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Outcomes Assessment and Legal Research Pedagogy

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Outcomes Assessment and Legal Research Pedagogy

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This article explores application of a taxonomic approach in legal research pedagogy to outcomes assessment based on Prof. Paul Callister’s adaptation of Bloom’s Taxonomy of Educational Objectives which integrates instructional design and learning activities compatible with formative assessment during the learning process and summative assessment at its conclusion. It reviews the development of outcomes assessment initiatives by legal educators and the development of outcomes assessment standards by the American Bar Association for the accreditation of law schools.

KEYWORDS assessment, formative, legal research, summative, taxonomy

INTRODUCTION

Historically, little attention has been paid to formal assessment of law school learning outcomes in legal education pedagogy. Assessment of learning has been largely a byproduct of course examinations and the post-law school Bar
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recently, however, the American Bar Association (ABA) has been revising the Program of Legal Education Standards to include measurement of student learning outcomes for “effective, ethical and responsible participation in the legal profession.” Accordingly, the ABA has been drafting new standards that require assessment of learning outcomes, not only at the end of a course in a traditional, summative assessment form such as a test, but also while learning is taking place during a course (i.e., formative assessment), which can “provide meaningful feedback to improve student learning.”

Assessment now becomes a driver of instructional and curriculum design to meet the ABA standards. This paradigm comes from outcome-based education (OBE) theory, which has been employed in other academic settings for several decades. It means that everything in the teaching program is organized toward what students will be able to do at the end of their learning experiences. One of the challenges inherent in OBE is matching learning outcomes with appropriate assessment forms. Education pedagogy has employed the use of taxonomies to “ensure that objectives, instruction, and assessment are consistent with one another” and to offer some guidance on selecting or designing “assessment instruments and procedures that provide accurate information about how well students are learning.”

How the new ABA standards will affect the pedagogy of legal research and the role of law librarians in legal education is as yet unclear. Putting these new standards into practice in legal education, specifically legal research instruction, will require identifying exactly what level of skill the new standards require, how to express these skills in the form of learning outcomes for law students, and how to effectively assess students’ progress toward those outcomes. Law librarians began this conversation at the recent Boulder conferences. This article builds on the work of the Boulder conferences and proposes using a taxonomic approach to assessment.

Part II of this article (“Outcomes Assessment and Legal Research Pedagogy”) explores the new ABA standards and the educational theory on which they are predicated and suggests ways in which the assessments required by the new standards can be integrated into legal research instruction. Part III (“Applying Taxonomies for Assessment of Learning Outcomes”) provides an overview of learning taxonomies and explores how a taxonomic approach to creating learning objectives can be applied in legal research pedagogy so as to align objectives and assessment. Part III explores how legal research ethics, tied inextricably to the competency standard in the proposed ABA standards, could be included in the taxonomy. Part IV (“The Role of Law Librarians & Law Libraries”) discusses the role of law libraries and law librarians in legal research pedagogy. Finally, this article concludes that using a taxonomy of learning objectives can provide an efficient and solid basis for outcomes assessment of legal research instruction.
ABA Learning Outcomes Standard and Its Precursors

In 2007, the Carnegie Foundation published *Educating Lawyers: Preparation for the Profession of Law*, a comprehensive, two-year investigation of legal education in Canada and the United States.\(^{13}\) The 2007 Carnegie Report may have influenced the ABA’s incorporating assessment in the current standards revisions, but assessment in legal education is an older issue, starting at least as far back as 1979 with an ABA report on lawyer competency and the role of law schools\(^ {14}\) and culminating in the ABA’s multivolume MacCrate Report in 1992.\(^ {15}\) It envisioned an ongoing process examining the “nature of the skills and values that are central to the role and functioning of lawyers in practice.”\(^ {16}\) The report specified legal research among the “fundamental lawyering skills,”\(^ {17}\) including both identifying legal issues and “research[ing] them thoroughly and efficiently.”\(^ {18}\)

