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Teacher, Coach, Cheerleader, and Judge: Promoting Learning through Learner-Centered Assessment*

Kristin B. Gerdy**

Ms. Gerdy explores the importance of learner-centered assessment and feedback in legal research instruction, and encourages legal research teachers to assist their students' quest to acquire practical legal research abilities by making a transition into the roles of coach, cheerleader, and judge.

Table of Contents

The Bicycle Analogy 60
The Learning Cycle 61
Learning around the Cycle 63
Completing the Learning Cycle by Asking "What If?" 64
Activating "Inert" Knowledge by Using Ill-Defined Problems 66
Effective, Learner-Centered Assessment 68
Characteristics of Exemplary Assessment Tasks 70
Developing Effective Assessment Tasks 73
Formulate and Publicize Outcomes and Performance Standards 73
Develop Assessment Measures 74
Provide Opportunities for Students to Learn 75
Use Assessment Results to Improve Learning and Teaching 77
Promoting Learning through Effective Feedback 78
Feedback to the Student 80
Feedback from Student to Teacher 81
Conclusion 83
Appendix A: Legal Research Review 84
Appendix B: Sample Group Feedback Memorandum 86

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The Bicycle Analogy[1]

¶1 When I think of teaching first-year law students to conduct effective legal research, I think of teaching a young child to ride a bike—a two-wheeler without training wheels. Few parents would expect their children to jump up onto a bicycle and ride off without a hitch. Rather they expect a few (if not many) tumbles and some tears and scraped knees.

¶2 In an attempt to make the process as pain-free as possible (both for their children and for themselves), most parents begin the riding lesson by holding onto the back of the seat to steady the bicycle while their children "ride." Feeling secure, the children are able to establish a kinesthetic understanding of bicycle riding that they would be unable to gain if all their effort was concentrated on attaining a balance that is far beyond their reach. With the hands of caring parents steadying them, they are able to work the pedals and steer a straight course down the sidewalk. They may even pick up enough speed to leave their parents a bit worn as they struggle to keep up—one hand firmly grasping the seat and holding it steady. But while the children certainly can propel the bike forward under their own power, they really have not yet learned to "ride" the bike (despite their insistence that they have).

¶3 In order for each child to take the next step and truly learn to ride the bicycle, the parent must let go of the seat. This may result in the occasional crash at first, but Lance Armstrong would never have become a three-time champion of the Tour de France if years earlier his parents had not finally let go.

¶4 Conscientious parents, however, don't just let their children continually fall down, hoping that eventually something will "click" and the child will ride off down the sidewalk. They coach and assist, provide the insights of experience, offer feedback (both as to specific technique and general approach), and act as a cheerleader throughout the process and when success is finally achieved.

¶5 There are many parallels between teaching a young child to ride a bicycle and teaching a law student how to conduct effective and efficient legal research. These parallels are rooted in learning theory. Learning, like riding a bicycle, is active. It takes effort and concentration, and it can be hard work. Arthur W. Chickering and Zelda F. Gamson observed that

> [l]earning is not a spectator sport. Students do not learn much just by sitting in class listening to teachers, memorizing packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences, apply it to their daily lives. They must make what they learn part of themselves.[2]

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1. Admittedly this is not a new analogy, having been used for years by many teachers, but it is one with which most people have personal experience and to which students can readily relate.
2. Arthur W. Chickering & Zelda F. Gamson, *Seven Principles for Good Practice in Undergraduate Education,* AAHE BULL., Mar. 1987, at 3, 5.

¶6 While there may not be serious repercussions if parents fail to appreciate, understand, or apply sound pedagogical principles while teaching their children to ride a bicycle, the same cannot be said about the young lawyer's legal research instruction. It is critical that legal research instructors understand at least the fundamentals of how their students learn and what they can do to foster and facilitate that learning.

¶7 The purpose of this article is to explore the importance of letting go of our students' legal research "seats" by using learner-centered assessment and feedback to expand our traditional role as teacher to include the additional roles of coach, cheerleader, and judge. After briefly introducing learning cycle theory and the role of assessment and feedback in the learning process, the article discusses the shift from well-defined to ill-defined legal research problems within the context of a student's learning cycle. It then addresses the role of effective, learner-centered assessment in the learning process. The final section discusses the use of feedback to promote learning.

