

# Somewhere between rational & irrational: Creativity in the graduate research process and its implications for librarians

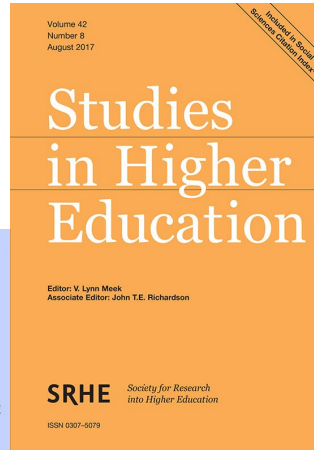
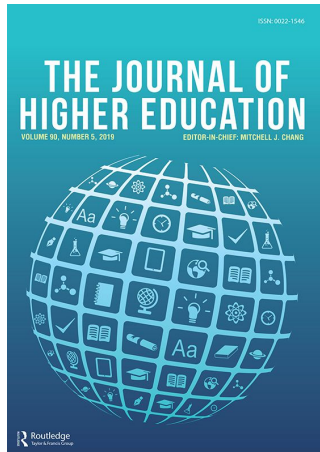
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This presentation was cancelled due to the COVID pandemic.



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# Literature Review focused on Doctoral Education



# Why Creativity is Important

- Creativity is central learning outcome in doctoral education (Brodin, 2018)
- Importance of creativity found in Association of American Universities (AAU) Committee on Graduate Education Report and Recommendations (1998)
- Graduate students as future leaders and need to think innovatively
- Creative mindset is important for success of graduate student (Cravens et al., 2014)
- Creativity is under-taught and underappreciated in graduate-level programs (Frick & Brodin, 2018)

“Creativity is inherent in and integral to graduate education, because graduate education is about producing the knowledge workers who ensure the ultimate success and survival of all the major institutions of society, by preserving, creating and developing the ideas, information and technology necessary for them to persist and advance” (Lovitts, 2005, 140).

# Themes Identified in Doctoral Education Literature

**Creativity** is enhanced by:

1. Academic support groups
2. Awareness of affective aspects of research
3. Literature review
4. Recognition that research is nonlinear
5. Metacognition



**Theme 1**  
***Academic Support Groups***

# Academic Support Groups - Doctoral Literature

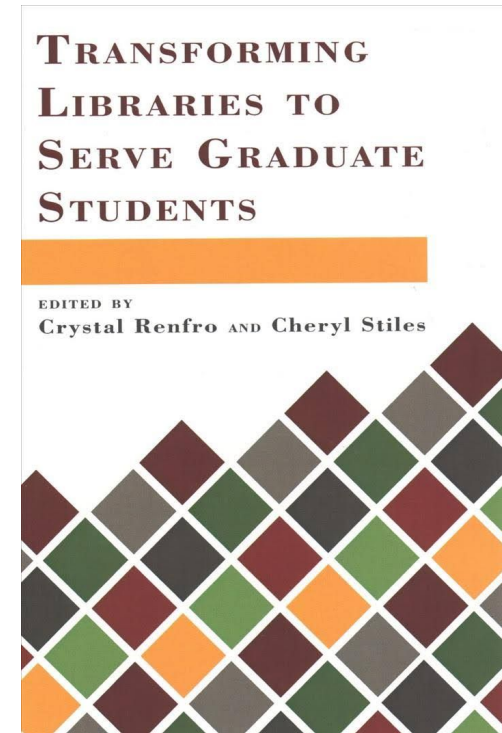
- Creativity often fostered by **informal support groups** outside of classroom (Brodin, 2018)
- Strong support group encourages creativity and **mediates stress** (Jairam, D., & Kahl Jr., 2012)
- Advisor, family, and academic friends make up common support groups (Brodin & Frick, 2011)
- The **micro-environment** involves these different aspects of a student's support group (Lovitts, 2005)
  - Social environment can have biggest impact on creativity (Lovitts, 2005, 150)



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# Academic Support Groups - Library Literature

- Examples of library support:
  - Spaces for grad students to study
  - Workshops -- literature review, etc.
  - Data Services
  - Traditional services -- IL instruction and research assistance
  - Campus partnerships
- Librarians can be key players in supporting PhD students in their microenvironment by being actively engaged through outreach and research appointments.
- Idea of *Librarian as counselor* (Kuhlthau, 2004)



## Theme 2

# *Affective aspects of research*



# Affect - Doctoral Literature

- Early researchers often experience confusion, uncertainty, and frustration (Bargar & Duncan, 1982)
- **Emotional resilience** is important in overcoming these challenges and can be taught in PhD program (Cravens et al, 2014)
- The academic support group is essential in providing emotional support (Whitelock et al., 2014)
- Not enough attention is given to **emotional well-being** of graduate students (Ulibarri et al, 2014)



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# Affect - Library Literature

- Kuhlthau (2004) conducted research on the affective aspects of the Information Search Process (ISP)
  - She found that early in the research process, researchers often experienced “**uncertainty, confusion, and frustration**” (Kuhlthau, 2004, 69).
  - Similar to doctoral researchers, Kuhlthau stressed importance of “**tolerance for uncertainty**” for research to be successful (Kuhlthau, 2004, 95).
- Kuhlthau’s work has been **highly influential** among academic librarians and their understanding of how emotions work in the research process.
- Librarians have focused on helping students overcome frustration and confusion associated with **library anxiety**.

