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WHAT RESOURCES DO SCHOOL LIBRARIANS USE WHEN DEVELOPING NEW  
PROGRAMMING: A QUALITATIVE INQUIRY

by

Jennifer Hansen

A thesis submitted in partial fulfillment  
of the requirements for the degree

of

MASTER OF SCIENCE

in

Instructional Technology and Learning Sciences

Approved:

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UTAH STATE UNIVERSITY  
Logan, Utah

2018

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## ABSTRACT

WHAT RESOURCES DO SCHOOL LIBRARIANS USE WHEN DEVELOPING NEW  
PROGRAMMING: A QUALITATIVE INQUIRY

by

Jennifer Hansen, Master of Science

Utah State University, 2018

Major Professor: Mimi Recker

Department: Instructional Technology and Learning Sciences

For this qualitative analysis, I analyzed observational and interview data from two middle school librarians who were setting up new active learning programs. I primarily focused on determining the resources the librarians used, what roles these resources played in the librarian's informational search, and how these resources were implemented. I started my research by collecting the preliminary data gathered in field notes from observations at the different sites to determine what programming resources the librarians were using. A secondary consideration was drawn from this preliminary evidence, which indicated the librarians regularly utilized the social curating site Pinterest. After gathering initial data from observations, I gathered additional data from

two interviews: the first interview focused on my primary interest on where the librarians find information and the second interview focused on the secondary consideration of how they used Pinterest.

The first interview had each librarian select and outline a previous program they had already developed, and then outline a preselected hypothetical future program which we provided. This interview required that the librarians draw out their resources in a diagram. The second interview was a traditional question answer interview that focused on how the librarians used the social curating site Pinterest for programming, and why they found it useful.

The objective of this research was to determine what kinds of information resources librarians relied upon to help inform new program development, and to determine how these librarians used the social curating site mentioned in the observational data. After collecting preliminary data, I coded the material using three levels of coding, looking first at what kind of resource it was that a librarian used, what role the resource played in the librarian's program-related information searching, and finally how the resource was used in the implementation of a program. The data suggests networking within the school community is an essential feature of middle school libraries and should be considered when developing programs as a way to strengthen the librarian's relationship with the community, enabling the librarian to leverage other teachers' knowledge. Also, the curating resources available through Pinterest provide a platform for finding ideas suitable for adapting to a specific library.

(56 pages)

## PUBLIC ABSTRACT

WHAT RESOURCES DO SCHOOL LIBRARIANS USE WHEN DEVELOPING NEW  
PROGRAMMING: A QUALITATIVE INQUIRY

Jennifer Hansen

For this qualitative analysis, I analyzed observational and interview data from two middle school librarians setting up new active learning programs. I focused my research by analyzing the preliminary data gathered in field notes from observations at the different library sites to determine what programming resources the librarians were using. A secondary consideration was drawn from preliminary evidence, which indicated the librarians turned to many on and offline information resources, including the social curating site Pinterest. After gathering initial data from observations, I gathered additional data from two interviews: the first interview focused on where the librarians find information and the second interview focused on Pinterest. The data suggests networking within the school community is an essential feature of middle school libraries and should be considered when developing programs as a way to strengthen the librarian's relationship with the school community, enabling the librarian to leverage other teachers' knowledge. Also, the curating resources available through Pinterest provide a platform for finding ideas suitable for adapting to a specific library.

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Jennifer Hansen

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## CHAPTER 1

### INTRODUCTION

A critical impact of the digital age on libraries is their shift from a traditional provider of books, magazines, and reference information towards a focus on helping students to find their own information. Kuhlthau (2010) in her article entitled *Guided Inquiry* outlines this shift showing how “school librarianship has evolved from emphasis on library skills to information skills in the 1980s, to information literacy in the 1990s, to inquiry as a way of learning in the first decade of the 21st century” (p. 19). As part of this shift to inquiry as a way of learning, libraries, including school libraries, are offering more innovative programming and instruction that allows the students to learn through creation and innovation. In Small’s research on the motivational and information needs of young inventors, she also addresses this shift when she states that librarians need to provide strong inquiry skills and transform perceptions of libraries as a book repository to one that is an innovative space (Small, 2014). Examples of this shift can be seen in the increasing interest in incorporating STEM and Maker programs in school libraries (Subramaniam et al., 2012).

However, while research such as Subramaniam et al. have shown how critical innovative learning is the expected future of school libraries, many librarians lack specific training in how to develop and support such programs. In a research study funded by SRI education in 2016, researchers found the primary concern of individuals

developing these spaces is the need for assistance in developing ideas and lesson plans (Remold et al., 2016). Moreover, there is a gap in the research and development literature distilling best practices for implementing and evaluating effective library programming. As a result, many librarians develop their own programming without much of an evidence-base to inform their decisions.

Preliminary evidence gathered during observation for a research project investigating teen program development in middle school and public libraries created a secondary question that suggested that librarians turn to many on and offline information resources, including social media (Lee, Recker, & Phillips, under review). Within social media, we found librarians turn to a particular kind of interest-based social curating site, specifically Pinterest, to inform program development. However, little is known how librarians select, adapt, and use such information resources to inform their program development, nor why or how they use social curating sites. By better understanding these factors, more effective supports can be developed to help libraries develop programming for libraries.

The primary purpose of this thesis study is to examine how school librarians draw upon information resources to inform new program development, and to determine how they plan to utilize those programs. Because of the preliminary data that has been gathered, my secondary question focused on the social curating site, Pinterest.

The thesis study will be guided by the following research questions:

1. What kinds of information resources do librarians draw upon to help inform new program development?

2. How do they use social curating sites to inform program development? What aspects do they find useful and less useful?

## **CHAPTER 2**

### **LITERATURE REVIEW**

There are three critical areas of research that impact my research study on how a school librarian finds resources for new program development: 1) emerging innovative learning spaces, 2) how librarians learn how to set up programs for these spaces, and finally 3) how librarians utilize Pinterest.

#### **Innovative learning spaces**

Innovative learning spaces are spaces that provide active, individual or collaborative learning through constructive, hands on activities. While an innovative learning space may look very different depending on who is setting it up and who the participants are, a commonality in all of them is the “formal learning environments and informal communities of practice” blended with a focus on “learning as production rather than as mastery of a composite set of skills” (Sheridan et al., 2014, p. 526). Under this definition, a wide variety of spaces could be set up. The fundamental principle is that it is a space where participants are learning by doing while pursuing their own interests. These interests could vary from the sciences such as robotics and coding, to crafts like knitting. Canino-Fluit concludes that librarians shouldn’t try to reproduce other spaces because the space needs to “look and be different from anyone else’s, because it should be meeting your students’ interests and skill levels” (Canino-Fluit, 2014, p. 22). Because of the individual interpretation that can go into these spaces, a number of different names

have also arisen. These spaces are called hackerspaces, makerspaces, Fablab etc., though for the purposes of this research I will continue to refer to them by the more general term “innovative learning space.”

In addition to the space being focused on a wide range of subject matter, an innovative learning space can also be setup in a wide variety of locations. In their research, Sheridan et al. described a space setup for adults that charged for membership, a community center that catered to all ages, and a youth museum that primarily was visited by children (Sheridan et al., 2014). It is essentially an adaptable space that is setup to the needs of its users.

Middle school libraries are a natural choice for this research as school libraries are frequently seen as the “hubs of different media forms: books, periodicals, videos, computers, and the Internet Library settings are places for student exploration and discovery, and are usually not tied to the negative stereotypes students may have of the formal classroom” (Subramaniam et al., 2012, p. 168). However, while middle school libraries may seem like a natural choice, there currently isn’t a lot of research on these spaces. There is research on developing new programs with teachers and classrooms, but the literature in middle school libraries is slim. What has been done seems to focus on individual innovative learning spaces, and doesn’t reach beyond the individual library’s program set up (Koh & Abbas, 2015).