As a result of the MacCrate Report, interest in teaching fundamental lawyering skills revived at the same time as a parallel movement in academia focused on outcomes of university teaching.\(^ {19}\) In 2000, Professor Gregory S. Munro published *Outcomes Assessment for Law Schools*, which recommended that law schools adopt outcome assessment measures including mission statements, outcomes goals, and curricula designed to meet those goals.\(^ {20}\) Munro, in addition, looked back to the MacCrate Report to define student outcomes as “the abilities, knowledge base, skills, perspective, and personal attributes which the school desires the students to exhibit on graduation.”\(^ {21}\) In the years since, many law schools have drafted mission statements and competency principles. By 2007, the movement to improve legal education produced the Carnegie Report, *Educating Lawyers*, which recommends law schools teach lawyering skills as early as the first year of law school and contends that relying on law firms to give graduates a practical apprenticeship in law was unrealistic.\(^ {22}\) In the same year, Roy Stuckey published *Best Practices for Legal Education*,\(^ {23}\) and in 2008, the ABA issued the *Report of the Outcome Measures Committee*,\(^ {24}\) which recommended that the ABA “refashion” accreditation standards to reflect “an Outcome-Oriented Approach.”\(^ {25}\) By 2009, the ABA’s Standards Review Committee issued its *Statement of Accreditation and Statement of Principles and Fundamental Goals of a Sound Program of Legal Education*,\(^ {26}\) which led to the establishment of a Learning Outcomes standard and an Assessment standard, supported by changes in the Curriculum and Institutional Effectiveness standards to ensure that law schools will make assessment a priority.\(^ {27}\)

The Learning Outcomes standard, as of November 2011, requires identified learning outcomes for law school graduates at the level of entry-level practitioners with competency in professional lawyering skills:
Standard 302. Learning Outcomes

(a) A law school shall identify, define, and disseminate each of the learning outcomes it seeks for its graduating students and for its program of legal education.

(b) The learning outcomes shall include competency as an entry level practitioner in the following areas ... 

(2) the professional skills of:
   (i) legal analysis and reasoning, critical thinking, legal research, problem solving, written and oral communication in a legal context; and
   (ii) the exercise of professional judgment consistent with the values of the legal profession and professional duties to society, including recognizing and resolving ethical and other professional dilemmas.

(3) a depth in and breadth of other professional skills sufficient for effective, responsible and ethical participation in the legal profession;28

The Learning Outcomes standard is buttressed in additional draft standards. Standard 304(a) requires “a curriculum that is designed to produce graduates who have attained competency in the learning outcomes identified in Standard 302.”29 Standard 305, Assessment of Student Learning, requires law schools to “apply a variety of formative and summative assessment methods across the curriculum to provide meaningful feedback to students.”30 Standard 306, Institutional Effectiveness, requires measurement of institutional effectiveness by conducting “regular, ongoing assessment” of learning outcomes, curriculum, assessment methods, and “student attainment of competency.”31

In effect, assessment will now drive instructional design. However, the standard of competency required by the ABA is not entirely clear. The draft standards set a general objective of professional legal research skill at the level of an entry-level practitioner,32 with sufficient skills for “effective, ethical and responsible participation in the legal profession.”33 In the context of the professional skill of legal research, this definition provides only a rough measure for setting specific teaching objectives. The requirement of entry-level attorney skills in legal research, for example, is a lower standard than the skill of a legal information professional such as a law librarian but should be much greater than the skill of a first-year law student. Ideally, students who have completed a rigorous apprenticeship in a legal clinic or internship would be able to attain this level of skill.34 The draft Curriculum Standard 304 provides some clarification, because it mandates an additional, faculty-supervised “rigorous writing experience after the first year” and a “faculty-supervised rigorous course” that includes professional skills such as “(i) simulation course(s); (ii) live client clinic(s); or (iii) field placement(s)
complying with Standard 310(e), all of which involve the development of more advanced legal research skills. Additional work will be necessary to further clarify the standard of competency envisioned by the new ABA standards. Part IV (“The Role of Law Librarians & Law Libraries”) of this article will explore how law librarians are well positioned to identify the requisite level of skill. Assessment of competency is mandated in the draft Standards, including formative and summative assessment.

Formative and Summative Assessments

To make assessment valuable and useful, it must evaluate whether the teaching objectives have been met (i.e., it must be aligned with the objectives of the teaching and must be relevant to the instructional activities and include formative and summative assessments). Assessment should thus be focused on improving student learning in the process of learning (formative assessment) and at the end of the educational process (summative assessment).

Instructors carry out formative assessments during the course of teaching to monitor learning, adjust instruction, and assign grades. For formative assessment to help shape instruction and learning during the course, it must occur while students still have time to make corrections and adapt their learning modalities or cognitive strategies to the learning environment. This type of assessment is fairly informal and can be based on a wide range of inputs. In legal research pedagogy, formative assessment can take the shape of individual or group research projects, classroom quizzes, and resource exercises. In the clinical practice environment, this form of assessment can also include observations by instructors of the students’ work processes and client interactions. The pedagogical key is that formative assessment provides the instructor and students with timely information on the students’ progress, ability, and needs related to achieving the instructional goals of the class.

Summative assessment sums up the level of learning achieved by students after a predetermined period of time. This type of assessment is more formal and based on the production of more focused information products such as tests, projects, and papers. In legal research instruction, summative assessments can be capstone research exercises and/or the production of briefs and memos. Summative assessment provides the instructor with the data necessary to assign accurate grades in a teaching environment.

