Approaches to Exploring the Information Worlds of Women Engineering Students

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• Aims and objectives of the PhD.
• Two approaches under consideration:
  • Women’s Ways of Knowing.
  • Intersectional feminism.
• Review of these concepts in LIS literature.
• Applications of these approaches in the PhD study.
Aims and objectives of the PhD

**Aim:** to explore information experiences within the lifeworlds of female engineering undergraduate students.

**Research questions:**

1. How does the experience of being a gender minority in an undergraduate engineering classroom impact the information behaviour of women students?
2. How does the gendered learning environment of an Engineering classroom impact women’s information literacy development?
3. What role does affect play in women engineering students’ information behaviour?
4. What are the aims and motivations of female engineering students when engaging with information?
5. How do female engineering students identify their information needs?
6. How do female engineering students acquire information for their learning needs?
7. Is Women’s Ways of Knowing (WWK) a useful lens through which to examine women engineering students’ information behaviour?
Women’s Ways of Knowing (WWK)

Model developed by educational psychologists Mary Belenky, Blythe McVicker Clinchy, Nancy Goldberger and Jill Tarule (Belenky et al., 1997/1986).

Extension of William Perry’s earlier scheme of intellectual development of college students (Perry, 1999/1968).

In-depth interviews with 135 women, recruited from universities and “invisible colleges”.
## The 5 “Ways of Knowing”

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| 1. Silence | Silenced women are voiceless and passive.  
Usually “socially, economically, and educationally deprived” (pp. 23-4). |
| 2. Received knowledge | Received knowers see knowledge as objective and fixed, binary right/wrong.  
Knowledge is received from authoritative sources, learning is passive. |
| 3. Subjective knowledge | Subjective knowers see knowledge as personal, private and intuitive.  
May become “polite listeners” in the classroom, spectators who do not engage. |
| 4. Procedural knowledge | Transitional stage: learning procedures for obtaining knowledge in different contexts.  
Procedural knowers see knowing as an active process. |
| 5: Constructed knowledge | Constructed knowers view all knowledge as constructed and contextual.  
Subjective and objective strategies are both valued. |
WWK critiques

Hierarchy of knowledge: model progresses from “irrational” to “rational” positions (Ruddick, 1996).

Gender essentialism: binary view of gender; assumes a common experience to all women (Clinchy, 2002; Baxter Magolda, 2004).

No consideration of race (Bing & Trotman Reid, 1996; Stanton, 1996); whiteness as default (Hurtado, 1989, 1996; Schweickart, 1996).
Applications of WWK within LIS research

• WWK has potential for investigating gendered information behaviour (Julien, 2005).

• Rarely explored: Perry is more commonly cited in LIS literature.

• Approximately 20 LIS papers since 2000 cite the WWK model.

• Most only briefly mention, no further engagement.
Four papers applying WWK in LIS

**Anne Fields:** Compares the WWK stages with the ACRL IL Competency Standards (2000).

**Hope Olson:** Uses connected knowing to propose a “connected” knowledge organisation scheme.

**Annemaree Lloyd:** Uses “received knowing” and “constructed knowing” to describe development from novice to expert.

**Lynn Westbrook & Ina Fourie:** Relates the information experiences of women with gynaecological cancer to the WWK ways of knowing.
**Intersectional feminism**

**Intersectionality:**
Term coined by Kimberlé Crenshaw (1989) to distinguish the experiences of black women from the sexism experienced by white women and the racism experienced by black men.

**Intersectional feminism:**
Avoids universalising the experiences of white, middle-class women, instead examining the way “socially constructed markers” such as gender, class, race, etc. interact (Hurtado, 1989).

**Intersectionality in adult education:**
How do the different life experiences of women and men impact their learning? (Mirza, 2006; Zukas, 1998)
Intersectionality in LIS research

• Intersectionality is under-used in LIS research (Floegel & Costello, 2022)

• Research into women’s information behaviour tends to look for gender differences (Urquhart & Yeoman, 2010).

• In the HE context, some themes have emerged from the literature review:
  • Influence of gender segregation on information behaviour in Kuwait and Oman (Al-Aufi & Al-Azri, 2013; Al-Muomen et al., 2012).
  • Experiences of Muslim, Arabic-speaking women in HE libraries (Mahlhl, 2020).
  • First-generation students’ development of information literacy (Folk, 2018, 2021).
Potential applications within the PhD research

**WWK as a “sensitising concept”**.

- Role of affect.
- Authority and expertise.

**Combining WWK with an intersectional approach.**

- Avoid binary treatment of gender.
- Purposive sampling to recruit diverse participants.
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References (1)


References (2)


