaching out to fellow cosplayers whose costumes they admire, Kit finding another cosplayer's progress photos to use, and Red Baran exploring the RC car community to find information on how to use servos. Future research including sustained, systematic observation of online spaces in the cosplay affinity space; digital artifact collection and analysis; and face-to-face participant observation might add data to support the restoration of these two codes in an updated version of Martin's model (Figure 79).

Research in other affinity spaces may support these restorations or others from Martin's original new information literacy model. Affinity spaces closely related to cosplay might include historical costuming, community theater, or those centered other fan activities such as fanfiction, fan art, or fan music videos. Blended affinity spaces which focus on a topic more distant from cosplay might also provide further evidence for Martin's model as-is or suggest restoring or adding stages to it. Examples of these kinds of affinity spaces include those focused on physical activities such as yoga, spiritual activities such as meditation,

writing communities that blend online forums and face-to-face conferences or retreats, or tabletop gaming where players sometimes meet online and sometimes in person. This is a small set of examples; almost any interest could potentially support a blended affinity space, so long as participants gather both face-to-face and online.

Figure 78

Martin's Original New Information Literacy Model

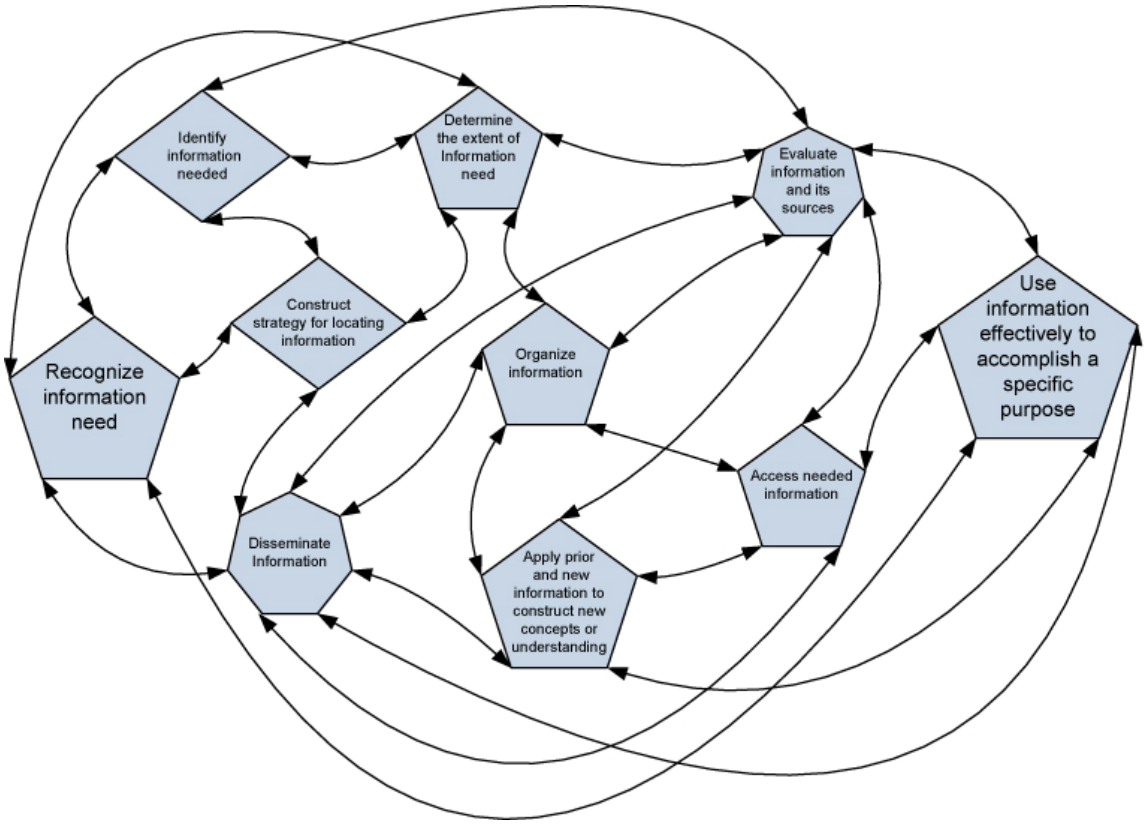

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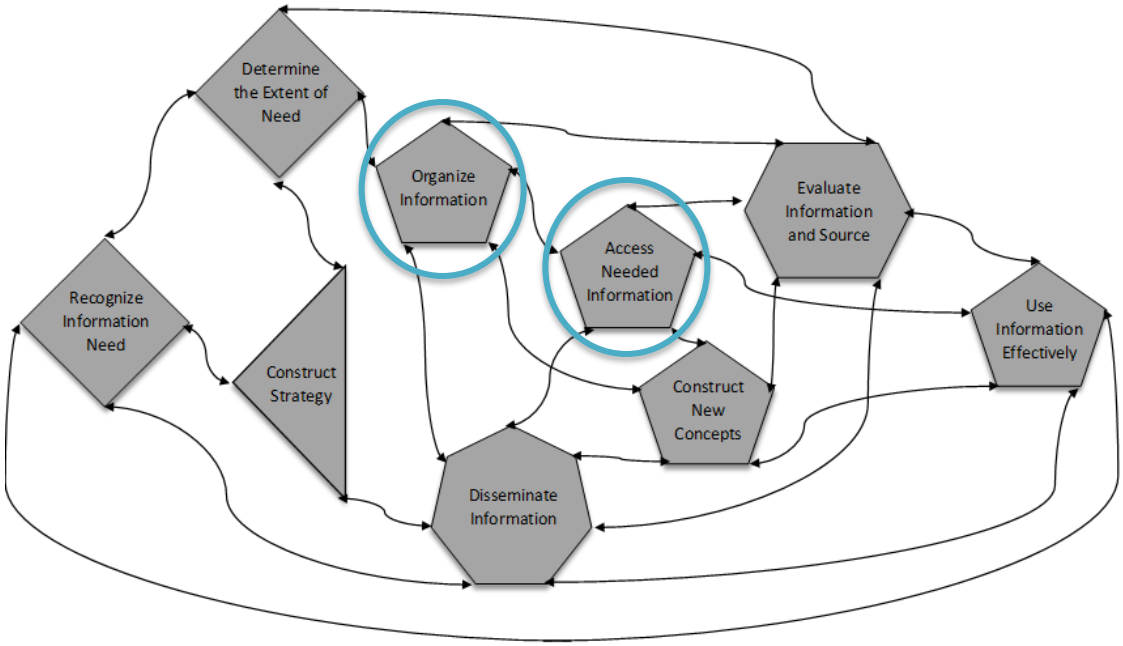
Figure 79

Revised Martin's Model of Information Literacy



Note. In this version of the model, "Organize Information" and "Access Needed Information" have been restored.

The Missing Piece: Cosplayers as Information Creators

The research question addressed in this study is "How do cosplayers situate themselves within the constellation of information available around their affinity space?" The discussion to this point has illustrated that they situate themselves in relation to a variety of peer-produced information sources, social sources including other cosplayers, and physical sources including their own and others' bodies. One way cosplayers situate themselves that has not appeared in this discussion so far is as creators.

Through the information horizon interviews, cosplayers situate themselves as two creators via two elements that are not currently including in Martin's revised model but should be considered as possible additions: *trial and error* and *creating information*. Four cosplayers mentioned trial and error or figuring things out for themselves in their interviews, but no cosplayers included it on their information horizon maps. Trial and error is not included in the traditional information literacy perspective or Martin's framework. I did not ask participants to include trial and error on their revised information horizon maps because, at the time, I was focused on information sources that could be sites for artifact collection, as well as because I thought, "Well, trial and error isn't *really* an information source." I was wrong.

