Using Depth of Knowledge Questions to Encourage Deep Thinking:
Intentional Questioning as an Instructional Strategy

Tiffeni Fontno and Adam Williams[*]

Librarians draw on a multitude of techniques and framing devices to iterate and improve on library instruction. Librarians often combine teaching methods to fit into the constraints of a limited amount of contact time with students. In this paper, we explore classroom questioning as one of those techniques often used by every teacher, but rarely examined as a possible structured method in library instruction. Specifically, we will look at Depth of Knowledge questioning as an efficient alignment device for teaching information literacy in the context of the Association of College and Research Libraries Framework for Information Literacy (ACRL Framework). Using the Framework to build goals and objectives for typical information literacy sessions, the questions act as a formative assessment tool to ensure that students are progressing toward the goals of a session. In addition, questioning as a formative assessment tool allows teachers to modify the lesson as needed based on student response. Understanding how to plan questions purposefully and intentionally helps guide students and improve learning outcomes.

Questions in the Classroom

Generally, questions in the classroom show valuable contributions to student learning. Many earlier studies observed the prevalence of questions in the classroom. The studies focused on the frequency and rates of questions asked by teachers or students as exemplified by the work of Dillon[1] or Wilen and Clegg.[2] It turns out that teachers ask many questions in a day, possibly tens of thousands a year. For a teacher not to frequently ask questions would be considered unusual. The propensity for asking questions is also prevalent among instruction librarians.[3]

Classroom questions roughly fall into two levels, low order questions and higher order questions.[4] Higher order questions would elicit more analytical or synthesizing responses from the students, and low-level questions mostly elicit recitation or recall.[5] For example, a higher order question might be, "How might you create a research question for your paper?" What makes the previous question "higher order" are the multiple moving parts. Students would need to make connections between what they already know about a research question, what they know about the nature of the assignment and how to construct a direction of inquiry based on their topics. A lower order question in the same vein might ask, "What is a research question?" In that case, an instructor might only be looking for foundational knowledge in students.

* *Tiffeni Fontno is Head Librarian, Educational Resource Center, Boston College, email: tiffeni.fontno@bc.edu. Adam Williams is Senior Reference Librarian and Bibliographer, Boston College, email: adam.williams.2@bc.edu*

The process of using high and low order questions in the classroom would entail a natural (and probably familiar) back and forth between a questioning teacher and answering students. When an instructor asks a tough question and students struggle to answer, a teacher might backtrack to simpler questions that then scaffolds students to the more difficult question. Lower order questions might break down a bigger question into smaller pieces to give students the opportunity to gain the knowledge necessary to wrestle with more thought provoking questions. Taking the question about a research topic, a simpler starting point might be with what the student already knows, "what is your topic?" The next step in questions might then be, "what about that topic?," taking a step to a more complicated task of having students connect the pieces about what they know about their topic of interest. Harnessing the natural tendency for teachers to ask high and low order questions has been an ongoing exercise for educators. Using structured methods to create questions can improve their quality and the academic rigor for students,[6] albeit the schemes vary in complexity.

A few intrepid librarians have worked questioning into information literacy instruction.[7] Some librarians drew on the tourism industry for methods of questioning during library orientations.[8] Hurley and Potter show a strong process for using a scheme to develop questions. They incorporated the Framework and objective driven questioning for a 100 level English course at their institution.[9] In their research, the ACRL Framework acted as a conceptual device for library instructors to design classes with more depth using highly developed questions. The instructors matched an English course objective, "analyze and describe the writing and research conventions of an academic field in order to understand the different ways of creating and communicating knowledge," to the Information Creation as a Process frame.[10] From the frame, the authors created their own objectives that then informed the task driven questions to issue to the students. The librarians bridged an important connection between the ACRL Framework, using objectives and questions. Through lesson planning, we take a similar approach, which starts with the ACRL Framework frames that best fit a course that lead to objectives. We will discuss how Depth of Knowledge builds the conceptual bridge between the ACRL Framework and the questions.