# Kuhlthau' Information Search Process (ISP)

**Figure 1:** Information Search Process<sup>1</sup>

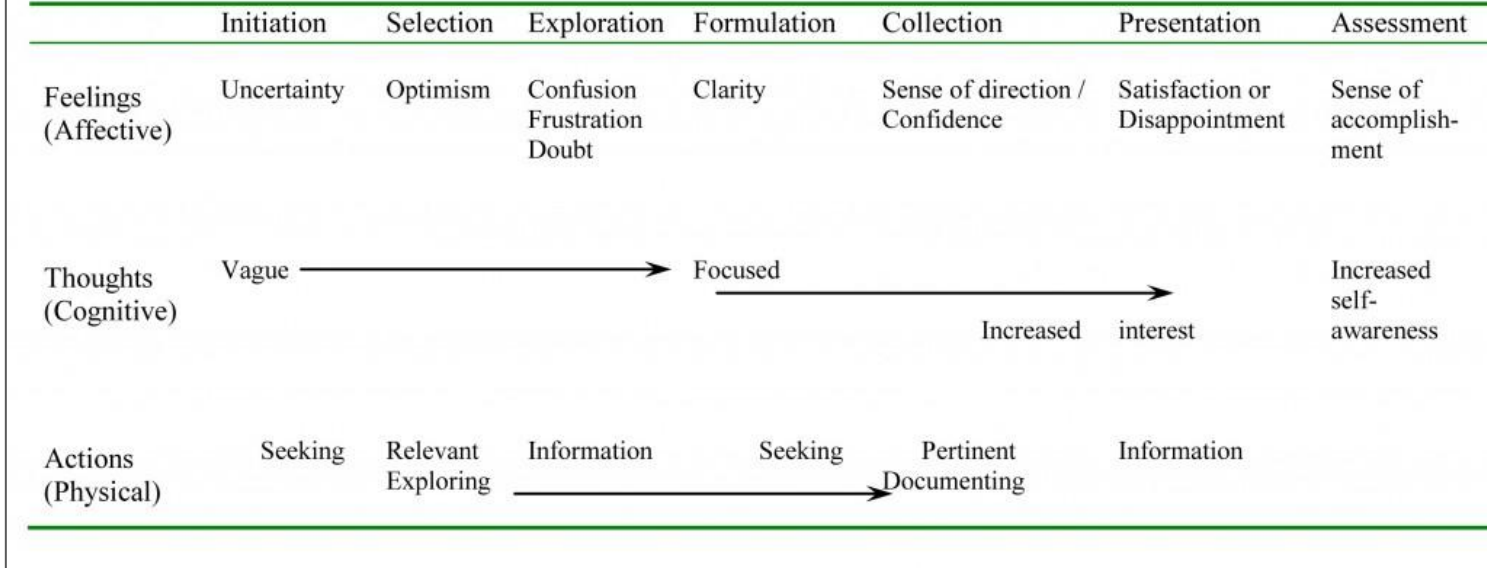


Image from "[Research Matters: The Long Reach of the Model of the Information Search Process \(ISP\)](#)" by Kuhlthau (2012)

**Theme 3**  
***Literature Reviews***

# Literature Reviews - Doctoral Literature

- Writing literature reviews is viewed as a creative endeavor
- Literature reviews allow students to know what contribution their research is making to the field (Wisker, 2015)
- Allows student to find voice (Brodin, 2018)
- Students identify literature review as creative endeavor (Whitlock et al., 2008)

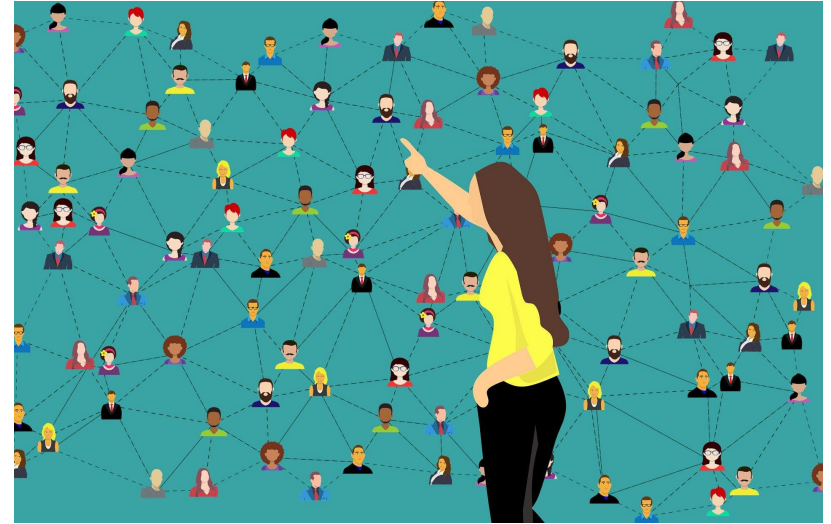


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# Literature Reviews - Library Literature

- Librarians have seen literature review as a key place to focus efforts for graduate students (Rempel, 2010)
  - Boot camps
  - Workshops
- While there is a focus on the librarian's role on teaching the literature review to graduate students, this relationship does not show up in the doctoral education literature reviewed
- To what extent are librarians aware of how the lit review impacts creativity?

