

23 March 2024

Generalate of the Brothers of the
Christian Schools

Different Ways of Seeing: Innovative Research Methods in LIS

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“Research is formalized curiosity. It is poking and prying with a purpose.”

- Zora Neale Hurston



Why innovative research methods?





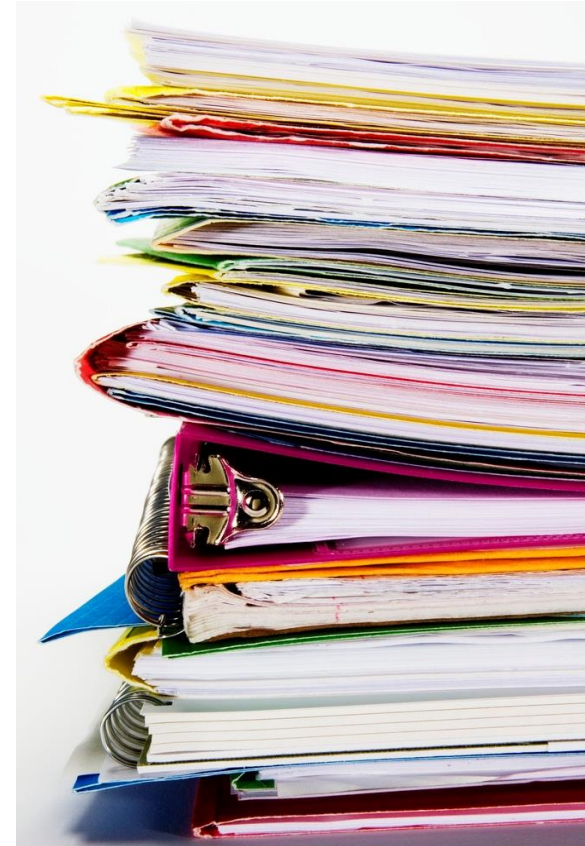
"Innovative LIS research that has not been previously enacted can both inform practice, as well as advance theoretical development."

(Connaway & Radford, 2021, p. 2)

ETHNOGRAPHIC RESEARCH

Ethnographic research

- **Rich description**
 - Incredibly detailed data
- **Time consuming**
 - Establishing rapport
 - Selecting research participants
 - Transcribing observations & conversations
 - Keeping diaries



(Connaway & Radford, 2021)
(Khoo, Rozaklis, & Hall, 2012)

STRUCTURED OBSERVATIONS

Structured Observations: A Guide

- **Develop observational categories**
 - **Define appropriate, measurable acts**
 - **Establish time length of observation**
 - **Anticipate patterns of phenomena**
 - **Decide on frame of reference**



(Connaway & Radford, 2021)

Recording Observations

- **Rating scales**
- **“All-or-none” categories**
- **Checklists of categories**
- **Video recording**
 - **Useful for overall view of behavior**
 - **Analyze closely later**



(Connaway & Radford, 2021)

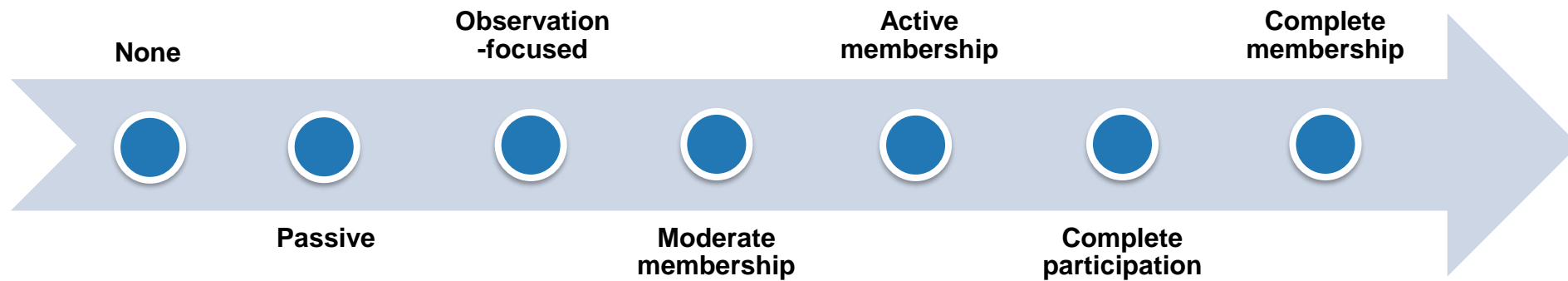
Increase Observation Reliability

- **Develop definitions of behavior**
- **Train observers**
- **Avoid observer bias**
 - **Take behaviors at face value**



(Connaway & Radford, 2021)

Continuum of Participation



(Connaway & Radford, 2021)

Participant/Immersive Observations

- **Move into the setting as deeply as possible**
- **Disturb participants as little as possible**
- **Open, direct interaction and observation as part of the group**



(Connaway & Radford, 2021)

Participant / Immersive Observations

- **Unobtrusive observation**
 - **Disguised**
 - **Field-based**
 - **Indirect**
 - **Reactive**
- **Obtrusive observation**
 - **Build rapport with participants**
 - **Informal for conversation**
 - **Formal to reinforce nonjudgmental interaction**



(Connaway & Radford, 2021)

Diaries



- **Ethnographic data collection technique**
- **Get people to describe what has happened**
- **Center on defined events or moments**

(Connaway & Radford, 2021)

Example: Digital Visitors and Residents Diaries



USU7 Diary May 2011

Good Evening Dr. Lanclos,

Here is my journal for this month:

I'm constantly doing quick researches on random things that come up through-out the day. Now that I have an itouch, anytime I have a question or something my friend's want to know, I like to look up the answer through the internet.

1. My friends and I wanted to know the history of bloody Mary. I searched "the history of bloody Mary" in the google search box and the first website was wikipedia. As much as they say not to use it, wikipedia is always the first website, so of course I'm going to go there since it makes researching so much easier. When I got to the page, it referenced the drink more than the history and origin itself, so it didn't help much. But I decided that with the brief history it gave me, it was enough.

2. Most of the time when I'm searching things up that is not academically, I don't go too much in depth with the results of the search. The only time I have lately is when I was looking for a wedding venue in Florida that was near the beach. It started out complicated because I wanted a place near Tampa, but nothing would come up. So I had to search for botanical gardens on the west coast of Florida that was a good distance from the beach, and it was very hard. Even though I specifically searched up botanical gardens, random gardens would come up and I had to go to each website to see which ones allowed weddings there. It was hard to find something specific that met my criteria but after 30 minutes, I finally found one.