ACRL Framework

By design, the Framework adapts to any discipline. What the Framework does so well is capture the essence of information literate thinking and leaves abundant room for librarians to design a pedagogy for teaching within their respective communities.

The Framework's roots lie in higher education, particularly threshold concepts.[11] The main parts of the Framework consist of the descriptive thresholds (frames) that are then broken down into abilities (knowledge practices) and mindsets (dispositions) related to the frame. Six frames provide "gateway or portal concepts through which students must pass to develop genuine expertise within a discipline."[12] The parts of the frame themselves only offer an instruction librarian the conceptual tools to then create objectives for a particular classes or single session.

There are any number of ways to create outcomes or objectives, so long as they are measurable. A class may involve several objectives based on several frames. Oakleaf gives an example where an instructor might use Scholarship as Conversation to have students "map linked citations representing scholarly conversation on a topic."[13] This is measurable by having students draw lines to sources in common between multiple reference lists on a worksheet. In the same class proposed by Oakleaf, Research as Inquiry has students "list areas of consensus and disagreement among publications on a topic."[14] The objective is measured by having students fill out a Venn diagram that describes the overlap or separate concepts between articles they have discovered. The objectives would suggest that the library instruction session addresses concepts of citation, possibly as a means to find additional sources and examine how those sources may differ in an academic perspective.

Oakleaf proposes that authentic assessment is key to assessing those learning objectives built from the Framework[15] by either capturing dynamic or static feedback from students.[16] Dynamic types of assessment would encompass methods that observe learning as it is happening. Questions asked by instructors are particularly well suited to dynamic or formative assessment. What's more, as is shown in the previously mentioned literature, questions also serve as a valuable teaching technique. Questions serve as both a means to gather in situ feedback and create a learning opportunity for students. The formative assessment also determines if the lesson is on track based on student response. How to develop questions that fit within a lesson based on the ACRL Framework is an important part of class planning.

Depth of Knowledge

Originally, Depth of Knowledge (DOK) was developed as a K-12 alignment method between student learning, instruction, content, and assessment.[17] As a simple example, students in a biology class might take a test (assessment tool) on a unit about the structure of the cell (content taught). A teacher would not have those same biology students take a quiz on the cardiovascular system when that unit of instruction had not occurred. The questions about the heart would make little sense to the students who are prepared with knowledge about the nucleus of the cell. The questions about the heart would in turn illuminate little about students' learning about cell structure to the teacher. There are also varying levels of cognitive rigor that would need examined as well, hence the need for making sure to align lesson assessments with the goals and objectives of the course. To aid in curriculum alignment, Webb developed DOK levels.

- Level 1: Recall and Reproduction
- Level 2: Skills and Concepts
- Level 3: Strategic Thinking
- Level 4: Extended Thinking[18]

The DOK levels describe the expected cognitive effort of students given a particular context. Students asked to recount *what* knowledge is needed, such as naming a specific database, would align with DOK level one. DOK level two would describe students' efforts to explain *how* the knowledge can be used to answer a question or task, such as a simple search in a database. Level three describes a task where students evoke higher order reasoning and students defend *why* the knowledge can be used to support a claim. For instance, a DOK level three task might ask students to explain why they chose certain terms to search a database. Level four characterizes very complex reasoning where students transfer knowledge to a new setting or circumstances. Usually, a DOK level four task creates something new and activates convergent and divergent thinking, such as incorporating sources into a paper.[19]

K-12 educators adapted DOK into a variety of forms extending the scope of Webb's work.[20] Many iterations of DOK retain the utility of alignment and incorporate a process of developing questions to use during a lesson. In the many examples of applying DOK, the questions are usually task driven, not unlike the tasks from the examples in the previous paragraph. A popular technique for developing questions involves question stems, where the likely root of a question would be related to a particular DOK level as in Figure 1 below.

