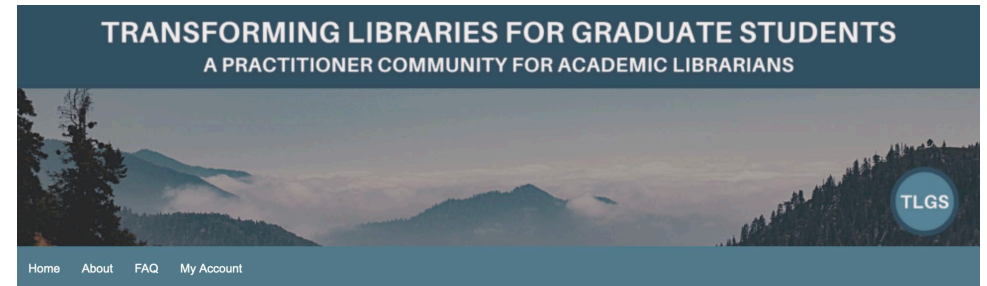# Accessing the intangible

AN EXPLORATORY QUALITATIVE STUDY OF HOW PIVOTAL SOURCES AFFECT DOCTORAL STUDENTS' RESEARCH THINKING

Introduction

Initial spark

- Research as a creative endeavor
- Some synergies between HE and LIS:
  - Academic support groups
  - Affective aspects of research
  - Literature review
  - Research as nonlinear
  - Metacognition

TRANSFORMING LIBRARIES FOR GRADUATE STUDENTS
A PRACTITIONER COMMUNITY FOR ACADEMIC LIBRARIANS

Home   About   FAQ   My Account

Somewhere Between Rational and Irrational: Creativity in the Graduate Research Process and Its Implications for Librarians

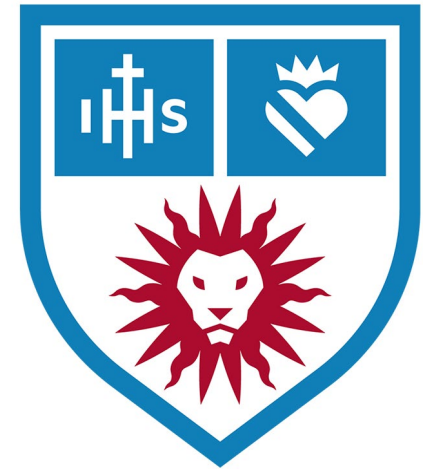Kelly Hangauer   Follow

Start Date
3-16-2020 11:30 AM
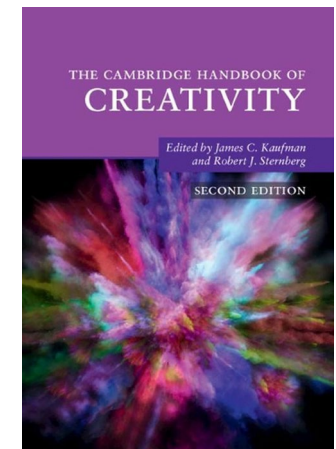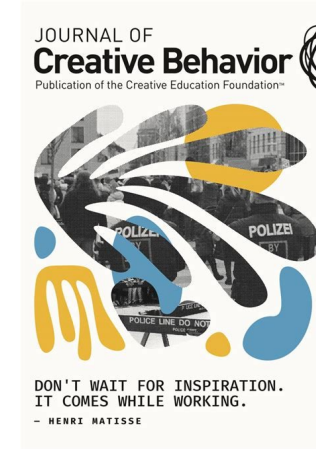
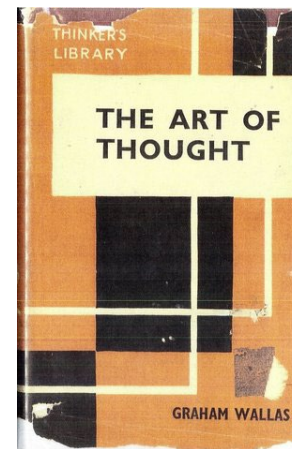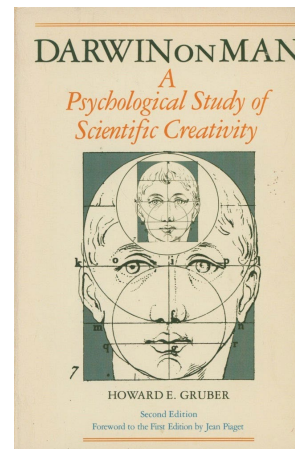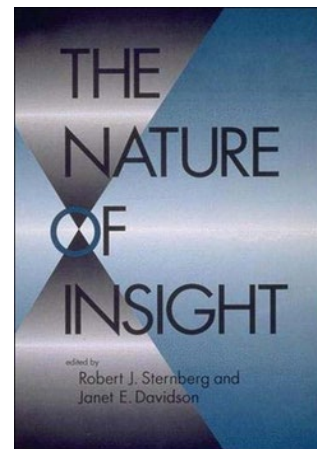**End Date**
3-16-2020 12:00 PM