### **Librarian Learning**

The second area relates to how librarians learn to develop new programs. Because innovative learning spaces are so new, “there is little in the literature that investigates it in

relation to the education and training of librarians” (Bowler, 2014, p. 60). While it is clear that librarians need to continue to adapt their library spaces, the literature shows there isn’t clear research on how the librarians should develop these programs and implement these changes, resulting in the librarian developing programs through trial and error (Moorefield-Lang, 2015). While this method of informal learning does have some benefits, the need for further research and training for librarians is essential. As Willet (2016) pointed out in her comprehensive overview of the existing published literature on innovative learning spaces, the current literature oversimplifies the informal learning that happens in these spaces and it has a tendency to “celebrate the kinds of learning in makerspaces without considering the possibilities of less desirable aspects of learning in these situations” (p. 325). This over simplification and rather scarce research in new program development in libraries has left a gap in the understanding of these spaces. Further research is needed.

### **Use of Pinterest by Librarians**

The third area of importance to my research, is Pinterest. Pinterest is an online social website that works as a “curating site, in which people create, maintain and share collections of digital objects like images and videos” (Zarro et al., 2013, p. 651). This platform is uniquely different from other social media sites as it places the “focus on objects and personal collections above and beyond communication and connection” (Lui, 2015, p. 129). With this shift in focus to collections over people, the platform provides access to collections of information that are centered around a specific idea. As Pinterest is a relatively new social media platform, there is very little research that has already



been completed on its use in libraries. Most of the literature that has been published focuses on community outreach and marketing. For example, Zhou et al. look at how Pinterest can be used to interact with a library community by analyzing the repins of a library that uses Pinterest (Zhou et al., 2015), and Thorton argues a library should use Pinterest to establish pin boards on Pinterest so they can “reach out to users and meet them in the social networking realm” (Thorton, 2012, p. 172).

Currently the research is not addressing the librarians use of Pinterest for program development, though librarians in trade publications are sharing how effective they find it. For example, Eckert’s article lists Pinterest along with marketing through community outreach as helpful uses for Pinterest (Eckert, 2016).

## CHAPTER 3

### METHODS

For my research, I focused this qualitative analysis on two school librarians who were already participating in the larger research study on how librarians develop Maker-oriented programming for school libraries. I began my research by analyzing the preliminary data gathered in field notes from observations at the different sites to determine what programming resources the librarians were using. After gathering initial data from observations, I analyzed the data we gathered in two interviews referred to as the Information Horizon Map interviews (see Appendix A), which focused on where the librarians find information, and the Pinterest interviews (see Appendix B), which focused on how they librarians use this social curating site. All three of these data points are described in more detail below. Table 1 outlines the data sources and analyses for each of my stated research question.

Table 1

*Data Sources and Analysis for the Research Questions*

| Research Questions   | Data Sources   | Analysis  |
|--|--|---|
| What information resources do Librarians use to help inform new program development? | The primary sources of data for this were observational field notes, and the Information Horizon map interviews. | Coded field notes looking for instances of librarians mentioning information resources for program development. Coded the audio transcript and drawings from the Information Horizon Maps interviews for instances of |

|  |  |  |
|--|--|--|
|  |  | librarians using programming resources. Coded data for primary programs used in developing instruction for further analysis. |
| How do they use social curating sites to inform program development? What aspects do they find useful and less useful? | The Pinterest specific interview was used to answer this question. | Coded for how the librarians chose to use Pinterest and how the information they gathered was then used.                     |

### Setting and Participants

The data for this research was gathered from data drawn from two middle school librarians participating in the larger study, located in rural and semi-rural parts of the Intermountain West. The librarians were working independently to develop new programming for their libraries. An important reason for focusing on these librarians was that I wanted librarians who were already actively incorporating new library programming. I also wanted a variety of experience and perspectives in the library field.

While the librarians came from the same school district, their demographics were very different, and the librarians heading these projects had a wide range of experience. The first location, Autumn Falls school (all names are pseudonyms), was a semi-rural community with approximately 700 seventh and eighth grade students and 33 teachers. The school librarian, Jane, was previously an English instructor in the school and moved to the position of school librarian at the beginning of 2016-2017 school year. She was in her first year during our research.

The second school, Northern Trove, was more rural and composed of 1,127 eighth and ninth graders with about 42 teachers. The librarian at this school, Annie, while also originally a school teacher, had been the librarian at her school for about twelve years at the start of our research.

### **Data Sources**

For this study, I used a number of data sources to help establish trustworthiness through data triangulation. The three data sources used were field notes from observations, and two separate interviews conducted a few months apart. These different data sources provided multiple perspectives instead of relying on one. The field notes were collected from observations gathered by the researchers and provided an outsider perspective of the librarian, whereas the interviews represented the librarian's perspective.

#### **Field note data from observations**

My first source of data was field note data from observations. This data was collected by multiple people working on the larger research project. For this project, we observed weekly in four libraries for a period of four months in the initial phase of the research. The weekly observations for this project were collected beginning in September. These observations were targeting times the library had a high level of use by the students e.g. lunchtime and before school. A second targeted observation was when the librarians were running a new program. While much of the content of these field notes observe the library, they also included impromptu conversations between the

researchers and librarians on how they developed their programs. In January the observations became more periodic as we began to observe specific programming that related to active learning activities. During these data collections, we collected both observational and participatory field notes, which allowed us to collect preliminary data on how librarians develop their programming for different library activities. While much of the data was collected by observing how the librarian worked, we occasionally participated in the library activities or helped the librarian run the program. All data used in this thesis was collected between April 2016-May 2017. Jane had 19 recorded observations and Annie had 22 recorded observations.

### **Information Horizon Maps Interviews**

The second source of data I analyzed was the Information Horizon Map interview (gathered for the main research project). An Information Horizon Map is a “descriptive explanation of human information, seeking and use behavior, and data collection and analysis techniques to explore human information, seeking behavior in context” (Sonnenwald, 2005, p. 191). While designing this interview, we utilized Samuel’s Dissertation (2001) *Routes and Resources on the Information Horizon Map* to design the interview protocol. For these Information Horizon Maps interviews, we conducted individual interviews with the librarians, asking them to first think through a program they had already run at their library and to then create a visual map of where they found their information. After the initial drawing, which typically looked similar to a brainstorming concept map, we asked the librarians to repeat the process, the second time for a potential library program utilizing Scratch (a free online program that uses block

coding for developing games). We selected Scratch as none of the librarians were currently using it, though a few had seen kids use it on their own in the library.

We recorded the audio as the librarian talked through their information seeking process, and we recorded the diagram they drew. The protocol for this interview can be found in Appendix A, and the drawings can be found in Appendix C.

### **Pinterest interview**

For the third source of data, I conducted an interview specifically focused on the social curating site that both librarians mentioned during observations and in the information Horizon map interview: Pinterest. The goal of this interview was to establish how they used the Pinterest website, what drew them to the website, and what about it made it more or less useful for their library programming. I asked exploratory questions and then asked them to show their personal account on Pinterest. The protocol for this interview can be found in Appendix B.

### **Analysis**

For this research project, I coded the audio of both interviews, and the field notes. I used HyperRESEARCH as a platform for storing the codes. This allowed me to organize the data and change code names as my understanding of coding evolved. In addition to this, I analyzed the map drawings from the Information Horizon Map interviews. I used a mixture of Word and Excel for further organization of data as these platforms were easier for sharing and aggregating the data with other researchers for inter-coding reliability.

To establish inter-coding reliability, I went through several iterations that were tested with a fellow researcher. For each test, we coded a predetermined page of data from one of the interviews. We completed a total of three coding tests, and we achieved an 81 % inter-coding reliability for all three levels of coding. I have outlined below these three levels of coding along with the final code book I used for coding all resources.

The procedure I used to code the field notes and interview records required three levels of coding. For the first step, I looked at the data to establish what kind of resources the librarians were using. I broke them into three groups: “people”, “online”, and “physical”. I used the “people” code if the resource came from either self-knowledge, or another person in a conversation or some other personal interaction (e.g., from talking with a colleague, from interacting with a friend or emailing a peer, etc.). “Online” resources were resources that were found on the internet. This could be online instruction videos, blogs etc. The final resource identified was “physical” and these were resources that came from some other material artifact or space (e.g., museum, newsletter, a hobby shop, etc.). I completed this first level of coding for all data sources except the Pinterest interview since the interview focused on an online resource only.

The second level of analysis looked at the role the resources that were identified in the first level of coding played in the librarian’s program related information search. This level of coding was more in-depth as it looked at how the librarian used the resource. For example, I examined whether they used the resource to generate ideas by browsing, or if they looked for a specific answer with focused exploration. For this level of coding, I included both interviews and the observational data. The codes I used along with the definition and an example are in Table 2.