As I analyzed the data, I realized that trial and error is an important information source for cosplayers. It can be paired with physical sources or considered part of embodied information literacy; it extends beyond "reading" bodies, however, because it involves attempting techniques and evaluating their success. When cosplayers use trial and error, they may be creating an entirely new technique for doing something. They are *creating information* which they can then share with others.

Further research might illuminate how trial and error and creating information fit into Martin's model of information literacy. *Trial and error* does not easily fit into any of the elements of Martin's model, though it might be considered part of *construct strategy* or *construct new concepts*. More research is needed to determine its role. This research might take the form of sustained, systematic observation of online spaces in the cosplay affinity space; digital artifact collection from the affinity space; face-to-face observation at conventions and other events; an in-depth ethnography; or case studies following individual

cosplayers throughout the process of creating a cosplay project. It's possible that *creating information* could be folded into either *construct new concepts* or *disseminate information*. Future research might indicate, however, that it is a separate step from either of these.

Limitations

As originally designed, this study would have balanced individual information literacy practices and collective information literacy practices by incorporating information horizon mapping interviews (individual perspective) and observation and artifact analysis (collective perspective). While the information horizon interviews reveal that collective intelligence is present in the cosplay affinity space, they are limited in their ability to explore collective information literacy practices. Further research should take up the two parts of the original design for this study that had to be set aside due to the COVID-19 pandemic. This would include sustained, systematic observation of online spaces in the cosplay affinity space in order to map connections between portals and determine the best data sources to analyze for potential evidence of collective information literacy practices. It would also involve digital artifact collection and analysis, as well as face-to-face participant observation. This data would be analyzed using both Martin's (2012a) information literacy and collective intelligence coding schemes.