Institute for Research Design in Librarianship

- 2022 IRDL Cohort
- Crash course in social science research methods
- Guidance and mentorship on research project

Research proposal

Research proposal: Psychology literature

Creativity Research Journal
Volume 34, Number 4, October–December 2022
ISSN 1040-0419
Special Issue: Advancements in the Measurement and Evaluation of Creativity Volume 1
Guest Editors: Sergio Agnoli and Serena Mastria
Taylor & Francis

THE NATURE OF INSIGHT
edited by
Robert J. Sternberg and
Janet E. Davidson

DARWINonMAN
A Psychological Study of Scientific Creativity
HOWARD E. GRUBER
Second Edition
Foreword to the First Edition by Jean Piaget

THINKER'S LIBRARY
THE ART OF THOUGHT
GRAHAM WALLAS

JOURNAL OF Creative Behavior
Publication of the Creative Education Foundation™
DON'T WAIT FOR INSPIRATION.
IT COMES WHILE WORKING.
— HENRI MATISSE

THE CAMBRIDGE HANDBOOK OF CREATIVITY
Edited by James C. Kaufman and Robert J. Sternberg
SECOND EDITION

Research proposal: Higher ed literature
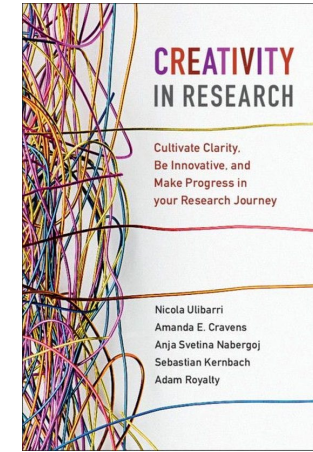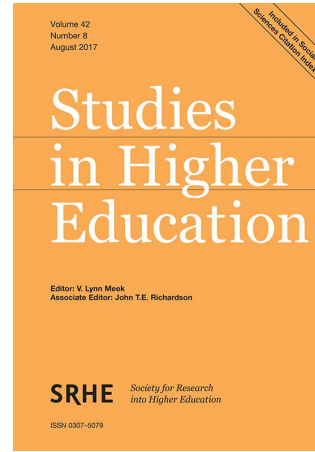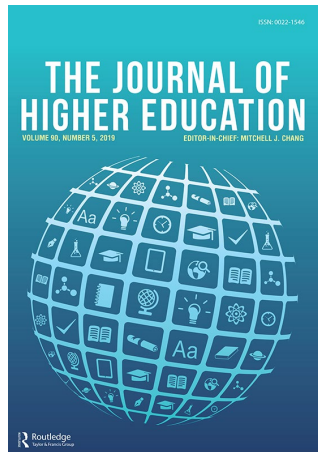
Research proposal: LIS literature
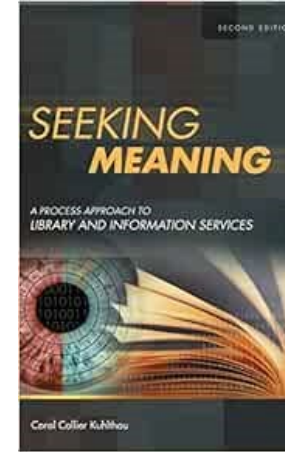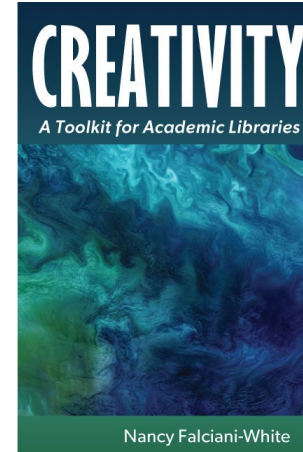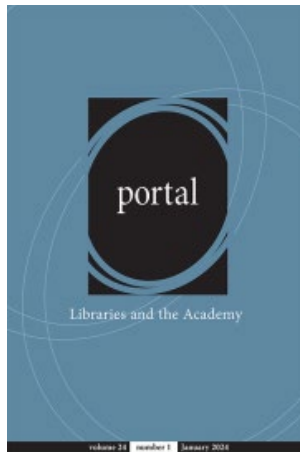
The Study

