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## Introduction

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# Introduction

Samantha Godbey, Susan Beth Wainscott, Xan Goodman

As its title suggests, this book explores information literacy threshold concepts in the context of subject disciplines. For most academic librarians, the term “threshold concept” is a recent addition to their professional vocabulary. Described as a portal, transition, or threshold to additional learning and deeper understanding for a learner, threshold concepts were first defined by Meyer and Land in 2003<sup>1</sup> and have been explored in libraries starting around 2010. In February 2015, the Association of College and Research Libraries (ACRL) officially filed the Framework for Information Literacy for Higher Education (Framework),<sup>2</sup> offering a new approach to information literacy based on threshold concepts. This document draws on the threshold concept analytic framework, proposing six threshold concepts for information literacy. Since the initial drafts of the Framework were shared in 2014, many librarians have struggled to make sense of the document and to identify ways in which they can apply these concepts in their own professional settings. With the rescinding of the Information Literacy Competency Standards for Higher Education by the ACRL Board of Directors in June 2016, librarians are engaging even more with the Framework and its threshold concepts.

The editors’ interest in threshold concepts predates the first drafts of the Framework, inspired by a session at the 2013 ACRL Conference about the work of Korey Brunetti, Amy R. Hofer, Silvia Lin Hanick, and Lori Townsend, who were, and are, conducting a Delphi study in order to identify threshold concepts in information literacy.<sup>3</sup> At that point, we began to integrate threshold concepts into our library instruction practice and research agendas. We began to discuss threshold concepts with librarian and disciplinary faculty colleagues. We have since led multiple workshops on the Framework, helping librarians to understand the threshold concepts it contains and attempt to integrate one or more of these concepts into a traditional one-shot library session. Through these workshops, we have directly observed librarians’ efforts to understand the Framework and their desire to learn from one another’s

experiences with threshold concepts. As subject librarians in a range of disciplines, namely education, engineering, and health sciences, we are personally familiar with the rewarding and challenging aspects of applying these concepts in disciplinary settings.

In this book, we wanted to provide a space for librarians to explore threshold concepts as an idea and the specifics of what the threshold concepts contained in the Framework might look like in disciplinary contexts. We have worked with our authors to provide a balance of the theoretical and practical in order to help readers both conceptually and pragmatically with their work in supporting student learning. In this introduction, we provide background on threshold concepts, the Framework, and this book.

## Defining threshold concepts

The definition of threshold concepts has been expanded over the years based upon the work of many educational scholars and practitioners,<sup>4</sup> and includes both characteristics of the concepts and the process a novice may undergo while learning. Threshold concepts are currently defined by the following characteristics:

- **Transformative:** Threshold concepts will alter the learner's view of the world and how they seek to understand and make sense of new information within their discipline, or even how they feel about or perform within the practices of their discipline.<sup>5</sup> This is the characteristic that is consistently described by Meyer, Land, and their coauthors as a defining characteristic and of primary importance to the discovery of threshold concepts.<sup>6</sup> Threshold concepts are not simply important facts, theories, or laws; they change the learner and how the learner will approach inquiry and the acceptance of new information. The threshold concept may even alter the learner's sense of professional identity.<sup>7</sup>
- **Integrative:** Many threshold concepts are also integrative in that they reveal patterns or connections between information that were not previously apparent,<sup>8</sup> like a connect-the-dots puzzle that previously had several dots lacking numbers. Once a learner accepts the threshold concept, the picture in the puzzle is made clear. Thus, threshold concepts tend to demarcate a plateau in student learning where students might not progress beyond defining and memorizing until the integrating concept is grasped.
- **Irreversible:** Threshold concepts may also irreversibly change the learner and be difficult to unlearn.<sup>9</sup> Once the learner has been transformed, they, now more comfortable with a particular threshold

concept, may find it difficult to relate to the perspective of those who are not similarly transformed.

- **Bounded:** Each threshold concept generally has more or less definable conceptual boundaries to its usefulness.<sup>10</sup> Sometimes one or more of the boundaries of a threshold concept will coincide with or be indicative of the boundaries between one discipline and others.<sup>11</sup> Additionally, learners who have crossed a threshold may also use jargon or discourse that is less accessible to those who have not crossed that threshold.<sup>12</sup>
- **Troublesome:** For many learners, the transformation required to understand a threshold concept will cause them to struggle. The process of accepting a threshold concept will be troublesome because it may require a learner to abandon a prior view of the world.<sup>13</sup> Additionally, there may be jargon to learn,<sup>14</sup> and the new relationships revealed by an integrative threshold concept may upset other aspects of the learner's worldview.

