

Information Literacy Threshold Concepts
and
the Association of College and Research Libraries'
Framework for Information Literacy
for Higher Education

Hazel McClure, MFA, MLIS

Grand Valley State University Libraries

Gayle Schaub, MA, MLIS

Grand Valley State University Libraries

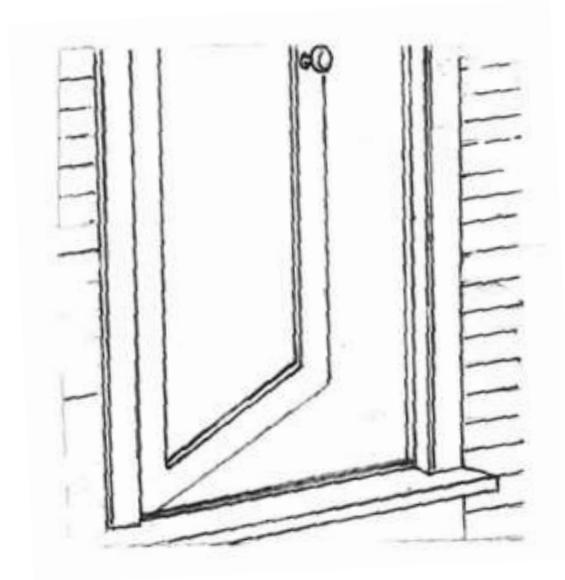
1. Threshold Concepts in Information Literacy

- Threshold Concepts
- Information Literacy in Higher Education in the U.S.
- IL Standards and the New Framework for Information Literacy in Higher Education

2. Practical Applications

- Example Lessons for Specific Concepts
- Teaching Information Literacy Threshold Concepts

Threshold Concepts



Threshold Concepts and Troublesome Knowledge (1): linkages to ways of thinking and practising within the disciplines

Authors and Institutions:

Jan H.F. Meyer

Director, Centre for Learning, Teaching and Research in Higher Education, University of Durham

Ray Land

Director, Centre for Teaching, Learning and Assessment, University of Edinburgh

Abstract

This paper arises from ongoing research undertaken by the Economics team of the ESRC/TLRP Project 'Enhancing Teaching and Learning Environments' (ETL)¹. This forms part of the large scale ESRC Teaching and Learning Research Programme Phase 2. ETL is seeking to identify factors leading to high quality learning environments within five disciplinary contexts across a range of HE institutions. Meyer's notion of a *threshold concept* was introduced into project discussions on learning outcomes as a particular basis for differentiating between core learning outcomes that represent 'seeing things in a new way' and those that do not. A threshold concept is thus seen as something distinct within what university teachers would typically describe as 'core concepts'. Furthermore, threshold concepts may represent, or lead to, what Perkins (1999) describes as 'troublesome knowledge' — knowledge that is conceptually difficult, counter-intuitive or 'alien'. The paper attempts to define characteristics of threshold concepts and, in the light of Perkins' work, to indicate correspondences between the notion of threshold concepts and that of 'troublesome knowledge.'

1.0 Introduction

A threshold concept can be considered as akin to a portal, opening up a new and previously inaccessible way of thinking about something. It represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress. As a consequence of comprehending a threshold concept there may thus be a transformed internal view of subject matter, subject landscape, or even world view. This transformation may be sudden or it may be protracted over a considerable period of time, with the transition to understanding proving troublesome. Such a transformed view or landscape may represent how people 'think' in a particular discipline, or how they perceive, apprehend, or experience particular phenomena within that discipline (or more generally). It might, of course, be argued, in a critical sense, that such transformed understanding leads to a privileged or dominant view and therefore a contestable way of understanding something. This would give rise to discussion of how threshold concepts come to be identified and prioritised in the first instance. However, first we require examples.

A simple illustrative example can be taken from the kitchen. Cooking is fundamentally a process of using heat (in various degrees and sources) to effect desired outcomes. In physics one encounters the concept of *heat transfer* and its mathematical formalisation

¹ ESRC Teaching and Learning Research Programme Project No L139251099

A threshold concept can be considered as akin to a portal, opening up a new and previously inaccessible way of thinking about something...

...a transformed way of understanding, or interpreting, or viewing something without which, the learner cannot progress.

