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Joni Larson
Indiana Tech Law School

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JONI LARSON

Getting Up to Speed: Understanding the Connection Between Learning Outcomes and Assessments in a Doctrinal Course

62 N.Y.L. SCH. L. REV. 11 (2017–2018)

ABOUT THE AUTHOR: Joni Larson is a professor of law at Indiana Tech Law School. She earned her J.D. from the University of Montana School of Law, her LL.M. from University of Florida College of Law, and her M.A. from Michigan State University.

LEARNING OUTCOMES AND ASSESSMENTS IN A DOCTRINAL COURSE

I. INTRODUCTION

Many professors are bristling over the recent changes to American Bar Association (ABA) Standards 302¹ and 314.² Commentary runs from “I don’t understand what a learning outcome is” to “isn’t the final exam enough of an assessment?” to “how long will we need to teach to the ABA standard?” Some professors may be resistant, if they are honest, merely because learning outcomes and assessments have not been a part of the law school culture and are not well understood.

Is the direction taken by the ABA a good one, given the loud clamoring for a need to change legal education?³ What are learning outcomes? Why are they important? What are assessments? Are assessments needed? Do they relate to learning outcomes?

Let us start by considering a traditional law school course. The content to be covered is predetermined and announced in the syllabus handed out before classes begin. The professor works through the material at a pace designed to cover all the topics before the term ends. The goal is to cover the material; the time allocated to each topic is relatively fixed. Determining if students are learning and able to apply the content has never been the focus, or at least not the primary focus. It has been the students’ job to “get” the material and keep up.⁴

But what if the focus were flipped?⁵ What if time became the variable and learning the constant? If students have sufficiently mastered an area of the law to be

1. Standard 302 is titled “Learning Outcomes”:

A law school shall establish learning outcomes that shall, at a minimum, include competency in the following: (a) [k]nowledge and understanding of substantive and procedural law; (b) [l]egal analysis and reasoning, legal research, problem-solving, and written and oral communication in the legal context; (c) [e]xercise of proper professional and ethical responsibilities to clients and the legal system; and (d) [o]ther professional skills needed for competent and ethical participation as a member of the legal profession.

ABA STANDARDS AND RULES OF PROCEDURE FOR APPROVAL OF LAW SCHOOLS § 302 (2017) [hereinafter ABA STANDARDS].

2. Standard 314 provides: “A law school shall utilize both formative and summative assessment methods in its curriculum to measure and improve student learning and provide meaningful feedback to students.” *Id.* § 314.

3. See, e.g., BRIAN Z. TAMANAHA, *FAILING LAW SCHOOLS*, at ix–xiii (Chi. Series in Law & Soc’y, 2012) (examining how the U.S. legal system is at risk economically if legal education is not reformed); Margaret Martin Barry, *Practice Ready: Are We There Yet?*, 32 B.C. J.L. & Soc. JUST. 247, 254–56 (2012) (discussing certain pressures placed on law schools to reform teaching approaches to produce practice-ready lawyers at graduation); Harry T. Edwards, *The Growing Disjunction Between Legal Education and the Legal Profession*, 91 MICH. L. REV. 34, 42–52, 57–62 (1992) (noting the difference between “practical” and “impractical” legal scholarship and arguing the necessity for law schools to reform legal education by hiring a balance of “practical” and “impractical” legal scholars).

4. See Joan Hawthorne, *Does Assessment Make Colleges Better? Let Me Count the Ways*, CHRON. HIGHER EDUC. (Aug. 19, 2015), <http://www.chronicle.com/article/Does-Assessment-Make-Colleges/232461> (asserting that, prior to engaging in assessments, higher education was about “what professors professed,” and the “responsibility for learning [the material] was on the student”).

5. See *id.* (“Rather than plan a class by choosing a text and then dividing the semester into segments corresponding with chapters, we recognized that learning might be better achieved if we named what students should get from a class, figured out how we’d like to see them demonstrate that learning, and

able to do something with the information, the professor does not need to allocate more class time to the topic.⁶ If they have not, the professor can spend more time on that material. However, the professor will know if students understand the material, and are able to do something with it, only by checking in with them. And this is where learning outcomes⁷ and assessments⁸ come into the picture.

I begin by discussing the foundational information, addressing what a “learning outcome” is in Part II and what an “assessment” is in Part III. Then, in Part IV, I discuss a variety of methods by which assessments can seamlessly and effectively be incorporated into a course and used to determine skill level.

II. LEARNING OUTCOMES

The ABA requires law schools to establish learning outcomes.⁹ A learning outcome describes how students will use information, with focus on what they can *do* with what they have learned.¹⁰ Learning outcomes can be designed for different program levels.¹¹ For example, they may be designed for the law school as an organization: Graduates should be able to write persuasively, think critically, and conduct legal research. Learning outcomes may be based on the student’s year: What should a first-year student know and be able to do? A second-year student?

Other learning outcomes focus on expectations within a course: What will students be able to do with what they have learned in the course? Arguably, course-level learning outcomes will inform the higher-level learning outcomes, as the

structured the semester to prepare students for doing that demonstration. We had to think about what students would do rather than what we’d say.”).

6. See William G. Spady, *Organizing for Results: The Basis of Authentic Restructuring and Reform*, EDUC. LEADERSHIP, Oct. 1988, at 4, 5–6 (“Differences in students’ aptitudes and abilities will be reflected in the time needed to reach given outcomes rather than their success on those outcomes.”).
7. The term “learning outcomes” refers to “what learners can actually do with what they know and have learned—they are the tangible application of what has been learned.” WILLIAM G. SPADY, AM. ASS’N OF SCH. ADM’RS, OUTCOME-BASED EDUCATION 2 (1994).
8. “Assessment” refers to the process of periodically checking in with students to ensure that they can in fact perform the objectives set out in the learning outcomes. See M.J. Bezuidenhout & H. Alt, *Assessment Drives Learning: Do Assessments Promote High-Level Cognitive Processing?*, 25 S. AFR. J. HIGHER EDUC. 1062, 1064 (2011).
9. ABA STANDARDS, *supra* note 1, § 302. Other professional skills, as identified in Standard 302, are defined as including “interviewing, counseling, negotiation, fact development and analysis, trial practice, document drafting, conflict resolution, organization and management of legal work, collaboration, cultural competency, and self-evaluation.” *Id.* § 302-1.
10. SPADY, *supra* note 7.
11. PAT HUTCHINGS, NAT’L INST. FOR LEARNING OUTCOMES ASSESSMENT, WHAT NEW FACULTY NEED TO KNOW ABOUT ASSESSMENT 2–3 (2011), <http://www.learningoutcomeassessment.org/documents/ABfaculty.pdf>. Hutchings identifies the institutional level, the program or department level, and the classroom level. *Id.* See also Kathleen A. Fitzpatrick, *Restructuring to Achieve Outcomes of Significance for All Students*, EDUC. LEADERSHIP, May 1991, at 18, 18–19 (discussing how to design a curriculum around defined learning outcomes).

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higher-level learning outcomes must be constructed from what occurs in the individual courses. Accordingly, the initial focus should be with course-level learning outcomes.