Even as originally designed, this research would describe an information ecology. It would have balanced breadth and depth, using methods that study both individuals and the population at large. Because of this, it is limited in its ability to provide a rich description of cosplayers' information practices and its transferability to the wider cosplay affinity space and especially to other affinity spaces. As Martin (2012) suggests for her study, future research based on this study might focus "in depth on the information literacy practices of a

few individuals for a specified time period, framing the study as an ethnographic study or possibly a case study." For example, a case study might follow a particular cosplayer through the process of creating a specific costume, documenting the information literacy practices the cosplayer uses during that process. A second study "would have to focus on the group level; it could possibly look at a much larger number of randomly sampled forum posts… in order to examine large scale aggregate patterns" (p. 107).

The information horizon map and interview process relies on participant recall to describe information-seeking experiences. Participants may leave out steps when describing their experiences or forget resources when drawing their maps. The case study research described above would not have this limitation, as it would track participants' information-related activities in real time.

Another limitation of this study is that it relies on visible traces of activity for its data sources. In affinity spaces, there are lurkers, who view information but do not post themselves, and people who may stop by a particular portal but not spend a significant amount of time there. Because this study relies on interviews with cosplayers who participate as convention guests and panelists, it cannot capture the experiences or practices of lurkers or transient visitors to the cosplay affinity space.

The study focuses on the experiences of cosplayers themselves, but cosplay has both supporters, such as cosplay medics who are on site at conventions and available to repair costumes, and spectators, whether they are people in the convention halls, people in the audience of a cosplay contest or masquerade, or people like I used to be, enjoying photographs of cosplayers online but not interacting with them otherwise. This study does not incorporate these supporters into the perspective it provides. Future studies might find

ways to capture the information literacy practices of lurkers or supporting participants in the cosplay scene such as medics and photographers.

Finally, this study focuses on information literacy and does not address information seeking more specifically. Information seeking is widely studied in LIS, and everyday life information (ELI) seeking includes cosplay information seeking, as it is a form of leisure. Studies of ELI tend to focus on the finding of information, sometimes mentioning use and sharing but rarely mentioning evaluation (Savolainen, 2017). Future studies might investigate the extent to which theories and concepts related to ELI in social spaces apply to information seeking in affinity spaces.

Recommendations for Information Literacy Instruction

Information literacy instruction that relies on traditional models of information literacy tends to restrict information literacy to the domain of work or school, treat it as a linear sequence of steps that can be checked off as if on a checklist, and follows a sequence that is derived not from empirical or naturalistic research, but from the recommendations of information professionals (Martin, 2012a; Tuominen et al., 2005; Webber & Johnston, 2000). These models operate on a deficit model, as if information literacy is something that information professionals have and lay people do not, that can only be transmitted via direct instruction by an information professional (Martin, 2011). These approaches treat information literacy as a universal process that will be the same for every information seeker in every context.

This dissertation study, along with other studies that investigate information literacy practices in affinity spaces (Bebbington, 2014; Martin, 2012a; Vardell et al., 2020), offers a vision of information literacy instruction that differs from traditional models. This and other

studies in affinity spaces demonstrate that, when pursuing a personal interest, individuals use a variety of resources and processes to meet their information needs. Information literacy instruction and assessment often relies on an imposed task, one the instructor has created. An alternative is to create a framework for learners to create their own information literacy tasks; instructors can provide an assignment or create a space where learners can identify their own information need and, with support from the instructor and their peers, use their information literacy practices to meet those needs and grow new information literacy practices when they struggle to meet their information needs.

The presence of peers in this process is key. Participants in this study were able to meet their information needs through direct engagement with other cosplayers, use of platforms that provide cosplayer-produced resources, and attendance at events where other cosplayers share information. Information literacy instructors can embed opportunities for peer interaction into their instruction, allowing learners to work together to meet shared information needs or providing time for them to confer with others who might have useful information for meeting their needs. As Pierre Levy says when discussing collective intelligence, “No one knows everything” and “everyone knows something” (Levy, 1997, pp. 13–14). Instructors can provide learners with an opportunity to establish themselves as experts in certain fields, sharing their expertise with their peers. This might be through a group discussion, through an institutional tool such as a learning management system forum, or through an informal tool like a private Discord server.