Transformative
Bounded
Troublesome
Integrative
Irreversible
Discursive

Overcoming Barriers to Student Understanding: Threshold Concepts and
Troublesome Knowledge | 2006 | Routledge | Jan Meyer and Ray Land



Transformative



Irreversible



Bounded

Integrative



Jargon

Difficult ideas

Alien concepts

Ritual Knowledge

Troublesome

Information literacy in Higher Education in the U.S.

Information Literacy Competency Standards for Higher Education

Association of College and Research Libraries

-- A division of the American Library Association

- Approved by Board of Directors of the Association of College and Research Libraries (ACRL) January 2000
- Endorsed by American Association for Higher Education October 1999 and Council of Independent Colleges February 2004

5 Standards

The information literate student:

- determines the nature and extent of the information needed.
- accesses needed information effectively and efficiently.
- evaluates information critically and incorporates selected information into his or her knowledge base and value system.
- uses information effectively to accomplish a specific purpose.
- understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

Project Information Literacy Research Report: How Freshmen Conduct Course Research Once They Enter



- Differences: high school to college libraries
- Navigation of complex digital & print information spaces
- Difficulties encountered (and resolved, if at all)
- Strategies/workarounds applied from high school or discovered during college
- Gaps in skills between high school and college-level research

Project Information Literacy Research Report: "Learning the Ropes" | December 4, 2013 | Alison J. Head

Project Information Literacy Research Report: Finding Context: What Today's College Students Say About Conducting Research in the Digital Age



What frustrates students most about research? Top four answers for academic research:

- Information overload (e.g., the more you know, the less you know, it's depressing).
- Too much irrelevant information, can't locate what is needed from online results.
- Beginning and getting started on an assignment.
- Trying to find the "perfect source."

Project Information Literacy Research Report: Finding Context: What Today's College Students Say About Conducting Research in the Digital Age



Head & Eisenberg identified four types of context students tried to establish in research:

1. Big picture
2. Language
3. Situational
4. Information Gathering

Information literacy instruction

- Mostly single session
- Often instruction librarians are liaison or subject librarians
- Collaboration & embeddedness are valued
- Some librarians are faculty members, some are not



Information Literacy Research Threshold Concepts

ABC-CLIO | Transforming Information Literacy Instruction: Threshold Concepts in Theory and Practice | Fall 2016 | Amy R. Hofer, Silvia Lu, and Lisa Townsend.

Communications in Information Literacy | Identifying Threshold Concepts for Information Literacy: A Delphi Study | 2016 | Lisa Townsend, Amy Hofer, Silvia Lin Hanick, and Korey Brunetti.

Framework for Information Literacy for Higher Education

Filed by the ACRL Board February 2015
Adopted by the ACRL Board January 2016

Introduction

This *Framework for Information Literacy for Higher Education (Framework)* grows out of a belief that information literacy as an educational reform movement will realize its potential only through a richer, more complex set of core ideas. During the fifteen years since the publication of the *Information Literacy Competency Standards for Higher Education*,¹ academic librarians and their partners in higher education associations have developed learning outcomes, tools, and resources that some institutions have deployed to infuse information literacy concepts and skills into their curricula. However, the rapidly changing higher education environment, along with the dynamic and often uncertain information ecosystem in which all of us work and live, require new attention to be focused on foundational ideas about that ecosystem. Students have a greater role and responsibility in creating new knowledge, in understanding the contours and the changing dynamics of the world of information, and in using information, data, and scholarship ethically. Teaching faculty have a greater responsibility in designing curricula and assignments that foster enhanced engagement with the core ideas about information and scholarship within their disciplines. Librarians have a greater responsibility in identifying core ideas within their own knowledge domain that can extend learning for students, in creating a new cohesive curriculum for information literacy, and in collaborating more extensively with faculty.

The *Framework* offered here is called a framework intentionally because it is based on a cluster of interconnected core concepts, with flexible options for implementation, rather than on a set of standards or learning outcomes, or any prescriptive enumeration of skills. At the heart of this *Framework* are conceptual understandings that organize many other concepts and ideas about information, research, and scholarship into a coherent whole. These conceptual understandings are informed by the work of Wiggins and McTighe,² which focuses on essential concepts and questions in developing curricula, and also by *threshold concepts*,³ which are those ideas in any discipline that are passageways or portals to enlarged understanding or ways of thinking and practicing within that discipline. This *Framework* draws upon an understanding of the *Delphi Study* that has identified several threshold concepts in information literacy,⁴ but the same *Delphi Study* that has identified several threshold concepts for the threshold concepts. Two added *threshold concepts* are *Authority Is Constructed and Contextual* and *Information Creation as a Process*, which are

