

Foundational Assumptions in Threshold Concepts and Information Literacy

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Introduction

While preparing for this conference, more than once I wondered whether the nearly year-long gap between proposal submission and the eventual presentation was not so structured without a slightly malign sense of humor on the part of the organizers. In reality, of course, this is just an artifact of the complex undertaking of organizing something on the scale (dare I say “quality”?) of this conference. Within the context of information literacy, criticism of a pedagogy based on threshold concepts was largely unexplored when I first began to reflect on them myself. Now, of course, there is a great deal more happening in this conversation.

I am informationally promiscuous, and as a span of several months has certainly seen a real explosion in the discourse on information literacy threshold concepts—thanks in large measure to the *Framework*—it would be silly and counterproductive not to try and take something of a broader view than I had originally intended.¹ Let me, accordingly, begin by contextualizing my argument.

Models are only tools, and like all tools, will inevitably perform well in certain contexts and poorly in others. Threshold concepts are exactly and only a model/tool, and far from useless. In a late-January post on the ACRL blog, Lori Townsend and her colleagues responded to some of the negative press threshold concepts had been receiving; in it, we were reminded how productive threshold concepts-based

approaches have been in a variety of learning contexts.² I want it to be clear that I do not object to the “utility” of threshold concepts.³ My objections can be roughly corralled into two broad criticisms:

1. As it has materialized in information literacy education, the threshold concepts model appears to be spurious, and
2. The theoretical model itself is intellectually procrustean.

An exploration of both of these constitutes the structure of the present study.⁴

“Immanence”

Elsewhere, I have criticized the apparent “immanence” of threshold concepts’ articulation in information literacy. By “immanence” I mean to refer to the apparent notion that threshold concepts are “identified” instead of negotiated entities, and exist independently of individual human meaning-makers. This is demonstrated, for example, in both the rigid application of threshold concept “criteria” (as originally described by Jan Meyer and Ray Land⁵) in early information literacy contexts, as well as the myriad discussions of “identification” that have taken place over the past year.⁶ Here, I would like to explore a phenomenon related to that immanence.

While it is not my express intention to present a critique of the *Framework*, my criticisms of threshold concepts as they are being deployed in the current conversation necessarily involve the *Framework*

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they determine. The primary difference between the much-maligned *Standards* and the emergent *Framework* consists in the fact that the former (notoriously) idealize an archetypal “information literate” student, whereas the latter idealizes the concept of “information literacy” itself by codifying its (allegedly) most important elements. In the *Framework*, this is done by invoking threshold concepts, which form the soul and skeleton of 6 “frames.” These concepts and frames have been “identified” as central sites of students’ information literacy learning hang-ups, and the pathways through these obstacles are to be enabled by threshold concepts.

A little background is in order here. Threshold concepts, loosely glossed, are key ideas; they are usually described as more or less “vital” realizations within particular disciplines. Threshold concepts gained immense popularity in information literacy discussions between 2010 and 2013, crucial times for what was then a conversation about updating the (2000) *Standards*. In two seminal articles, Lori Townsend (now of the Task Force) and coauthors Amy R. Hofer and Korey Brunetti introduced this interesting education-theoretical idea into information literacy discourse and practice.⁷ Townsend et. al’s original 2011 study was theory- and literature-based, and drew heavily from the original threshold concept work of Jan Meyer and Ray Land; this was followed by another paper in which the authors describe a study they did to evaluate their preliminary conclusions (Hofer et al. 2012). Both articles were popular, and it wasn’t long before threshold concepts became common at conferences and in information literacy discussions. Eventually, threshold concepts were selected by the ACRL-appointed Task Force as the foundational idea for revisiting the *Standards*.

I don’t think it is unreasonable to suggest that this decision was made under the influence of group-think. Was a “threshold concepts approach to the revision” chosen because it was best, or because it was most popular at the time? Its popularity is hard to dismiss as a coincidental matter. Popularity is not itself a negative attribute, and I don’t mean to suggest that a popular paradigm cannot also be a valuable one. In this particular case, however, the popularity of the “approach” and the paucity of criticism of it have resulted in a curious stagnation in the development of information literacy threshold concepts *themselves*.

