An exploratory framework for a study on designing a research focused advanced information literacy program for engineering researchers

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Layout

• Short background of the VUT
• Motivation for a new concept: AIL
• Exploratory framework for empirical research
Background of VUT

• **2004 - Vaal University of Technology**
• Applied & Comp. Science, Engineering & Tech., Human & Management Sciences
• Research Strategy Report in 2009
• Insufficient number of academic staff with PhDs
• Too few postgraduate students
• No strong research reputation
• Overall low levels of research & innovation
Postgraduate Induction Program 2010

Focused on the research proposal:
Academic writing
Referencing
Literature reviews
Academic dialogues (written & oral)
Appropriate scientific philosophies & methodologies
Data analysis & inferences
My observations:

• Strong focus on Social Sciences
• No framework for supporting various/unique disciplines
• New concept needed
• Advanced information literacy...
• PhD
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IL Background (LIS/IB)

- Focus on undergraduate students in Higher Education
- Gradual awareness: various & complex skills needed by postgraduate researchers
- ARL 2012 “New roles for new times” Covert-Vail & Collard
- Scattered efforts
- **Problem:** What should be included in support programs aimed at improving IL of postgraduate researchers?
Sub-problems

1.) How does AIL differ from current general understanding of IL?

2.) How can an encapsulating AIL definition serve as a framework for the planning and design of support programs for engineering researchers?
Basic information literacy (undergraduate)

• ALA definition (need...locate...evaluate...use)
• Information Literacy models (Big Blue, 7 pillars, PLUS, Big six...)
• Bibliographic instruction/one-shot sessions
• Tools (OPAC & databases)
• Basic skills: seeking, evaluating and using information
• Focus: information retrieval
• Finding information = END GOAL
Information literacy (postgraduate - 1)

• Increasing postgraduate population
• Diverse – generic approaches!
• New opportunities/reconsider
• Beyond information retrieval
• Advanced users...
Information literacy (postgraduate - 2)

• Current initiatives & support (IR, Endnote...)
• Research commons
• LibQUAL
• Needs outpaced the ability of subject specialists
• “Research support librarian”, “Research support specialist”, “Research liaison manager”
• NO clear definition of AIL in literature
• Focus: research processes
• Research life cycle (not linear) – 3 stages
Basic research life cycle
(http://www.jisc.ac.uk)
Research processes (MacCall & Erway, 2009)

- Funding
- Discovering
- Managing
- Creating
- Retaining
- Sharing
- Assessing
Expanded research lifecycle

- Idea/problem
- Assessing
- Data collection & analysis
- Creating
- Managing, organizing & curating information/data
- Funding
- Discovering information/partners
- Retaining
- Sharing
Workplace environment & IL

- Include broader context
- Engineering workplace:
  Information sources
  Publication of results
AIL defined:

Postgraduate researchers being able to identify a researchable topic, to secure the necessary funding to perform the study, to comfortably navigate themselves through the information discovery process in order to contribute to knowledge creation, to manage and organize all information/data obtained and generated, to create output in various formats, to retain rights to information where needed, to share information with the academic community and others, and to assess their impact in order to become competent researchers in an academic environment, as well as in the workplace environment.
Exploratory framework for the planning and design of AIL support to postgraduate engineering researchers

Aspects relevant to information literacy in an undergraduate environment

Aspects relevant to information literacy in a postgraduate environment

Considering the research lifecycle

Considering research and information behavior in an engineering context (academic)

Considering information behavior in the engineering workplace/industry

Formulating an encapsulating definition of advanced information literacy (AIL)

Data collection

Design of a research focused advanced information literacy program for engineering postgraduate researchers

Formative and summative assessment together with continuous improvement of both the AIL concept and program content
Conclusion

- Empirical studies can build on this exploratory framework
- Applied to other disciplines
- Continuous improvement to sustain new services & develop programs

Thank you!