While defining learning outcomes is fairly straightforward, actually creating them can seem overwhelming. This is particularly true because, up to this point, most professors' focus has been on course content and coverage, as opposed to students' use of the information. But it is not an insurmountable project, and some may even find the process challenging, enlightening, and worthwhile.

The process begins with what the professor knows—the main subject matter areas she covers during the course—and asks why those areas are important for students to know and understand. Having mastery over course content, a professor should easily be able to answer this question.

The next step is to connect the professor's teaching goals (and the reason for those goals) to the student's learning. The professor must first shift her focus from what she intended to teach to what content the student has learned. I use a Bike Riding 101 course in Figure 1 for illustration purposes.

Figure 1

Professor covers:	Student learns:
The history of the bike: how it was developed over time in response to a need for cost effective and efficient transportation.	How the history of the bike informs its current construction and use.
Mechanics: bike construction, maintenance, and alterations.	Issues related to maintenance and ownership of a bike.
Current uses: exploration of the variety of uses of the bike such as pedicabs, mountain biking, and racing.	The ways in which the bike is currently used in society.

But identifying what the student is expected to learn is not the end of the process. Nor is it enough for students to do well on an exam that tests their knowledge of the information delivered by the professor. One more step is needed: the one that moves learning beyond the current system.

A learning outcome is not merely a “goal” or a test of knowledge. It encompasses the *actions* students should be able to perform to *demonstrate* they have learned the material. This difference between a learning outcome and a goal is represented in the structure of the learning outcome. A learning outcome must be a statement about the student actually *doing*, not just *knowing*.¹² Accordingly, a well-designed learning outcome will have a “demonstration” or action verb—a verb that captures the expectation of a student using the course content to do something, such as to explain, analyze, evaluate, or compute.¹³ Figure 2 gives a few examples of goal-oriented words versus action-oriented verbs.

12. Hawthorne, *supra* note 4 (“[I]n an era of Wikipedia and smartphones, ‘knowing’ doesn’t seem all that crucial compared with doing.”); SPADY, *supra* note 7 (“[O]utcomes involve actual doing, rather than just knowing or a variety of other purely mental processes . . .”).

13. SPADY, *supra* note 7.

Figure 2

Knowing (Goal-oriented)	Doing (Action-oriented)
Define	Describe
State the rule of	Explain
Recite	Create
Understand	Design
Remember	Apply

We can see, in Figure 3, how this shift from *knowing* to *doing* could be demonstrated in the Bike Riding 101 course.

Figure 3

Professor covers:	Student learns:	Student can (the outcome):
The history of the bike: how it was developed over time in response to a need for cost effective and efficient transportation.	How the history of the bike informs its current construction and use.	Explain how the history and development of the bike led to its current construction.
Mechanics: bike construction, maintenance, and alterations.	Issues related to maintenance and ownership of a bike.	<ul style="list-style-type: none"> • Oil a chain. • Change a tire. • Tune up a gear shift. • Prepare a maintenance schedule.
Current uses: exploration of the variety of uses of the bike such as pedicabs, mountain biking, and racing.	The ways in which the bike is currently used in society.	<ul style="list-style-type: none"> • Ride a bike. • Propose an alteration to the current construction of the bike so it could be adapted to a new use.

Finally, a learning outcome goes further than merely specifying the subject matter to be learned. It incorporates a reference to the knowledge and skills the student needs as proof of having achieved the outcome. In other words, an outcome includes a description of what students should (1) know and (2) be able to do to demonstrate that competence, as well as the context in which the competence should be demonstrated.

The professor may want to develop short-term outcomes, such as what students are expected to be able to do with a piece of information or specific small topic or with information presented on a specific day. Or the focus may be on medium-term outcomes, such as what students are expected to be able to do based on a major topic covered during the course. Finally, long-term, course, or exit outcomes will address what students are expected to be able to do with the information when they complete the course or, for those with more far-reaching goals, what students are expected to be able to do with the information in the student's law practice. Thus, learning outcomes require deep thinking about how the law looks when it is being applied.

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The focus on *doing* is a logical progression based on what law students are training to do: practice law. The student must not only know and understand the law, but also be able to apply that knowledge.¹⁴ The current hiring environment for law students suggests an assessment, or skills-based, approach will better position graduates for practice.¹⁵ Those who have attained and can demonstrate they have attained the greatest number of skills, including the ability to think critically,¹⁶ can hit the ground running. They have the knowledge and skills to be productive and effective lawyers from the beginning of their careers. One academic explained the process of learning as follows:

Deep learning occurs when students are able to consider information or ideas from different viewpoints to solve problems, use decision-making skills to arrive at conclusions, can make applications in varying contexts, and use initiative to explore new knowledge. To do this, students have to use the evaluative and creative (or analysis and synthesis) cognitive functions which form the highest levels of the taxonomy of learning.¹⁷

This perspective can be demonstrated by analogy to other skills-based activities. Those who want to play the piano must be able to read music and understand where the notes are on the piano. But that is not enough. Nor is listening to their instructor play the piano. They must sit down at the keyboard and actually hit the proper keys, information found on the sheet music.

Similarly, aspiring football players must do more than watch film clips, memorize plays, and track the movements of those who are more skilled at the game. They must get out on the field and see what it is like to actually run a play with their teammates

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14. ROY KILLEN, *TEACHING STRATEGIES FOR QUALITY TEACHING AND LEARNING* 4 (3d ed. 2010) (“High-quality learning in any context has occurred when . . . [l]earners are able to apply knowledge to solve problems. For this to occur, learners must not only know and understand—they must also be able to do things with their knowledge.”).
 15. See ALEXA Z. CHEW & KATIE ROSE GUEST PRYAL, *BRIDGING THE GAP BETWEEN LAW SCHOOL AND LAW PRACTICE* 4 (2015), <http://law2.wlu.edu/deptimages/externship%20program/bridgingthegap.pdf> (describing the gap between what law students learn and what legal employers expect from novice attorneys, and presenting strategies to help bridge that gap); LEXISNEXIS, *WHITE PAPER: HIRING PARTNERS REVEAL NEW ATTORNEY READINESS FOR REAL WORLD PRACTICE* (2015), https://www.lexisnexis.com/documents/pdf/20150325064926_large.pdf (“[Ninety-five percent] of hiring partners and associates in a recent survey believe recently graduated law students lack key practical skills at the time of hiring. Law schools are presented with a great opportunity to improve upon the employment prospects of their graduates by focusing on certain practical skills that law firms most desire.”); Neil W. Hamilton, *Changing Markets Create Opportunities: Emphasizing the Competencies Legal Employers Use in Hiring New Lawyers (Including Professional Formation/Professionalism)*, 65 S.C. L. REV. 567, 568 (2014) (analyzing research on the competencies that legal employers and clients look for in new lawyers, and underscoring the importance of utilizing a skills-based approach in law school to develop those competencies); Susan C. Wawrose, *What Do Legal Employers Want to See in New Graduates?: Using Focus Groups to Find Out*, 39 OHIO N.U. L. REV. 505, 522 (2013) (recommending changes to law school curricula to develop skills desired by employers).
 16. While there is a lot of debate about what constitutes critical thinking, for the purposes of this discussion, critical thinking means the ability to perform at the highest levels of Bloom’s Taxonomy (discussed *infra*).
 17. Bezuidenhout & Alt, *supra* note 8, at 1074 (citation omitted).

against an opponent. In the same manner, law students must not only know the rules of civil procedure, but also understand if and how those rules can be used to solve a client's problem.