FIGURE 1
Question Stems matched with Depth of Knowledge levels

DOK 1	DOK 2	DOK 3	DOK 4
• Can you list...? • What is the answer to...? • What is the definition...?	• Can you compare...? • How might you organize...? • What is the difference between...?	• Why would you...? • What would happen if...? • How might you interpret...?	• How might you justify...? • What arguments can you make...? • How might you strategize a solution...?

The stems help teachers build questions more efficiently, rather than trying to create a brand new set of questions for each lesson.[21] The question stems also help teachers ask a complex variety of focused questions. Recollecting that the bulk of questions that a teacher typically asks during a class are simple recall questions, or to put another way, the guess-what-I'm-thinking question. That is not to say that simple questions or what would amount to DOK level one questions do not have an important role during a lesson. Recall questions have a significant role in developing foundational knowledge, such as defining basic terms. DOK recall questions scaffold student thinking with the intention to build rigor and knowledge as opposed to unstructured guessing questions.

While Depth of Knowledge does stratify cognitive tasks into low to high order thinking, DOK is not sequential. In the framing of a lesson, teachers need to consider the context of what students need to accomplish or respond. In using DOK oriented questions, the task the students need to complete at a given moment during a lesson determines the DOK level question used. To put it another way, simple questions are just as likely to occur at the end of a lesson as at the beginning.

Lesson Planning with the ACRL Framework and Questioning with DOK

A lesson plan serves as a means to organize teaching and learning. As an example of the process of building a lesson plan, we will take all of the elements in the previous discussion, aligned questioning, objective creation and framing devices together. As described previously, the ACRL Framework orients library instruction toward a particular discipline no matter the level of the user. A lesson plan for a specific session might look something like the Figure 2 below.

FIGURE 2 Education Class Lesson Plan			
Lesson Plan			
Frame(s): Searching as Strategic Exploration Information Creation as a Process Authority Is Constructed and Contextual	**Goal(s):** Students will be able to independently search library resources to find education peer-reviewed journals to support a research statement or question and keeping track of their sources.		
Knowledge Practices	**Objective(s)/Skill(s)**	**Activity:**	**DoK Questions**
Recognize the implications of information formats that contain static or dynamic information Define different types of authority, such as subject expertise, societal position, or special experience	Students will explain the qualitative difference between popular and peer-review sources.	In pairs, students identify and classify the differences between a peer-reviewed and magazine article and report out on their findings. Discussion of peer-review process in the context of education sources	What are some identifiers of a peer-reviewed article? (DOK 2) Who wrote the articles? (DOK 1) What are the credentials of the authors? (DOK 1) What is a peer-reviewed article? (DOK 1)

FIGURE 2 Education Class Lesson Plan			
Knowledge Practices	**Objective(s)/Skill(s)**	**Activity:**	**DoK Questions**
Match information needs and search strategies to appropriate search tools	Students will identify databases related to their research topic	Present different subject databases • ERIC • Education Source • PsycINFO	Can you list the names of the databases you will use for your research? (DOK 1)
Use different types of searching language appropriately	Students will strategize keyword and searches to journal articles related to the research topic	Students generate a concept map of key terms and alternative terminology to try in the databases Using student example list to demonstrate finding subject heading in ERIC and how they work	Why would you need alternative terms when searching for sources? (DOK 2)
Design and refine needs and search strategies to appropriate search tools	Students will distinguish between subject heading searches and keyword searches.	Students search databases using all keywords and then a search with at least one subject heading and compare their results.	What happens if you only used keywords and not used controlled vocabulary? (DOK 3)
Manage their search processes and results effectively	Students will employ the use of citation management to keep track of sources	Class discussion about citation management and keeping track of search terms. • Citing tools, Google docs, etc.	What is a citation management tool? (DOK 1) How would you keep track of your searches? (DOK 2) Why would you keep track of your sources and searches? (DOK 3)

The above lesson plan addresses a first year research paper (aka paper-with-sources) assignment where education is the theme of the course. The plan begins with the frames that best suit the needs of the class. The frames used to develop the main objective are Searching as Strategic Exploration,[22] Information Creation as a Process[23] and Authority Is Constructed and Contextual.[24] In short, students will need to discover a certain number of sources that are peer-reviewed, preferably using databases.