- Authority Is Constructed and Contextual
- Information Creation as a Process
- Information Has Value
- Research as Inquiry
- Scholarship as Conversation
- Searching as Strategic Exploration

need to deploy these concepts in a way that is consistent with the same reason, these lists should not be construed as

In addition, this *Framework* draws significantly upon the concept of metaliteracy,⁵ which offers a renewed vision of information literacy as an overarching set of abilities in which students are consumers and creators of information who can participate successfully in collaborative spaces.⁶ Metaliteracy demands behavioral, affective, cognitive, and metacognitive engagement with the information ecosystem.

Framework for Information Literacy for Higher Education

- Six Frames
- Each frame is comprised of:
 - A core concept (We consider these to be threshold concepts)
 - A set of **knowledge practices** (“demonstrations of ways in which learners can increase their understanding”) surrounding the core concept
 - A set of **dispositions** of learners who are developing that core concept of information literacy (“which describe ways in which to address the affective attitudinal or valuing dimension of learning”)
- Influenced by the concept of **metaliteracy**

- Scholarship as Conversation
- Research as Inquiry
- Searching as Strategic Exploration
- Information Creation as a Process
- Authority is Constructed and Contextual
- Information Has Value

Introduction

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- Authority is Constructed and Contextual
- Information Creation as a Process
- Information Has Value
- Research as Inquiry
- Scholarship as Conversation
- Searching as Strategic Exploration

Neither the knowledge practices nor the dispositions that support each concept are intended to prescribe what local institutions should do in using the *Framework*; each library and its partners on campus will need to deploy these frames to best fit their own situation, including designing learning outcomes. For the same reason, these lists should not be considered exhaustive.

In addition, this *Framework* draws significantly upon the concept of metaliteracy,⁷ which offers a renewed vision of information literacy as an overarching set of abilities in which students are consumers and creators of information who can participate successfully in collaborative spaces.⁸ Metaliteracy demands behavioral, affective, cognitive, and metacognitive engagement with the information ecosystem.

Critiques & Debate about *The Framework*

...the previous standards [are like] the authoritarian gym coach yelling “here are the five things you need to be information literate—learn them” the new standards are more like the hippie English teacher saying, “hey guys, here’s some stuff to think about, but interpret it whatever way works best for you.”

Lane Wilkinson, [“The Problem with Threshold Concepts”](#) *Sense and Reference*, June 19, 2014

Critiques & Debate about *The Framework*, continued

...the framework set out to rid itself of jargon, but wound up only replacing old jargon with new jargon (metaliteracy, knowledge practices, etc.).

Nicole Pagowsky, "[Thoughts on ACRL's New Draft Framework for ILCSHE](#)" *Blog*, March 2, 2014

Critiques & Debate about *The Framework*, continued

Are threshold concepts just a rehash of older, more established educational theories? Food for thought.

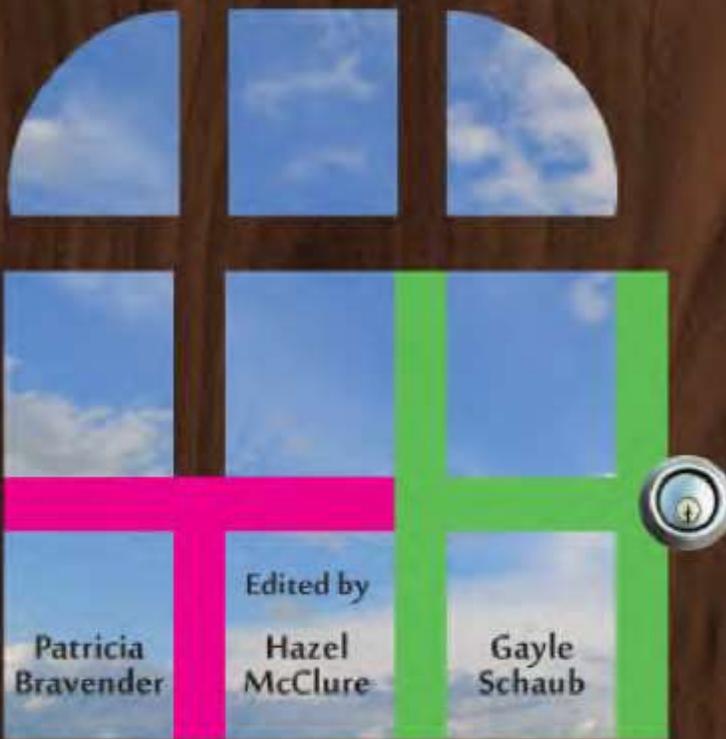
Amanda Hovious, [“Tackling Threshold Concepts”](#) *Designer Librarian*, March 6, 2014

Why do we like threshold concepts?