**Theme 4**  
***Research as Nonlinear***

# Research as nonlinear - Doctoral Literature

- Recognition in literature that research is a **messy, nonlinear process** but students don't always realize this
- The research process is different than how it is typically taught (Cravens et al., 2014)
- Research relies on **serendipity and intuition** (Cravens et al., 2014)
- Important for students to develop a **“tolerance for ambiguity”** (Ulibarri et al., 2014)



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# Research as nonlinear - Library Literature

- Many of the ideas in the doctoral education literature regarding the messiness of research are reflected in the **ACRL Framework**
- **Research as Inquiry**
  - Embrace ambiguity
  - Open mind and critical stance
  - Intellectual humility
- **Searching as Strategic Exploration**
  - Research is non-linear and iterative
  - Persist in the face of challenges
- Librarians might consider teaching **Research as Inquiry** at an early stage of the graduate process so that students are prepared for the nonlinear aspects of research



**Theme 5**  
***Metacognition***

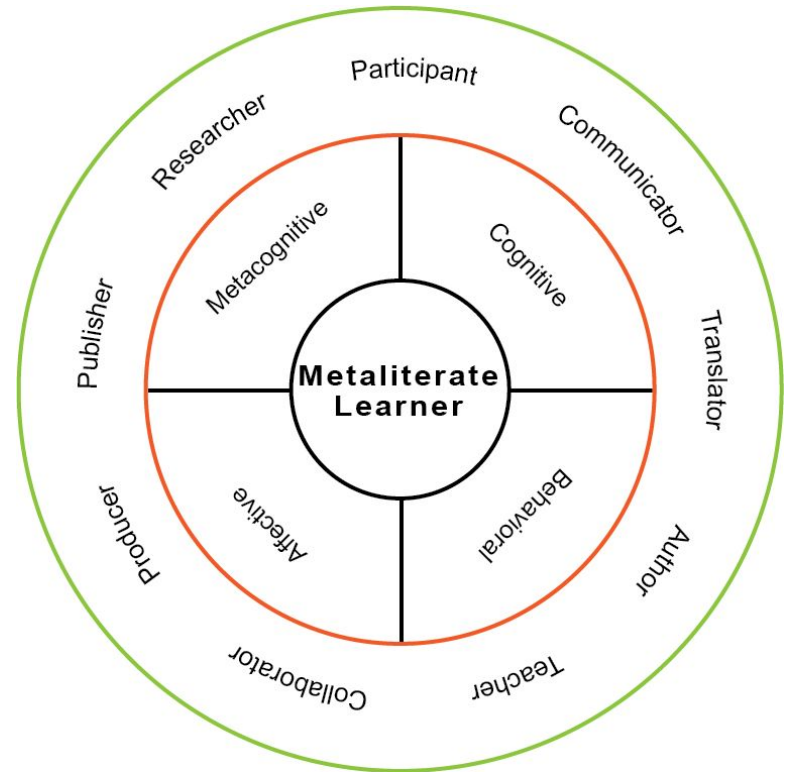
# Metacognition - Doctoral Literature

- Metacognition important to development of original ideas (Bargar & Duncan, 1982)
- Reflecting on their own thought process can be difficult for some graduate students (Cravens et al., 2014)
- Metacognition allows students to challenge assumptions and “explore and imagine alternatives” (Brodin & Frick, 2011)



# Metacognition - Library Literature

- The **ACRL Framework** draws heavily on concepts of metaliteracy and metacognition
- **Metaliteracy** is important concept in field of Information Literacy (Mackey & Jacobson, 2011)
- Librarians have been studying the role of metacognition in the research process



# How these insights can *inform* academic librarianship

- There are **conceptual commonalities** found in the doctoral education literature and library literature, but there is little crossover
- Librarians can use this common purpose to engage with faculty and graduate students. Here are some **recommendations for librarians**:
  - Think of yourself as a part of a student's academic **support group** and understand the emotional and creative support this provides
  - Articulate to graduate students the **emotional ups and downs** inherent in the research process and draw on Kuhlthau's work to demonstrate this
  - Keep focusing on providing **literature review** support for graduate students and make explicit how it leads to creativity and establishment of student voice
  - Stress the **non-linear, iterative process of research** early on in the graduate program so that students are mentally prepared and know where to go when they get frustrated
  - Model **metacognitive strategies** in consultations and instruction

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