Study overview

- Overall Goal:
  - Understand the experience of doctoral research as a creative endeavor.
- Objectives:
  - To explore doctoral students' relationship with their research topics.
  - To identify bibliographic sources or authors that represent key turning points in the doctoral students' research experience.
  - To document moments of insight experienced by doctoral students in the process of crafting their literature review.
- Research questions:
  - What draws doctoral students to their research topics?
  - What are doctoral students' experiences of insight in their research process?
  - What cognitive and affective states accompany these insights?

Recruitment

Kelly Hangauer is conducting a research study to better understand the experience of insight in the research process.

During the interview, you will be asked to discuss your dissertation research topic and **describe 3-5 sources in your bibliography that have been particularly influential.** The interview will focus on your personal experience engaging with the knowledge of your field.

The story of sources

Methods

Study design and population

- Qualitative study using in-depth interviews
- Doctoral students (ideally post-comprehensive exams) in social sciences

Conducting the study

- Recruited PhD students in social sciences
- 11 semi-structured interviews (10 post-comps, 1 pre-comps)
  - 1 Psychology
  - 1 Sociology
  - 9 Education
- Interviews held over Zoom and lasted between 45 minutes – 1.5 hours
- Used otter.ai to create transcripts
- Coding was going to be done through NVivo

Thematic analysis (TA)

- Thematic analysis "involves the searching *across* a data set...to find repeated patterns of meaning" (Braun & Clarke, 2006, p. 86).
- Inductive coding
- Semantic level

Information box 13.2 Braun & Clarke's (2006) six-phase approach to TA

1. *Familiarisation with the data:* reading and re-reading the data.

2. *Coding:* generating succinct labels that identify important features of the data relevant to answering the research question; after coding the entire data set, collating codes and relevant data extracts.

3. *Searching for themes:* examining the codes and collated data to identify significant broader patterns of meaning; collating data relevant to each candidate theme.

4. *Reviewing themes:* checking the candidate themes against the data set, to determine that they tell a convincing story that answers the research question. Themes may be refined, split, combined, or discarded.

5. *Defining and naming themes:* developing a detailed analysis of each theme; choosing an informative name for each theme.

6. *Writing up:* weaving together the analytic narrative and data extracts; contextualising the analysis in relation to existing literature.

Reflexive TA

- Values of qualitative paradigm
- Importance of researcher subjectivity
- Organic and recursive coding processes
- Deep reflection on, and engagement with, data
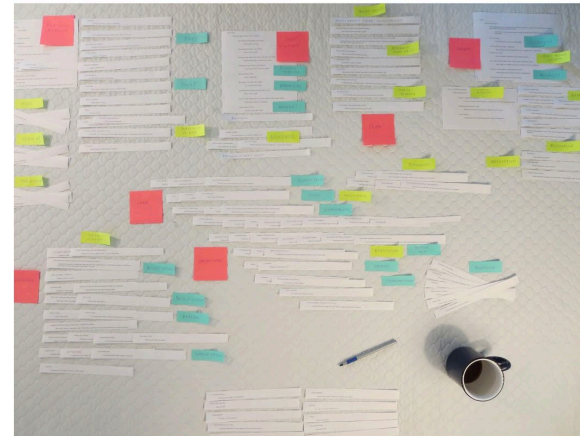

Doing Reflexive TA

Image: Lisa Trainor

From thematicanalysis.net

Phases of TA

Table 1 Phases of thematic analysis

Phase	Description of the process
1. Familiarizing yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Impasse