Photo Diaries

- **Elicitation tool**
 - Jog interviewees' memory of detail about a person, place or event
- **Ask participants to take a short set of photos**
 - List of things you want them to photograph
- **Conduct follow-up interviews for context of photo**



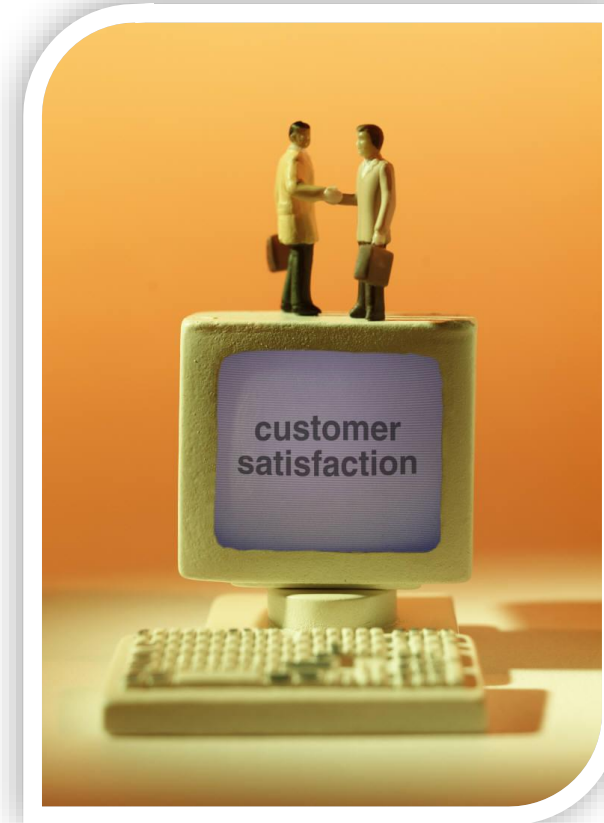
(THE ERIAL Project, 2011)
(Foster & Gibbons, 2007)



Usability Testing History

- **Human ethnographic observation**
 - Ergonomics
 - Cognitive psychology
- **Became popular in 1980s**

(Connaway & Radford, 2021)



Usability Questions

BASIC

Which online fonts are the best?

COMPLEX

Can users easily customize and manage discipline-specific content available in an open-source library portal?

(Connaway & Radford, 2021)

Community-Based Participatory Research

- **Community-based participatory research (CBPR)**
 - **combines knowledge and action to improve communities**
 - **provides framework to equitably involve community members, researchers and other stakeholders in the research process**
 - **creates positive, transformative and sustainable change with, for and in communities**



(Wallerstein, Duran, Oetzel, & Minkler, 2017; Wallerstein & Duran, 2006; Senteio et al., 2021)

Community-Based Participatory Research in LIS



Study for intervention for health information and technology education

- **Older African American adults with diabetes**
- **Young adults who are connected to them**

(Senteio, 2019)

ANALYTICS

Analytics

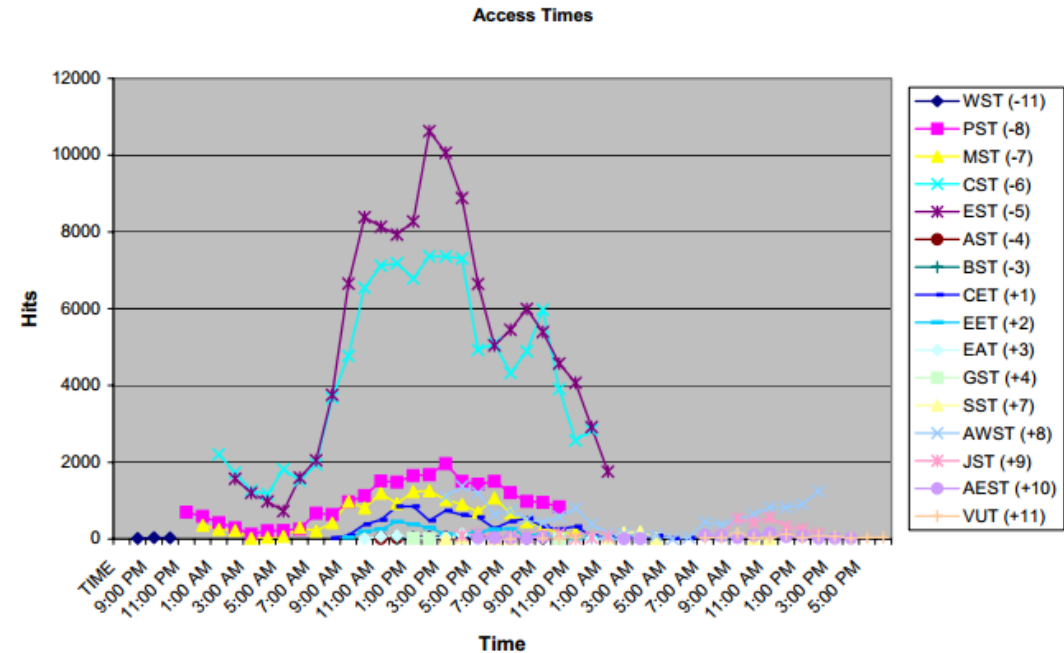
- **Understand, analyze, & visualize patterns of activities**
 - **Checkouts**
 - **Returns**
 - **Recent acquisitions**
 - **Print & eBooks**
 - **Aggregate collections**



(Harvard University Library, 2010)

Log Analysis

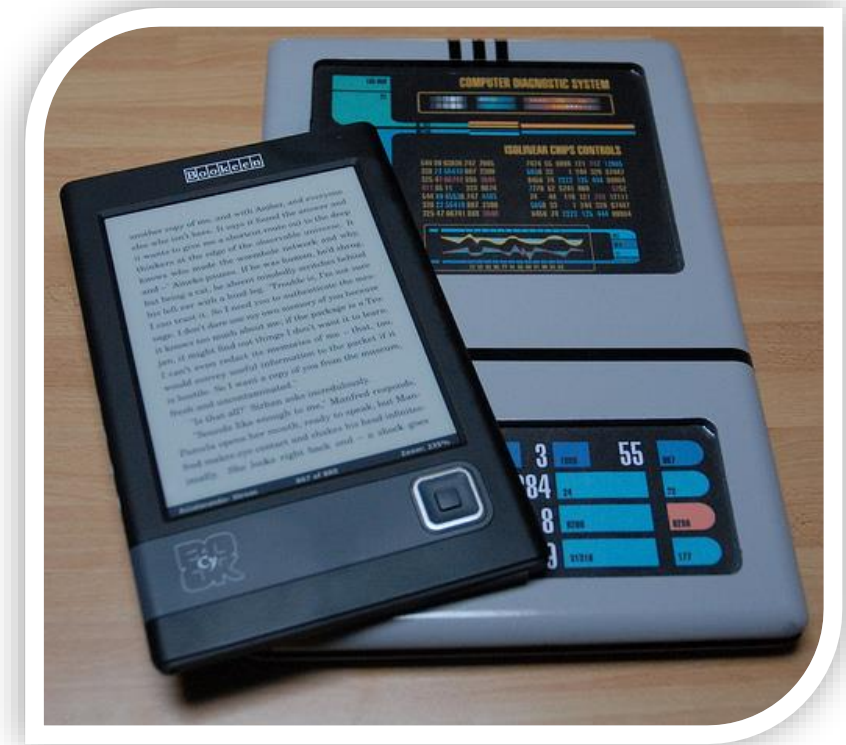
- Can be integrated with other methods
- Unobtrusively identify user patterns and systems
- Macroanalysis
 - Analysis of aggregate use data & patterns
- Microanalysis
 - Analysis of individual search patterns