Table 2

*Second Level Codes Analyzing the Role of Resources in the Information Search*

| <b>Role of Resources in Information Search</b> | <b>Definition</b>   | <b>Example</b>  |
|--|---|---|
| <b>Browsing</b>                                | Searching resources for ideas                                     | “So I will always get an idea there (Pinterest) and then that provides a springboard for another idea to make it my own.” - Jane  |
| <b>Focused exploration</b>                     | Deliberately seeking information for specific need                | “So when I get enough time, I'm gonna go into YouTube and say, "How can I mesh my two Pinterest accounts?" -Annie                 |
| <b>Evaluation</b>                              | Review effectiveness of idea or resource                          | “So I would look at the reviews on Amazon before I would go about purchasing that, because they're usually pretty honest.” -Jane. |
| <b>Structured learning</b>                     | Seeking /acquiring information in a traditional classroom setting | “Yeah and I would probably be looking to see if there are any UEN classes on learning this.” -Jane                                |
| <b>Support</b>                                 | Aid in program development  | “I bet there's somebody else who does it that I could also go to, so that I don't have to do it all myself.” - Annie              |
| <b>Background knowledge</b>                    | Using previously obtained information                             | “I guess it was mostly Google and my previous knowledge of being an English teacher.” –Jane                                       |
| <b>Hands on learning</b>                       | Learning by doing   | “And so we spent a good three hours on it, learning code.org.” -Jane  |
| <b>Other</b>                                   | Doesn't fit in general codes                                      | So I guess my other resource is hubby And his good nature. -Annie   |

In the third and final coding level, I analyzed how the resource identified in the first step was used to implement the program. If an idea was generated from a resource, I looked at how the librarian used that idea in her programming. For example, an idea could



be used exactly how it was found, or it could be used to inspire a new idea. As the librarian did not always specify how she used the idea, this analysis could not be applied to every resource identified in step one. Table 3 shows codes used in the third level.

Table 3

*Third Level Coding Analyzing How Ideas were used in Program Implementation*

| <b>How Idea from Resource Used in Program Implementation</b> | <b>Definition</b>                                   | <b>Example</b>   |
|--|---|--|
| <b>Plug and play</b>   | Use an idea or a resource without any changes       | “I don't pin it. I just download it and I have it.<br>–Jane found material on Teachers pay teachers            |
| <b>Inspiration</b>   | Resource provokes a new idea                        | “The journals help me come up with some ideas.”<br>-Jane   |
| <b>Revision</b>  | Adapt existing idea                                 | “And anyway. Just kind of looked at a pattern and modified it just a little..”<br>– Annie used for bag pattern |
| <b>Examples</b>  | Completed projects others have used to hone an idea | “I pulled them (clay animals examples) over onto a document, the pictures.” -Annie used for instruction        |

After coding the observational material and both interviews, I did a further analysis of the Information Horizon Maps drawn by the librarians by writing an analytical memo of the drawings for each program discussed in the interview. Analytical memos are a method for writing up ideas and patterns, especially in visual material

(Saldaña, 2015). These maps were drawn while the librarian was asked to verbalize everything she was drawing, allowing me to code the information in the Information Horizon Map Interview audio. The maps provided potential information on the resources I had previously coded by providing a second level of observation on the resources the librarian described in the interview.

As a final step of analysis, I analyzed the information horizon Map interviews to determine frequency of mention and use for specific resources, e.g., coworkers, Pinterest, Google etc. This excludes repetition within the same sentence about the same resource.

## CHAPTER 4

### FINDINGS

To analyze the data for this research, I first coded each data set separately. For the observational field notes I first looked specifically at what resources the librarians mentioned while they were developing programming for the library.



*Figure 1. Resources mentioned by librarians*

When coding the frequency of the mentions, I did not include repetition within the same sentence, unless multiples uses were provided for that resource. For example, if s librarian said “I use Pinterest for lesson plans and I use Pinterest to look for bulletin

board ideas”, I would count that as two for online resource, but if they said “Pinterest is great because I can use Pinterest to develop lesson plans”, I would count it as one. For the first librarian, Jane, I analyzed 19 recorded observations and the information Horizon Map Interview, using the drawn diagrams accompanying this interview to augment the analysis. I also analyzed the Pinterest interview, but as this interview focused on a specific online resource, it did not contribute useful data to the first level of coding.

A closer look at Jane’s data shows a strong dependence on people for her resources when developing library programs. In both her observational records and the Information Horizon Map interview, analyses revealed that she favored getting information from people. As shown in Figure 3, the first level of coding for the three information categories (“people”, “online”, “physical”) showed that she mentioned “people” 53% of the time in the observation data and 50% of the time in the Information Horizon Map interview. A good example of this is demonstrated in this interview when she is asked how she would develop a Scratch Program. She states she would ask the tech teacher and then, taking it a step further, “I would even ask him if he would teach it in his class because if a few kids get hooked on it, then it's pretty easy to get 'em on in here [the library]”.

To further illustrate this focus on people, Jane’s drawing on her program of choice from the Information Horizon Map (see Figure 2) show three out of the six resources listed were coded in the transcript as “people” resources (SUU is a university, google forms was used to survey colleagues, and previous knowledge was from the librarian).

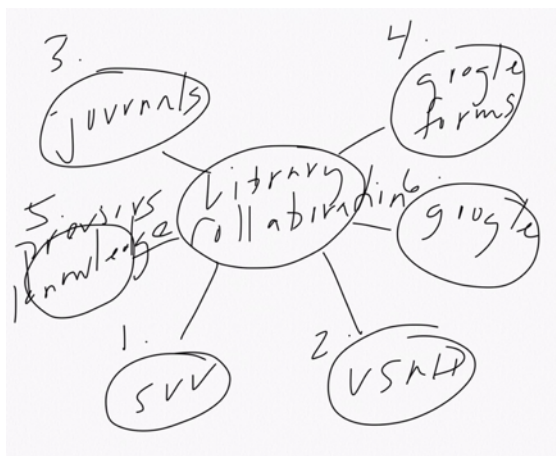
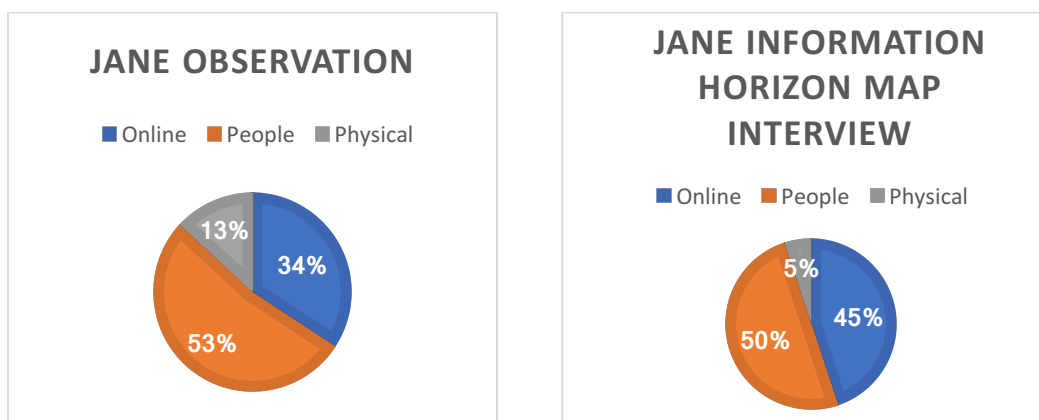
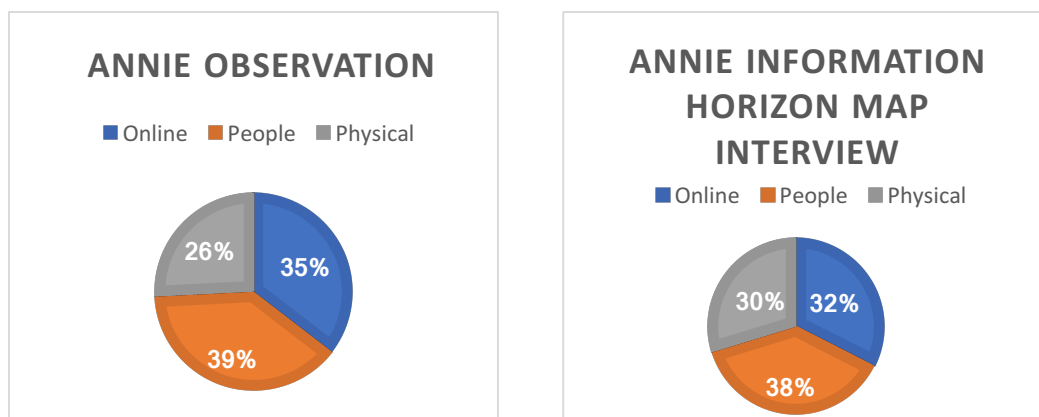


Figure 2. Jane's first drawing from the Information Horizon Map Interview

Annie's results looked different from Jane's. Annie's observations had 22 records along with the information Horizon Map Interview and the data showed a more even division between the three categories coded for, though she also demonstrated a small preference for seeking informational resources from "people": 39 % of the codes in the observation data and 38% of the codes in the Information Horizon Map Interviews (see Figure 3).