The fact that the Framework’s drafting was a partially-crowdsourced affair, and even supported by an ongoing “Delphi Study,”⁸ seems largely not to have affected the evolution of the Framework’s threshold concepts, **which would appear to be, basically, those originally outlined by Townsend and her colleagues several years ago**. Whether or not this is perceived to be a problem, I think it is important to recognize; few would object to the notion that librarians (information specialists?) *especially* should be held accountable for the roots of the concepts they embrace. It is instructive, with this in mind, to see how the oldest batch of information literacy concepts compares to the most recent (see figure 1).

It is superficially clear that these major concepts, which bookend the threshold concept experience in information literacy, have barely budged. It is true that in most cases, the wording of the concepts themselves is not *precisely* the same. In all cases, however, very little meaningful change appears to have taken place.

Things are even more interesting in between these nodes. In their 2012 follow-up article, Hofer et.al. analyzed data collected from a small open-response survey to identify seven threshold concepts for infor-

FIGURE 1
Final Framework Draft Concepts:: Hofer et al 2011 Concepts

Information has value :: information as commodity
Information creation as a process :: format is a process
Research as inquiry :: research solves problems
Searching is strategic :: good searches use database structure/metadata=findability
Authority is constructed and contextual :: authority is constructed and contextual

mation literacy. This was meant to be an extension of the group’s previous work, in which the “provisional” concepts for information literacy had been suggested. After analyzing those responses individually and as a team, they ultimately suggested the following concepts:

- Metadata=findability
- Good searches use database structure
- Format is a process
- Authority is constructed and contextual
- “Primary source” is an exact and conditional category
- Information as a commodity
- Research solves problems

Strikingly, relatively little in this lineup differs from what was proposed in the initial theory paper—which, I think, should seem surprising and strange to librarians especially. Very little was to change from here on out; the “evolution” of these concepts (through the second draft) can be seen in figures 2–4.

So what?, a critic might protest. Does it matter, really, that these concepts have changed so shallowly? I think it does. For this reason, it is also worth reminding ourselves of the *way* in which the “original” threshold concepts—that is, those hypothesized in Townsend et al’s 2011, pre-investigation article—were determined. The authors’ primary information came,

ultimately, from librarians’ written responses to these questions:

Please identify three key concepts or big ideas that your students struggle to understand. Describe each, then answer the following: What do you think is the main reason your students struggle with this concept? As a librarian, how does your approach to this idea/concept differ from that of your students?”

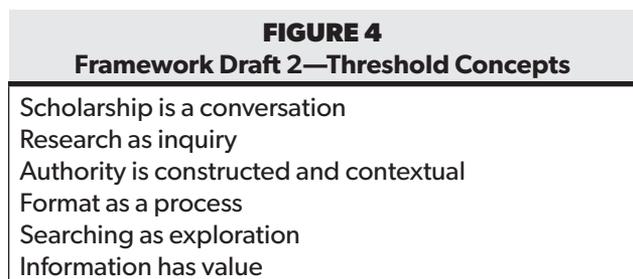
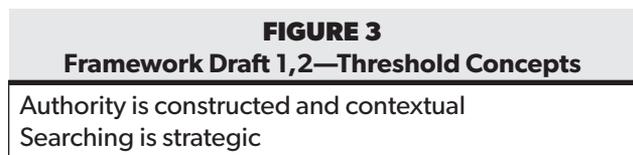
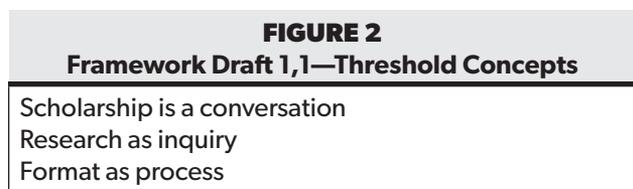
All told, 59 librarians submitted written responses to the authors’ queries about students’ common problems, which the authors then analyzed, individually and together, to try and “identify” threshold concepts for information literacy. After all of that analysis, it seems, the authors determined that they had basically had it right all along; as we can see by comparing the concepts articulated in both studies, remarkably little changed.