(Connaway & Snyder, 2005)

Example: Transaction Log Analysis of E-book Usage

- Identify
 - Number of users accessing the site
 - Number of e-book sessions
 - Time of day when users were accessing e-books
 - Length of time they were spending on the site and within an e-book,
 - Number of e-books viewed per session
 - Number of pages viewed per session
 - Search terms
 - Search patterns



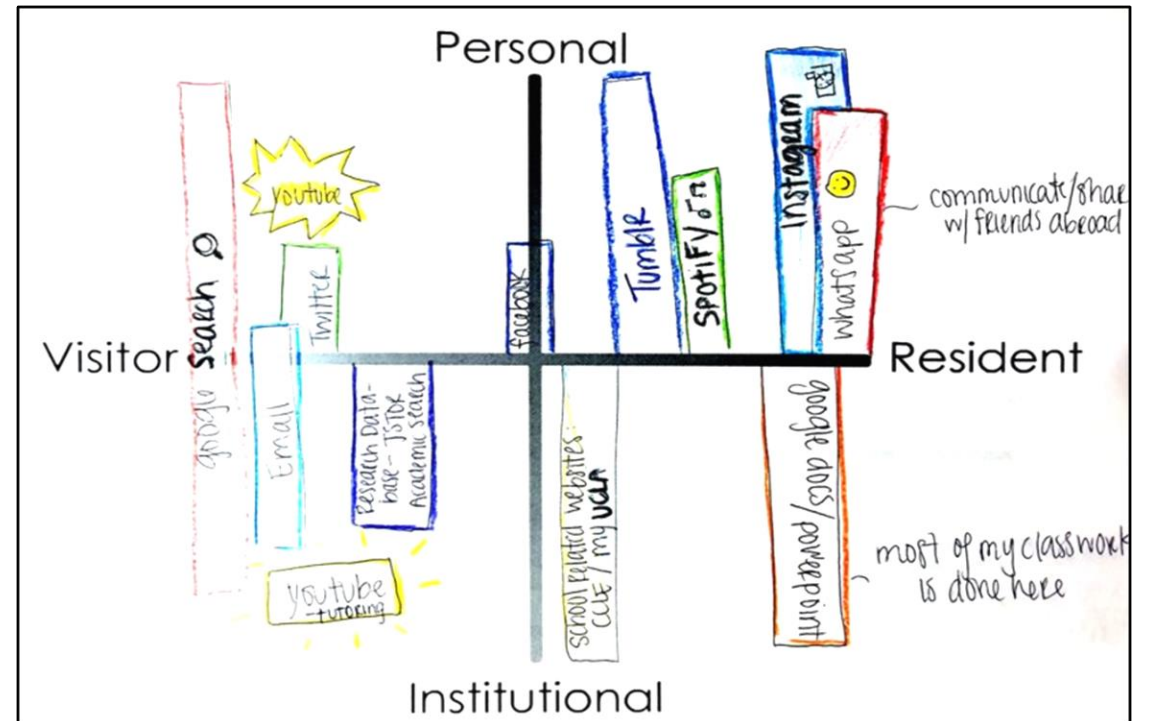
(Connaway & Snyder, 2005, pp.4-5)

VISUAL METHODS

Visual Methods

Images:

- can be produced by participants as data
- can provoke other data
- can be used for feedback and documentation of the research process
- are useful as a mode of interpretation and representation



VISUAL RESEARCH METHODS



EPISODE #1

INTRODUCTION TO A SERIES ON
**VISUAL RESEARCH
METHODS**





THE DRAW-AND-WRITE TECHNIQUE



Draw-and-Write Technique

- Adapted in LIS by Jenna Hartel, Ph.D.
- Arts-informed, visual research method
- Participants prompted to perform a drawing activity along with a writing exercise, individual or focus group interview



Data from (Hartel, 2014)



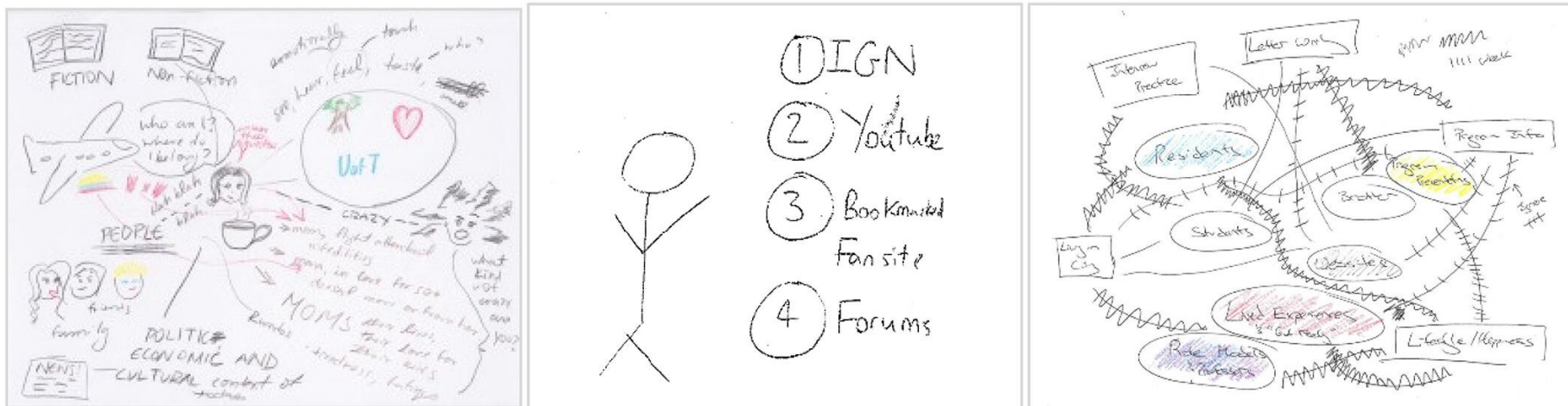
THE INFORMATION HORIZON (INTERVIEW)