Both types of assessments are tied closely together in the teaching environment, and the closer that link, the more successful students will be in their summative assessments. Students who have multiple opportunities to measure their progress through the accumulation of ongoing formative assessments will, generally, master the material and perform better in the final analysis. Instruction is likely to be more successful and more easily mastered
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when it is based on an experiential, learn-by-doing pedagogy. Legal research instruction lends itself particularly well to this paradigm.

External Assessments
A solid pedagogy must also take into consideration external assessments affecting instruction such as a set of research competencies assigned by the law school, standards set by the ABA, standards established by librarians and information professionals, and the performance of students on the Bar. External assessments are high-stake testing that hold serious consequences for both students and instructors. In the legal instruction model, the highest level of external assessment is the Bar exam. For students, failure to pass the Bar exam results in the inability to practice; for law schools, an unsuitable passage rate can result in loss of ABA accreditation.

A balanced legal research pedagogy should be geared to identifying a balance between the practical needs of research and the concurrent familiarization with legal materials used in research. The research pedagogy needs to create a reinforcement loop with the doctrinal curriculum and emphasize cognitive processes that lead to practical success. A research pedagogy that is centered on the cognitive process of the law will create a synergy of learning that enhances students’ success on the Bar. This type of pedagogy serves as a continuing loop of formative and summative assessments leading to a higher success ratio in the external assessment, itself a mandated summary assessment.

APPLYING TAXONOMIES FOR ASSESSMENT OF LEARNING OUTCOMES

Successful measurement of learning transfer and retention can best be accomplished when outcomes assessments and instructional objectives are in alignment. A taxonomic approach intrinsically achieves the necessary alignment, as exemplified in Bloom’s Taxonomy and its adaptation to legal research. A taxonomy is especially useful in designing a summative assessment. Considering each one of the four knowledge modalities—factual, conceptual, procedural, and metacognitive—and the cognitive process dimension, the instructor must carefully craft learning objectives that can be accurately reflected in the assessment instruments. The instructor must also clearly differentiate learning objectives from instructional activities. A learning objective is an outcome statement that captures specifically what knowledge, skills, and attitudes the students should be able to exhibit following instruction. In a legal research instructional environment, a learning objective could be written as, for example, “The student will be able to find the common law of evidence in the District of Columbia using trial practice manuals and treatises.” For objectives to align with assessments, the objectives
must be specific, measurable, attainable, relevant, and targeted to the level of learning. Learning objectives should help the instructor integrate the four modalities of learning and connect content with assessments.

Bloom’s Taxonomy

Bloom’s Taxonomy of Educational Objectives, published in 1956,\(^4^4\) popularly known as Bloom’s Taxonomy and revised in 2001,\(^4^5\) has been especially influential. The taxonomy identifies stages of learning or knowledge that can be taught and assessed sequentially. The taxonomy is especially relevant to legal education pedagogy because it focuses on development of thinking and reasoning along a cognitive dimension, as in Table 1.

Bloom’s Taxonomy begins with rote learning such as remembering and understanding and moves sequentially to higher levels of competency where elements of knowledge can be analyzed and applied to problem solving, as in research and synthesis of case law to determine the common law of a particular jurisdiction. The taxonomies finish with the highest levels of competency wherein students use their knowledge and skills to create their own work and to evaluate their processes. Because Bloom’s taxonomic approach so closely tracks the process of legal analysis and legal practice, it is particularly well suited to legal education pedagogy and legal research in particular.\(^4^6\)

Adapting Bloom’s Taxonomy for Legal Research Pedagogy

Professor Paul D. Callister has led the way in exploring how to apply the revised Bloom’s Taxonomy in the pedagogy of legal research.\(^4^7\) In his Adapted Taxonomy, assessment is implicit in the functional objectives of legal research because the end result is a conclusion of some kind, often in the form of a measurable product,\(^4^8\) such as a memorandum of points and authorities, a legal brief, etc., or even simply a research log. This end product

**TABLE 1** An illustration of Bloom’s Taxonomy Table

<table>
<thead>
<tr>
<th>Knowledge Dimension</th>
<th>Cognitive Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factual Knowledge</td>
<td></td>
</tr>
<tr>
<td>Conceptual Knowledge</td>
<td></td>
</tr>
<tr>
<td>Procedural Knowledge</td>
<td></td>
</tr>
<tr>
<td>Metacognitive Knowledge</td>
<td></td>
</tr>
</tbody>
</table>
provides a means for summative assessment, but teaching the process of legal research also provides opportunities for formative assessment.