The lesson progresses in order of the activities presented. A library instructor would begin with the comparison of a magazine and peer-reviewed articles. The instructor would proceed in order of objectives and activities as they appear. The Knowledge Practices act as guideposts for the more specific objectives. To accomplish the first objective, students participate in a think-pair-share exercise. Students compare and contrast the types of sources, in this case, physical copies of a popular source and a peer-reviewed one. The DOK questions accomplish two purposes. The questions keep the activity on track and build student learning in line with the objective.

While the objectives and activities are in chronological order, the DOK questions that align with each objective/activity are not in any particular order. Depending on the flow of the library session, an instructor might ask the DOK one question, "What is a peer-reviewed article?," first to welcome some initial thoughts from students and give clues to the instructor as to the current class's understanding of peer-reviewed articles. Ideally, the instructor would not answer the question and leave the question hanging if students do not offer a response. The activity would likely then follow to have students wrestle with the unanswered question and attempt to figure out the response through the activity. The DOK two question, "What are some identifiers of a peer-reviewed article?," would come at the end of the activity, potentially asking a handful of paired students to report out. Further discussions and more questions from the DOK bank would continue about the specifics of the students' findings. The library instructor could then ask the DOK one question again and likely receive increasingly complete answers from students. Depending on the response of students, instructors may need to back track to asking about markers mentioned (DOK one questions about what the students know) when students reported on the comparisons between the popular magazine and the peer-reviewed articles.

The process of asking questions, in the given scenario, would happen quickly. The key to instructor questioning is to make sure that he or she does not answer the question or questions. The instructor works from what students already know in the context of the activity to drive students to think toward the stated objective. The back and forth between the instructor's questions and the students' responses is the ongoing formative assessment. Once students achieve a small milestone to one question, the instructor moves the questioning and tasks forward. If the answer to a question indicates that the students have achieved the ideal complexity of thought, the instructor backtracks to reestablish the path to the objective with more DOK questions.

FIGURE 3
Social Policy Class Lesson Plan

Lesson Plan			
Frame(s): Information Creation as a Process[25] Research as Inquiry[26] Searching as a Strategic Exploration[27]	**Goal(s):** Students will identify and find relevant documents to include in their paper on the history of a piece of national legislation.		
Knowledge Practices	**Objective(s)/Skill(s)**	**Activity:**	**DoK Questions**
Assess the fit between an information product's creation process and a particular information need 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	Students will identity documents that pertain to a legislative history and describe the types of sources needed to complete their own legislative history.	Students examine and list the documents of a legislative history. As a class critique the legislative history. As a class students list the documents they need to create their own legislative history.	What are the types of documents in a legislative history? (DOK 2) How would you describe one of those sources? (DOK 2) What do the documents in a legislative history have in common? (DOK 3) What kind of documents do you need to create a legislative history? (DOK 1)

FIGURE 3 Social Policy Class Lesson Plan			
Knowledge Practices	**Objective(s)/Skill(s)**	**Activity:**	**DoK Questions**
Match information needs and search strategies to appropriate search tools Monitor gathered information and assess for gaps or weaknesses	Students will construct a search terms that relate to their piece of legislation.	Present government documents databases • Proquest Congressional • Congress.gov • Hein Online Instructor and students examine the different parts of a bill or law volunteered by a student	What database would be ideal for finding your piece of legislation? (DOK 2) What pieces of information could you use to search for your bill or law? (DOK 2) How do you know if you have the right version of the bill or law? (DOK 2)
Determine the initial scope of the task required to meet their information needs Understand how information systems (i.e., collections of recorded information) are organized in order to access relevant information Monitor gathered information and assess for gaps or weaknesses	Students will be able to independently find government documents related to their legislation that reconciles the different stages of the legislative process.	Students would individually begin to search for documents to create their legislative history	How could you find government documents about your piece of legislative without using the name of the bill or law? (DOK 3) How would the connection between a piece of legislative and it's stage of development affect your search? (DOK 4)

In Figure 3, we examine a class designed for social work graduate students who are tasked with creating a legislative history around a United States bill or law. The concept of a legislative history stray drastically from what students typically associate with research within the social work field. Government documents also tend to be new territory. Most social work assignments at the graduate level involve peer-reviewed, original research and very few primary sources. The questioning and tasks will sit at a greater rigor for social work students than say a law or history student, who may have more experience with the norms of legal research. For a social work student, a legislative history is a collection of less familiar documentation, such as versions of bills, congressional hearings, executive statements, committee reports, etc.