There are multiple problems to discuss here. One is that, simply, the basis of this study is librarians’ interpretations of librarians’ speculations of what goes on inside students’ minds. Another is that any 59 librarians are unlikely to provide a representative sample of either librarian insight or librarian bias, but only a random smattering of both of those in uneven mixture. A third problem, of course, is that these “threshold concepts” were asserted before they were demonstrated.

The fact that a comparison of these and the emergent ACRL core threshold concepts and frames reveals a recognizable resonance is troubling. Why, after all, *these* concepts? Though often discussed in a language which treats them as though they exist “out there” somewhere independent of any given context, in reality they are negotiated and thus *not* immanent. Indeed, they ultimately come from the minds of librarians.

Pivot: the Simulacrum

“This fossil fits previous predictions,” said Eric Delson, a paleoanthropologist at Lehman College of the City University of New York, “which is a nice rarity in our field.”—re: 55,000 y.o. skull find published recently in *Nature*.¹⁰



To summarize so far: the threshold concepts at the heart of the new *Framework* are not only based on highly subjective, anecdotal, impressionistic speculation and testimony by a relatively small number of librarians (Delphi study notwithstanding!), but also, marvelously, they were more or less identified (correctly) before any experimentation or public discussion or anything else.

This is an example of what Jean Baudrillard has called “precession of the model,” which is what happens when map exists independently of any given territory;¹¹ we might think of it as a map that *anticipates* a place. If it is true that maps are at least partially responsible for the creation of the thing they represent,¹² then an unreal map can help ramify an unreal landscape. For Baudrillard, such a construction is a *simulacrum*, in which a hyperreal landscape replaces the real.

I suggest that the de facto codification of information literacy threshold concepts as witnessed in the *Framework* amounts to a model-first simulacrum of information literacy. We need models, and can make excellent use of them—provided we remain sensitive to their weaknesses and vigilant in scrabbling with them. It is precisely that which I intend to undertake now.

The Value of Information

Ian Bogost has defined a caricature as “something that captures some aspects of something at the cost of other aspects.”¹³ As currently theorized in the context of information literacy learning, threshold concepts operate similarly. They are expressed, with varying degrees of overtness, as metaphorical (specifically synecdochical, and frequently metonymical) formulas,¹⁴ which gives them the eerie gnomicism characteristic of incantations. In particular, each one translates a single, identified-as-very-important, “big” concept into the terms of another concept altogether—albeit one with a partially overlapping semantic range.¹⁵ This translation, pithily expressed in the form of a maxim, is the stuff of threshold concepts.¹⁶

Making such comparisons, ultimately, distorts both participating concepts by selecting only the areas

of overlap, or at least making those paramount. This does not come without conceptual shearage.

To illustrate some of the intellectual ramifications of the current threshold concepts model, I’d like to examine a single proposed threshold concept: **information as commodity/information has value**. For much of its history, this concept was known as “information as commodity”; it belongs to the first generation of information literacy threshold concepts as hypothesized by Townsend and her team way back in 2011 (the titans!), although it did not surface in the *Framework* until the second draft.¹⁷

I understand that, quite literally, “information as commodity” and “information has value” are not identical. The trajectory from hypothesis to implementation in the *Framework* has, as with a few other concepts (as discussed above), resulted in altered wording of fundamentally similar ideas. In the present case, one characteristic of information—the economic/commoditized/commodified *aspect*—grounds everything. This is traceable in the language associated with this concept’s development. In their original paper on applying threshold concepts, Townsend and her coauthors elaborated on the thinking behind their suggestion of “information as commodity” as a major pillar of their framework (as they originally described it¹⁸):

The application of the economic concept “commodity”—something that has monetary value and can be traded—to information has certainly been explored before. But framing teaching around this concept ties together learning objectives such as citation, copyright, fair use, proprietary databases vs. open access, intellectual property, and other related issues. The threshold of understanding information as commodity answers the “why” behind each of these lessons, validating the need for attribution, the existence of copyright laws, and the importance of the Fair Use doctrine.¹⁹