Professor Callister adapts Bloom’s Taxonomy “as a minimal schema, to order legal research skills.” He presents a comprehensive application of the taxonomy to instructional design, learning activities, and assessments. His Adapted Taxonomy lays the groundwork for a methodology based on solid educational theory. It generally follows the six categories of Bloom’s cognitive dimension, progressing from simple, factual recall to the researcher’s metacognitive analysis of his or her research process. For Callister, the taxonomy begins with the professional researcher acknowledging that he or she does not yet know what he or she does not know. The beginning of a research inquiry lies on the edge of the schema or construct of what is known, where the researcher makes the leap into the field of things yet to be known.

Callister uses active verb forms to label cognitive action rather than the static noun forms Bloom used, for example, changing Bloom’s first category of Knowledge to Remembering, which he describes as recognizing and recalling. Similarly, Callister renames Bloom’s second stage of learning, Comprehension, as Understanding, where the learner has the “ability to define, explain, outline, and exemplify research concept, paradigms, (schemata), and issues.” This construct reflects the incremental movement in the cognitive dimension from simple recall to mastering application of a skill, a level of knowledge that Callister labels Exercise; in other words, learning is accomplished by exercising the various schemata that comprise legal research skills. And by repeated practice, students construct the cognitive patterns necessary to solve problems and think like professionals.

At the fourth cognitive stage, Callister compresses Bloom’s two steps of Analysis and Synthesis into one concept. He defines Analysis as the ability to separate issues into manageable elements and to organize those issues “so that general background knowledge precedes attempts to resolve narrower issues.” He explains the unified concept of Analysis and Synthesis as the process of restructuring a problem by separating, identifying, and reordering its elements into manageable schema. This is the level at which students are required to understand the concept of “working the problem.” Working the problem is an analytical skill on a level with finding research terms and identifying issues.

Creation of the final product is the Concluding phase of the research, where the researcher answers the questions asked or solves the problem. Callister’s Adapted Taxonomy emphasizes the sixth and final step, Metacognition, which calls for self-evaluation. At this level, the researcher is capable of reviewing and critiquing his or her research results and the process that led to the end product. The learner has finally moved from knowing nothing about the area of inquiry to a level of mastery. This stage is recognized by students who ask, “How do you know when to stop researching?”
Using the Taxonomy to Design Learning Objectives & Assessment for a Course

The advantage of a taxonomy is that it identifies the kind of thinking involved in each kind of knowledge in a visually intuitive grid format as illustrated in Table 2.

The grid format of the taxonomy, with cognitive dimension along the top and knowledge dimension along the left side, allows the instructor to map course objectives together with the level of thinking to identify objectives. The exercise of creating the grid and filling in the objectives achieves two goals. First, it helps the instructor create and implement objectives that encourage cognitive skills along the continuum from rote learning to metacognition, as illustrated in Table 2. Second, the mapping of objectives is an aid to creating various kinds of assessment activities that measure the cognitive skills, as illustrated in Table 3.

The graphics illustrate how knowledge and cognitive dimensions interact as research progresses. For example, factual knowledge of state and federal primary sources of law involves the thinking skills of remembering or recalling information. But conceptual knowledge, comprehending how the information fits into a political organization of state and federal law, each with legislative and judicial law-making powers, and the concept of a double tripartite system, requires a higher level of thinking or understanding. Assessing whether a student has reached this stage of thinking and knowledge is facilitated by the taxonomic structure, which aligns objectives and assessments.

For example, at the most basic level of learning legal research, the first cognitive stage of Remembering, the objective would be for the learner to recall the primary sources of federal and state law including codes, case law, regulatory codes and registers, session laws, statutes-at-large, rules of procedure and evidence, court rules, etc.; and the secondary materials and tools for finding, interpreting, and updating primary law, such as annotated codes, case law digests, citators, legislative histories, encyclopedias, treatises, indexes, and articles. Assessment of this knowledge could be achieved by matching or multiple-choice exercises, oral recitation, completion of a research assignment, etc. At the highest level of learning, Metacognition, the instructor can help the learner meet the objective and assess it by having the learner write an essay evaluating his or her search strategies, procedures, and conclusions.