Return to the literature

Theoretical Framework

Information behavior

- Information behavior is the study of how individuals:
  - Perceive information
  - Seek information
  - Understand information
  - Use information
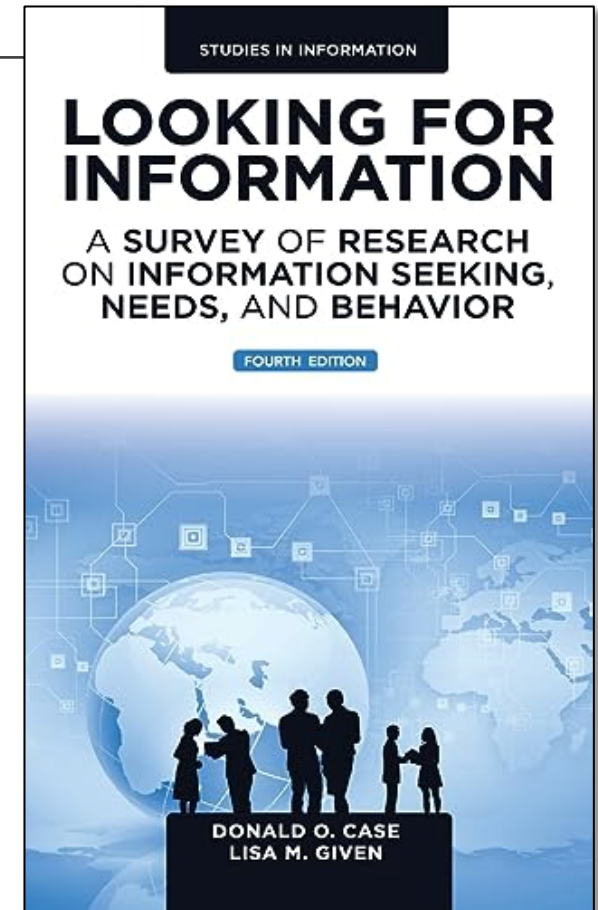
Intangible & tangible

"So exposure to information can result in at least two kinds of results: changes in the knowledge of the recipient (conceptual or intangible), and application of the information to some task or decision (instrumental or tangible)" (Case and Given, 2016, p. 94).

Information utilization (Todd, 1999)

- Get a complete picture
- Get a changed pictured
- Get a clearer picture
- Get a verified picture
- Get a position in a picture

Ross J. Todd
Department of Information Studies, University of Technology, PO Box 123, Broadway NSW, Australia 2007.
E-mail: Ross.Todd@uts.edu.au

This article reports on a study that investigates how older adolescents cognitively utilize information on the drug, heroin. With a small group of four girls in their final year of secondary education, the study sought to: (a) establish the perceived effects of exposures to information; (b) establish how the perceived effects are associated with changes to the girls' knowledge structures; and (c) establish any patterns in relation to changes in knowledge structures and perceived effects. The study employed a quasi-experimental, repeated-phase approach. The girls' existing knowledge structures about the drug, heroin, were elicited and mapped, as were knowledge structures after each of three exposures to different information on heroin. The knowledge structures after each exposure were shown to change by cognitive strategies of appending, inserting, and deleting. Five types of effects, as types of cognitive information utilization, were identified, these being: Get a complete picture, get a changed picture, get a clearer picture, get a verified picture, and get a position in a picture. The study also showed that there was coherence between the effects and how these effects were manifested in changes to the girls' knowledge structures. This article also discusses important implications for information practice and instructional design.

Introduction

The high incidence of drug abuse by adolescents and young adults, and its consequences, are acknowledged by many as an important concern in contemporary society. Adolescents and young adults also acknowledge that drugs are an important everyday concern for them (Poston-Anderson & Edwards, 1993). Statistics from many countries bear witness to the seriousness of this problem. In the state of New South Wales, Australia, for example, data from the Health Department Drug and Alcohol Directorate (1993) show that alcohol is responsible for 51% of drug-caused deaths in the 15 to 34 year old age group. Opiate-caused deaths are also highest amongst this age group, accounting for 33% of the total drug-caused deaths (New South Wales

(NSW) Health Department, 1993). The seriousness of the concern is further reflected in the plethora of media and public drug-education campaigns and curriculum-based studies in schools that are designed to provide information to shape the knowledge, attitudes, and values of young people toward a drug-free lifestyle (Wodarski, 1990).

Considerable research exists which has attempted to understand factors contributing to the perpetuation of drug abuse by adolescents, and concludes that it is influenced by a complex interacting network of sociological, biological, and physiological factors (McDonald & Towberman, 1993). It is known, for instance, that the first experience with drugs usually occurs during adolescence (Wolf, Olenick-Shemesh, Addad, Green, & Walters, 1995); that when adolescents perceive their parents' attitude towards substance use is favorable, they tend to use substances at a higher rate; that association with drug-using peers is a strong predictor of adolescent drug use; and that parental absence due to break-ups, death, divorce, or a hostile family environment that creates a sense of alienation, increase the chances that adolescents will abuse drugs (Denton & Kampfe, 1994).