Compare that description with the Task Force’s first stab at “information has value”:

Information has Value acknowledges that the creation of information and products derived from information requires a commitment of time, original thought, and resources that need to be respected by those seeking to use these products, or create their own based on the work of others. In addition, information may be valued more or less highly based on its creator, its audience/consumer, or its message.²⁰

Finally, here is the wording of the final (?) version:

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 socio[-]economic interests influence information production and dissemination.²¹

Given the explicit listing of its status as a “commodity” as *only one* among other ways in which information might be said to have “value” in the *Framework’s* final (current) draft, one might expect some meaningful expansion beyond the fundamentally market economy-based original phrasing’s horizons. Here, however, there is little that extends beyond the producer/consumer model. For example, here is what students now need to grok about what information’s “value” centers on:

- information is a commodity
- information is produced
- information is **disseminated**
- information is an instrument (“means”)

Rather than a distancing from the world of markets and capital, this presentation surely prioritizes that aspect of “value,” even while adding in a healthy dash of paternalistic utilitarianism. It is also hard, considering the way this concept is described, to escape the ghost of the originally-presented description (i.e., in Draft 2), which includes the clause “...information may be valued more or less highly based on its creator, its audience/consumer, or its message.”²² Certainly

these were not intended to be exhaustive, but the fact that this highly economically-infllected mindset exists in the original articulation of this concept is not insignificant, given its ultimate form. The parameters of its context have remained firmly in place.

I am not contesting the value of understanding this *aspect* of what characterizes “information.”²³ Rather, I question the terms of its fundamentality; it may well be that “information as commodity answers the ‘why’” of things like attribution or copyright legislation—but with relatively limited scope. Here we see an example of the constraining nature of such comparisons: as one of the select concepts now enshrined in the *Framework*, the value/commodity lens now possesses an associative legitimacy it did not always wield. Ought it? Marcuse would warn us against that: he identifies as “soulless regions” those “commodi[fied]” areas of human life “openly abandoned to the economic law of value”, which he considered a hallmark of what he called “affirmative culture”—itself a kind of simulation-first approach to reality.²⁴ We needn’t be as extreme, but it’s worth pointing out how reminiscent Marcuse’s thinking is of what Marx derided as “commodity fetishism,” or when interactions between humans are reconfigured in terms of interactions between things.²⁵

Expressions of this mindset are not hard to find. In a comment that epitomizes some of the strongest contemporary dynamics in information literacy instruction, Kevin Seeber recently wrote:

Considering the complications inherent in this kind of instruction, the librarians tasked with teaching these concepts will need to advocate for increased involvement and resources on their campuses. The shift to discovery has meant that these professionals are free to move away from explaining the nuance of database interfaces, but they will now need support to develop the new pedagogies and assessments necessary to teach critical evaluation effectively. They will also need to communicate with their campus stakeholders, explaining that to de-

velop the kinds of research skills necessary to succeed in the future, students will require in-depth, recursive instruction. This kind of instruction goes well beyond the “one shot” paradigm which has been so pervasive in library instruction.²⁶

Seeber is, of course, absolutely right in advocating more direct, “in-depth, recursive” instruction. In making this point, however, he also demonstrates the sly fetish power of the commodity model by indicating an obvious willingness to trust providers. While “discovery” certainly opens up new possibilities (and problems) in information retrieval and information literacy, how confident are you that ProQuest (for example) has indexed all it said it would? Can we indeed now leave off worrying over the “nuance[s]” of searching proprietary databases, which—it certainly seems—are treated more and more like benevolent (or at least inevitable) black boxes? What of massive-scale search platforms, like Google, whose information service (which masquerades as “free”) is fully capable of making sure a searcher finds everything she wants right away, structuring, some would argue, exposure to knowledge?²⁷

Finally, It is also worth bearing in mind that information’s value/commodity aspect is not always insightfully comparable to other, more concrete commodities. The fact that the concept of “information” is ultimately intangible means there are at least 2 important differences to grapple with.²⁸ For one thing, information is often indefinitely reproducible (copiable) without loss; as a result, it is also “posessable” by potentially unlimited numbers of people²⁹ simultaneously. Both of these attributes problematize the commodity model; in fact, simply by virtue of having those attributes, “information” appears particularly poorly suited to conceptualization in commodity terms.