III. ASSESSMENT

Once she has created a learning outcome, the professor must determine if or when the outcome (or a step along the way to a learning outcome) has been achieved.¹⁸ An assessment follows the implementation of a learning outcome and has two feedback loops.¹⁹ First, students are given the opportunity to consider what they have learned, demonstrate their knowledge, and receive useful feedback about their knowledge and skill level.²⁰ Second, the professor is given the opportunity to consider what students have demonstrated and determine if they have sufficiently achieved the learning outcome before moving to new information.²¹ Learning outcomes can be further understood in light of what an assessment must do. A learning outcome must identify

18. HUTCHINGS, *supra* note 11.

19. As with learning outcomes, each law school is now required to use assessments. Criterion 4B of the Higher Learning Commission, titled "Teaching and Learning: Evaluation and Improvement," focuses on this assessment requirement and provides, in part:

The institution demonstrates a commitment to educational achievement and improvement through ongoing assessment of student learning.

1. The institution has clearly stated goals for student learning and effective processes for assessment of student learning and achievement of learning goals.
2. The institution assesses achievement of the learning outcomes that it claims for its curricular and co-curricular programs.
3. The institution uses the information gained from assessment to improve student learning.
4. The institution's processes and methodologies to assess student learning reflect good practice, including the substantial participation of faculty and other instructional staff members.

HLC Policy: Policy Title: Criteria for Accreditation, HIGHER LEARNING COMMISSION, <http://www.hlcommission.org/Policies/criteria-and-core-components.html> (last updated June 2014). Standard 315, titled "Evaluation of Program of Legal Education, Learning Outcomes, and Assessment Methods" provides:

The dean and the faculty of a law school shall conduct ongoing evaluation of the law school's program of legal education, learning outcomes, and assessment methods; and shall use the results of this evaluation to determine the degree of student attainment of competency in the learning outcomes and to make appropriate changes to improve the curriculum.

ABA STANDARDS, *supra* note 1, § 315.

20. HUTCHINGS, *supra* note 11, at 2.

21. Bezuidenhout & Alt, *supra* note 8 (asserting that one of the purposes of assessment is to "illustrate to [students] their progress and ensure that a proper standard has been achieved before they progress to a next level"); Gerald F. Hess, *Listening to Our Students: Obstructing and Enhancing Learning in Law School*, 31 U.S.F. L. REV. 941, 944-45 (1997); *see also* CIARA O'FARRELL, DUBLIN INST. OF TECH., ENHANCING STUDENT LEARNING THROUGH ASSESSMENT, <http://www.avondale.edu.au/Departments/Learning-and-Teaching/Enhancing-Student-Learning-through-Assessment-A-Toolkit-Approach.pdf> (last visited Jan. 24, 2018) (providing an overview of the purposes of assessment and how assessors can best utilize assessment).

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an observable and measureable action to be taken by students.²² If it does not meet this criterion, it is probably not a valid learning outcome.²³ Each assessment can be either formative or summative.²⁴ Formative assessments are designed primarily to help students improve knowledge construction during the term by providing feedback on progress and identifying gaps in learning.²⁵ They facilitate and enhance ongoing learning. A formative assessment can be used for many purposes:

- To determine what students know, understand, and can do
- To inform students of weaknesses in their performance and how to improve
- To illustrate to [students] their progress and ensure that a proper standard has been achieved before they progress to a next level
- To provide a means for certification regarding the standard of performance
- To serve as a promotion technique
- To indicate to students areas of importance in the learning material
- To serve as motivation for students
- To measure the effectiveness of teaching; thus serving as leverage for improvement in education²⁶

More specifically, multiple ongoing formative assessments give students the opportunity to learn more doctrine at a deeper level and develop the skills to make use of that knowledge.²⁷

Using the analogies discussed earlier, a formative assessment of the aspiring piano player may assess the student's ability to play a scale, sight-read a piece of

22. Am. Ass'n of Law Libraries, *Archived: Writing Learning Outcomes*, AALL, <https://www.aallnet.org/Archived/Education-and-Events/cpe/outcomes.html> (last visited Jan. 24, 2018).

23. *See id.*

24. ABA STANDARDS, *supra* note 1, § 314 (requiring a law school to “utilize both formative and summative assessment methods in its curriculum to measure and improve student learning and provide meaningful feedback to students”).

25. Carol Springer Sargent & Andrea A. Curcio, *Empirical Evidence that Formative Assessments Improve Final Exams*, 61 J. LEGAL EDUC. 379, 381–83 (2012) (asserting that formative assessments providing students with feedback throughout the semester enhance student learning and performance); Harry Torrance, *Formative Assessment at the Crossroads: Conformative, Deformative and Transformative Assessment*, 38 OXFORD REV. EDUC. 323, 324 (2012) (Eng.) (explaining that formative assessment is intended to “provide feedback to both students and teachers on student progress and what more might be done to facilitate such progress”). ABA Interpretation 314-1 states: “Formative assessment methods are measurements at different points during a particular course or at different points over the span of a student’s education that provide meaningful feedback to improve student learning.” ABA STANDARDS, *supra* note 1, § 314-1.

26. Bezuidenhout & Alt, *supra* note 8, at 1064–65.

27. *See* Sargent & Curcio, *supra* note 25, at 395; *see also* O’FARRELL, *supra* note 21 (noting that “[b]oth deep and surface learning have a place in assessment” and should help students develop “a wide range of transferable skills and competencies”).

music, or use good hand position when playing. For the football player, it may assess the student's ability to throw a good spiral pass, run sprints, or determine which play would be optimal for a particular situation.

Summative assessments are designed primarily to judge cumulative learning.²⁸ Final exams and the bar exam are examples of summative assessments. Of course, by this point, there is little opportunity to provide useful feedback to students about how well they understand and apply the course information. If either a student or a professor is incorrect about the level of learning in the course, little can be done. To go back to the analogies used previously, a summative assessment could be a concert performance of a piece of music or a performance in the championship football game.

IV. METHODS FOR INCORPORATING ASSESSMENTS

When assessments are treated as a compliance issue by the faculty—check the box—they do little to improve student learning.²⁹ When they are intentionally and purposefully chosen to assess a specific demonstration of skill or ability, they inform both the professor and the student whether the skill or ability level is as believed. So a professor wanting to understand the skill level of her students should actively engage in the process of learning what her students know, in much the same way professors expect students to actively engage in the process of understanding the material.

A. Skills Taxonomy

One way of approaching assessments is through the use of a taxonomy. “A taxonomy is a classification scheme that orders . . . phenomena hierarchically.”³⁰ Items higher on the list are more complex and subsume items at the lower level.³¹ It is like a ladder. Students begin at the lowest level. When they master that level, they move up to the next, and the next, until they reach the highest level.³²

28. See Sargent & Curcio, *supra* note 25, at 381. ABA Interpretation 314-1 states: “Summative assessment methods are measurements at the culmination of a particular course or at the culmination of any part of a student’s legal education that measure the degree of student learning.” ABA STANDARDS, *supra* note 1, § 314-1.