Information Horizon Mapping

- Created by Diane Sonnenwald, Ph.D.
- First visual research method originating in LIS
- Elicit and document a person's information behavior or how they seek information
- Information horizon is the imagined space of information resources available to them

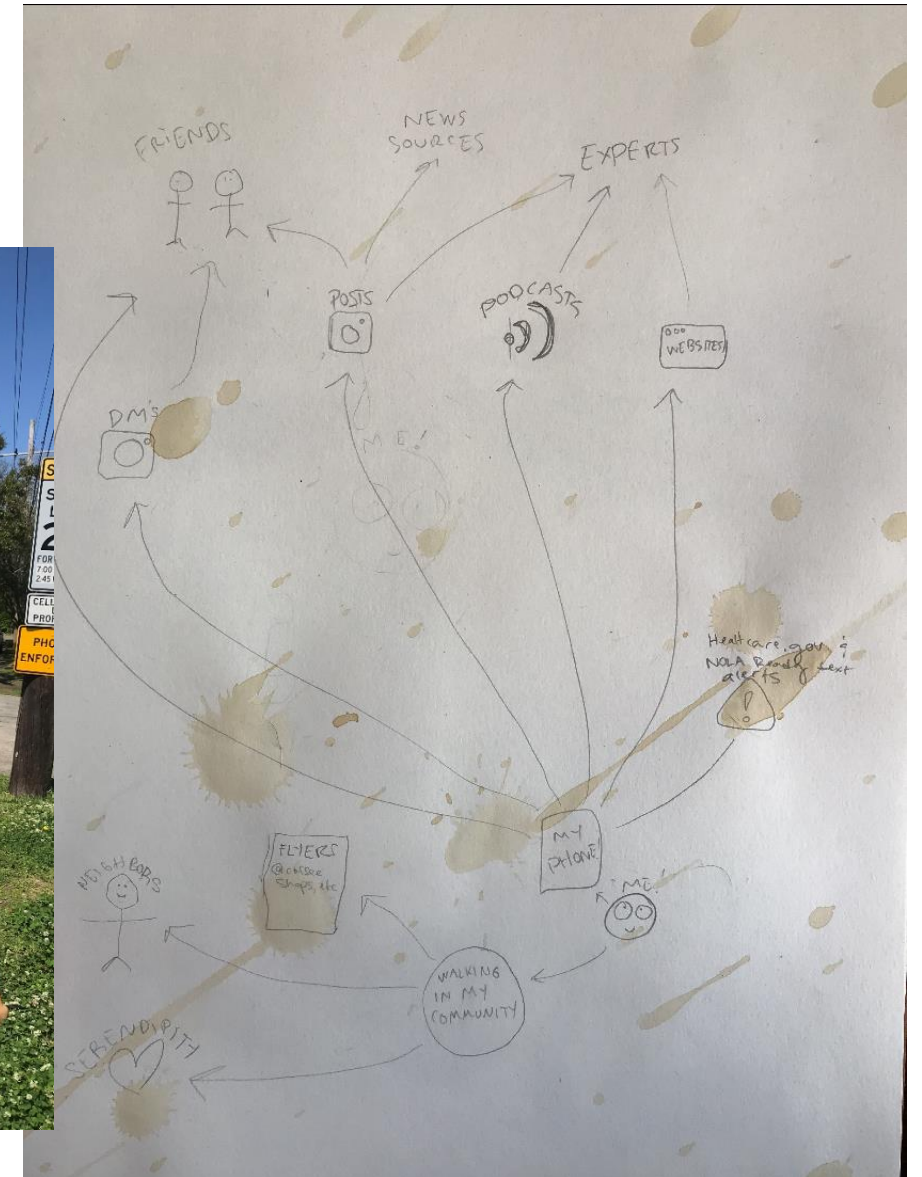
(Hartel, 2016; 2021)



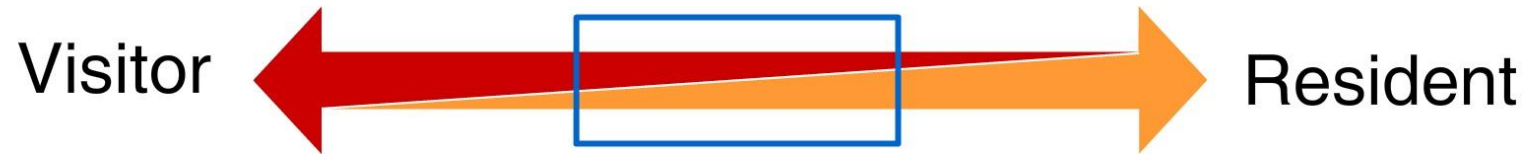
Adaptations of the IHI

Analyzed participants' information horizon maps with the images of their immediate information spaces

(Montague, 2023)



V&R Framework



#vandr

Visitors and Residents resources <http://goo.gl/vxUMRD>

(White and Le Cornu, 2011)

Visitor Mode

- **Functional use of technology**
- **Formal need**
- **Invisible online presence**
- **Internet is a toolbox**



(White and Connaway 2011-2014)