Baran and Davis (1995) assert that in our everyday lives we are exposed to vast quantities of information; yet we ultimately process, utilize, and store only a small fraction of this information, most of which is soon forgotten. This assertion begs the question: What do adolescents do cognitively with the volume of drug information to which they are exposed? Understanding the world of adolescents in relation to how they process drug information is thus seen as an important component of both more holistic theory building in this contemporary problem and in the development of more effective information services that contribute to intervention and prevention of this problem.

Background and Aims

This research builds on two important developments in information science over the last two or three decades. First, a growing focus on a user-oriented paradigm (Dervin & Nilan, 1986) has given emphasis to the "active, construct-
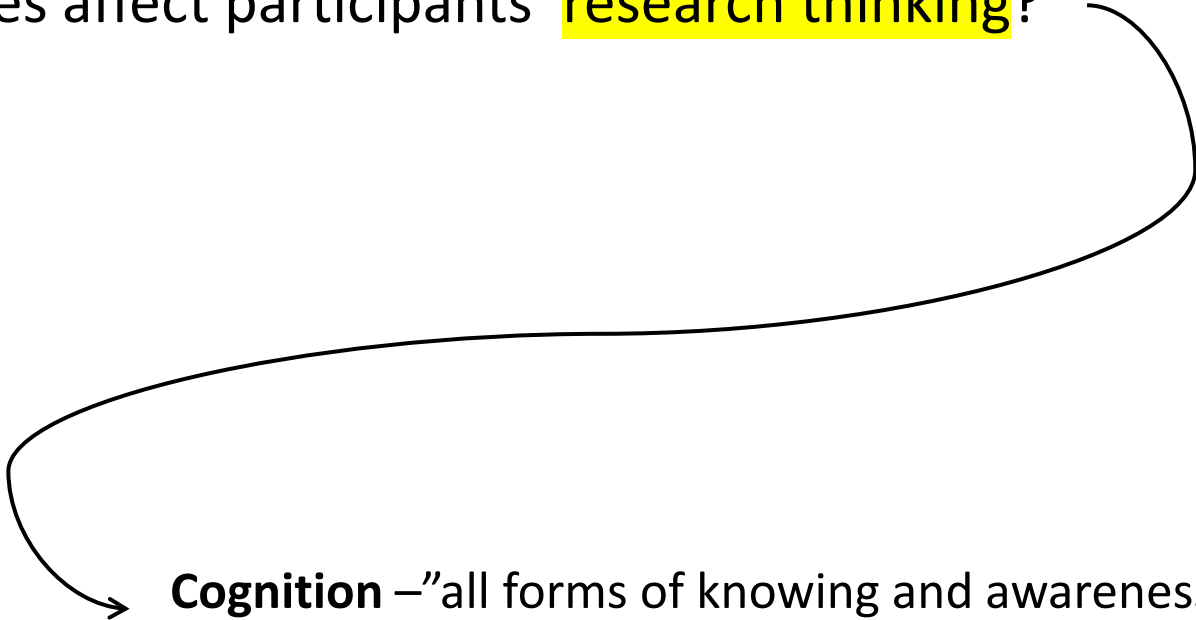
Research questions

1. How did pivotal sources affect participants' ==research thinking==?

Cognition –"all forms of knowing and awareness, such as perceiving, conceiving, remembering, reasoning, judging, imagining, and problem solving" (APA Dictionary) – that relates to the **research experience.**

Findings

Six cognitive themes

I found that pivotal sources affected the research thinking of doctoral students in six major ways; sources tended to:

1. Clarify
2. Expand
3. Confirm
4. Consolidate
5. Validate
6. Challenge

1
Clarify

Make (a statement or situation) less confused and more clearly comprehensible

- New Oxford American Dictionary

Ten participants described **23 sources** that clarified some aspect of their research thinking, especially as it related to research direction, patterns in the literature, theoretical and methodological frameworks, and disciplinary language.

1

Clarify

Make (a statement or situation) less confused and more clearly comprehensible

- New Oxford American Dictionary

Psychology PhD candidate, #1

"It was in that meeting that I was like, okay, I should feel very comfortable. All the big people that are on this paper are here, and all of their peers are here. And they all are saying 'use this,' literally [in person]."