The DOK question listed, "What are the types of documents in a legislative history?" is deceptively simple. When students examine the types of documents listed in a legislative history, they will need to contend conceptually with the variety of documents, while the students might answer the question at a tier lower by simply repeating the list. Therefore, a follow-up question of equal rigor, "How would you describe one of those sources?" would help students refocus their efforts to understanding more about the sources. The question, "How would the connection between a …?" is an example of higher level questioning where students needing to connect multiple lines of thinking and apply them to their search strategy.

Discussion

Webb developed Depth of Knowledge as an assessment alignment tool. Though DOK is one of many options for structuring questions, we found that DOK questioning is a balance ground between high and low order catego-

ries and the complexity of student learning. Conceptually, DOK also gives instructors flexibility to apply differ-ent level questions when appropriate for a lesson rather than forcing a progression from simple to more complex questions. Although DOK is used successfully in K-12 classrooms, DOK is a new concept for library instruction. In our discussion, we lay out lingering challenges and questions that have emerged as we have pieced together a DOK approach to library instruction.

We have made small inroads in changing our classroom questions. While we believe the inclusion of DOK questioning into lesson plans is beneficial, the implementation takes practice. We frequently fall back on natu-rally asking low order questions. In part, we have noticed that we ask a good number of simple questions to check-in with students. The check-in question does not fill the curricular needs of lessons and more often than not serves only as a way to gain students' attention. Changing our own habits to be strategic about questions continues to present challenges. We suspect other instruction librarians will face a similar learning curve.

While we focus on the use of DOK questions as a formative tool, it is worth exploring how DOK can assist with summative assessment. Potentially, a teacher can assess the effectiveness of the questions by examining stu-dent feedback at the end of class. For example, employing polling software, instructors might offer a structured way to deliver DOK questions to a class and provide post-class data to assess. Instructors could collect polling answers through the software and discuss the collected responses with students or ask more questions of the students based on the responses. Exit slip questionnaires could also present an opportunity to apply DOK level questioning at the end of a session. In addition, the couple of familiar techniques presented may offer an easier path to applying DOK questioning. The predetermined timing of a polling question or exit slip might provide helpful structure to delivering questions, where formative assessment may take more practice.

Ultimately, we present an instructional approach that has strong potential for a typical library session. The coming semesters will offer us an opportunity to experiment with the lesson plans presented in this paper and offer concrete examples of our method. Primarily we plan to employ DOK questioning incrementally to break our own teaching habits and to review the efficacy of the DOK questioning method.