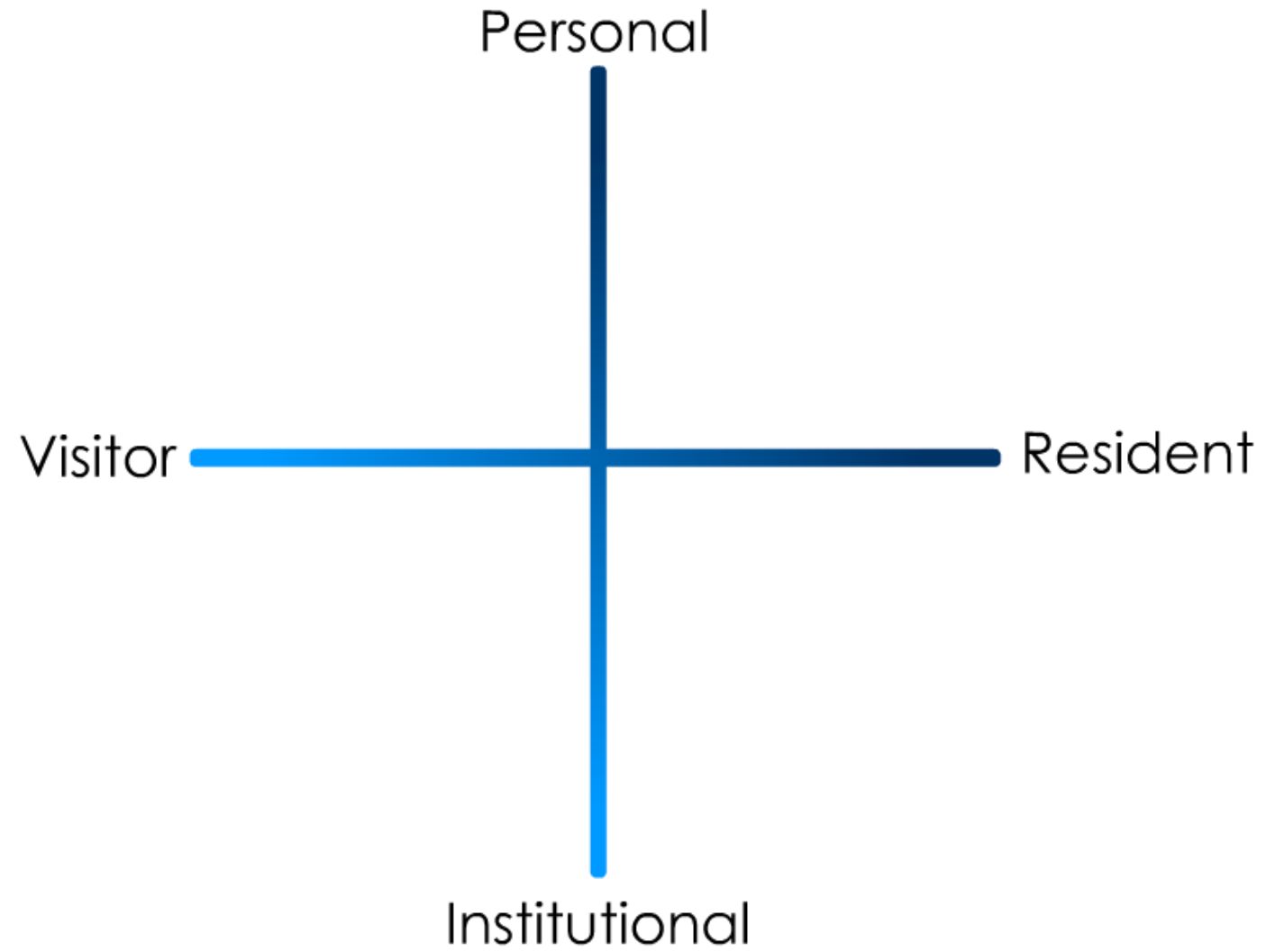
Resident Mode

- **Visible and persistent online presence**
- **Collaborative activity online**
- **Contribute online**
- **Internet is a place**



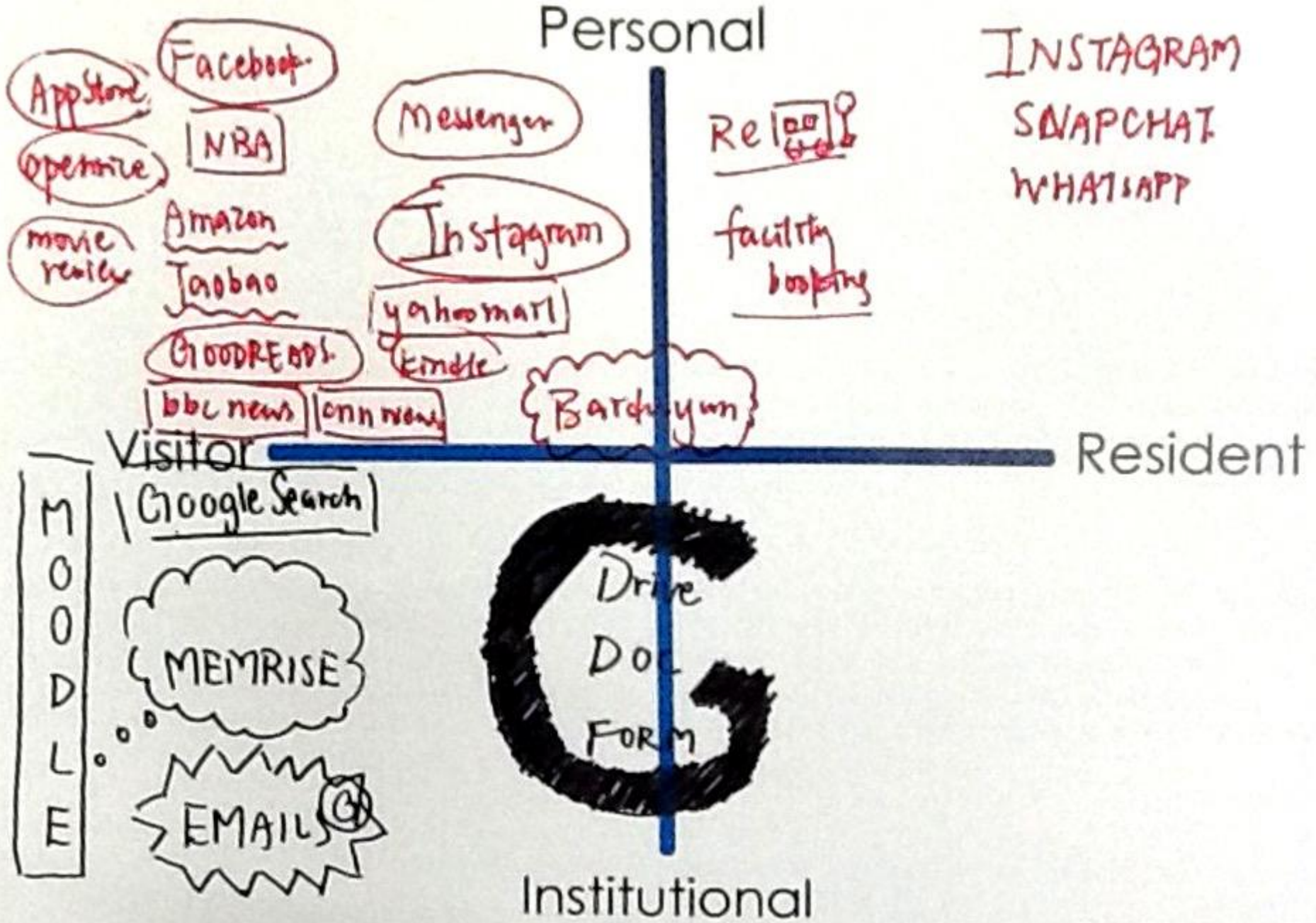
(White and Connaway 2011-2014)