Education PhD candidate, #5

"I realized that it was absolutely the piece that I needed to help me understand how to do the work I needed to do. . . so it was just, oh, from start to finish like 'yes, that's what I want to do, and that's how I want to do it, and it's the topic I want to do it on.'"

"God—re-energizing and totally motivating."

"It was just an amazing moment."

2

Expand

Incorporating new information into one's knowledge structure

Ten participants described **22 sources** that expanded their knowledge regarding methods, theory, terminology, and concepts.

2

Expand

Incorporating new information into one's knowledge structure

This article "really helped scaffold my understanding of [my topic], gave me a lot of terminology to use. I could trace it forward and see who's been citing it. So yeah, it's really helped me understand . . . this literature."

"I read it back to front quickly… [and] fell in love with this book because it was literally everything that I was thinking about."

It was my first introduction to "me-search" which made the research feel "like it came from a place of knowing, like actually going through this."

3
Confirm

Establish the truth or correctness of (something previously believed, suspected, or feared to be the case)

- New Oxford American Dictionary

Six participants described **8 sources** that confirmed some aspect of their research thinking, especially as it related to theory and methodology.

3

Confirm

Establish the truth or correctness of (something previously believed, suspected, or feared to be the case)

- New Oxford American Dictionary

Education PhD candidate, #7

Reading qualitative study "brought up this like, you know, like this fire, this passion, this urge, about like, this is exactly why you're doing this work. And it's important."

Psychology PhD candidate, #1

"People had less faith in my idea at the time, they felt like it was a leap . . . [and] I was really speculating about how meaningful these measures could be, and my interpretation of how best to use them."

"This paper came out and I was like, 'Ha! Look – exactly what I was thinking.'"

Sociology PhD candidate, #1

"I had this hunch that like the theory—that the background I came from can help them expand their research a little bit more. But I don't really know how to articulate the words. She did that for me."

4

Validate

Recognize or affirm the validity or worth of (a person or their feelings or opinions); cause (a person) to feel valued or worthwhile

- New Oxford American Dictionary

Six participants described **7 sources** that validated their research thinking.

4

Validate

Recognize or affirm the validity or worth of (a person or their feelings or opinions); cause (a person) to feel valued or worthwhile

- New Oxford American Dictionary

Education PhD candidate, #2

"At least for me, there's always a thing in my head of like, 'Is this even worth spending—like, is this dissertation worthy? I don't know. I've never done this before.' So coming across this article was like, 'Yeah, somebody thought that this was worthy of study, so probably is in your field, too.'"

Education PhD candidate, #7

This source made it so that I am "not having to convince, you know, faculty that what I'm trying to do is impossible [laughs]."

Education PhD candidate, #5

The author's work was "pivotal in giving me—permission is the wrong word—but validation, motivation, sort of an invitation into the work. And so it's partly the work that she was doing, but it's partly who she was as a scholar.'"

5
Consolidate

Combine (a number of things) into a single more effective or coherent whole

- New Oxford American Dictionary

Six participants described **6 sources** that helped consolidate disparate thoughts or disparate sources.

5

Consolidate

Combine (a number of things) into a single more effective or coherent whole

- New Oxford American Dictionary

Education PhD candidate, #2

"I re-encountered this piece in a different way that suddenly was illuminating things."

"I do remember just kind of feeling like a bunch of puzzle pieces click together or like I had put on a new pair of glasses where disparate threads that I had been trying to bring together suddenly were fitting together, and for the first time feeling much more confident or clearer about where my dissertation might go. It felt like I just sort of had these disparate ideas and this was the thing that brought them together that felt really clarifying."

Education PhD candidate, #5

Upon reading, I thought "oh, crap" because I realized that "the narrative structure that I'd been seeing and struggling with was absolutely a mirror of what [theorist] was talking about . . . and the consequences of that." Seeing this connection was "huge in my like, oh [gestures head explosion]."

6
Challenge

When new information leads to "cognitive disequilibrium"

- Jean Piaget

Four participants described **7 sources** that challenged some aspect of their research thinking.

6

Challenge

When new information leads to "cognitive disequilibrium"

- Jean Piaget

Education PhD candidate, #9

"I struggled really hard to make sense of it."

"Real tension."

"Sitting with some of these deeper philosophical questions was kind of challenging."

"Ontological crisis."

Sociology PhD candidate, #1

Yeah, with this one, I definitely have worries . . . I was like, 'Do I still need to study this if other people have already done the work?'"

Conclusion

Thank you

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