The Learning Cycle

¶8 Whenever we learn anything, be it how to ride a bike or how to conduct effective and efficient legal research, we travel around a learning "cycle." The precise way we travel around that cycle is grounded in our individual experiences.

¶9 A report jointly produced by the American Association for Higher Education, the American College Personnel Association, and the National Association of Student Personnel Administrators outlines ten principles of learning that, when followed, will lead to enhanced student experiences. The first principle directly addresses the role of experience in learning: "Learning is fundamentally about *making and maintaining connections*: biologically through neural networks; mentally among concepts, ideas, and meanings; and experientially through interaction between the mind and the environment, self and other, generality and context, deliberation and action."[3] The report challenges educators to require and enable students to make connections between the students' own experiences and knowledge and the new material being taught.[4]

¶10 The central role of experience in the learning process is key to David A. Kolb's learning theory.[5] Drawing from the origins of experiential learning in the

3. AM. ASS'N FOR HIGHER EDUC., AM. COLL. PERSONNEL ASS'N, & NAT'L ASS'N OF STUDENT PERSONNEL ADM'RS, POWERFUL PARTNERSHIPS: A SHARED RESPONSIBILITY FOR LEARNING 5 (1998) [hereinafter POWERFUL PARTNERSHIPS], *available at* http://www.aahe.org/assessment/joint.htm.

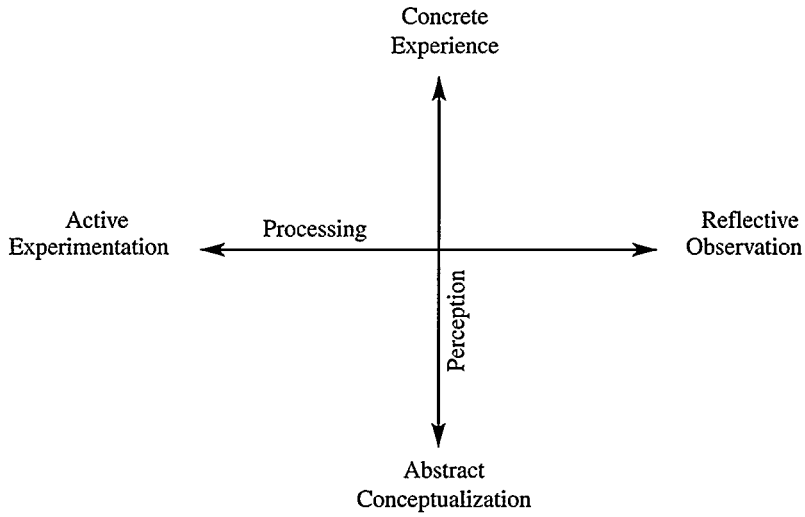
4. *Id.*

5. DAVID A. KOLB, EXPERIENTIAL LEARNING: EXPERIENCE AS THE SOURCE OF LEARNING AND DEVELOPMENT 20–21 (1984). Kolb is currently a professor of organizational behavior in the Weatherhead School of Management at Case Western Reserve University. With masters and doctoral degrees from Harvard University, Kolb's research focuses on individual and social change, experiential learning, career development, executive and professional education, learning and development, and adult development. INDIVIDUAL FACULTY PROFILES, Weatherhead Sch. of Mgmt., Case W. Reserve Univ., *at* http://weatherhead.cwru.edu/wsom/profiles/kolbd.html (last visited Oct. 15, 2001).

works of John Dewey, Kurt Lewin, and Jean Piaget, Kolb, a Harvard-educated professor, first developed a "learning style inventory" and then expanded upon it to describe the process of experiential learning and a model of the underlying structures of the learning process based on research in psychology, philosophy, and physiology. According to Kolb, true learning combines experience, perception, cognition, and behavior. Under this theory, "knowledge is continuously derived from and tested out in the experiences of the learner."[6]

¶11 Kolb's experiential learning model is best described as a cycle through which the learner passes numerous times while progressing from novice to expert. The cycle revolves around two axes that represent fundamental elements of the learning process: perception, or the way the student perceives or grasps the new information, and processing, or the way the student adapts the information to meet his or her needs and realities.