29. HUTCHINGS, *supra* note 11, at 3 (“Where assessment is treated as a bureaucratic task, undertaken to satisfy external requirements, impact in the classroom is unlikely.”); Erik Gilbert, *Does Assessment Make Colleges Better? Who Knows?*, CHRON. HIGHER EDUC. (Aug. 14, 2015), <http://www.chronicle.com/article/Does-Assessment-Make-Colleges/232371>; see also THOMAS R. GUSKEY, OUTCOME-BASED EDUCATION AND MASTERY LEARNING: CLARIFYING THE DIFFERENCES 14 (1994) (“The finest list of outcomes in the world, even if accompanied by valid assessment tools, represents a wish list at best. It will have little impact on student learning in the absence of effective instructional practices. At the same time, it is essential that highly effective instructional strategies be paired with a thoughtfully planned curriculum.” (citation omitted)).

30. DAVID H. JONASSEN & BARBARA L. GRABOWSKI, HANDBOOK OF INDIVIDUAL DIFFERENCES, LEARNING, AND INSTRUCTION 6 (Routledge 2011) (1993).

31. *Id.*

32. *Id.*

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Bloom's Taxonomy of Cognitive Objectives³³ is a skills-based taxonomy, specifically designed to establish whether learners have attained acceptable skills targeted in learning outcomes.³⁴ The lowest skill levels are knowledge and basic comprehension.³⁵ From there, students move up through the levels, with each new level incorporating the skills required at the lower levels and adding more demanding intellectual behaviors.³⁶ Because it informs the process by which students acquire increasingly refined skills,³⁷ the taxonomy provides the perfect framework around which learning outcomes and assessments can be created.³⁸

The level of the taxonomy will inform the level of *doing* to be assessed. Is the professor assessing whether the student can demonstrate basic content knowledge? Is the professor assessing whether the student can apply specific rules to a fact pattern? Or, if students are sufficiently progressed in their learning, is the professor assessing whether they can select the correct rule from the many learned and use it to solve a problem?

33. See generally A COMM. OF COLL. & UNIV. EXAM'RS, TAXONOMY OF EDUCATIONAL OBJECTIVES (Benjamin S. Bloom ed., 1956) (providing an overview of Bloom's Taxonomy of Cognitive Objectives).

34. See *id.*; see also JONASSEN & GRABOWSKI, *supra* note 30, at 7–8 (discussing Bloom's Taxonomy of Cognitive Objectives); Thomas R. Guskey, *Closing Achievement Gaps: Revisiting Benjamin S. Bloom's "Learning for Mastery"*, 19 J. ADVANCED ACADS. 8, 10–21 (2007) (discussing Bloom's contributions in the area of assessing student learning in the classroom). Bloom used "outcomes" to describe the mastery learning process, or the intended results from the process of teaching and learning. Guskey, *supra*, at 12–17. He also intended that formative assessment be a part of the process. *Id.* at 12.

Bloom saw dividing the material to be learned into units and checking on students' learning with a test at the end of each unit as useful instructional techniques. He believed, however, that the tests used by most teachers did little more than show for whom the initial instruction was or was not appropriate. If, on the other hand, these checks on learning were accompanied by a *feedback and corrective* procedure, they could serve as valuable learning tools. That is, instead of using these checks solely as evaluation devices marking the end of each unit, Bloom recommended they be used to diagnose individual learning difficulties (feedback) and to prescribe specific remediation procedures (correctives)

With the feedback and corrective information gained from a formative assessment, each student has a detailed prescription of what more needs to be done to master the concepts or desired learning outcomes from the unit.

GUSKEY, *supra* note 29, at 9–11.

35. A COMM. OF COLL. & UNIV. EXAM'RS, *supra* note 33, app. at 201–03.

36. Bezuidenhout & Alt, *supra* note 8, at 1066–67; see also FARZANA SULTANA, AN INITIAL STUDY OF A METHOD FOR INSTRUCTING EDUCATORS ABOUT THE REVISED TAXONOMY 12–13 (2010) (discussing Bloom's six different levels of objectives). Others have modified, updated, or expanded Bloom's Taxonomy. For example, see David R. Krathwohl, *A Revision of Bloom's Taxonomy: An Overview*, 41 THEORY INTO PRAC. 212, 212–15 (2002).

37. A COMM. OF COLL. & UNIV. EXAM'RS, *supra* note 33, at 38–43.

38. See Bezuidenhout & Alt, *supra* note 8, at 1066–67.

Bloom's taxonomy levels, arranged from lowest to highest, are set out in Figure 4³⁹:

Figure 4

Using the bike course scenario, starting from the bottom and working upward, the focus of an assessment may be the following:

Knowledge. Can the student identify each part of the bike and explain how that part is necessary to the operation of the bike?

Comprehension. Can the student explain how the bike developed into the form it exists in today?

Application. Can the student demonstrate how a bike could be used in a new transportation setting?

Analysis. Can the student explain the bike as a transportation vehicle by comparing and contrasting it to cars and trains?

Evaluation and synthesis. Can the student devise a new purpose for a bike or alter the design of a bike so that it can serve a new purpose?

Note that use of the Socratic method falls in the low- to mid-level of the taxonomy. And, to the extent it could be considered an assessment, it evaluates only the student called on to answer the professor's questions. Accordingly, while there is nothing wrong with using the Socratic method as a teaching tool, professors who use it should be honest about the skill level they are expecting from the called-on student

39. JONASSEN & GRABOWSKI, *supra* note 30, at 7–8; *see also* Bezuidenhout & Alt, *supra* note 8, at 1066–67 (discussing the original and revised Bloom's Taxonomy); Michael T. Gibson, *A Critique of Best Practices in Legal Education: Five Things All Law Professors Should Know*, 42 U. BALT. L. REV. 1, 6–12 (2012) (providing an overview of Bloom's six levels of learning).

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and the fact that it does not develop skills higher on the taxonomy.⁴⁰ The professor misses an opportunity to adequately prepare students for the practice of law by not requiring them to engage in the higher cognitive levels of critical thinking, such as making decisions based on analysis, synthesizing different elements to create something new, or applying knowledge in various contexts.⁴¹

Similarly, professors who design their class around giving lectures and covering appellate court cases should understand that this is only one approach to teaching content, one that fails to develop any of the skills at the mid- to upper-end of the taxonomy:⁴²

[I]t is necessary to not simply show students past examples of high distinction quality work, as that gives them neither information nor skills on how to achieve that level of work. It is comparable to admiring an Ikea kitchen in the showroom and then having all the components sitting at home with no instruction booklet and no Allen key: success is highly unlikely! The other limitation of using an exemplar as a passive, rather than an active, teaching

40. See Robin A. Boyle, *Employing Active-Learning Techniques and Metacognition in Law School: Shifting Energy from Professor to Student*, 81 U. DET. MERCY L. REV. 1, 1–3 (2003) (“[M]ost students do not learn well [through the Socratic method] and would learn better if they were engaged in truly active learning.”); Jennifer Howard, Essay, *Learning to “Think Like a Lawyer” Through Experience*, 2 CLINICAL L. REV. 167, 172–75 (1995).