Ultimately, we need not *frame* our disciplinary conceptualization of information literacy in metaphors based on assumptions couched in the ethos of producers and consumers, regardless of how unavoidable the “commodified” aspect of information

may appear to be. The predicating mindset at work in the commodity model assumes current information structures, many of which are profit-generating entities, are an inevitable (if not “natural”) feature of our information ecosystem. This model also puts librarians and teachers in an awkward position with respect to the ethics of that system. We live, with these, in a world of monetized information flows, a world in which librarians support (as we truly do) the existence of paywalls. Here, one produces or consumes information, which has an indeterminate and contingent value. In such a world we find information, the commodity. It is not a happy place. It also seems an unethical frame; consider, for example, how one might square an approach with information’s “value” at its foundation—given the way our information architecture (on a global scale) is currently set up—with Troy Swanson’s excellent onetime suggestion that something along the lines of “information as a human right” might itself be a threshold concept? Are we not humans and educators? Why ought such a lens be less elemental?³⁰

Prescriptivism and Discourse

Why does this matter enough to merit argument?³¹ I would like to close with two intertwined points.

This matters, in part, because the Task Force’s framing of the “identified” threshold concepts is overdetermined and fundamentally prescriptivist in a real but subtle way. Ian Beilin and Nancy Foasberg, in a response to the (in)famous New Jersey Letter,³² countered the writers’ stance that the *Framework* lacked the rigor of the *Standards* by praising the *Framework*’s flexibility and openness as intentional benefits, which is in line with the way the *Framework* has always been presented to us. For example, consider this recent excerpt from an ACRL Board of Director’s “Action Form,” discussing the foolhardiness of mapping the new *Framework* to something as medieval as the *Standards*:

The Framework and the Standards take different approaches to information literacy, and drawing

direct connections between the two is not possible, nor would it be advisable if it were possible. The conceptual approach of the Framework allows for more flexibility based on individual settings, and it would be counterproductive to link to a more prescriptive approach.³³

Prescriptive is as prescriptive does, however, and I mean to suggest that the threshold concepts—based *Framework* as it is currently conceived most certainly “does.” Lisa Hinchliffe has already observed that the *Framework* is, from a normative standpoint, *Standards*-like, though indirectly:

The Board needs to send a strong and clear message that the Framework is not a set of standards. There is clear confusion on this as multiple libraries have already done a highlight-cut of the five goals from the Standards and then a copy-paste of the six frames, treating the Framework as Standards.³⁴ (Emphasis in original).

From the outset, the Task Force has insisted that there has never been any intention of prescriptivism. What Hinchliffe reminds us of, however, is that when a document is promulgated (*disseminated?*) by the ACRL, any number of institutions, for any number of reasons, will deploy what is suggested not only as standards, but even as relatively unyielding ones at the core of important policies.

This prescriptivism also operates on a more fundamental—and influential—level. While the use of the term “framework” intentionally sets the Task Force’s product apart from the negative connotations of “standards,” that choice honestly indicates the document’s function: to provide gently-standardized patterns for understanding difficult concepts in information literacy. What does a framework in which a select group of dubiously chosen and impoverished metaphors are enshrined at a discipline’s center do if it *doesn’t* standardize thinking in some way? Recall that each threshold concept is associated with a “frame” of its own.

The broader conversation of which this is a part is the journey to our disciplinary future. Many teaching librarians interested in the idea of information literacy share a desire for greater and more creatively diverse opportunities to work with campus constituencies outside the library. Increasingly, we aim high; our reach, however, often fails. Revisiting the *Standards* was partially motivated by this very concern.