*Figure 3. First Level Coding of Observations and Information Horizon Map Interviews*

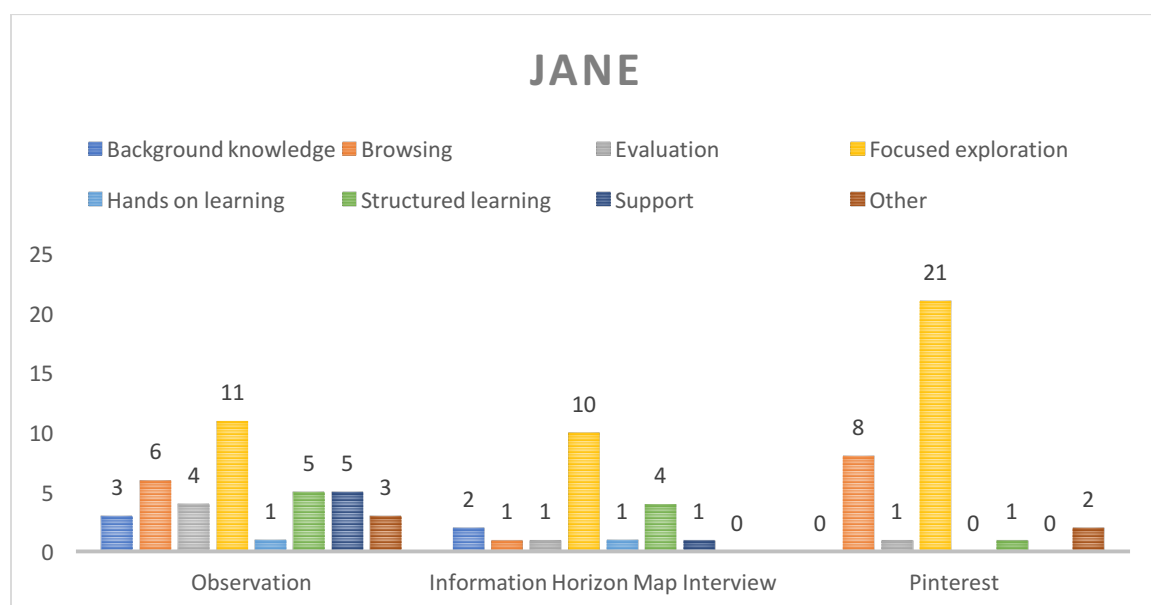
A systematic coding for the second level of coding produced useful data from the observations data, the information horizon Map interview, and also the Pinterest interview (see Figure 4). Despite preliminary expectation that the resources were used predominately for “browsing” or seeking out new ideas, the data showed that while “browsing” the resources for useful ideas was a frequent method for seeking information, both librarians typically approached a resource with “focused exploration.” Analyses thus suggested that they had a deliberate information need and they searched to resolve it.

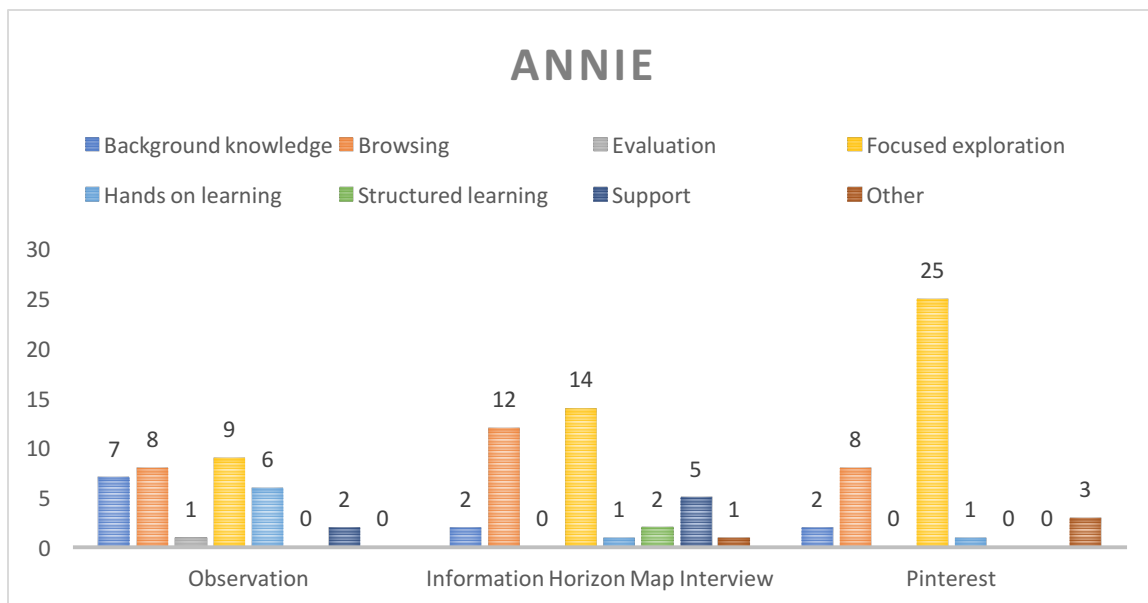
While the Information Horizon Maps interview deliberately looked at the development of a program which I expected would require more “focused exploration” of resources, the observational data, which included the selection of what programs the library would be doing, also suggested that the librarians’ primary approach for seeking information was through a “focused exploration” of resources as opposed to simply “browsing”.

While the Information Horizon Map asked the librarian to consider any program they developed and then consider the resources they used, the Pinterest interview took a

different approach as it deliberately looked at a resource, Pinterest, used in program development. I expected this resource to be utilized more in “browsing” as the website’s opening page is on a page with an infinity scroll that is constantly supplying new ideas related to the account holder’s interest for browsing. Despite this expectation, Pinterest use by the librarians demonstrated a “focused exploration” as the primary focus when utilizing Pinterest (Figure 4). In fact, the Librarian, Jane, stated in the interview about Pinterest that

I like how I can start with something that I thought was a pretty narrow search, but then they’ll add those additional searches below, that even narrow it down further. For example, I might do ‘Young Adult Historical Fiction’, and they’re gonna give me those options like ‘Middle School’, ‘High School’, so I can narrow that down further.





*Figure 4. Second Level Coding of Both Interviews and Observational Data*

The third level of coding, which looked at how ideas from the resources were used in program implementation, demonstrated less consistency in patterns than the first two levels of coding (see Figure 5). Part of this is due to the fact this coding could not be applied to every resource as the librarians didn't always state how they used a resource. Although there was less data to code, results of the coding were quite varied. For example, while Figure 5 shows that for Jane, use of resources were most often coded as "Plug and Play", "Inspiration" and "revision," whereas, Annie's use of the ideas were mostly coded as "inspiration" (see Figure 5).