41. Bezuidenhout & Alt, *supra* note 8, at 1063.

42. ROBERT CANNON & DAVID NEWBLE, *Teaching in Large Groups*, in A HANDBOOK FOR TEACHERS IN UNIVERSITIES AND COLLEGES: A GUIDE TO IMPROVING TEACHING METHODS 58–86 (RoutledgeFalmer 4th ed. 2000) (1989); Lucy A. Goodson, *Teaching and Learning Strategies for Complex Thinking Skills*, in 1 ANNUAL PROCEEDINGS OF SELECTED RESEARCH AND DEVELOPMENT PAPERS PRESENTED AT THE NATIONAL CONVENTION OF THE ASSOCIATION FOR EDUCATIONAL COMMUNICATIONS AND TECHNOLOGY 164, 164–68 (Margaret Crawford & Michael Simonson eds., 2000) (“Teachers who provide ready-made rules and generalizations for students to memorize are following practices that interfere with the development of thinking skills.” (citation omitted)); Bezuidenhout & Alt, *supra* note 8, at 1063; Andrea Revell & Emma Wainwright, *What Makes Lectures ‘Unmissable’? Insights into Teaching Excellence and Active Learning*, 33 J. GEOGRAPHY HIGHER EDUC. 209, 209–10 (2009); George C. Thornton III & Jeanette N. Cleveland, *Developing Managerial Talent Through Simulation*, 45 AM. PSYCHOLOGIST 190, 196 (1990); David A. Whetten & Sue Campbell Clark, *An Integrated Model for Teaching Management Skills*, 20 J. MGMT. EDUC. 152, 156 (1996) (“[L]ecturing is an effective way to transfer facts, by presenting a wide variety of information in a relatively short period of time. However, students retain less of this material in the long run than they would if they were more highly involved in the learning process.” (citations omitted)); Sue Stewart Wingfield & Gregory S. Black, *Active Versus Passive Course Designs: The Impact on Student Outcomes*, 81 J. EDUC. FOR BUS. 119, 120 (2005) (“Passive learning emphasizes learning conceptual knowledge by focusing on facts and theoretical principles.”); Graham Biggs, *Lectures Don’t Work, But We Keep Using Them*, TIMES HIGHER EDUC. (November 21, 2013), <https://www.timeshighereducation.com/news/lectures-dont-work-but-we-keep-using-them/2009141.article> (“For some educational goals, no alternative has ever been discovered that is less effective than lecturing, including, in some cases, no teaching at all.”). “The professor processes the material, organizes it, shapes it into information that he then transmits to the student.” Joni Larson, *To Develop Critical Thinking Skills and Allow Students To Be Practice-Ready, We Must Move Well Beyond the Lecture Format*, 8 ELON L. REV. 443, 447 (2016); CANNON & NEWBLE, *supra*; Bezuidenhout & Alt, *supra* note 8, at 1063. Any lecture-based format of instruction lacks student engagement and “doing,” and “[n]o matter how engaging, entertaining, clear, or well-constructed a lecture is, the student receiving the lecture is passively receiving information.” Larson, *supra*; Revell & Wainwright, *supra*, at 210–11 (“[E]mpirical research has shown that even in the most interesting lecture, attention levels naturally tend to drop (often dramatically) after the first 20 minutes of presentation.”).

strategy is that students will tend to use it as a template. This works against the development of in-depth critical and creative thinking by students.⁴³

Nothing requires a professor to use class time to “cover the cases.” The professor can choose to do something different and still have students learn. While students will still be expected to read and understand cases (which they should be able to do effectively on their own relatively early in law school), the focus of class time can be on students demonstrating their ability to use that information. In other words, the student’s *doing* and the assessing of that *doing* can become a main focus of classroom time. The perception that a professor must allocate class time between teaching and assessing is based on previous teaching methods. An assessment need not be in addition to what she is teaching. When used properly and effectively, an assessment becomes a seamless part of the learning process.

With the taxonomy as a guide, the professor can intentionally craft a learning process that assists students in moving from the lowest level of the taxonomy to the highest level, or at least the highest that reasonably can be expected. The professor can focus on how she would like students to demonstrate their learning and structure the course to prepare students for carrying out that demonstration. In other words, the professor focuses on what students will do rather than what she will say.⁴⁴ Moreover, skill development requires practice; the students need time to engage with the material in ways that extend beyond reading the assignment, and class time can be used for that purpose.⁴⁵

Returning to the earlier analogies, which piano players are developing better skills: the ones who only study what the masters have accomplished or the ones who can play the masters’ works with technical precision and emotional understanding? Which football players are acquiring higher-level skills: the ones who review the plays their coach called in a previous game or the ones who must rely on what they have learned to anticipate what the next play will be?

1. *Taxonomy Assessment Options*

The possibilities for assessments are only limited by the professor’s ability to think creatively at each level of the taxonomy.⁴⁶ The lower end of the taxonomy requires “near transfer” of skills—the learner is expected to apply knowledge and skills in situations similar to the context in which the knowledge was learned. The higher end of the taxonomy requires “far transfer” of skills—the learner must develop

43. Sonia Walker & Julia Hobson, *Interventions in Teaching First-Year Law: Feeding Forward to Improve Learning Outcomes*, 39 ASSESSMENT & EVALUATION HIGHER EDUC. 326, 328 (2014).

44. Hawthorne, *supra* note 4.

45. Walker & Hobson, *supra* note 43, at 329.

46. See Hawthorne, *supra* note 4 (“There are lots of kinds of doing.”).

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connections to context that differ in some manner from the initial context in which the information was learned.⁴⁷

To keep things manageable, at least at the beginning, the number of categories can be reduced to three broad categories, focusing on the lowest level, a mid-level, and the highest level:

- Developing a knowledge base
- Demonstrating practical applications
- Transferring learning to new situations

This list is by no means exhaustive. Nor is it a suggestion that every class should incorporate every type of assessment. Rather, each professor might consider adding one or two assessments beyond what she is currently doing or trying a new assessment that might better evaluate a particular skill.⁴⁸

Using the simplified list, Figure 5 provides some examples.

Figure 5

Developing a Knowledge Base	Demonstrating Practical Applications	Transferring Learning to New Situations
Successfully complete a quiz (either prior to or during class) about rules, definitions, terms.	Answer a professor-prepared hypothetical.	Draft a hypothetical.
Be able to complete exit slips (five-minute written responses to a question the teacher poses at the end of class to assess student understanding of key concepts, collected as students leave the classroom).	From a fact pattern, create a list of questions to ask the hypothetical client to determine if the client has a cause of action (or perhaps to gather information to prepare a will or determine the correct business structure).	Draft a document that requires use of the underlying substantive knowledge.

47. See Paul D. Callister, *Time to Blossom: An Inquiry into Bloom's Taxonomy as a Hierarchy and Means for Teaching Legal Research Skills*, 102 LAW LIBR. J. 191, 199 (2010) (describing how Bloom's taxonomy arranges the types of learning "in a hierarchy of progressive difficulty and importance"); Penny L. Willich, *The Path to Resilience: Integrating Critical Thinking Skills into the Family Law Curriculum*, 3 PHX. L. REV. 435, 442–49 (2010) ("Ascension from the lowest level of knowledge requires increasingly difficult or complex cognitive processing to reach the highest level of evaluation.").