Professional Responsibility: The Ethics of Information Use

Lawyers have a professional responsibility to research and learn the law necessary to represent their clients. That responsibility is laid out in licensing requirements, the profession’s Code of Professional Responsibility, and the Model Rules of Professional Conduct, as well as in case law. Although
**TABLE 2** Callister’s Adapted Taxonomy: Objectives

<table>
<thead>
<tr>
<th>Knowledge Dimension</th>
<th>Cognitive Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Remembering</td>
</tr>
<tr>
<td>Factual</td>
<td><strong>Objective</strong>: Recall sources; primary and secondary.</td>
</tr>
<tr>
<td>Conceptual</td>
<td></td>
</tr>
<tr>
<td>Procedural</td>
<td></td>
</tr>
<tr>
<td>Metacognitive</td>
<td></td>
</tr>
<tr>
<td>Knowledge Dimension</td>
<td>Cognitive Dimension</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>Remembering</td>
</tr>
<tr>
<td>Factual</td>
<td>Matching and multiple-choice exercises; list resources; oral recitation of sources.</td>
</tr>
<tr>
<td>Conceptual</td>
<td></td>
</tr>
<tr>
<td>Procedural</td>
<td></td>
</tr>
<tr>
<td>Metacognitive</td>
<td></td>
</tr>
</tbody>
</table>
ethical practice is required in professional legal research, at least to avoid malpractice, it is not specifically included in either Bloom’s Taxonomy or Callister’s Adapted Taxonomy. It is possible to include professional responsibility in various sections of the taxonomy, however, as subject matter to be learned, from the lowest level of Remembering or recognizing and progressing right up through the highest level of Metacognition. Metacognition in this context would require reflection on the ethical and legal requirement to meet the professional standard of care.

The Model Rules mandate that “[a] lawyer shall provide competent representation to a client. Competent representation requires the legal knowledge, skill, thoroughness and preparation reasonably necessary for the representation.”71 One court has held that legal knowledge includes the ability to “discover those additional rules of law which, although not commonly known, may be readily found by standard research techniques.”72 The Model Rules do not establish a standard of competent legal research, but a standard can be synthesized from case law as one of ordinary and common care of an attorney: “such skill, prudence, and diligence as lawyers of ordinary skill and capacity commonly possess and exercise.”73 The ABA Standards’ requirement of law student education in ethics in Standards 301, Objectives; 302, Learning Outcomes; 303, Curriculum; and 305, Institutional Effectiveness lend support for the need to teach the ethical practice of legal research. Librarian Lawrence Duncan MacLachlan has argued that this common standard of care is evolving upward “in response to increasing sophistication in research tools and methods of accessing those tools.”74

Professional ethics are included in law librarians’ ongoing efforts to develop a pedagogy of legal research. The first Boulder Statement on Legal Research Education, from 2009, adopts the Carnegie Report’s recommendation that law schools provide a practical apprenticeship in learning both the legal system and law while developing a sense of professional “identity and purpose.”75 As a part of this apprenticeship,

[Students will learn to apply the professional and ethical norms implied by their research . . . . For legal research instruction, this includes an ongoing examination of professional standards including the identification of ethical responsibilities, the avoidance of plagiarism, and the fulfillment of the ethical duty to conduct adequate and thorough research.76

The results of ineffective analytical research can include, for example, dismissal of the complaint, loss or reduction of damages for the plaintiff, and attorney’s fees for the plaintiff’s counsel. There is potential liability for malpractice claims77 or inadequate research that results in Rule 11 sanctions for bringing frivolous claims.78
THE ROLE OF LAW LIBRARIANS & LAW LIBRARIES

Qualifications of Law Librarians

Law librarians are uniquely qualified as experts in both information science and law to identify legal research learning objectives and to assess student outcomes. They have a breadth and depth of knowledge about research resources and methods beyond that of most legal practitioners. This makes them well positioned to identify the appropriate standard of skill necessary to meet the ABA’s requirement for law school graduates (i.e., professional mastery at the level of an entry-level practitioner). In many law schools, their expertise is sufficiently recognized that librarians teach legal research in both first-year legal writing courses and in Advanced Legal Research courses. At the University of the District of Columbia David A. Clarke School of Law, librarians have in the past year experimented with embedded librarianship as well, by taking part in clinic and seminar courses. Whether or not librarians formally teach law students in the classroom, they conduct a great deal of informal legal research instruction at the reference desk.

The expertise of law school librarians is also unique in that it is part of their professional competence to keep up with all the changes in legal research resources, particularly the online resources. Law practitioners and law faculty all rely on law librarians for assistance in these areas. For example, the beta versions of WestlawNext and Lexis Advance were all demonstrated first to the law school librarians. In addition, law school librarians also monitor changes in legal research products such as Bureau of National Affairs (BNA), Commerce Clearing House (CCH), HeinOnline, etc. A standard part of a law librarian’s professional development is attending conferences with workshops on new products and processes. Moreover, law librarians have the task of selecting and providing all the legal research resources necessary for mastery of legal research skills.