MAPPING

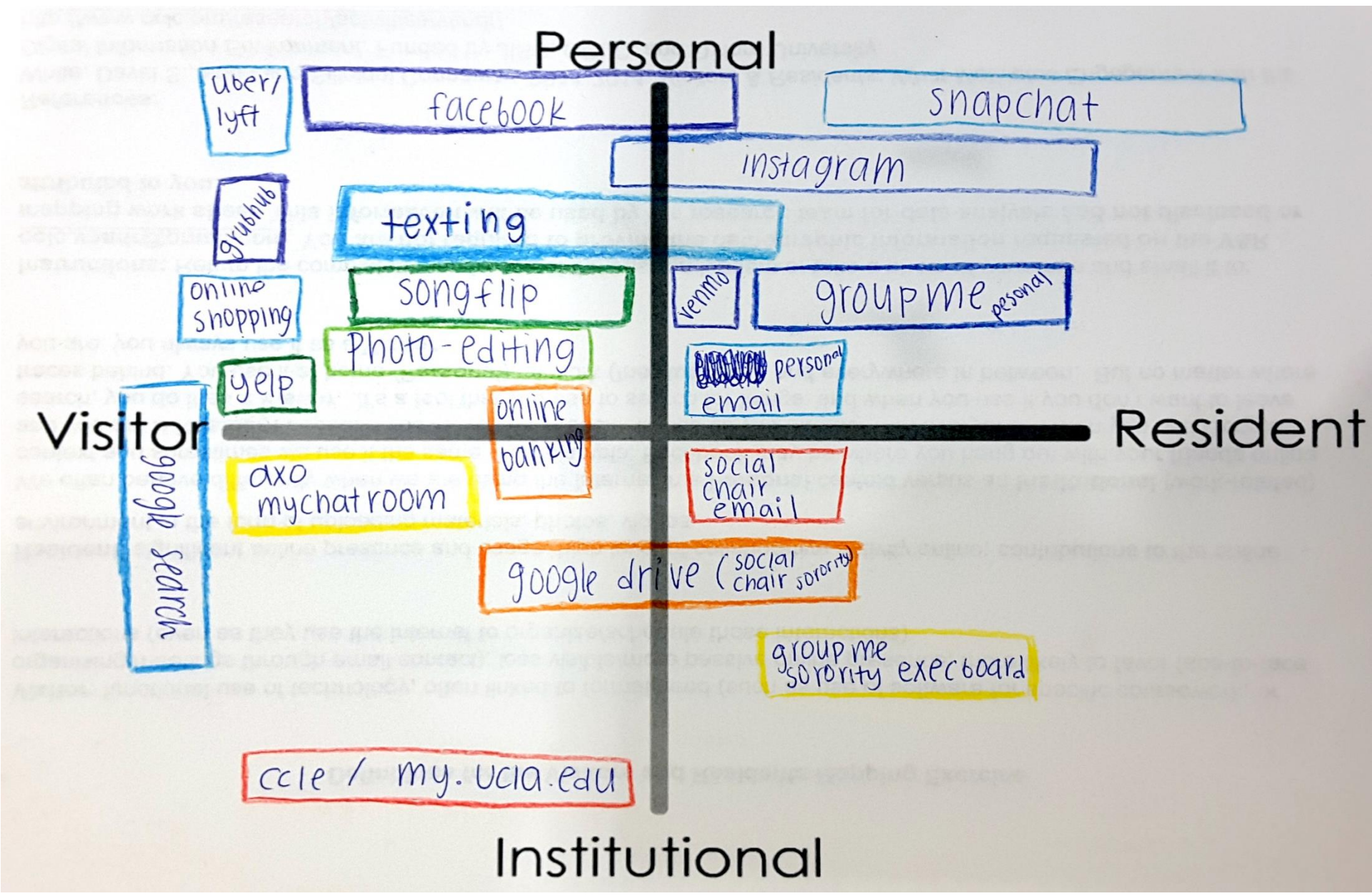


(Connaway and White for OCLC Research 2012)