48. See Sophie Sparrow, *Taking a Small Step Toward More Assessments*, LAW TCHR., Fall 2009, at 1, 1; see also Hess, *supra* note 21 (discussing additional assessment ideas); Cassandra L. Hill, *Peer Editing: A Comprehensive Pedagogical Approach to Maximize Assessment Opportunities, Integrate Collaborative Learning, and Achieve Desired Outcomes*, 11 NEV. L.J. 667, 668–69 (2011) (advocating for collaborative peer editing exercises as an assessment strategy). ABA Interpretation 314-2 provides that "[a] law school need not apply multiple assessment methods in any particular course. Assessment methods are likely to be different from school to school. Law schools are not required by Standard 314 to use any particular assessment methods." ABA STANDARDS, *supra* note 1, § 314-2.

Figure 5 continued

Developing a Knowledge Base	Demonstrating Practical Applications	Transferring Learning to New Situations
Be able to explain a term in a manner a client would understand.	Give small groups (not more than three to four students) an issue and have them come to a consensus about how that issue should be resolved. (This project is really two assessments: Can a student persuasively explain their position, and can a student listen to and understand another's position?)	Prepare a memorandum to the partner with advice about a client's specific situation.
Recite a rule of law and give an example of when it would be applicable.	Explain how two courts, using a similar fact pattern, came to different conclusions (explain how courts can engage in differing analyses to reach different conclusions from similar facts).	Draft a letter to a client with advice about the client's specific situation.
Take a quiz at the beginning of class, marking down responses. Take the same quiz at the end of class, noting whether understanding of the material has changed.	Explain how two opinions using the same analysis come to different conclusions (explain how the same analysis, but with a small change in facts, can result in a different conclusion).	Create a flowchart covering specific content.
Complete a worksheet that requires students to identify the rules or define terms that apply in a class period.	Draft a paragraph (section) to be used in a document, based on knowledge of the underlying substantive area.	Create a checklist of facts to be obtained from a client with respect to a certain subject matter area.
Write the rules to be applied during that class period on the board.	Prepare an exit slip with an explanation of how the student anticipates seeing one of the topics covered in class in a law practice.	Negotiate resolution of a client's issue with an opposing party.
Create a mnemonic to memorize a rule.	Focusing on a particular area or concept, have the student identify what he knew prior to class, what he learned during class, and what he still wants to know.	Brainstorm solutions to a client's particularly difficult situation.

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2. *Seeing the Taxonomy at Work in Building Skills*

I have utilized the levels of Bloom's taxonomy in several of my classes, moving students from the bottom of the skills pyramid to the top over the semester's term. Figure 6 is what this assessment looks like in my Business Organizations class, isolating the issue of agency.⁴⁹

B. *Application Focus*

The focus in law school on content knowledge has often missed the mark in that it fails to recognize that students who become practicing attorneys are expected to be able to do something with that knowledge: meet with a client and ask relevant questions, make a decision about whether to take a case, file a complaint, negotiate a settlement, decide a plan of action for the client, recommend a business entity, conduct legal research, or construct an estate plan.⁵⁰ Inherent in a student's ability to effectively

Figure 6

Knowledge	<p>Prior to class, students took an online quiz. The purpose of the quiz was to verify that they understood the most fundamental rules and definitions related to actual and apparent authority.</p> <p>Prior to class, students completed a worksheet based on the assigned reading. The worksheet required them to summarize the rules related to actual and apparent authority (they knew the worksheet would be used in class).</p>
Comprehension	<p>Following presentation of the material, students worked through actual and apparent authority problems assigned from the book. Students referred to the worksheet for the rules they were applying in answering the problems.</p>
Application	<p>Students were provided a hypothetical fact pattern involving several potential agency issues. Students worked in small groups (no more than four members), with each group assigned a different client perspective (principal or third party). Students had to decide whether actual or apparent authority could have been applied to their client's situation. After each group had flushed out the strengths and weaknesses of its case, the groups were paired up and given the opportunity to negotiate a solution to the disagreement as to whether the (purported) agent had authority to bind the principal. As part of this process, students were expected to both be able to clearly articulate their position and understand and appreciate the merits of a position presented by the opposing side.</p>
Analysis	<p>The concept of agency appeared in connection with sole proprietorships, partnerships, and corporations. Accordingly, students had the opportunity to see a principal-agent relationship existing in many different settings. In seeing the concept from so many different angles, students could better appreciate the nuances of the concept.</p>

49. Every class involved several forms of assessment. This example focuses only on those assessments related to the agency theories of actual or apparent authority.

50. See Barry, *supra* note 3, at 250; Edwards, *supra* note 3, at 34–35.

Evaluation and synthesis	Several class periods were devoted to students having an opportunity to develop an issue on their own. It began with an interview of a (mock) client. From the facts students gathered in the interview, they had to identify the issues presented. Once having recognized the issue was an agency issue (whether the client had actual or apparent authority to bind the principal), they prepared a memorandum to the partner setting forth the facts learned from the client, the rules related to agency, a discussion of how the rules applied to the facts obtained from the client, and a conclusion. ⁵¹
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carry out any of these activities is knowledge of the underlying content. For example, a student who does not have a firm grasp on the differences between a partnership, corporation, and limited liability company will not know what questions to ask a client to best advise what business entity to create. Similarly, a student who does not have an understanding of hearsay may not be able to properly assess the strength of a case prior to filing a complaint. Accordingly, one way to determine if students understand the course content or its nuances is to have them demonstrate application of that content in a practice-type setting.

To consider the approach more broadly, a law school program could intentionally incorporate such a use-based approach to doctrinal instruction across its curriculum.⁵² However, this approach requires more than just embedding problems within the curriculum. Professors who are familiar with the content area easily wrap their knowledge around an application.⁵³ In contrast, students who are just learning a subject matter area most likely do not have the same level of knowledge and application dexterity. Thus, for this type of assessment model to most benefit students, the professor must first demonstrate or model the application, helping them understand the transition from knowing to doing.

For example, the professor can walk students through a statute-reading problem, explaining the process as she goes and encouraging them to think about how they would approach the exercise on their own. Or the professor can brainstorm with students about what questions they would ask a client and why, evaluating how the information gathered would connect to the underlying law. Or she could work with students to parse through a variety of possible legal arguments to determine which approach would be in the client's best interest. It is a temporary support structure provided by the professor to assist students in expanding their understanding of how

51. It was clear to me that this project was unfamiliar territory for students. I heard comments along the lines of "This is the first time I haven't been told what to think," and "I'm so nervous. I have to figure this out."

52. Maryellen Weimer, *Targeted Skill Development: Building Blocks to Better Learning*, FAC. FOCUS (Oct. 22, 2012), <http://www.facultyfocus.com/articles/teaching-professor-blog/targeted-skill-development-building-blocks-to-better-learning/> ("We don't do all that badly sequencing content across courses, but we don't often plan skill development in the same careful way.").

53. Paula Lustbader, *Construction Sites, Building Types, and Bridging Gaps: A Cognitive Theory of the Learning Progression of Law Students*, 33 WILLAMETTE L. REV. 315, 321 (1997) ("As experts, law teachers have internalized so much of the information and process that they are not consciously aware of all that goes into their analysis.").

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the underlying material is applied. The idea is that what students can do with assistance of the professor today, they can do independently tomorrow.