- Conceptual teaching -- Why versus What
- Student-centered
- Acknowledge unique disciplinary approaches & discourses
- Embrace intellectual struggle of research
- Was a fruitful way for us to collaborate
- Idea of troublesome knowledge asks us (educators) to be aware of knowledge we take for granted

TEACHING

INFORMATION LITERACY



THRESHOLD
CONCEPTS
LESSON PLANS FOR LIBRARIANS

The Editors

Hazel McClure, MFA, MLIS

Liaison to English, Writing, and Environmental Studies
Grand Valley State University Libraries

Gayle Schaub, MA, MLIS

Liaison to Psychology and Sociology
Grand Valley State University Libraries

Patricia Bravender, MLIS

Liaison to Legal Studies, Criminal Justice,
and Hospitality and Tourism Management
Grand Valley State University Libraries

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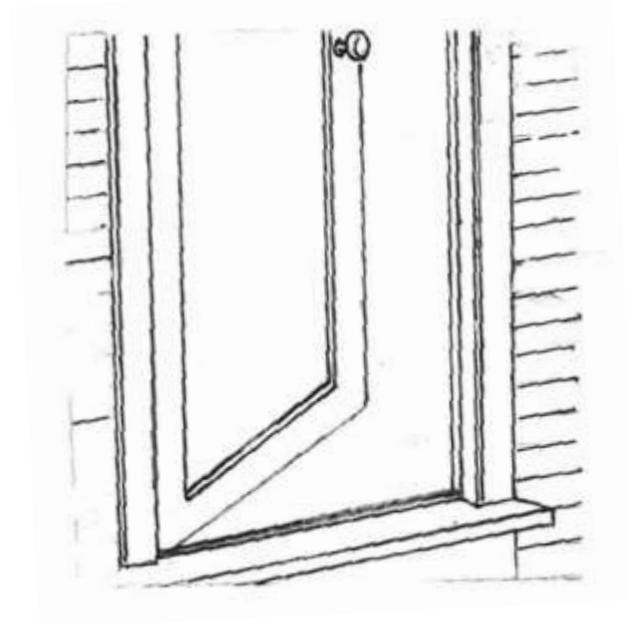
THRESHOLD
CONCEPTS
LESSON PLANS FOR LIBRARIANS

Features practical lesson plans with a strong conceptual foundation

Includes interactive, hands-on activities

Features ideas of other instruction librarians

Practical Application



Information Creation as a Process

Information in any format is produced to convey a message and is shared via a selected delivery method. The iterative processes of researching, creating, revising, and disseminating information vary, and the resulting product reflects these differences.

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The information creation process could result in a range of information formats and modes of delivery, so experts look beyond format when selecting resources to use. The unique capabilities and constraints of each creation process as well as the specific information need determine how the product is used. Experts recognize that information creations are valued differently in different contexts, such as academia or the workplace. Elements that affect or reflect on the creation, such as a pre- or post-publication editing or reviewing process, may be indicators of quality. The dynamic nature of information creation and dissemination requires ongoing attention to understand evolving creation processes. Recognizing the nature of information creation, experts look to the underlying processes of creation as well as the final product to critically evaluate the usefulness of the information. Novice learners begin to recognize the significance of the creation process, leading them to increasingly sophisticated choices when matching information products with their information needs.

Knowledge Practices

Learners who are developing their information literate abilities

- articulate the capabilities and constraints of information developed through various creation processes;
- assess the fit between an information product's creation process and a particular information need;
- articulate the traditional and emerging processes of information creation and dissemination in a particular discipline;
- recognize that information may be perceived differently based on the format in which it is packaged;
- recognize the implications of information formats that contain static or dynamic information;
- monitor the value that is placed upon different types of information products in varying contexts;
- transfer knowledge of capabilities and constraints to new types of information products;
- develop, in their own creation processes, an understanding that their choices impact the purposes for which the information product will be used and the message it conveys.