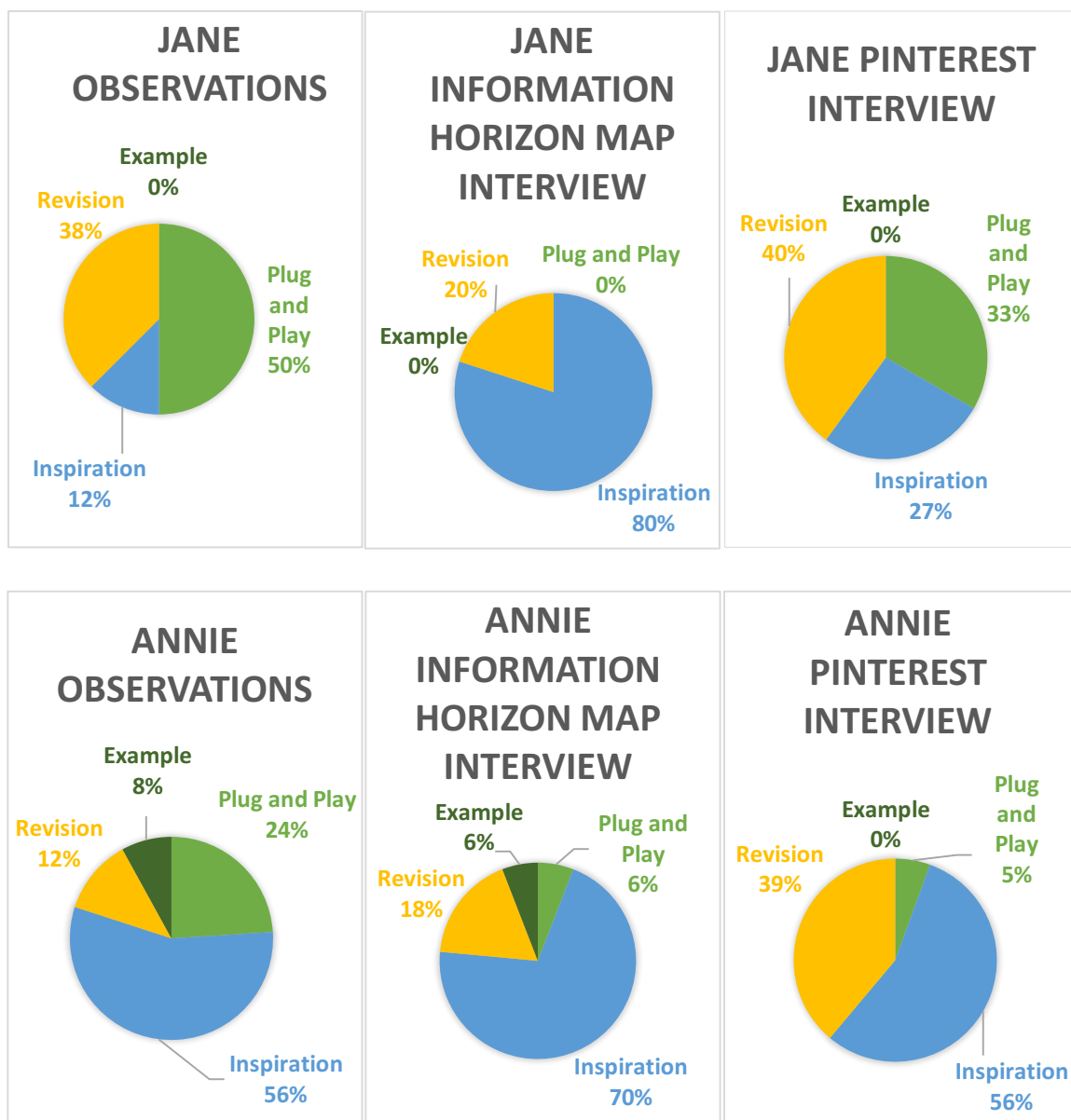
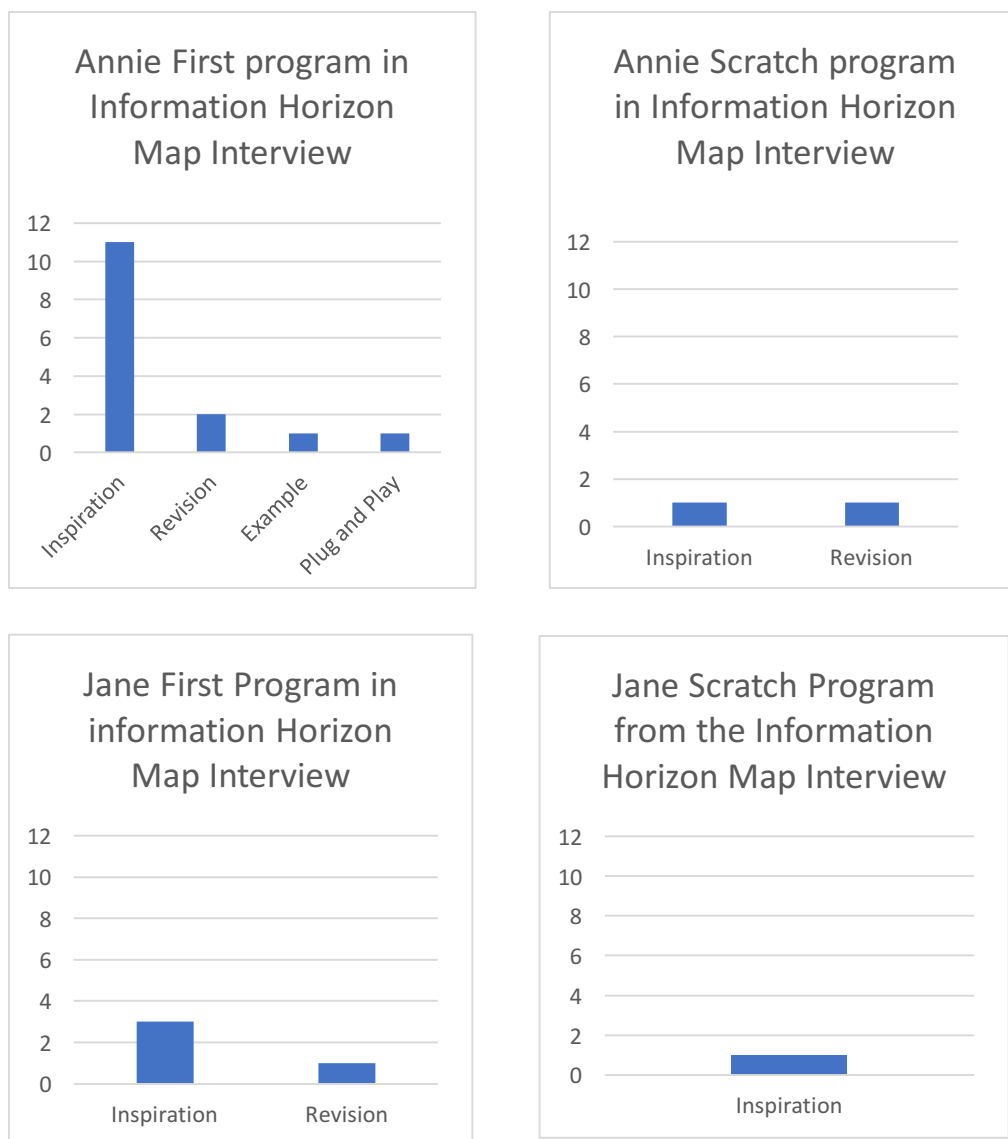


Figure 5. Third Level Coding (percentages) of Interviews and Observational Data

While general patterns were difficult to infer for the third level coding, both Jane and Annie used the ideas they found primarily for “inspiration” in the Information Horizon Map Interviews. To gain more information on this, I broke the Information Horizon Map interview into the two programs, librarian selected and hypothetical

(Scratch), discussed in the interview (see Figure 6). For both librarians, the first program, had an overall higher number of third level codes than the second program. As the first program, which the librarians selected, had already been developed before the Information Horizon Map Interview took place, this provided the librarian with the knowledge of how the librarian used the ideas they found. In contrast, the second program was a hypothetical program proposed in the interview where if the librarian did articulate how they would use an idea, it was hypothetical, resulting in a lower number of third level codes generated in the analysis of the second part of the Information Horizon Map Interviews (see Figure 6).