C. Holistic Approach—the Five Cs

Quite simply, the objective of an assessment is to determine what students have learned and timely correct any mistakes in the learning process. To that end, it does not need to be a complicated or intrusive process. Rather, the professor could simply follow the five Cs: connect, construct, commit, confirm or correct, and create.⁵⁴

1. Connect

Students must be connected to the information. Sometimes it seems that students are not engaged with the material. They are content to passively write down what they are told while patiently waiting for the term to pass so they can move on to another area of law.

Can the professor help students be motivated to engage with the material? “Motivation falls along a continuum, with more [extrinsic] forms of motivation at one end and more [intrinsic] forms at the other.”⁵⁵ Extrinsic motivation is the motivation to achieve an external reward or avoid a punishment.⁵⁶ Intrinsic motivation comes from the inherent satisfaction of doing an activity and is more successful in promoting learning and achievement.⁵⁷ “[A]ny type of expected, tangible reward (excluding unexpected rewards and praise) tends to undermine intrinsic motivation.”⁵⁸ Accordingly, threats, deadlines, directives, and competition diminish intrinsic

54. The five Cs is an approach created by the author.

55. Douglas A. Guiffreda et al., *Do Reasons for Attending College Affect Academic Outcomes? A Test of a Motivational Model from a Self-Determination Theory Perspective*, 54 J.C. STUDENT DEV. 121, 122 (2013); see also Jeff Allen et al., *Third-Year College Retention and Transfer: Effects of Academic Performance, Motivation, and Social Connectedness*, 49 RES. HIGHER EDUC. 647, 649 (2008); Sheila Brownlow & Renee D. Reasinger, *Putting Off Until Tomorrow What is Better Done Today: Academic Procrastination as a Function of Motivation Toward College Work*, 15 J. SOC. BEHAV. & PERSONALITY (SPECIAL ISSUE) 15, 17–18 (2000) (providing an overview of extrinsic and intrinsic motivation); JOSEPH HOUDE, *ANDRAGOGY AND MOTIVATION* 91 (2006), <http://files.eric.ed.gov/fulltext/ED492652.pdf> (discussing whether learners are more responsive to external or internal motivators); Matthew L. Partin et al., *Yes I Can: The Contributions of Motivation and Attitudes on Course Performance Among Biology Nonmajors*, 40 J.C. SCI. TEACHING 86, 86 (2011) (discussing how students initiate and sustain learning behavior through extrinsic and intrinsic motivators).

56. See Brownlow & Reasinger, *supra* note 55; Partin et al., *supra* note 55.

57. See Brownlow & Reasinger, *supra* note 55; Partin et al., *supra* note 55.

58. Partin et al., *supra* note 55; see also Gregory N. Mandel, *To Promote the Creative Process: Intellectual Property Law and the Psychology of Creativity*, 86 NOTRE DAME L. REV. 1999, 2007–08 (2011) (discussing the difference in group output that is fueled by intrinsic motivation rather than extrinsic motivation); Amy Wrzesniewski & Barry Schwartz, *The Secret of Effective Motivation*, N.Y. TIMES (July 4, 2014), <https://www.nytimes.com/2014/07/06/opinion/sunday/the-secret-of-effective-motivation.html> (discussing the effect on any activity by introducing extrinsic motivators in addition to intrinsic motivators); TERESA GARCIA & PAUL R. PINTRICH, *CRITICAL THINKING AND ITS RELATIONSHIP TO MOTIVATION, LEARNING STRATEGIES, AND CLASSROOM EXPERIENCE* 3 (1992), <http://files.eric.ed.gov/fulltext/ED351643.pdf> (discussing the effects of intrinsic versus extrinsic motivators on critical thinking).

motivation.⁵⁹ Such activities focus “attention on the external reasons for doing something, thereby minimizing the importance of the original drive.”⁶⁰

Self-determination theory (SDT) is a theory of motivation and development that is based on the principal that intrinsic motivation is more conducive to learning than extrinsic.⁶¹ “According to SDT, there are three primary psychological needs that, when satisfied, foster intrinsic motivation: (a) autonomy, . . . (b) competence, . . . and (c) relatedness . . .”⁶² Satisfying the three need-drivers helps shift motivation from the extrinsic to the intrinsic end of the motivation continuum.⁶³

Competence “is the need to test and challenge one’s abilities” and to receive positive feedback.⁶⁴ Completing an assigned reading and sitting through a lecture on the reading involves little in the way of challenging the student’s ability to understand or use the material covered. Nor can these activities provide much in the way of positive feedback. Being asked to apply the information in a meaningful way can create the challenge students need to achieve a deeper understanding of and connection to the material. Autonomy “occurs when students choose to become engaged in learning because the subject and activities are closely aligned with their interests and values.”⁶⁵ Perceived autonomy includes opportunities for choice and the absence of external rewards or controls.⁶⁶ Law students are expected to take courses about subjects ranging from torts to criminal law to tax. It is unlikely that every course will align completely with a student’s interests. But a professor aware of the breadth and depth of a course is in the best position to help each student understand and see a connection between the course and the student’s anticipated area of practice or other

59. Brownlow & Reasinger, *supra* note 55; Partin et al., *supra* note 55.

60. Brownlow & Reasinger, *supra* note 55.

61. Guiffreda et al., *supra* note 55, at 121.

62. *Id.* at 121–22.

63. *Id.* at 122.

64. *Id.* at 121; Paula J. Manning, *Understanding the Impact of Inadequate Feedback: A Means to Reduce Law Student Psychological Distress, Increase Motivation, and Improve Learning Outcomes*, 43 CUMB. L. REV. 225, 239–41 (2013).

65. Guiffreda et al., *supra* note 55, at 121.

66. See Emmeline Paulette Reeves, *Teaching to the Test: The Incorporation of Elements of Bar Exam Preparation in Legal Education*, 64 J. LEGAL EDUC. 645, 653–54 (2015) (discussing the psychological attributes vital to law student success and ways in which law schools can help nurture those attributes).

Internalisation involves people’s transformation of external regulatory processes into internal regulatory processes. Integration is the process through which these internalised regulations are assimilated with one’s self. As an external regulation becomes internalised and integrated, the person becomes more fully self-regulating of that behaviour. The person then experiences that the perceived locus of causality has shifted from external to internal.

Marcus Selart et al., *Effects of Reward on Self-Regulation, Intrinsic Motivation and Creativity*, 52 SCANDINAVIAN J. EDUC. RES. 439, 440 (2008) (citations omitted).

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goals, as is demonstrated in Figure 7:⁶⁷

Figure 7

Finally, relatedness is the “need to establish close, secure relationships” and feel satisfied with involvement with other people.⁶⁸ This need-driver can be met when a professor interacts with students in a way that engages them with the content.⁶⁹ It can also be met by the professor allowing students to interact with each other in a manner designed to enhance each student’s intrinsic motivation.⁷⁰ Necessarily, engagement requires communication *between* student and professor and *between* students, not just communication *from* professor *to* student.

2. Construct

Students must construct their own understanding of imparted information, turning the information into knowledge.⁷¹ Students construct knowledge by assigning

67. Figure 7 is intentionally formatted in this manner. It is meant to suggest that a reader imagines her own connections between the subject matter area and areas of practice. The connections, rather than being subject to specific identification, are infinite.