Dispositions

Learners who are developing their information literate abilities

- are inclined to seek out characteristics of information products that indicate the underlying creation process;
- value the process of matching an information need with an appropriate product;
- accept that the creation of information may begin initially through communicating in a range of formats or modes;
- accept the ambiguity surrounding the potential value of information creation expressed in emerging formats or modes;
- resist the tendency to equate format with the underlying creation process;
- understand that different methods of information dissemination with different purposes are available for their use.

Information Creation as a Process

What evidence do we see in students' research that shows us that this is "troublesome"?

How are we teaching students to research in ways that deal with this concept?

How could students' research be transformed by this concept?

Information Creation as a Process: An Example lesson

Tracing Information Over Time

Introduces students to the information cycle via an event in popular culture

Author: Xan Goodman, University of Nevada, Las Vegas

Information Life Cycle

This lesson asks students to evaluate information they use for their college writing assignments, such as newspapers, scholarly journal articles, etc., through the lenses of format and rigor by introducing them to the information life cycle.

CONCEPT IN CONTEXT

The connection between format and quality of information is not apparent to novice researchers. Students just beginning to do research are learning about the importance of evaluating the information they discover, but their understanding of the information life cycle is probably limited. Here, the librarian fosters student awareness of the different information formats and how the process behind their creation determines their shape, content, and quality, or *rigor*, the term used in this lesson. Students examine articles from a variety of sources and think about the time it takes to create the information in each. This obvious examination of time spent on production requires students to think critically about the information they encounter: why it was created, for whom, and what effect the time element has on the depth, accuracy, and overall impact of its content. Can we compare the rigor of an article in a journal to that of a newspaper article? Are there degrees of rigor within each format? This activity engages students with the content in a way that compels them to consider the format of information each time they consider using it in their work.

Authors: Toni M. Carter, Library Instruction Coordinator

Todd Aldridge, English Graduate Teaching Assistant
Auburn University, Auburn, Alabama