Meyer cautions those looking for potential threshold concepts within their knowledge domain that this list of common characteristics is not useful when simply used as a diagnostic or a rubric to identify threshold concepts.<sup>15</sup> He emphasizes that the characteristics are best used to provide guidelines for considering what each individual learner may be experiencing when faced with concepts that challenge their worldview, and how to best support each of their learning processes when some but not all may be struggling with this fundamental disruption.<sup>16</sup>

This process of transformation will be unique to, and troublesome to different extents for, each learner. The transformation process is most fully described in Meyer, Land, and Baillie's 2010 book, *Threshold Concepts and Transformational Learning*.<sup>17</sup> Here, three states are described: the preliminal, liminal, and postliminal, with acknowledgement that some learners experience these states in a cyclical manner, recursively, or oscillating between worldviews.<sup>18</sup>

The preliminal state is the original status of the novice learner, unperturbed by what they are unaware that they do not know, or "the unknowable unknown."<sup>19</sup> Before an encounter with the threshold concept, the novice is in the blissful state of ignorance of any other potential, and potentially disruptive, view of the world. The learner's shift out of the preliminal state is provoked upon being made aware of the threshold concept.<sup>20</sup> The threshold concept disturbs their understanding of the world, and if they do not immediately reject it out of hand, they have entered the liminal state, and their potential for transformation has begun.

Within the liminal state, the learner considers that this threshold concept and foreign way of sense-making may be true, and their world is shaken by what this possibility holds. They may feel instability due to an awareness

that their prior knowledge was incomplete or simply wrong. They may be prompted to reject prior understandings outright or to significantly adjust the context. They may attempt to deconstruct their prior worldview and find a way to incorporate the new threshold concept information or viewpoint.<sup>21</sup> This adjustment to a different way of thinking can be disruptive to a learner's affective state.<sup>22</sup> Some learners may even experience a stall or plateau in their learning as they become stuck<sup>23</sup> within a liminal state while they struggle to accept or resist<sup>24</sup> the threshold concept.

The postliminal state is the world that lies beyond the conceptual threshold or boundary.<sup>25</sup> Previously known and accepted facts may remain, but the connections to other facts or the context that forms knowledge are forever altered for the learner. As a learner more deeply accepts the concept and becomes more familiar with the language used in the field to discuss and use the concept, it may change the way they make sense of the world.<sup>26</sup> They may simultaneously be accepting the threshold concept and this expert perspective as part of their professional identity.<sup>27</sup> Thus, while the process of shifting through these states is internal, if a learner crosses over to the postliminal state, one observable signal or symptom of the transformation is a change in their discourse.<sup>28</sup>

## The Framework

The Framework for Information Literacy for Higher Education consists of an introduction, six frames structured around six threshold concepts, and several appendices.

The six threshold concepts within the Framework are, in alphabetical order:

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

The introduction and appendices explain some of the theory undergirding the document, including metaliteracy<sup>29</sup> and the work of Wiggins and McTighe<sup>30</sup> on essential questions and backward design. Each frame is comprised of a threshold concept followed by knowledge practices and dispositions for that threshold concept. The *knowledge practices* are defined as “demonstrations of ways in which learners can increase their understanding of these information literacy concepts,” while the *dispositions* “describe ways in which to address the affective, attitudinal, or valuing dimension of learning.”<sup>31</sup> It is

important to note that the Framework authors stress that these knowledge practices and dispositions are not meant to be prescriptive in terms of local application of the Framework. They note that “each library and its partners on campus will need to deploy these frames to best fit their own situation, including designing learning outcomes.”<sup>32</sup>

In the introduction to the Framework, the authors note that the term “framework” was chosen deliberately to emphasize that “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.”<sup>33</sup> The Framework authors therefore caution readers against using this document as a prescriptive document, instead encouraging individuals to take the Framework and work with it in order to make it fit their own situations. In the following chapters, you will find examples of librarians who are doing just this.

The editors appreciate that the adoption of the Framework and the rescission of the Standards is a controversial topic for many. The Framework has prompted robust debate among academic librarians as well as other library and information science professionals. We editors have taken a pragmatic approach to the Framework and look at it as a document that has inspired dialogue about our teaching and helped us in conversations with one another and with disciplinary faculty. We do not believe that the Framework is a perfect document, but we and others have found inspiration here. We also recognize that the idea of threshold concepts has its critics. We appreciate threshold concepts not as an edict, but as one way of thinking about learning. This, to us, is one way of approaching information literacy among others. These threshold concepts have given us language to start with as we explore the questions of what challenges our students are likely to face in their learning. We also appreciate the inclusion of the dispositions, which address the affective dimension of learning, and which we have found to be tremendously important in our interactions with students around troublesome points in learning.