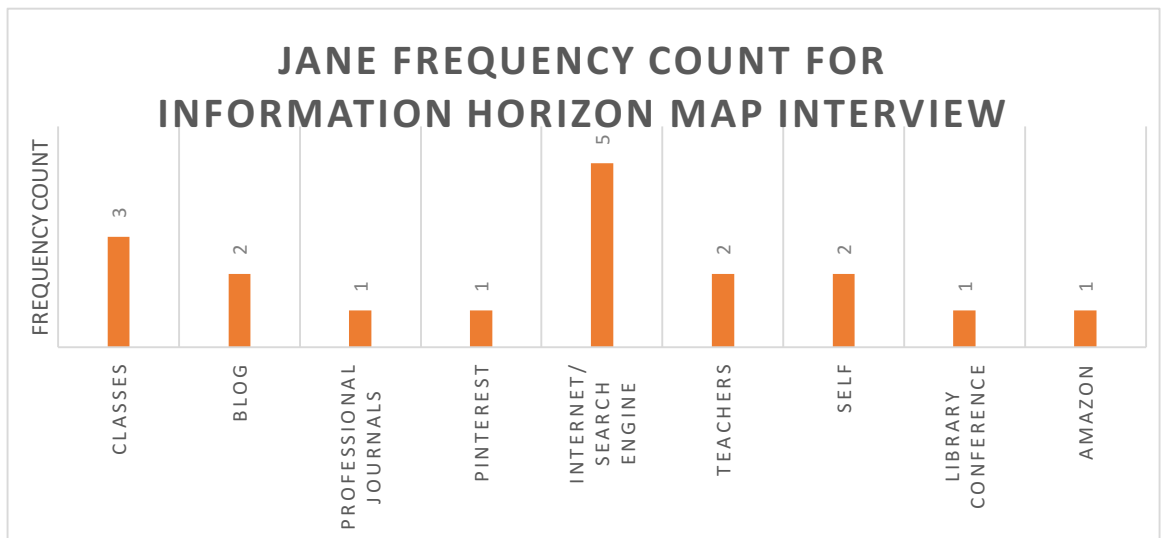
Despite these variation in the number of codes, Figures 5 and 6, suggest that while the librarians looked at a variety of resources with “focused explorations,” they primarily used these ideas from the resources for “inspiration.”



*Figure 6. Third Level Coding of Information Horizon Map Interview by Library Program*

The final analysis is a frequency count of all the resources listed in the Information Horizon Map interviews (see Figure 7) and the observational records (see Figure 8) for the two librarians. I did not include the Pinterest interview as that focused on only one resource. For Figures 7 and 8, I combined the resource “general internet searches”, with general references to “Internet”. I also combined different specific physical stores as each store was only mentioned once in the interview. The frequency

count particularly in the observational data, not only confirm the preliminary observation that Pinterest is the primary “online resource” specified, but also broke down what types of people the librarians were turning to for their informational needs. The category that was consistently mentioned by both librarians was “teachers/ coworkers”. Annie showed a clear pattern that is reflected below in Figures 7 and 8 as she turned to the science teacher for ideas repeatedly and then other coworkers occasionally, while it was less clear for Jane as she also relied on library classes she was taking for professional development and the students in her library.



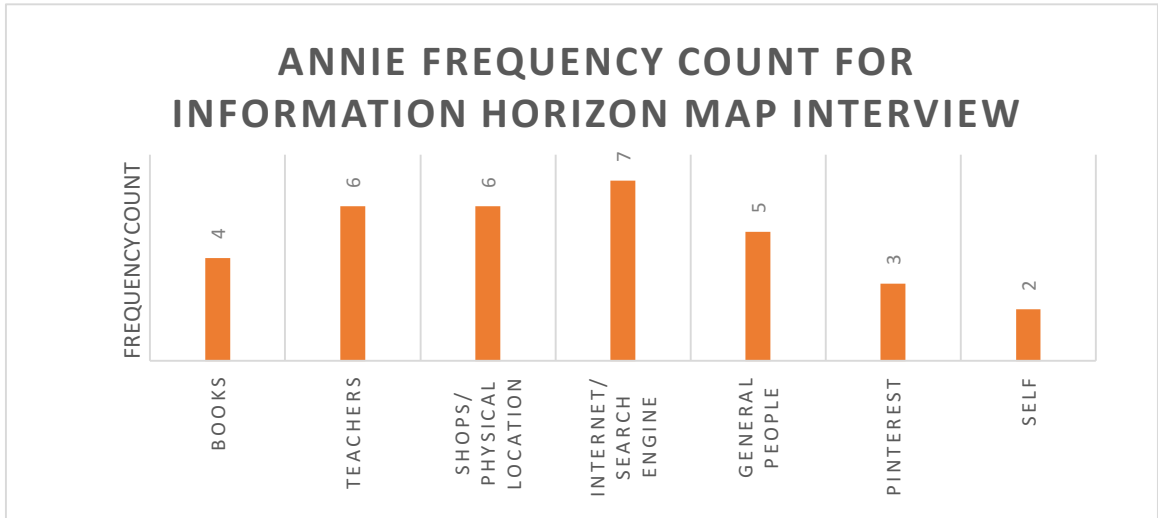
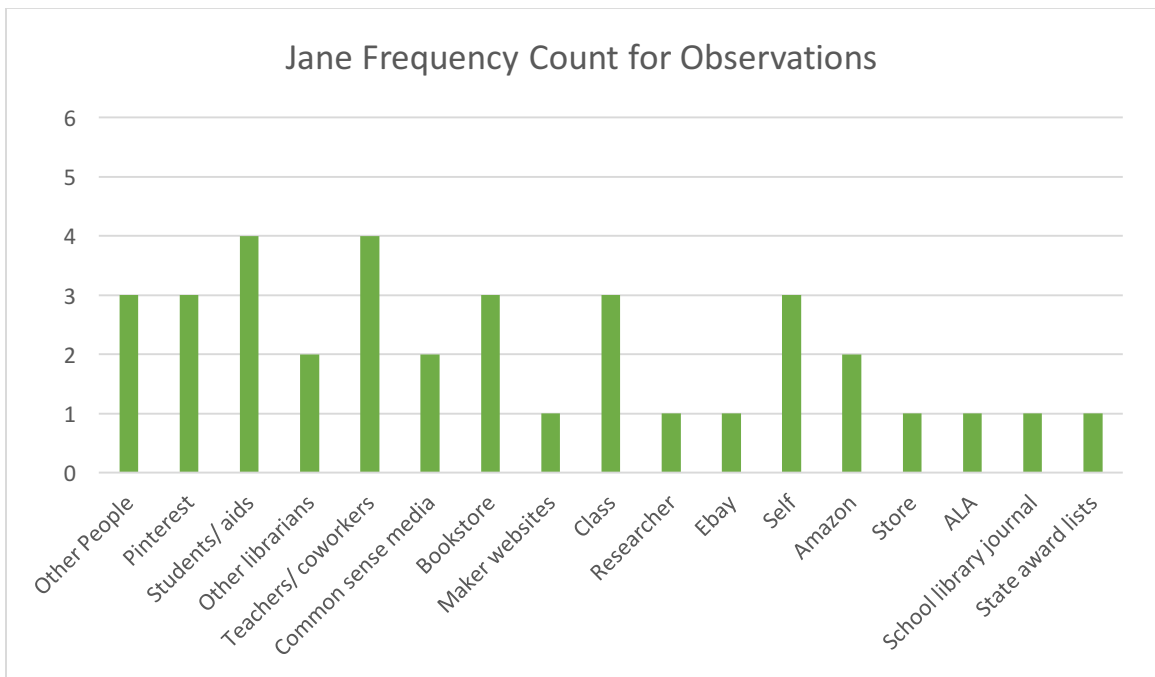
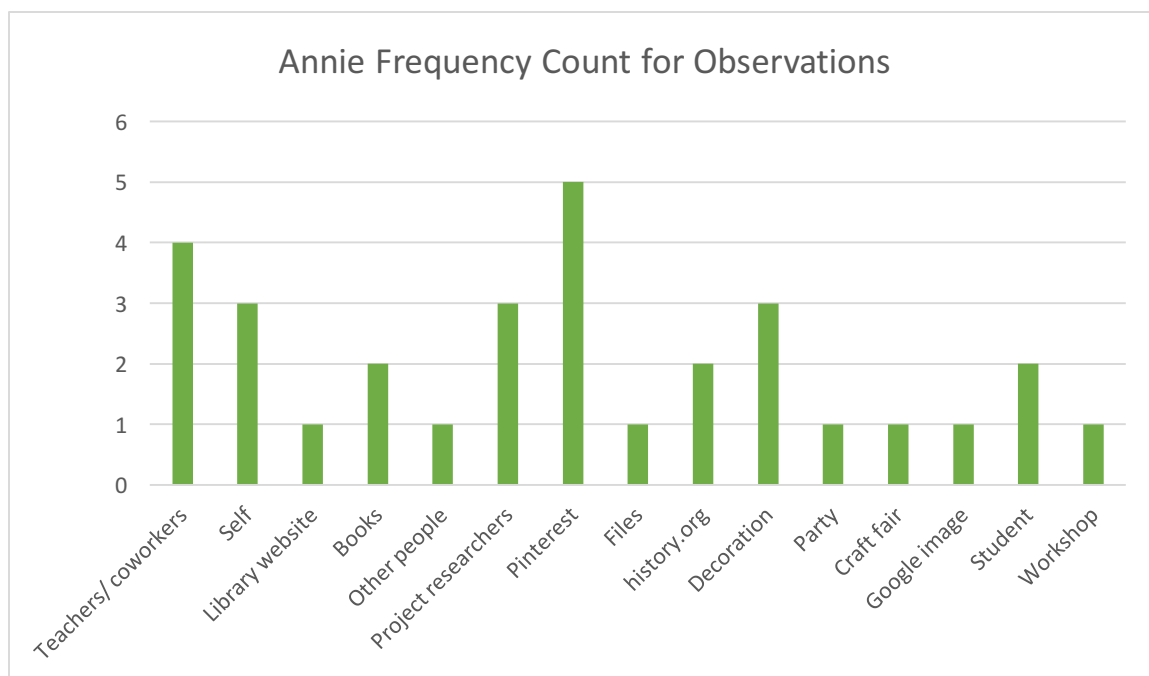