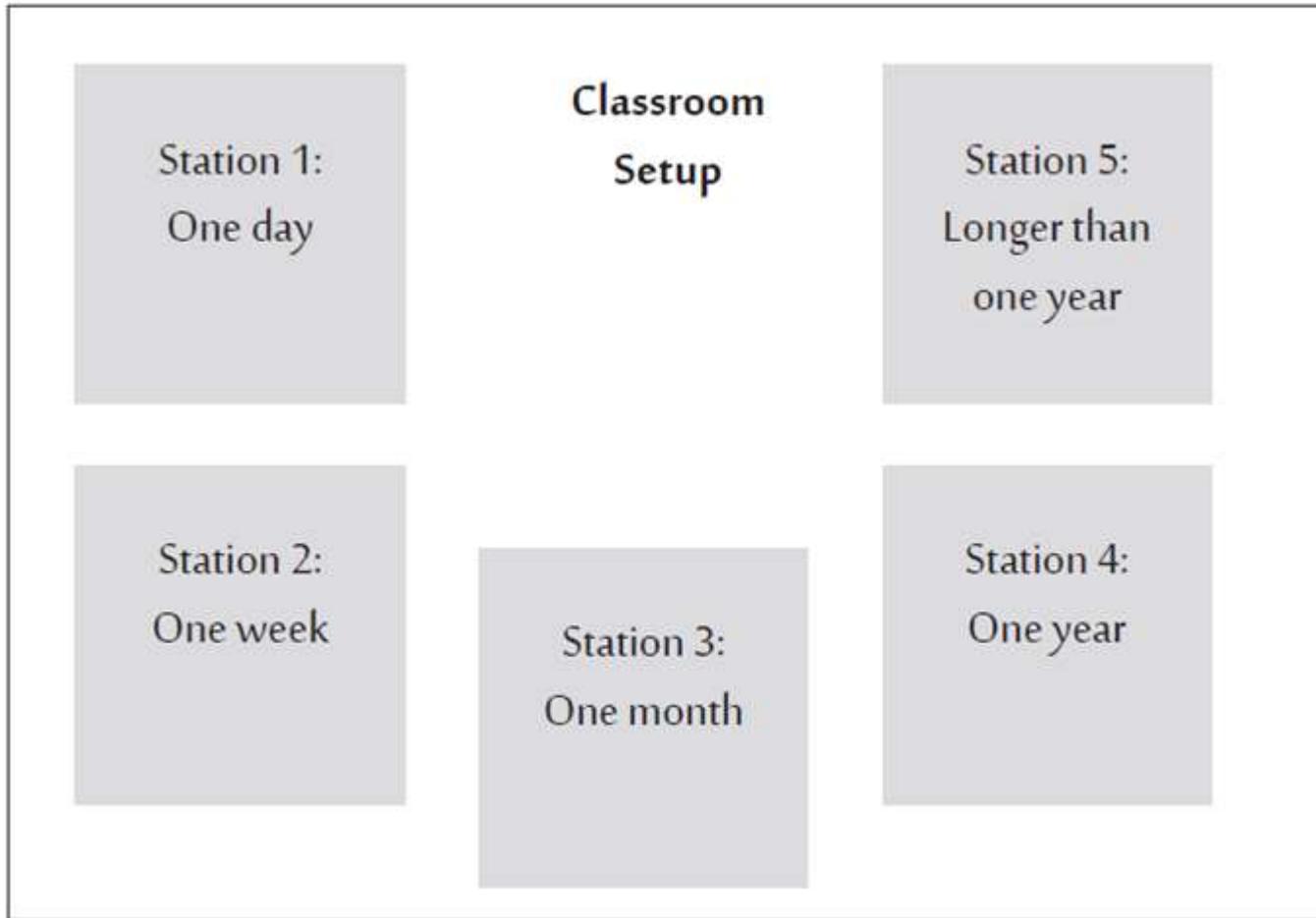
Level: Basic/general education

Estimated Time: 50–60 minutes

MATERIALS NEEDED

- Five stations are set up throughout the classroom prior to the start of the class. These can be whiteboards or large pieces of paper taped to the wall.

- Understanding of information life cycle limited
- Connection between format and quality of information
- Awareness of different information formats
- Process behind creation determines shape, content, and quality of info



Station 1:

Online news, newspaper articles, blog posts

Station 2

Longer newspaper articles, weekly magazine articles

Station 3

Monthly magazine articles, longer online articles

Station 4

Journal article

Station 5

Books and encyclopedia entries

Small Group Discussion of Another Concept

What evidence do you see in students' research that shows you that this is "troublesome"? How could it be transformative?

Authority Is Constructed and Contextual

Information resources reflect their creators' expertise and credibility, and are evaluated based on the information need and the context in which the information will be used. Authority is constructed in that various communities may recognize different types of authority. It is contextual in that the information need may help to determine the level of authority required.

Information Creation as a Process

Information in any format is produced to convey a message and is shared via a selected delivery method. The iterative processes of researching, creating, revising, and disseminating information vary, and the resulting product reflects these differences.

Information Has Value

Information possesses several dimensions of value, including as a commodity, as a means of education, as a means to influence, and as a means of negotiating and understanding the world. Legal and socioeconomic interests influence information production and dissemination.

Research as Inquiry

Research is iterative and depends upon asking increasingly complex or new questions whose answers in turn develop additional questions or lines of inquiry in any field.

Scholarship as Conversation

Communities of scholars, researchers, or professionals engage in sustained discourse with new insights and discoveries occurring over time as a result of varied perspectives and interpretations.

Searching as Strategic Exploration

Searching for information is often nonlinear and iterative, requiring the evaluation of a range of information sources and the mental flexibility to pursue alternate avenues as new understanding develops.

How are you already teaching students to research in ways to help them understand this concept?

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What are ideas for instruction sessions to teach this concept?