In a recent study in which several disciplines’ approaches to incorporating threshold concepts into instruction were compared, Patrick Carmichael (2014) identifies an interesting opposition between what might be thought of as fundamentalist and instrumentalist applications of threshold concepts thinking. He contrasts engineering and social anthropology:

...different patterns of engagement and discursive remakings of the concept of thresholds aligned were contiguous with preferred ‘signature pedagogies’ which were, themselves, materialisations of broader disciplinary commitments. Engineers were enthused by the potential of the concept of thresholds to provide a system-wide overview; social anthropologists saw it as another form of learning encounter for their students. And we should not be surprised by this if we understand the enterprise of educational inquiry to be one of concept creation: looking across our participants’ lines of flight from that initial encounter with the concept of thresholds, we see the concept being remade in different ways, to fulfil different functions, to fill different gaps.³⁵

An attempt to achieve something like a “system-wide overview” necessarily involves an attempt to articulate those concepts closest to “the true” disciplinary center, effectively identifying a central and coherent—but artificial—conceptual edifice. Such was the reported approach to threshold concepts of the engineers, and so seems to have been the approach of the librarians. We would do well, ultimately, to follow the example of Carmichael’s social anthropologists in

treating threshold concept approaches as the generally useful tools they are, without articulating a disciplinary pedagogical vision in their terms.

Notes

1. Patrick Morgan, "Pausing at the threshold," *portal: Libraries and the Academy* 15 no.1 (2015), 183-195.
2. Lori Townsend, Silvia Lu, Amy R. Hofer, and Koei Brunetti, "What's the matter with threshold concepts?" *ACRLLog* (2015), January 30. Available at <http://acrl.org/2015/01/30/whats-the-matter-with-threshold-concepts/>
3. Marcus Banks, "A defense of the ACRL's use of threshold concepts," *Marcus' World weblog* (2014), November 12, and "Threshold concepts are good," *ibid.*, November 13. Available at http://mbanks.typepad.com/my_weblog/2014/11/im-a-dweller-on-the-threshold-a-defense-of-the-acrls-use-of-threshold-concepts.html
4. Jane Hammons has been maintaining a generally useful place for finding discussion of and articles dealing with information literacy threshold concepts and the Framework: see <http://www.livebinders.com/play/play/1380162>
5. See, for example, Jan Meyer and Ray Land, "Threshold concepts and troublesome knowledge: linkages to ways of thinking and practising," In: Rust, C. (ed.), *Improving Student Learning—Theory and Practice Ten Years On* (Oxford: Oxford Centre for Staff and Learning Development (OCSLD), 2003), 412-424.
6. *Framework* drafts as well as twitter discussions have often featured such language, which seems to accompany threshold concepts from field to field as its influence spreads.
7. "Threshold Concepts and Information Literacy," *portal: Libraries and the Academy* 11, 3 (2011), 853-69; and "Troublesome Concepts and Information Literacy: Investigating Threshold Concepts for IL Instruction," *portal: Libraries and the Academy* 12, 4 (2012), 387-405.
8. The choice of a "Delphi study" has itself been criticized; see Jacob Berg's January 2015 guest post for the ACRL blog ("Scholarship as conversation: the response to the Framework for Information Literacy," *ACRLLog* (2015), January 21). This is how "Team TC" describes a Delphi study:

"This research method is named after the Greek Oracle at Delphi because the methodology was originally conceived by the RAND corporation in the 1950s to predict the future. A Delphi study is a qualitative research method in which a small group of experts are asked to answer questions about a topic in writing, anonymously. The answers are collected and summarized by a moderator, and then sent back to the experts. This process is called a round. In each round, experts read the responses of their peers, make adjustments to their own answers and address questions raised during the previous round. The idea is to remove undue influence caused by a person's reputation or demeanor that might influence results if the group of experts gathered together in person. As such, the best ideas rise to the top." (Statement available at ilthresholdconcepts.com.)
9. Hofer et. al. 2012, 390.
10. The citation itself comes from John Noah Wilford's article, "Skull fossil offers new clues on human journey from Africa," from the *New York Times* on January 28, 2015: (http://www.nytimes.com/2015/01/29/science/ancient-skull-adds-new-insight-to-story-of-human-evolution.html?_r=0). My defense for citing this epigram in this context: that is how things **should** be, maybe.
11. Jean Baudrillard, *Simulacra et Simulation* (Paris: Editions Galilee, 1981).
12. Why else would we ever need reminding that map and territory are not the same?
13. See the chapter "Metaphorism" in his book *Alien Phenomenology, or What It's Like to Be a Thing* (Minneapolis/St Paul: University of Minnesota Press, 2012), 75ff.
14. Simply put: a metonymy compares two things closely related, whereas a synecdoche compares part and whole of the same thing. Not everyone agrees these are radically different, however; see Umberto Eco's *Limits of Interpretation* (Bloomington: University of Indiana Press, 1991), 207.
15. As George Lakoff and Mark Johnson note in *Myths We Live By*, this is standard collateral damage in deploying a metaphor.
16. Elsewhere, I have discussed different approaches to this problem. See "Pausing"
- 17 Available at <http://acrl.ala.org/ilstandards/wp-content/uploads/2014/02/Framework-for-IL-for-HE-Draft-2.pdf>
18. Of note: a ctrl+F search reveals 58 instances of the term "framework" in their 2011 piece, and the first one is in the abstract.
19. See Hofer et al 2011, pages 863-864.
20. *ibid.* p 12.
21. Available at <http://acrl.ala.org/ilstandards/wp-content/uploads/2015/01/Framework-MW15-Board-Docs.pdf>; see p. 8.
22. Notably, the idea of the authority and expertise of the formulators of this model has been fronted to such an extent in the development of the *Framework*—not least because of the importance of the Delphi study—that it qualifies as a true hallmark of the entire threshold concepts model in information literacy.
23. In *The Information Society* (London: Facet, 2008), John Feather points out that the status of information as a thing of value/commodity is just undeniable, but also suggests that the way information's "value" might come to be (determined) involves complications beyond typical commodities.
24. "Affirmative Character of Culture," 117.
25. An entire chapter is devoted to it, more or less, in *Kapital...*
26. "Teaching 'format as process' in an age of web-scale discovery," *Reference Services Review* 43 no. 1 (2015),
27. I am reminded of a comment attributed to Mark Zuckerberg by David Kirkpatrick: "A squirrel dying in front of your house may be more relevant to your interests right now than people dying in Africa." See *The Facebook Effect* (New York: Simon and Schuster, 2011), 296.

28. Andrew Preater has written an insightful blog post about the problematic commodity-aspect of information; “Information as commodity—at #radliblon,” Ginformation Systems blog (2014), June 3.
29. See also Bollier & Helfrich, eds., *The Wealth of the Commons* (Florence and Amherst: Levellers Press, 2012).
30. Similarly, in a paper I am otherwise quite fond of, Tara Brabazon situates the need for digital literacy within the context of those with “surplus income to buy technology.” See her article “Take the red pill: A new matrix of information literacy” in *Journal of Media Literacy Education* 2.3 (2011), 209-229.
31. I confess to hoping that by this point, a reader (hearer?) might not need to be told. However, since some have expressed feelings in this direction (e.g. Kevin Klipfel, Lori Townsend, Troy Swanson...), I thought it was worth making it explicit.
32. Available at <http://acrlog.org/2015/01/07/an-open-letter-regarding-the-framework-for-information-literacy-for-higher-education/>.
33. See <http://acrl.ala.org/ilstandards/wp-content/uploads/2015/01/Framework-MW15-Board-Docs.pdf> (and page 2).
34. <https://www.evernote.com/shard/s22/sh/e0ba3c7a-4230-4ab4-8a66-1a6167dc287d/556396d0a43df515e0d49d16fbbdeb>
35. Patrick Carmichael, “Tribes, territories and threshold concepts: educational materialisms at work in higher education,” *Educational Philosophy and Theory* 44 (supp.) (2012), 31-42.