Figure 7. Frequency count of Resources for Information Horizon Map Interviews





*Figure 8. Frequency Count of Resources for Observational Data*

While Pinterest is shown to be a regularly used resource (see Figures 7 and 8) by both Jane and Annie, both librarians expressed concern over using Pinterest as it can also be a time waster. In the Pinterest interview, Jane remarked that she couldn't do it at work because she didn't have the time, and when looking for something, it could take hours because there are "tons" of results and she felt that "we're overloaded with information and so now we have to kinda weed through a lot of information.... That's the downside to this [Pinterest]. There's too much." Annie also stated in her Pinterest interview that her use of Pinterest decreased through the year because once she had the idea set for her upcoming programming, she felt she didn't have the time. She also stated she wanted to get her Pinterest boards organized, but felt the project was "too time consuming."

## CHAPTER 5

### CONCLUSION

#### Summary

From the first level of coding, I found that the primary resource mentioned by both of the librarians in this qualitative analysis were “people,” though this finding was more pronounced for Jane than Annie. The second level of coding took this coding a step further as it established that the librarians used “focused exploration” as a strategy to find the ideas they used in their programming. Results from the third level coding indicated that the librarians used those ideas primarily for “inspiration” while programming. After coding the three levels, a frequency count of the resources used in the Information Horizon Map and the observations found that both librarians use teachers or staff regularly for resource ideas and that Pinterest was the most frequent online resource mentioned.

#### Interpretation of Findings

**Research Question 1: What kinds of information resources do librarians draw upon to help inform new program development?** An important trend emerged within the data for these middle school librarians; their primary resource is “people”. As librarians are promoting both physical and online resources for people visiting the library, it was surprising to realize that these librarians looked primarily toward other people to complete their informational need, instead of searching the physical and online library collection. While this finding may at first seem surprising, when looking at the second

level of coding, it emerged that librarians are deliberately engaging in “focused exploration” when seeking information, demonstrating a level of efficiency and urgency in these searches. From reviewing the observational data, librarians seem to be in general pressed for time and resources. By utilizing information from co-workers and other associates, they can reduce the time to develop their programming. As Annie stated when developing a new program: “I bet there's somebody else who does it that I could also go to, so that I don't have to do it all myself”. Working with people is perceived as a way to save time.

The prevalent use of “people” resources result could also come from this being a qualitative analysis of middle school librarians. By looking at the breakdown of resources used in Figure 5 for both librarians, teachers and coworkers represent a consistent portion of the “people” category from the first level of coding. As a middle school library is part of a community with teachers in a variety of fields, the ability to gain quick results from other people increases significantly as opposed to a librarian working in a public library where the librarian may be more isolated. Their only colleagues are usually other library employees. Also, a typical middle school library is expected to work with the teachers on helping to bring library resources to the students, a relationship requiring the librarian to work with the teachers to determine what their library needs are. Because this relationship is often already in place between the librarian and the teachers at the school library and the programs are meant to be a support for the teachers, it can be easier for the librarian to then use this existing relationship with teachers to request aid for ideas and support for developing library programs. There are school libraries that will not have this relationship either because they are more isolated in their school due to work place



politics or other factors. These schools will not have any easier route as they will be required to build the relationships while also developing library programs.

Another factor that could be contributing to librarians seeking people for ideas to develop library programming could be the librarian assessing the needs of their community. By seeking out ideas from coworkers, the librarian is determining the communities' expectations. An excellent example of this would be when Jane sent out a survey to the teachers at her school to find out what classes they wanted taught.

A final consideration to why people are a primary resource for librarians could be that in both of these middle school libraries, the librarian was the only person running that space. The librarian did have student aides at times during the day, or an occasional volunteer, but the librarian at a middle school library is both a staff worker and reference librarian. By using other people in the school community, the librarian establishes what the community needs and does it as efficiently as possible in what is often a busy schedule for the librarian.

**Research Question 2: How do they use social curating sites to inform program development? What aspects do they find useful and less useful?** As shown in Figure 6, while the librarians in our study frequently turn to other people for their resources, the primary website mentioned by name for both librarians was Pinterest, confirming preliminary observations. This website, while having the ability to follow friends, is focused more on collections of ideas rather than people, allowing for focused exploration of an idea that has been organized by people with similar interests. This feature of Pinterest is further demonstrated by looking at the data for the Pinterest interviews in the second level of coding, which shows that once again, the librarian was

approaching this site with a strategy of “focused exploration”. Pinterest is well suited for “focused exploration,” as the collections of ideas curated by people leads quickly and easily to a selection of ideas the librarian can use for “inspiration” while developing a library program.

Another key factor in supporting this focused exploration is that the visual potential of Pinterest allows the librarian to quickly glance through several pins and to determine if the resource would be of use. As Jane stated in the Pinterest interview: “Pinterest provides you a visual display of what you're looking for. So, if you're looking on the internet, you're just getting lists, but Pinterest is visual, and I think that's why it's more popular.”

Another factor that could contribute to Pinterest’s effectiveness as an online platform is the curating element of Pinterest allows the librarian to find an individual person with similar interests. Unlike other social platforms where a group of people is typically drawn together by some association with another person, Pinterest is sharing ideas so complete strangers with similar interests are more likely to follow each other. This is significant feature as setting up an active learning space requires customization to the librarian’s individual space, and a variety of ideas from people with the same interests can increase the librarian’s opportunity to adapt an idea to meet the needs of a library’s community. By finding someone on Pinterest with a group of ideas that may meet the needs of a specific library, the time for program development can be reduced.

While these factors contribute to Pinterest usefulness and can speed the process of program development, both librarians noted that Pinterest can become a time waster. The site has many ways to find specific information, but while searching these variation in

ideas, the focus of the librarian can shift from “focused exploration” to “Browsing,” the different ideas in the results, significantly slowing the search process and program development.

### **Limitations**

In this qualitative analysis of two librarians from semi-rural and rural communities, this data has limitations on what information will be generalizable to general school librarian use. The communities these librarians were sampled from are in semi-rural and rural communities that have a strong crafting tradition. This crafting may have impacted the views of the librarians, that may not necessarily be prevalent in other communities.

Another factor that may have impacted the research could be the support or lack of support from the library’s administrators regarding new librarian programming, limiting what the librarian was willing or able to do and what resources they could utilize.

Much of the data used in this analysis was from observational field notes while the librarian was running a program. This required the observer to ask the librarian how they developed a program, providing the limitation that the data was usually collected from the librarian’s memory and perspective instead of while they developed the program.

Another potential limitation is the changeability of the social media. While the secondary research question focused on more general social curating sites, this research could still be limited by the development of new online platforms.

Also, one of our librarians was leaving her school at the end of the year, possibly limiting her to developing programs that would require less expense or time. A final potential limitation is in the difference between Annie and Jane's interview responses. Annie was a verbose interviewee who would discuss a resource multiple times, versus Jane who outlined her program development in short and concise responses. This resulted in Annie having a higher number of resources mentioned than Jane.