Notes

1. James T Dillon, "The Effect of Questions in Education and Other Enterprises," *Journal of Curriculum Studies 14*, no. 2 (1982): 127-128
2. William W. Wilen and Ambrose A. Clegg, "Effective Questions and Questioning: A Research Review," *Theory and Research in Social Education 14*, no. 2 (1986): 153.
3. Sara Maurice Whitver and Leo S. Lo, "Asking Questions in the Classroom: An Exploration of Tools and Techniques used in the Library Instruction Classroom," *Communications in Information Literacy 11*, no. 1 (2017): 185-203.
4. Meredith D. Gall, "Synthesis of Research on Teachers' Questioning," *Educational Leadership 42*, no. 3 (1984): 40.
5. Christopher H. Tienken, Stephanie Goldberg, and Dominic DiRocco, "Questioning the Questions," *Education Digest 75*, no. 9 (2010): 29.
6. For a near complete description of the best frameworks and methods for using questions in the classroom see, Jackie Acree Walsh and Beth Dankert Sattes, *Quality Questioning: Research-Based Practice to Engage Every Learner* (Thousand Oaks, CA: Corwin, 2016).
7. For an approach to using Bloom's taxonomy to assess student generated questions see, Nancy E. Adams, "Asking a Great Question: A Librarian Teaches Questioning Skills to First-Year Medical Students," *Medical reference services quarterly 34*, no. 4 (2015): 418-427; For an approach using a dialogic method see Nicholas Schiller, "Finding a Socratic Method for Information Literacy Instruc-tion," *College & Undergraduate Libraries 15*, no. 1/2 (2008): 39-56.
8. David A. Hurley and Robin Potter, "Teaching with the Framework: A Cephalonian Approach," *Reference Services Quarterly 45*, no. 1 (2016); Also, see Nigel Morgan and Linda Davies, "Innovative Library Induction - Introducing the 'Cephalonian Method,'" *SCONUL Focus 32*, Summer/Autumn (2004): 4-8.
9. Hurley and Potter, "Teaching with the Framework."
10. Hurley and Potter,121.
11. Threshold concepts are ideas that students learn over time in a specific discipline that change their perspective. Threshold concepts are considered transformative and fundamentally changes a student's outlook in general and within a given discipline. See Jan Meyer and Ray Land, "Threshold Concepts and Troublesome Knowledge: An Introduction," in *Overcoming Barriers to Student*

Understanding : Threshold Concepts and Troublesome Knowledge, ed. Jan Meyer and Ray Land (London: Routledge, 2006), 3-18.

12. Association of College and Research Libraries, *Framework of Information Literacy*, (Chicago, IL: ACRL, 2016): Appendix 1. http://www.ala.org/acrl/standards/ilframeworkapps

13. Megan Oakleaf, "A Roadmap for Assessing Student Learning Using the New Framework for Information Literacy for Higher Education," *Journal of Academic Librarianship* 40, no. 5 (2014): 512

14. Oakleaf, "A Roadmap for Assessing Student Learning," 512.

15. Oakleaf, 511.

16. Oakleaf, 513.

17. Norman L. Webb, *Criteria for alignment of expectations and assessments in mathematics and science education*, Research Monograph No. 6. (Washington, DC: Council of Chief State School Officers, 1997).

18. Norman L. Webb, "Issues Related to Judging the Alignment of Curriculum Standards and Assessments," *Applied Measurement in Education 20*, no. 1 (2007): 11-13.

19. Erik M. Francis, *Now That's a Good Question! : How to Promote Cognitive Rigor Through Classroom Questioning*, (Alexandria, VA: ASCD, 2016): 15.

20. There are a great number of resources showing the broad range of Depth of Knowledge applications, some hue closer to an alignment tool than others. See, Walsh and Sattes, *Quality Questioning*; Erik M. Francis, *Now That's a Good Question!*. Also see, Karen Hess, *A Guide for Using Webb's Depth of Knowledge with Common Core State Standards*, (Common Core Institute, 2013).

21. Searching the web for "dok question stems" or "depth of knowledge question stems" returns many results. For example see, "DOK Question Stems," Ohio Department of Education, accessed April 28, 2017. https://education.ohio.gov/getattachment/Topics/Teaching/Educator-Evaluation-System/How-to-Design-and-Select-Quality-Assessments/DOK-Question-Stems.pdf.aspx

22. The essence of the frame is about the search for sources. The introduction to the frame states, "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." See, Association of College and Research Libraries, *Framework of Information Literacy*, (Chicago, IL: ACRL, 2016): Searching as Strategic Exploration. http://www.ala.org/acrl/standards/ilframework#exploration

23. Information Creation as a Process primarily deals with format and how that format reflects the purpose of the produced information. As stated in the introduction to the Frame, "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." See, Association of College and Research Libraries, *Framework of Information Literacy*, (Chicago, IL: ACRL, 2016): Information Creation as a Process. http://www.ala.org/acrl/standards/ilframework#process