The law library not too long ago was the setting for practicing legal research. While law students today may have individual passwords to Lexis and Westlaw, the law library Web site is still the portal for comprehensive legal research databases and reports. Some materials continue to be available only in print in the law library. In sum, in addition to providing access to resources, law school libraries and librarians provide both the setting for students to master the professional skills of legal research and the instruction in these skills.

Librarian Initiatives

Law librarians have taken significant steps toward identifying the skills required by the ABA’s standards, expressing them in the form of learning outcomes, and outlining appropriate assessment tools. As the legal profession began to set standards for lawyering skills, including the skill of legal
research, law librarians have concurrently developed a body of work identifying professional legal research competencies and a pedagogy of legal research. Following publication of the MacCrate Report, the American Association of Law Libraries (AALL) assembled a Research Instruction Caucus that published *Core Legal Research Competencies: A Compendium of Skills and Values as Defined in the ABA’s MacCrate Report.* More recently, AALL convened a Law Student Research Task Force, which has published drafts of *Law Student Research Standards.*

Recognizing the need for legal research scholars and teachers to develop a pedagogy for legal research teaching, law school librarians have also begun to collaborate on the topic in several forums, including the Boulder Conferences and to pursue individual scholarship and publication. Recent efforts by law librarians have used as their starting point The Carnegie Report, which calls for integrating “the cognitive, the practical, and the ethical-social” aspects of a legal apprenticeship in legal education. The Carnegie Report emphasizes the importance of assessment and in particular, using formative assessment to give students feedback in the process of learning for the purpose of “using assessments appropriate to developing expertise.” The value of assessment in practice situations where learning skills occur is that the student is exposed to the “blending” of “knowledge, skill and ethical comportment . . . in professional practical reasoning.”

In 2009, Barbara Bintliff, now law library professor and director at the University of Texas Tarlton Law Library, brought together a group of law school librarians at the University of Colorado School of Law to present and publish the first *Boulder Statement on Legal Research Pedagogy.* This first *Boulder Statement* adopts the Carnegie Report recommendation of a cognitive “ethical-social apprenticeship” for teaching how to research and resolve legal problems in the context of professional standards and ethical duty and sets forth an agenda for developing an experiential pedagogy for learning legal research. The language of the Boulder Statement also reflects that of Callister’s Adapted Taxonomy: Remembering, Understanding, Application, Analysis & Synthesis, Concluding, and Metacognition. It characterizes the legal research education process as “iterative and analytical” in

1. [a] practical apprenticeship of identifying significant facts, determining legal issues and problems; and locating, evaluating, and manipulating research authorities . . . [and]
2. learning the importance of understanding the legal system . . . [and]
3. evaluating available legal resources . . . [and]
4. synthesizing information about legal systems and resources to identify the best research plan . . . [and]
5. continually re-evaluating their progress and results . . . [and]
6. applying the professional and ethical norms implicated by their research.
At the second Boulder Conference in 2010, law librarians published a *Signature Pedagogy Statement* “offered in the spirit of the ongoing process of improving the preparation of law students for their legal careers.”\(^{95}\) The Signature Pedagogy describes the common practices or framework of an area of education that is easily recognizable because it is almost universally followed, such as the clinical, medical education teaching practice of medical rounds.\(^{96}\) In the Carnegie Report, a signature pedagogy is more than the educational theories or techniques in a given area of education. The concept of a signature pedagogy as an analytical model is that it examines the pedagogy on several levels: the a) surface structure, the behavioral features that can be seen and copied; b) the deep structure of theory, rationales and models that supports the surface structure; c) the tacit structure of values that the structure exemplifies; and d) the shadow structure of what is missing from the structure.\(^{97}\)

The Boulder Conference Signature Pedagogy Statement tracks the Carnegie Report’s model as a multilevel structure and provides examples of how it works in legal research education. For example, the surface structure is the teaching of an “intellectual process for the application of methods for legal research” that includes “providing regular assessment.”\(^{98}\) The deep structure “enables students to master analytic and metacognitive approaches” for, among others, evaluating and synthesizing legal research resources.\(^{99}\) The tacit structure is the implicit modeling of “values, attitudes, and norms of ethical professional behavior” such as “accountability, honesty, thoroughness,” etc.\(^{100}\) The shadow structure of legal research pedagogy, what is missing from legal education, for example, includes the lack of integration of legal research into the legal education curriculum and the undervaluation of research experts such as law librarians.\(^{101}\)

In sum, law librarians, legal research experts, by virtue of their expertise in legal research practice and theory, and by academic qualifications that usually require advanced degrees in both legal education and information science, have the knowledge and background to set forth an effective and theoretically sound pedagogy of legal research education. Law librarians have already taken a leading role in developing that pedagogy, including learning objectives and assessment.