### **Future Research and Conclusion**

The implication of this research shows that networking within the school community is an important feature of middle school librarians' work. This knowledge could be used by librarians to take it a step further and focus developing library programming around this relationship. The librarian could develop a program with a teacher that expands on what the students are already learning, helping to augment the learning in libraries to what the school community needs, instead of becoming simply a social activity. Another important result of focusing programming on working with other teachers is that it would reduce the amount of information the librarian needs to learn by building on existing knowledge resources. Librarians are experts at finding information, but developing a program requires more knowledge. By focusing on working with another teacher on program development reduces the expectations that the librarian must know everything.

The next step of this research would be to test the limitations of this research project. This could start by testing these findings on a wider selection of libraries and

librarians. For example, one idea could be to look at active learning spaces in college academic libraries. As this is also an educational environment, the potential for emulating the middle school library model and building an active learning space by involving professors in program development in the library may be a way to improve effectiveness at the university level.

Another important place to further research is the public library. Testing findings in a public library would help to determine if these trends are applicable to both school and public libraries. Further research should also be conducted on how these ideas can be used to improve the effectiveness of program development for librarians.

This research focused on determining what resources were used by middle school librarians during program development and how librarians used social curating sites to inform program development. The data suggests networking within the school community is an important feature of middle school libraries and should be considered when developing programs as a way to strengthen the libraries relationship with the school community and enable the librarian to leverage other teachers' knowledge. Also, the curating resources available through Pinterest provide a platform for finding ideas suitable for adapting when developing a specific library program.

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## APPENDICES

**Appendix A**

**Information Horizon Interview Plan**

## Information Horizon interview plan

First clarify objective: We want you to draw an information Horizon map for you. What this is, is a simple sketch drawing that creates a visual of how you learn.

For example, if I were doing an information Horizon map on how to learn how to make homemade pizza I would: demonstrate. Be sure to use numbers. Don't state it, do it to encourage behavior when interviewee does it. Also, verbalize while drawing the map. Also, be sure to acknowledge that you start with yourself, as you first consider what you already know. In this example, try to consider places that are not considered all areas you use for this information search.

Pizza demonstration example:

If I were to make homemade pizza, the first thing I consider is if I know how to do it. While I have made other breads before, I know I haven't made homemade pizza. I can put pizza dough in the same category as rolls, so I have an idea that I need yeast in my pizza. I then decided to consult the person who I know cooks a lot, and I call my mother. She gives me some quick tips and directs me to a recipe in a cookbook she has used. Once I have the bread recipe, I then google Pizza topping ideas and go through the results until I find topics I like. I then assemble the ingredients and start making the pizza. While making the pizza dough, I find I have a question with the dough recipe and I call my mom again. Result, an amazing homemade pizza.

Before you draw your map, we are going to ask some questions, generated to helping you think through some of the different ways you find information.

- Can you think of a time when you recently needed to find information for a program?
  - Can you think of different kinds of information you needed to set up this program?
  - Why was that information an important aspect of the process?
  - Can you remember where you went to find this information?
  - Is this where you found the information, or did you look multiple places?
    - If so, what were those places you looked?
  - When considering where you went to find info, are you considering places other than standard forms of information like a book?
- Can you think of a time it was difficult to find information?
  - What did you do to find that information?
  - Why was it difficult to find the information?

Now that you have had the opportunity to think it through a bit, time to draw your own information Horizon Map for a recent program you developed. Verbalize as you think it through and draw the map.

We want you to take the next step and create a second map, only for a new maker activity program in your library. If you were setting up a program for using scratch in your library, what resources would you use and how do you find information?

**Appendix B**  
**Pinterest Protocol**

## Pinterest Protocol

I am going to ask you about your experiences with developing programming. We can stop at any time, just let me know. If you feel uncomfortable about a question, you can skip it or answer it in a way that is more comfortable for you. I'll be audio recording this interview. Are you okay with being recorded? Do you have any questions before we begin?

1. For a program you have developed, what resources did you use?
  - a. How did you use this resource?
  - b. Why did you use this resource ?
    1. If Pinterest isn't mentioned ask a. and b. for Pinterest.
2. Do they use Pinterest to help you create ideas or do you use the ideas?
  1. Do you repin the ideas, or just browse,
  2. Do you create permanent boards for your ideas, or temporary boards you then delete after the activity?
3. How do you search Pinterest?
  1. Do you google your search term or go directly to Pinterest?
4. Do you use a library account or your own personal account?
5. Did you use Pinterest personally before you used it in the library?
  1. Do you use Pinterest for personal use now?
6. Can we look at your Pinterest page

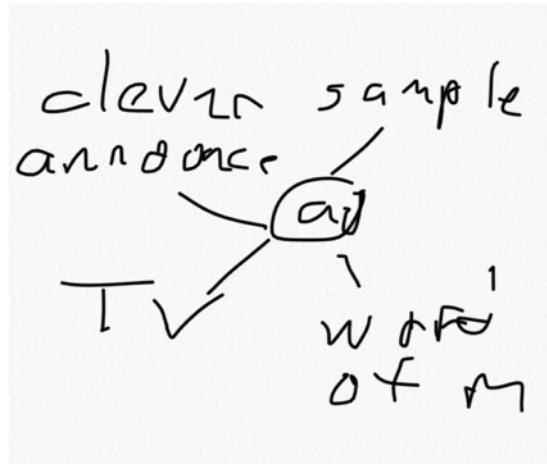
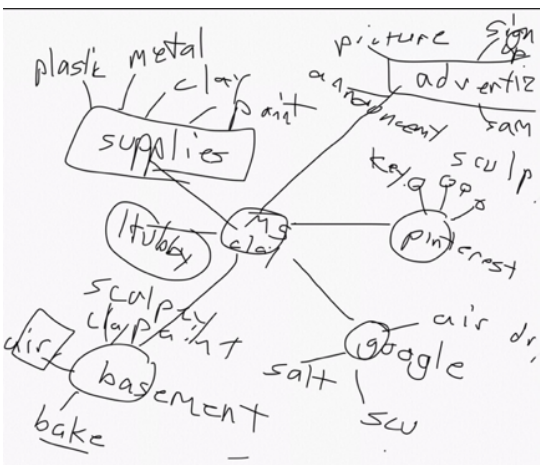
Thank you so much for your time!

**Appendix C**  
**Information Horizon Maps**

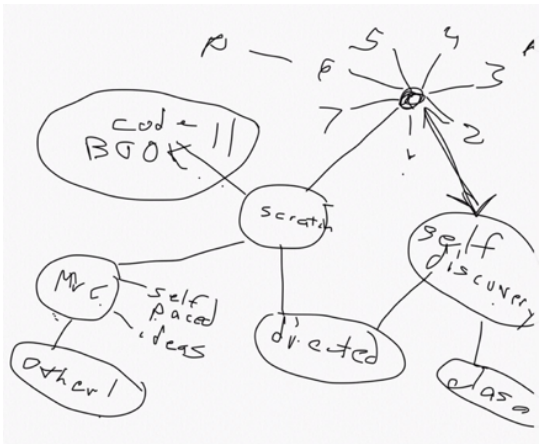
### Information Horizon Maps

Below are the images taken from the Information Horizon Map Interview.

#### Annie-Program selected by Librarian

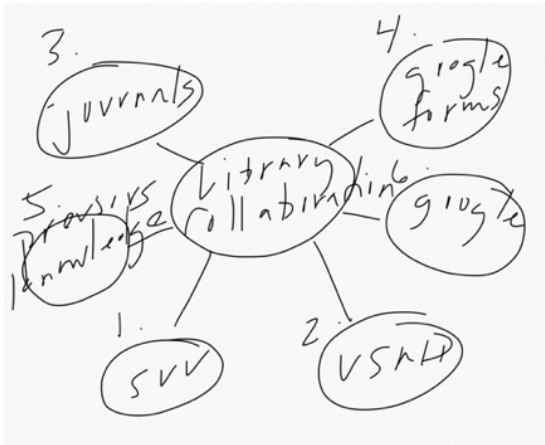


#### Annie - New Program introduced by Interviewer - Scratch





**Jane - Program selected by Librarian**



**Jane - New Program introduced by Interviewer – Scratch**