24. This frame is intended to capture authorship and credibility as described as, "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." See, Association of College and Research Libraries, *Framework of Information Literacy*, (Chicago, IL: ACRL, 2016): Authority Is Constructed and Contextual. http://www.ala.org/acrl/standards/ilframework#authority

25. See note 21 above

26. The frame, Research as Inquiry treats research as an, "iterative [process] and depends upon asking increasingly complex or new questions whose answers in turn develop additional questions or lines of inquiry in any field." See, Association of College and Research Libraries, *Framework of Information Literacy*, (Chicago, IL: ACRL, 2016): Research as Inquiry. http://www.ala.org/acrl/standards/ilframework#inquiry

27. See note 20 above.

Bibliography

Adams, Nancy E. "Asking a Great Question: A Librarian Teaches Questioning Skills to First-Year Medical Students." *Medical reference services quarterly 34*, no. 4 (2015): 418-427.

Association of College and Research Libraries. *Framework of Information Literacy*. Chicago, IL: ACRL, 2016. http://www.ala.org/acrl/standards/ilframework.

Dillon, James T. "The Effect of Questions in Education and Other Enterprises. "*Journal of Curriculum Studies 14*, no. 2 (1982): 127-152.

"DOK Question Stems." Ohio Department of Education, accessed April 28, 2017. https://education.ohio.gov/getattachment/Topics/Teaching/Educator-Evaluation-System/How-to-Design-and-Select-Quality-Assessments/DOK-Question-Stems.pdf.aspx

Francis, Erik M. *Now That's a Good Question! : How to Promote Cognitive Rigor Through Classroom Questioning*. Alexandria, VA: ASCD, 2016.

Gall, Meredith D. "Synthesis of Research on Teachers' Questioning. "*Educational Leadership 42*, no. 3 (1984): 40-47.

Hess, Karen. *A Guide for Using Webb's Depth of Knowledge with Common Core State Standards*. Common Core Institute, 2013.

Meyer, Jan and Ray Land. "Threshold Concepts and Troublesome Knowledge: An Introduction." In *Overcoming Barriers to Student Understanding : Threshold Concepts and Troublesome Knowledge*, 3-18. Edited by Jan Meyer and Ray Land. London: Routledge, 2006.

Morgan, Nigel and Linda Davies. "Innovative Library Induction - Introducing the 'Cephalonian Method.'" *SCONUL Focus 32*, Summer/Autumn (2004): 4-8.

Oakleaf, Megan. "A Roadmap for Assessing Student Learning Using the New Framework for Information Literacy for Higher Education." *Journal of Academic Librarianship* 40, no. 5 (2014): 510-514.

Schiller, Nicholas. "Finding a Socratic Method for Information Literacy Instruction." *College & Undergraduate Libraries 15*, no. 1/2 (2008): 39-56.

Tienken, Christopher H., Stephanie Goldberg, and Dominic DiRocco. "Questioning the Questions." *Education Digest 75*, no. 9 (2010): 28-32.

Walsh, Jackie Acree and Beth Dankert Sattes. *Quality Questioning: Research-Based Practice to Engage Every Learner.* Thousand Oaks, CA: Corwin, 2016.

Webb, Norman L. *Criteria for alignment of expectations and assessments in mathematics and science education*, Research Monograph No. 6. Washington, DC: Council of Chief State School Officers, (1997).

Webb, Norman L. "Issues Related to Judging the Alignment of Curriculum Standards and Assessments." *Applied Measurement in Education 20*, no. 1 (2007): 7-25.

Whitver, Sara Maurice and Leo S. Lo. "Asking Questions in the Classroom: An Exploration of Tools and Techniques used in the Library Instruction Classroom." *Communications in Information Literacy 11*, no. 1 (2017): 185-203.

Wilen, William W. and Ambrose A. Clegg. "Effective Questions and Questioning: A Research Review." *Theory and Research in Social Education 14*, no. 2 (1986): 153-161.