68. Guiffreda et al., *supra* note 55, at 121–22; see Andrew J. Martin & Martin Dowson, *Interpersonal Relationships, Motivation, Engagement, and Achievement: Yields for Theory, Current Issues, and Educational Practice*, 79 REV. EDUC. RES. 327 (2009); Jennifer Ann Morrow & Margot E. Ackerman, *Intention to Persist and Retention of First-Year Students: The Importance of Motivation and Sense of Belonging*, 46 C. STUDENT J. 483 (2012).

69. See GARCIA & PINTRICH, *supra* note 58, at 16 (“[C]ollaboration and discussion of class material with other students seems to promote critical thinking, and interestingly, course work students perceive as challenging may ‘force’ students to think more critically.”); Paul D. Umbach & Matthew R. Wawrzynski, *Faculty Do Matter: The Role of College Faculty in Student Learning and Engagement*, 46 RES. HIGHER EDUC. 153, 165 (2005).

70. See Umbach & Wawrzynski, *supra* note 69.

71. JOHN BIGGS & CATHERINE TANG, THE SOC’Y FOR RESEARCH INTO HIGHER EDUC., *TEACHING FOR QUALITY LEARNING AT UNIVERSITY* 22 (4th ed. 2011); RICHARD W. PAUL, CTR. FOR CRITICAL THINKING & MORAL CRITIQUE, *CRITICAL THINKING: WHAT EVERY PERSON NEEDS TO SURVIVE IN A RAPIDLY CHANGING WORLD* 425 (1990); see also K. PATRICIA CROSS, *TAKING TEACHING SERIOUSLY* 5 (1986), <http://files.eric.ed.gov/fulltext/ED268849.pdf> (“No wonder that employers, states, and the nation are so interested in an educational system that will result in people who have ‘idea power.’ Ideas are far more important to our world than information which has become both plentiful and cheap.”).

meaning to the knowledge, fitting it into their previous life experiences (placing it in context), using it in the classroom, and redefining how the knowledge applies in different settings, both current and foreseeable.⁷² To do this, students must be given opportunities to actively engage with the content. More specifically, they must engage in cognitive processes that require higher-order thinking that must be complex and contextualized in order to construct meaning and create knowledge from that information.⁷³

3. *Commit*

A student who does not commit to a perceived understanding of the material is less likely to acquire a deep understanding of the content. It is easy for a student to observe the professor or another student engage with the material and believe he would have used the same process or would have had the same understanding. But until he is held accountable for his thought processes and conclusions, there is no way to be certain. And there is no way for the professor to learn if the student has correctly understood the material. For the most learning to occur, the student must be called on in class. Only then does he commit to an understanding of the material and become vested in his own understanding.

[T]hose who advocate critical thinking instruction hold that knowledge is not something that can be *given* by one person to another. It cannot simply be memorized out of a book or taken whole cloth from the mind of another. Knowledge, rightly understood, is a distinctive construction by the learner, something that issues out of a *rational* use of mental processes.

PAUL, *supra*.

72. Hess, *supra* note 21, at 943; *see also* Goodson, *supra* note 42, at 167 (“Content is a building block for thinking skills.”).

73. Bezuidenhout & Alt, *supra* note 8, at 1063; *see also* BIGGS & TANG, *supra* note 71, at 23 (noting that “teachers need to see the object of instruction from the student’s perspective and lead them to higher order levels of understanding”); L. DEE FINK, CREATING SIGNIFICANT LEARNING EXPERIENCES: AN INTEGRATED APPROACH TO DESIGNING COLLEGE COURSES 67–113 (rev. & updated ed., 2013) (discussing how teachers can create courses that will provide a significant learning experience for students); JAN HERRINGTON & RON OLIVER, USING SITUATED LEARNING AND MULTIMEDIA TO PROMOTE HIGHER-ORDER THINKING 2 (1998), <http://files.eric.ed.gov/fulltext/ED428672.pdf> (“Higher-order thinking occurs when a person takes new information and information stored in memory and interrelates and/or rearranges and extends this information to achieve a purpose or find possible answers in perplexing situations.”). Receiving information is not the same as learning, which involves making meaning of information. *See* FINK, *supra*, at 117–18. Making meaning refers to developing connections between existing knowledge and new information—constructing and reconstructing knowledge to make it meaningful. *See id.* Active learning is consistent with constructivism, the learning theory in which knowledge is internalized by learners. Michael Hunter Schwartz, *Teaching Law by Design: How Learning Theory and Instructional Design Can Inform and Reform Law Teaching*, 38 SAN DIEGO L. REV. 347, 374–82 (2001) (discussing the constructivism theory). One of the attributes of constructivism is its focus on “preparing the learner to problem solve in ambiguous situations.” Ronald Noel Beyers, *A Five Dimensional Model for Educating the Net Generation*, 12 EDUC. TECH. & SOC’Y 218, 223 (2009). To the extent the information is being interpreted for the student (such as in a teacher-centered classroom where much of the information is transmitted by lecture), the professor generates little interaction and little opportunity for students to construct knowledge. *Id.* at 220. In addition, students are less likely to be engaged. *Id.*

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4. *Confirm or Correct*

Once a student has committed to an understanding of the material, the professor can either confirm for the student that his understanding is correct or, if necessary, correct the student's misunderstanding. This is an iterative process vital to the student's successful construction of knowledge, a process that necessarily requires the professor to inquire of the student about his understanding. To be most effective, confirming or correcting knowledge must occur as the student is constructing the knowledge. The more opportunities to inquire and correct, the better for the student.⁷⁴

5. *Create*

Law professors are committed to teaching the law. But anyone who has practiced law understands that the rules are just the starting point. Clients show up in the attorney's office just as often for problems that fall outside the decided rules as for matters on which the law is clear. Students must be able to bridge the gap between learning and applying the rules and carving into the space where there are no rules or the applicable rules are ill defined. Lawyers are expected to construct solutions that are grounded in the rules but transcend the settled areas of the law. This is surely where professors and students alike feel most uncomfortable. During law school, so much emphasis is placed on students getting the "right" answers that it often is difficult for students and professors to move beyond that and into the space of untested and uncertain solutions. But a true education in the law must address this aspect.

A law school program that strives to connect students to the material; works with them in constructing their knowledge; gives them reason to be invested in acquiring that knowledge; and creates numerous opportunities to develop critical-thinking skills will produce lawyers who are poised to begin creating solutions to their clients' complex legal problems.

V. CONCLUSION

By shifting to a learning outcome and assessment-based approach, content knowledge and skill development based on that knowledge become the constant and time becomes the variable. The professor can use any of a number of different assessment methods to determine the level of learning her students have mastered, not being satisfied until the learning outcome has been met.⁷⁵ Moreover, through the professor's focus on a demonstration of knowledge, students leave law school with a vast skill set designed to allow them to *do* something with the knowledge they have acquired.

74. This feedback is the intent of a formative assessment. See Stefani A. Bjorklund et al., *Effects of Faculty Interaction and Feedback on Gains in Students Skills*, 93 J. ENGINEERING EDUC. 153 (2004).

75. Spady, *supra* note 6, at 5.