**CONCLUSION**

Assessment of learning outcomes has been widely studied and discussed in the legal academy for more than a decade, with widespread acknowledgement that course examination grades and Bar passage are insufficient for assessing all aspects of law students’ competency for practice. Efforts to rethink assessment in legal education and legal research pedagogy culminated in the ABA’s revision of legal education standards. These standards...
require a curriculum’s learning objectives to align with formative and sum-
mative assessments that “provide meaningful feedback to students.” In the
context of teaching law students to meet professional skill standards for legal
research, a taxonomic approach to teaching aligns teaching objectives with
assessing student learning. Bloom’s *Taxonomy of Educational Objectives*, the
2001 Revised Taxonomy, and Professor Paul Callister’s adaptation facilitate
assessment for the pedagogy of legal research. Law librarians, uniquely qual-
ified experts in performing and teaching legal research, are in the process
of refining a pedagogy for legal research instruction. Their efforts incorpo-
rate the cognitive apprenticeship envisioned by the Carnegie Report, the
new ABA standards for competent and ethical legal research skills, and the
educational pedagogy of Bloom as adapted by Callister.

**NOTES**

1. The ABA is the accrediting agency for law schools. See ABA Sec. Leg. Educ. & Admis.
accreditation.html

2. See, e.g., ABA Sec. Leg. Educ. & Admis. to the Bar Standards Review Committee,
*Draft after November 2011 Meeting*, Chapter 3, Program of Legal Education, Standard 302,
Learning Outcomes. Available at http://www.americanbar.org/content/dam/aba/migrated/2011_
build/legal_education/committees/standards_review_documents/jan2012/20111222_standards_chapters_
1_to_7_post_nov11.authcheckdam.pdf

(a) A law school shall identify, define, and disseminate each of the learning outcomes it
seeks for its graduating students and for its program of legal education . . . .

(b) . . .

(2) the professional skills of:
(i) legal analysis and reasoning, critical thinking, legal research, problem solving,
written and oral communication in a legal context; and
(ii) the exercise of professional judgment consistent with the values of the legal pro-
professions and professional duties to society, including recognizing and resolving
ethical and other professional dilemmas.

3. ABA, *supra* n. 2, at Chapter 3, Program of Legal Education, Standard 301, Objectives.
A law school shall maintain a rigorous educational program that prepares its students for

(1) admission to the bar and
(2) effective, ethical and responsible participation in the legal profession.

4. ABA, *supra* n. 2, at Standard 305, Assessment of Student Learning. See also ABA, *supra* n. 2,
at Standard 304, Curriculum, which requires law schools to offer a curriculum that “that is designed to
produce graduates who have attained competency in the learning outcomes identified in Standard 302.”
*Id.*

5. Formative assessments relate to developing teaching and learning objectives during the
course. See *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom’s Taxonomy of
Educational Objectives* 245 (Lorin W. Anderson & David R. Krathwohl et al. eds., 2001) (hereinafter the
Revised Taxonomy) (Longman 2001).
6. Summative assessments relate to the grading process, which sums up student learning for the whole course. *Id.* at 247.

7. ABA, *supra* n. 2, at Standard 305, Assessment of Student Learning. “A law school shall apply a variety of formative and summative assessment methods across the curriculum to provide meaningful feedback to students.” Interpretation 305-1:

Formative assessment methods are measurements at different points during a particular course or over the span of a student's education that provide meaningful feedback to improve student learning. Summative assessments methods are measurements at the culmination of a particular course or the culmination of any part of a student's legal education that measures the degree of student learning.


12. Librarians are familiar with the use of taxonomies in classifying and cataloging information materials. During the last several decades, taxonomies have been introduced as a useful tool in education pedagogy. See *generally Taxonomy of Educational Objectives* (Benjamin S. Bloom et al. eds., David McKay Co. 1956) (hereinafter Bloom's Taxonomy).


16. *Id.* at 124.

17. The MacCrate Report provides an elaborate explanation of the knowledge, ability, and understanding of legal analysis and “the nature of legal rules and institutions” required for using the tools of legal research to formulate issues for research in an effective research plan. *Id.*

18. *Id.* at 138. The MacCrate Report requires a law school graduate to have:

3.1. Knowledge of the Nature of Legal Rules and Institutions;

3.2. Knowledge of and Ability to Use the Most Fundamental Tools of Legal Research;

3.3. Understanding of the Process of Devising and Implementing a Coherent and Effective Research Design.


In measuring its institutional effectiveness pursuant to Standards 202 and the rigor of its education program pursuant to Standard 301, the dean and faculty of a law school shall:

(a) conduct regular, ongoing assessment of whether its learning outcomes, curriculum and delivery, assessment methods and the degree of student attainment of competency in the learning outcomes are sufficient to ensure that its students are prepared to participate effectively, ethically, and responsibly as entry level practitioners in the legal profession; and

(b) use the results of this review to improve its curriculum and its delivery with the goal that all students attain competency in the learning outcomes.