The adoption of the Framework has been disruptive within our professional community. Some of our colleagues have rejected the Framework and underlying philosophy; some may agree in principle but are unable to put it into practice due to inertia or organizational culture at their institutions. Some are still testing out threshold concepts and considering whether they can be added to their practice, and others have fully embraced the Framework and discarded prior practices. This is all reminiscent of a learner’s process when encountering a troublesome or threshold concept. Land, Meyer, and Baillie emphasize the importance of a supportive environment during the liminal phase.<sup>34</sup> We editors have adopted a supportive stance in recognition of the critical importance of each individual’s distinct process with en-

gaging with the Framework. As a result, we do not take a position on whether the Framework should replace or supplement existing practices, guidelines, or standards. We present here examples of colleagues' work in order to explore the proposed information literacy threshold concepts as depicted in the Framework. We believe it is for the reader and their home institution to determine if the ideas presented in this book would be useful to try within their own professional contexts.

## **This book**

We organized the chapters in six sections aligned with the Framework because we want this to be a useful and approachable text. Readers might focus on chapters that align with their job duties and subject assignments, or readers might choose to read all the chapters on a specific threshold concept that draws their interest. Nonetheless, readers will notice the title of this book very deliberately refers to threshold concepts and not to the ACRL Framework. We wanted to emphasize the threshold concepts themselves over the precise language in the current version of this document. Many, but not all, authors explored specific language from the Framework and its knowledge practices and dispositions, but we wanted to provide flexibility to our authors in the extent to which they would focus on the Framework language as it currently exists. We also worked with authors to think and write about these ideas as threshold concepts, not simply as statements that had been put out by ACRL. We editors have been inspired especially by certain aspects of threshold concepts—the acknowledgement of the messy liminal space, the recognition of the different paths learners can take in the learning process, and the recognition of the affective dimension of learning, and we wanted to emphasize these ideas as threshold concepts and not exclusively as frames. Finally, it is our hope that the Framework will continue to evolve as librarians grapple with these and other information literacy threshold concepts.

The chapters cover a range of disciplines, including the humanities, social sciences, life sciences, and physical sciences, and a range of students, from first-year undergraduates to doctoral students. Readers will encounter chapters in which librarians have designed learning outcomes aligned with the frames as presented in the latest version of the Framework. Some authors have used knowledge practices or dispositions as outcomes, and others have generated outcomes independent of these specifics in the Framework. With these examples, we share different approaches to working with information literacy threshold concepts and how librarians are making them work not only within their institutional contexts, but within those disciplinary contexts that vary within institutions. In addition, there are chapters in which

authors draw on or propose discipline-specific threshold concepts, using the common characteristics of threshold concepts to identify troublesome areas within subject disciplines.

In the following chapters, authors describe their experiences with negotiating an information literacy threshold concept within a discipline and provide suggestions for addressing that threshold concept in that disciplinary context. Many chapters are by a single academic librarian, others by two or more librarians at one or more institution, and several are co-authored by a librarian and a disciplinary faculty member. Chapter authors include those who have enthusiastically embraced the Framework and others who approach the document and threshold concepts with skepticism. All, however, have found ways of using the Framework's threshold concepts to think about information literacy in a different way. We asked authors to authentically explore their experience with threshold concepts within the specific disciplinary context in which they interact with learners. In these chapters, authors span the theoretical and practical, which, in our opinion, is key to fully taking advantage of the potential of threshold concepts to improve student learning experiences in impactful ways.

We hope this book will be helpful to academic librarians involved in instruction and reference, especially those who work with particular disciplines as subject liaisons. We hope it will help our readers to develop or enrich expertise regarding threshold concepts and approach interactions with students and faculty in new ways. We hope these chapters will provide inspiration and provoke discussion that moves librarians' work forward and enhances student learning. We look forward to continuing to engage with you about these and other troublesome concepts.