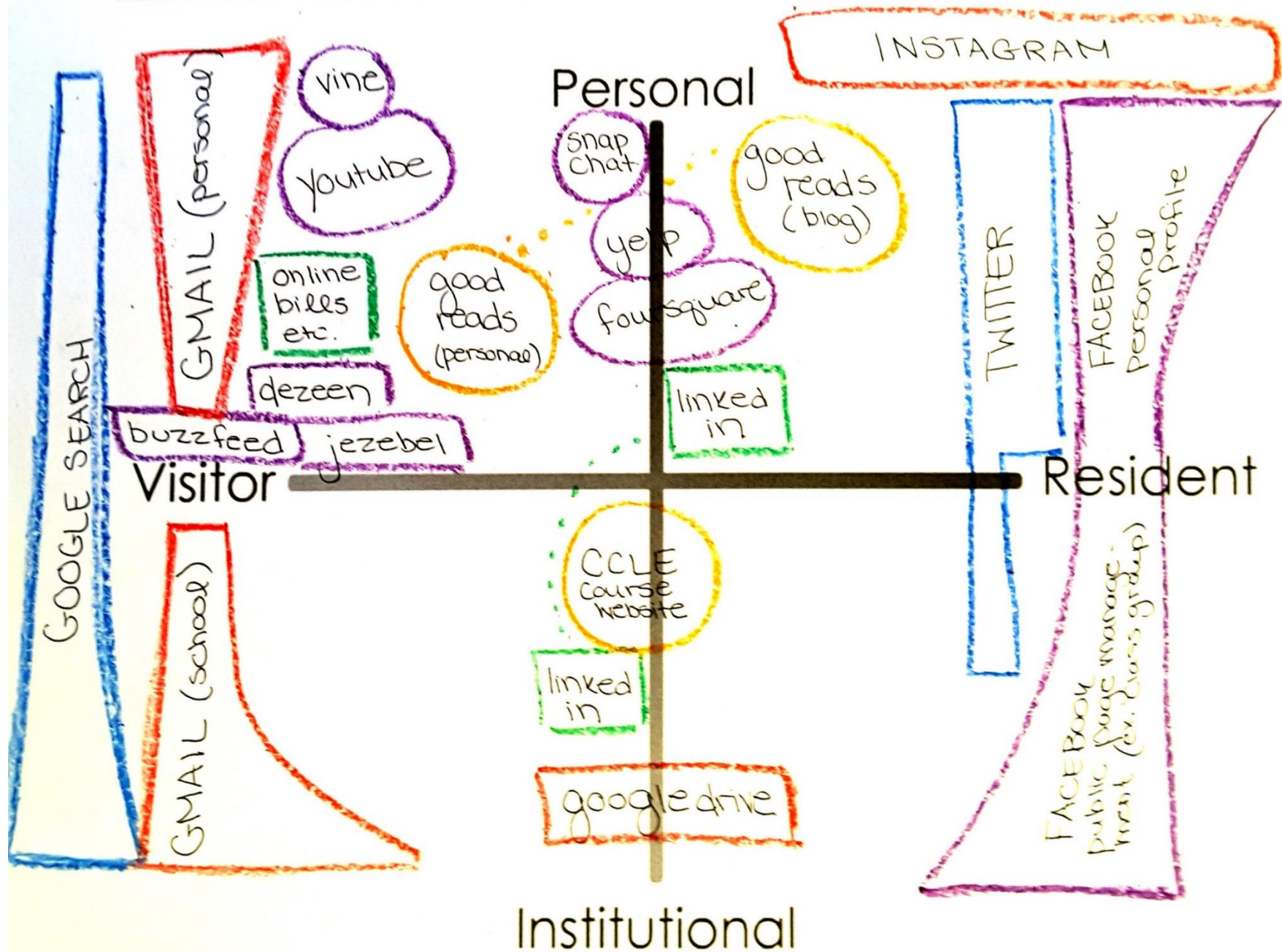
1ST YEAR UNDERGRADUATE



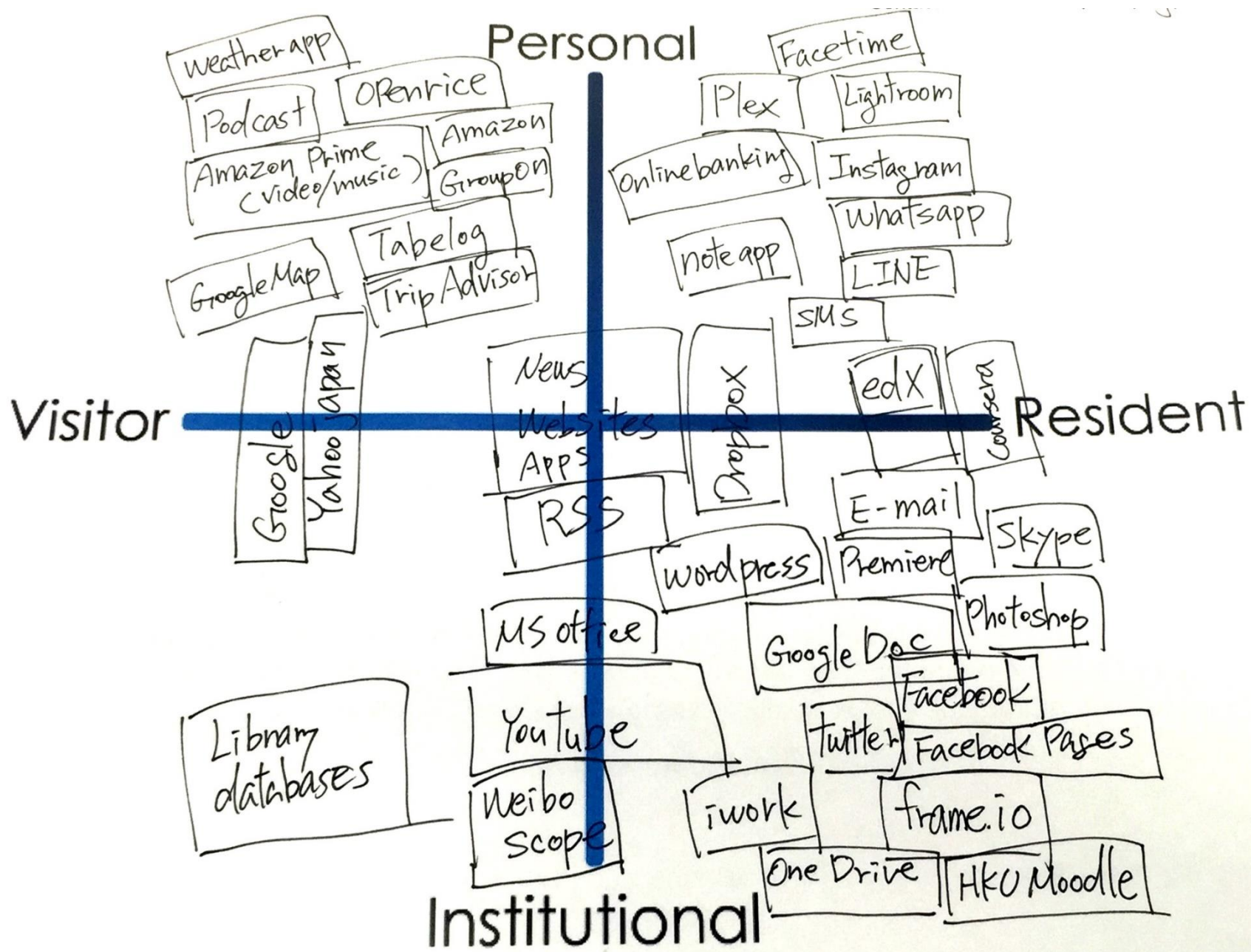
UPPER LEVEL UNDERGRADUATE



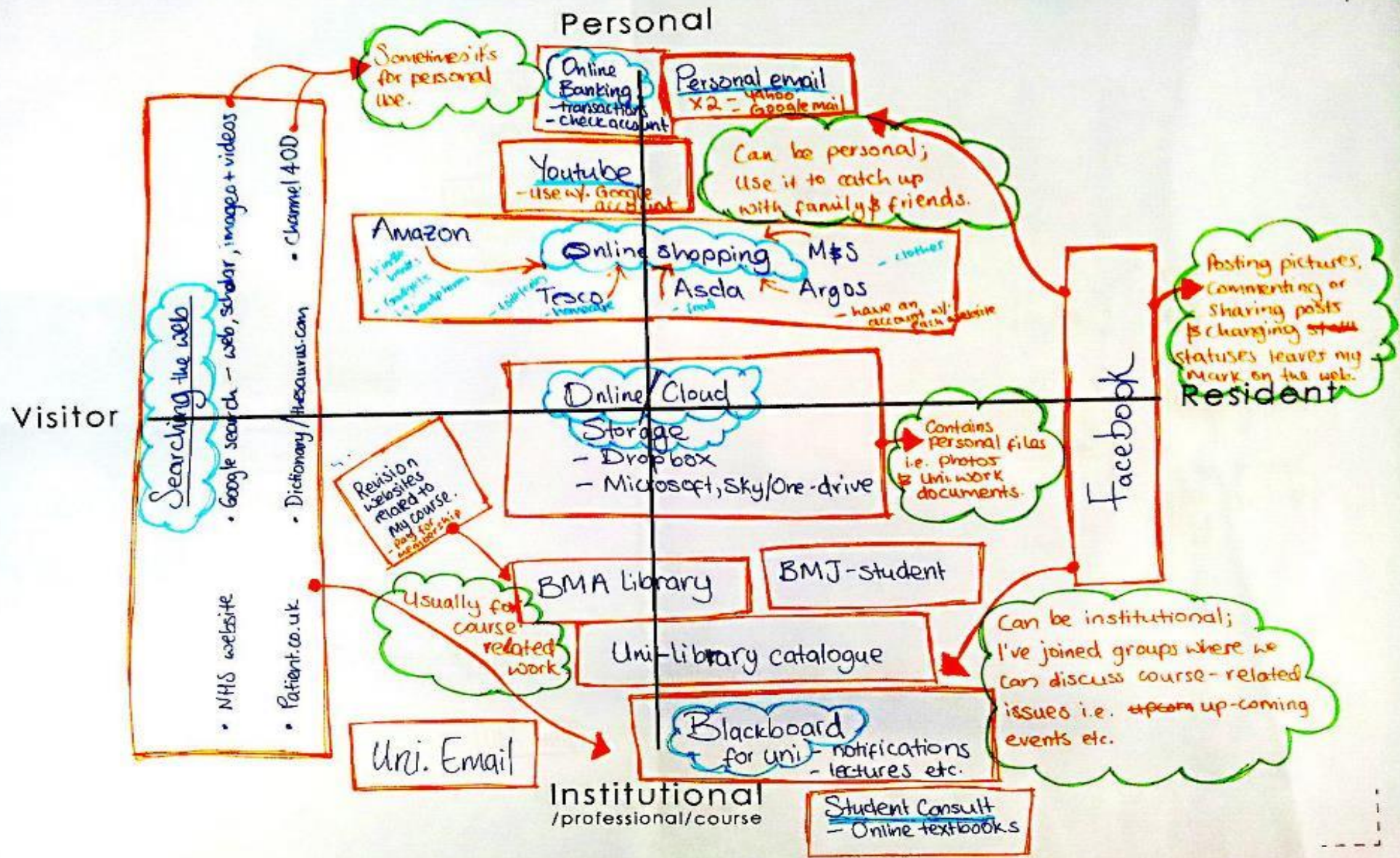
GRADUATE STUDENTS



FACULTY



LIBRARIANS



AI: APPLICATIONS FOR RESEARCH

AI: Chat GPT



Bio from Chat GPT

Lynn Silipigni Connaway is a highly accomplished information scientist and a **senior research scientist** at OCLC, a global library cooperative. She has made significant contributions to the field of library and information science, especially in the areas of user behavior and information-seeking practices.

Lynn earned her Ph.D. in Library and Information Science from **the University of Pittsburgh in 2002**, and since then has been involved in numerous research projects focused on exploring the changing landscape of information-seeking behavior in the digital age.

Her research has been widely published and cited, and she has received numerous awards and honors for her work, including the ALISE/Bohdan S. Wynar Research Paper Competition Award and **the OCLC Online Computer Library Center Award for Research.**

In addition to her research, Lynn is a highly sought-after speaker and presenter, and has delivered keynote speeches and presentations at conferences and workshops all over the world. She is also a highly regarded educator and mentor, and has taught courses in library and information science at the University of Denver, **the University of North Carolina, and Florida State University.**

Reimagining Descriptive Workflows" by OCLC is a research report that explores the major themes related to metadata creation and management in libraries, archives, and museums. The report identifies several challenges faced by institutions in these fields and proposes potential solutions to address them. Some of the major themes covered in the report are:

1. **Collaboration and Community:** The report highlights the importance of collaboration and community building in metadata creation and management. It suggests that institutions should work together and share expertise, tools, and resources to enhance metadata quality and efficiency.
2. **Automation and Artificial Intelligence:** The report discusses the potential of automation and artificial intelligence (AI) in metadata creation and management. It suggests that institutions can use AI to improve metadata quality, reduce errors, and increase efficiency.
3. **Linked Data:** The report explores the concept of linked data and its potential for enhancing metadata interoperability and accessibility. It suggests that institutions should adopt linked data principles and technologies to improve metadata sharing and reuse.
4. **User-Centered Design:** The report emphasizes the importance of user-centered design in metadata creation and management. It suggests that institutions should consider user needs and preferences when designing metadata workflows and interfaces.

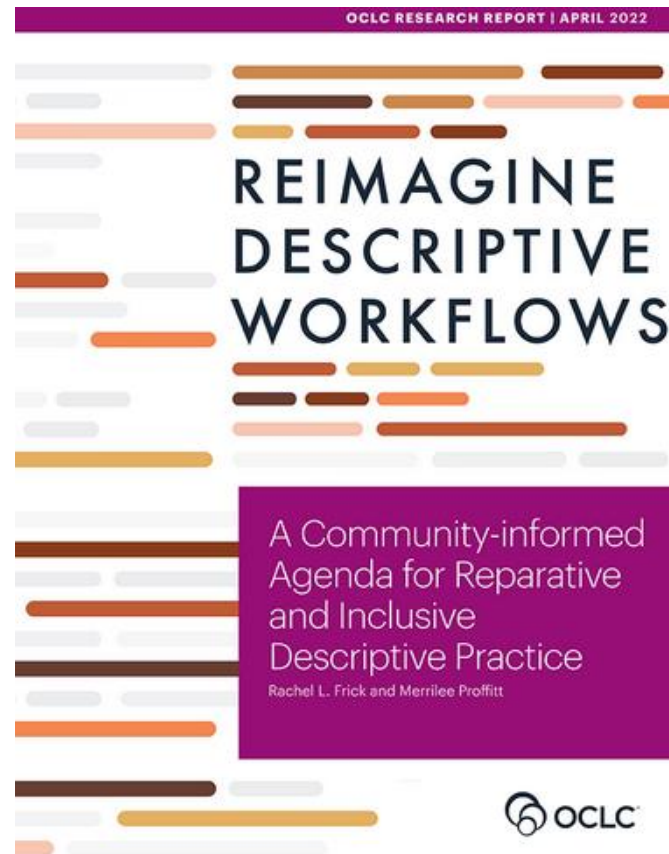


What Chat GPT missed



No mention of:

- **Power**
- **Racism**
- **Privilege**
- **White**



AI: Otter.ai


- **Upload audio or video files or synch media files automatically from Dropbox for real time, accurate transcripts**
- **Allows ability to comment and collaborate on transcripts in real time**



Bard is an experiment

As you try Bard, please remember:

Bard will not always get it right
Bard may give inaccurate or inappropriate responses.



“We’re stumbling into a massive game of AI misinformation telephone, in which chatbots are unable to gauge reliable news sources, misread stories about themselves, and misreport on their own capabilities.”

(Vincent 2023)



"Innovative LIS research that has not been previously enacted can both inform practice, as well as advance theoretical development."

(Connaway & Radford, 2021, p. 2)

Thank you!

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**Because
what is
known must
be shared.SM**



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