(Emphasis supplied.)

28. See supra n. 2 (Emphasis supplied.)
29. See ABA, supra n. 4:

(a) A law school shall offer a curriculum that is designed to produce graduates who have attained competency in the learning outcomes identified in Standard 302. . . .

30. See ABA, supra n. 4:

A law school shall apply a variety of formative and summative assessment methods across the curriculum to provide meaningful feedback to students (Emphasis supplied).
31. See ABA, supra n. 27.
32. See ABA, supra n. 2.
33. ABA, supra n. 2, at Standard 302, Interpretation 302-4.
34. ABA supra n. 2, at Standard 304(a)(2-3), Curriculum, requiring at least one rigorous skills course of three semester hours after the first year, including simulation courses, live client clinics, or field placement.
35. Id.
36. Revised Taxonomy, supra n. 5, at 245.
37. Id. at 246.
38. Id. at 247.
39. Id. at 249.
40. See, e.g., University of the District of Columbia David A. Clarke School of Law Clinics’ Competency Principles for Legal Research (copy on file with the authors).
41. See, e.g., Boulder Statement, supra n. 11; Boulder Signature Pedagogy, id.; American Association of Law Libraries Legal Research Competency Principles, infra n. 83.
42. Revised Taxonomy, supra n. 5, at 250.
44. Bloom’s Taxonomy, supra n. 12.
45. Revised Taxonomy, supra n. 5.
46. As noted by Professor Callister and others. See, e.g., Callister, supra n. 43.
47. Id.
48. Id. at 209.
49. Id. at 193.
50. Id. Callister credits Maureen Fitzgerald for identifying Bloom’s taxonomy as useful for grounding legal research educational pedagogy. Id. at 197. See Maureen F. Fitzgerald, What’s Wrong with Legal Research and Writing? Problems and Solutions, 88 L. Lib. J. 247, 271 (1996).
51. See generally id.
52. See infra Table 2.
54. In using verb forms, Callister is following the Revised Taxonomy, supra n. 5, which labels categories with verbs rather than nouns.
55. Callister, supra n. 43, at 199.
56. Id. at 202.
57. Id. at 203.
58. Id.
59. Id.
60. Id. at 205.
61. Id.
62. Id.
63. Id. See also Paul D. Callister, Working the Problem, 2003 Ill. B.J., at 43.
64. Callister, supra n. 43, at 206.
65. Id. at 211. See also Kristina L. Niedringhaus, Teaching Better Research Skills by Teaching Metacognitive Ability, 18 Persps. 113, 117 (2010) (“Students who understand what they know and understand how to control their own learning are more likely to understand how to apply what they have learned previously to new situations.”)
66. Examples are from Callister, supra n. 43.
67. Id.
68. These examples are from Callister, supra n. 43, at 216.
70. For a leading malpractice case that explicates the standard of care, see Smith v. Lewis, 530 P.2d 589, 593 (Cal. 1975), overruled on other grounds by In re Marriage of Brown, 544 P.2d 561 (Cal. 1976) (cited and quoted in MacLachlan, supra n. 69, at 616–617).

71. Model Rule 1.1, Competence, supra n. 69. This rule is enforced by a disciplinary rule for “[f]ailing to act competently.” Disciplinary Rule 6-101, Failing to Act Competently (“a lawyer shall not . . . handle a legal matter without preparation adequate in the circumstances,” id.


73. Smith v. Lewis, supra n. 70.

74. MacLachlan, supra n. 69, at 617.

75. See Boulder Statement, supra n. 11.

76. Boulder Signature Pedagogy, supra n. 11.


81. See MacCrate Report, supra n. 15.


84. See, e.g., Callister, supra n. 43, at 191.

85. See Boulder Statement, Boulder Signature Pedagogy, supra n. 11.


89. Id. at 171.

90. Id.

91. Id. at 172–173.

92. See The Carnegie Report, supra n. 13, at 160; Boulder Statement, supra n. 11.

93. Callister, supra n. 43, at 200.

94. See Boulder Statement, Boulder Signature Pedagogy, supra n. 11. (Emphasis supplied.)

95. See Boulder Statement, Boulder Signature Pedagogy, supra n. 11.

96. See The Carnegie Report, supra n. 13, at 50.

97. Id. at 51.

98. See Boulder Statement, Boulder Signature Pedagogy, supra n. 11.

99. Id.

100. Id.

101. Id.