## Notes

1. Jan H. F. Meyer and Ray Land, "Threshold Concepts and Troublesome Knowledge 1 – Linkages to Ways of Thinking and Practising," in *Improving Student Learning 10: Improving Student Learning Theory and Practice - 10 Years On*, ed. Chris Rust (Oxford, England: The Oxford Centre for Staff & Learning Development, Oxford Brookes University, 2003), 412–424.
2. Association of College and Research Libraries (ACRL), *Framework for Information Literacy for Higher Education*, February 2, 2015, <http://www.ala.org/acrl/standards/ilframework>.
3. See Lori Townsend, Amy R. Hofer, Silvia Lin Hanick, and Korey Brunetti, "Identifying Threshold Concepts for Information Literacy: A Delphi Study," *Communications in Information Literacy* 10, no. 1 (2016): 23–49.
4. Ray Land, Jan H. F. Meyer, and Michael T. Flanagan, eds. *Threshold Concepts in Practice* (Rotterdam, Boston & Taipei: Sense Publishers, 2016), xi. See also the online bibliography: Michael T. Flanagan, "Threshold Concepts: Undergraduate



Teaching, Postgraduate Training, Professional Development and School Education: A Short Introduction and a Bibliography,” accessed December 22, 2016, <http://www.ee.ucl.ac.uk/~mflanaga/thresholds.html>.

5. Meyer and Land, “Threshold Concepts and Troublesome Knowledge 1,” 412, 415.
6. The importance of this characteristic is described in strong terms: “Hence the superordinate and non-negotiable characteristic of a threshold concept is its *transformative* capacity.” Land, Meyer, and Flanagan, *Threshold Concepts in Practice*, xii.
7. Jan H. F. Meyer and Ray Land, “Threshold Concepts and Troublesome Knowledge: Issues of Liminality,” in *Overcoming Barriers to Student Understanding: Threshold Concepts and Troublesome Knowledge*, eds. Jan H. F. Meyer and Ray Land (London: Routledge, 2006), 21–22.
8. Meyer and Land, “Threshold Concepts and Troublesome Knowledge 1,” 416.
9. Ibid.
10. Ibid.
11. Ibid.
12. Ibid., 420–421.
13. Ibid., 419.
14. Ibid., 420–421.
15. Jan H. F. Meyer, “Helping Our Students: Learning, Metalearning, and Threshold Concepts,” in *Taking Stock: Research on Teaching and Learning in Higher Education*, eds. Julia Christensen Hughes and Joy Mighty (Montreal: McGill-Queen’s University Press, 2010), 205.
16. Ibid, 210.
17. Ray Land, Jan H. F. Meyer, and Caroline Baillie, “Editors’ Preface,” in *Threshold Concepts and Transformational Learning*, eds. Jan H. F. Meyer, Ray Land, and Caroline Baillie (Rotterdam: Sense Publishers, 2010), xi–xiii.
18. Ibid., xi; Meyer and Land, “Threshold Concepts and Troublesome Knowledge: Issues of Liminality,” 24.
19. Leslie Schwartzman, “Transcending Disciplinary Boundaries: A Proposed Theoretical Foundation for Threshold Concepts,” in *Threshold Concepts and Transformational Learning*, eds. Jan H. F. Meyer, Ray Land, and Caroline Baillie (Rotterdam: Sense Publishers, 2010), 22.
20. Land, Meyer, and Baillie, “Editors’ Preface,” xi.
21. Ibid.
22. Ray Land, “Toil and Trouble: Threshold Concepts as a Pedagogy of Uncertainty,” in *Threshold Concepts in Practice*, eds. Ray Land, Jan H. F. Meyer, and Michael T. Flanagan, (Rotterdam: Sense Publishers, 2016), 14–16.
23. Ibid.; Schwartzman, “Transcending Disciplinary Boundaries,” 33.
24. Schwartzman, “Transcending Disciplinary Boundaries,” 33.
25. Land, Meyer, and Baillie, “Editors’ Preface,” xi.
26. Ibid.
27. Meyer and Land, “Threshold Concepts and Troublesome Knowledge: Issues of Liminality,” 21–22.
28. Land, Meyer, and Baillie, “Editors’ Preface,” xi.
29. Thomas P. Mackey and Trudi E. Jacobson, “Reframing Information Literacy as a Metaliteracy,” *College and Research Libraries* 72, no. 1 (2011): 62–78, doi: 10.5860/crl-76r1.

30. Grant Wiggins and Jay McTighe, *Understanding by Design* (Alexandria, VA: Association for Supervision and Curriculum Development, 2004).
31. ACRL, *Framework*.
32. Ibid.
33. Ibid.
34. Land, Meyer, and Baillie, "Editors' Preface," xiv.