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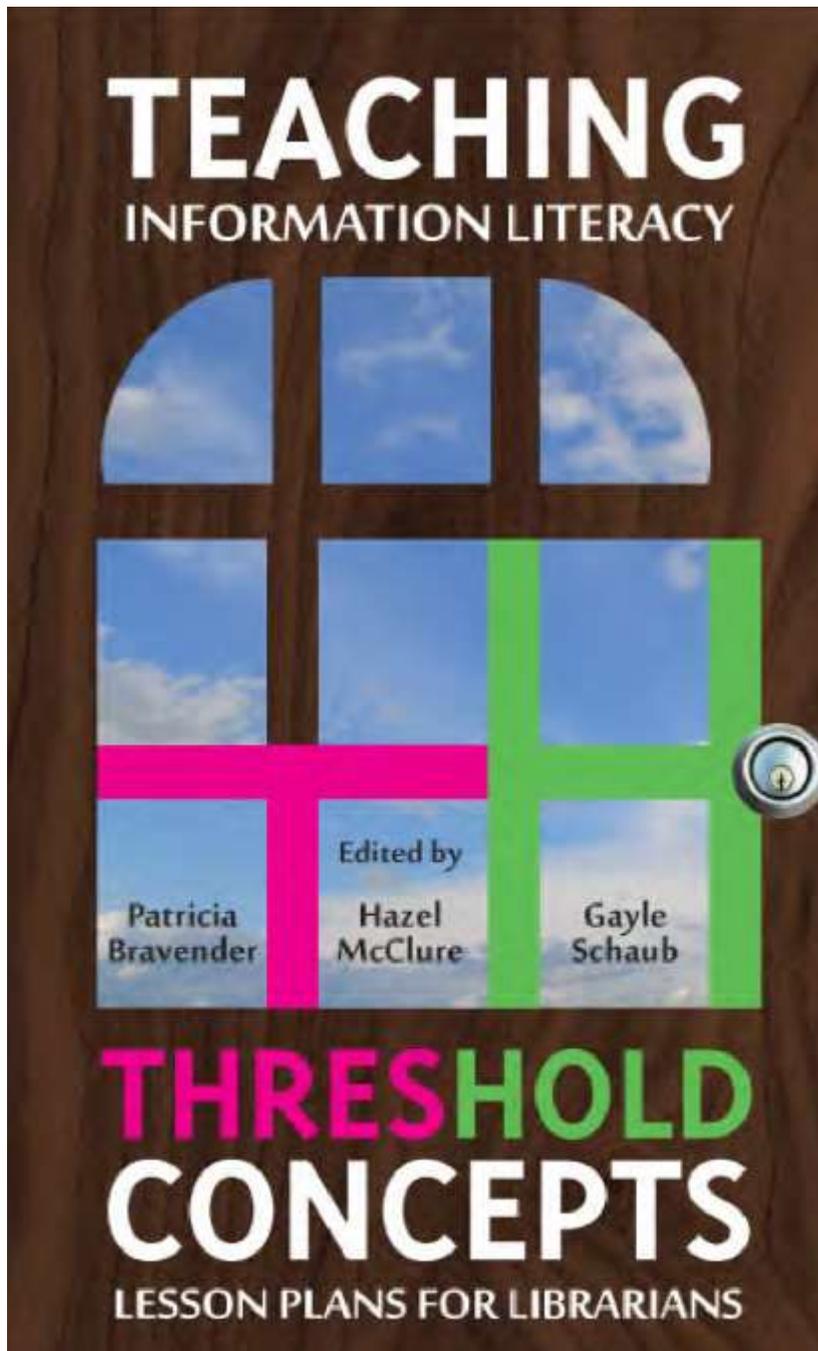
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Discussion

- 1) What evidence do you see in students' research that shows you that this is "troublesome"? How could it be transformative?
- 2) How are you already teaching students to research in ways to help them understand this concept?
- 3) What are ideas for instruction sessions to teach this concept?



Discussion:
Questions?
Comments? Ideas?

Additional Discussion Topics

How do we assess student learning of concepts?

What are other potential threshold concepts in information literacy?

How do you see threshold concepts working in the different disciplinary contexts of your students?

Using IL threshold concepts in individual classes & at a programmatic level

Sources of more information:

ACRL Framework for Information Literacy for Higher Education

http://www.ala.org/acrl/sites/ala.org.acrl/files/content/issues/infolit/Framework_ILHE.pdf

ACRL Information Literacy Competency Standards for Higher Education

<http://www.ala.org/acrl/standards/informationliteracycompetency#ilassess>

Introduction to Threshold Concepts, by Glynis Cousin

<http://www.et.kent.edu/fpdc-db/files/dd%2002-threshold.pdf>

Teaching Information Literacy Threshold Concepts: Lesson Plans for Librarians

<http://www.alastore.ala.org/detail.aspx?ID=11471>

Threshold Concepts and Information Literacy, The Delphi Study

<http://www.ilthresholdconcepts.com/>

Threshold Concepts and Troublesome Knowledge (1): Linkages to Ways of Thinking and Practising Within the Disciplines

https://www.utwente.nl/ces/vop/archief_nieuwsbrief/afleveringen%20vanaf%20okt%202005/nieuwsbrief_17/land_paper.pdf

Listserves

acrlframe-request@lists.ala.org