In addition to creating space for learners to engage with their peers who are present in the learning environment, information literacy instructors can encourage learners to leverage peer-produced resources to meet their information needs. For example, while a university-

based information literacy instructor might commonly demonstrate how to use the university's research databases, the instructor could also add opportunities for learners to learn about advanced YouTube or Twitter search techniques, the different structures of common types of Instagram hashtags (for example, #cosplayersofinstagram follows a common pattern of #*x*ofinstagram where "x" is the interest-related identity of the user), or how to find self-published materials like Kamui Cosplay's books.

Furthermore, information literacy instructors could support learners' participation in events related to their information needs. Instructors might point learners to specific events related to their interests, but they might also teach learners how to find and evaluate these events themselves. Navigating conference or convention schedules, using virtual event software such as Zoom or Crowdcast, and participating in the conversation at events are all information literacy practices.

Finally, information literacy instructors can go beyond helping learners to find and evaluate information and support them as they create and share information themselves. This might involve partnering with other experts in addition to information literacy instructors. For example, if learners wish to share what they learn via YouTube, a media production instructor might be a good partner for an information literacy instructor. Beyond simply the production process, however, the information literacy instructor could help learners understand how to write effective descriptions of their videos, leverage tags to make sure they appear in relevant searches, and create opportunities for viewers to find more information about the video's topic.

An information literacy instructor might look at this list of possibilities and wonder how they could possibly know how to do all of these things. Information literacy instructors

themselves can leverage all of the same tools learners can to bridge the gaps in their knowledge. Information literacy instructors don't need to know everything; they only need to know how to learn more.

Conclusion

Information literacy is a key competency for people of all ages in a time of abundant information, misinformation, and disinformation. When pursuing their personal interest in cosplay, cosplayers use a variety of resources and strategies to find, evaluate, use, and share information. The information literacy practices cosplayers and others use in the pursuit of their personal interests have the potential to inspire a transformation in information literacy instruction and an extension of the sociocultural approach to information literacy research. I hope that this study is one of many to explore the relationships between information literacy and personal interests.

APPENDIX A: DATA COLLECTION INSTRUMENT

Information Horizon Map Interview Protocol

Do you have your paper and something to write with? Let's start the drawing part of the interview.

(Modified from Sonnenwald, et al., 2001; Martin, 2012)

I would like you to draw an information horizon map. Locate yourself somewhere on the map and mark resources you use when you have an information need around cosplay situations, as well as connections you see between the information sources. The map can be whatever you want it to be; it is your visualization of your information horizon. If possible, please talk about what you're drawing as you're drawing it.

WHEN DONE: Please take a photo of your drawing and send it to me via email or Instagram DM.

1. Could you tell me about a cosplay problem you had recently when you needed information about cosplay?

   Follow-up questions to elicit additional details about the situation:
   - What information or type of information did you need?
   - Why? [Try to learn about the context of that information need and the situation that gave rise to it.]
   - Who did you go to for help or what resource(s) did you use to find the information you needed?
   - What did you do next? [Try to learn about their information seeking process and how they used the information they found, e.g., if they successfully resolved their information need.]
   - Were you satisfied with the outcomes? How did you use the information?
   - Would you do it this way again (if you needed similar information at a later point in time)? If not, what would you do differently? [trying to learn about if their information seeking process/information horizon changed as a result of this experience.]

2. Could you tell me about a cosplay problem you had to solve when it was particularly difficult to find information you needed?

   Alternative wording: In general, what type of information is hardest for you to obtain? Why?

   Use follow-up questions from Question 1.

3. When it was particularly easy?

Alternative wording: In general, what type of information is easiest for you to obtain? What makes it easy to get?

Use follow-up questions from question 1.

4. When looking for information was particularly dissatisfying? I.e., a dissatisfying experience
   Use follow-up questions from question 1.

5. When getting information (finding information you wanted/needed) was very satisfying?

   Use follow-up questions from question 1.

6. Do you share information about cosplay? How? Why?

7. If you would like to update your information horizon map, please do so now. If you do, please take a picture of the updated version and send it to me.

8. How has the current situation with COVID-19 impacted your experiences as a cosplayer? How do you think it will impact them in the future?

9. Is there anything I should have asked that I didn't?

10. Is there anything else you would like to tell me?

11. Can you think of anyone else I should interview?

12. Please answer the following demographic questions, if you feel comfortable doing so. If you choose not to answer the question, you can just say "skip":
    a. How long you've been cosplaying?
    b. Your gender?
    c. Your age?
    d. Your level of education?
    e. Your race or ethnicity?
    f. The type of place where you live: urban, suburban, rural, college town?

Thank you so much for doing this! Do you want me to be sure to share what I learn with you?

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