Figure 1
Kolb Experiential Learning Model



¶12 The four axis points represent the four basic learning modes. The vertical axis represents the two predominant manners of perception: feeling, which Kolb named "concrete experience," and thinking, named "abstract conceptualization." The horizontal axis represents the two predominant manners of processing: watching, named "reflective observation," and doing, named "active experimentation." The combination of preferred modes of perception and processing form the basis of Kolb's four learning "styles."[7]

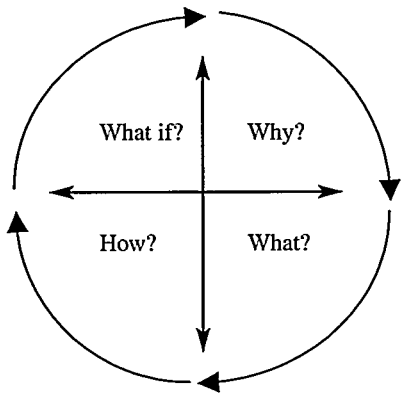
6. *Id.* at 27
7. For a more in-depth discussion of Kolb's learning modes and learning styles, see Kristin B. Gerdy, *Making the Connection: Learning Style Theory and the Legal Research Curriculum*, LEGAL REFERENCE SERVICES Q., 2001 no. 3–4, at 71.

Learning around the Cycle

¶13 Although each learner has a preferred learning style based on the modes of perception and processing with which he or she is most comfortable, the most effective learning takes place not when learners work in their preferred style but when they work in all four predominant modes and move around the learning cycle.

¶14 Moving around the cycle requires working through all four modes by answering the summarizing question in each quadrant: *why?* (concrete experience), *what?* (reflective observation), *how?* (abstract conceptualization), and *what if?* (active experimentation).

Figure 2
The Learning Cycle



¶15 Ideally, as students travel around the learning cycle, they begin by having a "concrete experience" (*why?*). They then reflect upon that experience from different perspectives in the "reflective observation" phase (*what?*). From the different observations, they are able to create general principles and theories; this is the "abstract conceptualization" phase (*how?*). Finally, they are able to test their newly created theories in different situations, thereby engaging in "active experimentation" (*what if?*). As will be shown below, working in all four modes produces the most effective learning experience for students.[8]

¶16 Thus, rather than focusing their learning experiences in the particular quadrant of their preferred learning style, effective learners move around the cycle in each learning experience. Excellent learners develop skills in all four quadrants of the cycle and can move through the cycle rapidly, ultimately enabling them to learn independently.

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8. *See infra* ¶¶ 21–26.

¶17 Most legal research teachers find it quite natural to lead their students through the first three quadrants of the cycle, and most students naturally move through them. Because it seems logical to "begin at the beginning," many teachers instinctively provide the "concrete experience" of the first quadrant. Here the teacher introduces the subject matter and begins to answer why the material is being taught. Answering the *why* question is enhanced by providing the "big picture" and giving relevance to the subject by showing the learners how the new knowledge or skills will be important to their lives now and in the future.

¶18 After providing the motivation and setting the stage, most teachers find it quite easy to move to the second quadrant of the learning cycle and answer the *what* question. Here teachers provide information to the students, organize and integrate new material by showing how it fits into the big picture, and provide time for thinking and reflection ("reflective observation").

¶19 Moving on to the third quadrant of the learning cycle and presenting opportunities for "abstract conceptualization" also fits easily into the legal research teacher's existing ideas about teaching. Learning in this quadrant requires that students apply their new knowledge to answer the *how* question. Here the teacher is transformed from an information disseminator to a coach.[9] The focus of this quadrant is on both the application of knowledge and on the acquisition and application of problem-solving skills. A safe environment in which to experiment with both strategy and specific skills is essential to learning in this quadrant. This is the arena where most legal research exercises and assignments fall.

¶20 Unfortunately, many legal research teachers stop at the end of the third quadrant, never taking their students through the final quadrant of the learning cycle and consequently never solidifying the learning that has taken place. Perhaps this is why so many—law students, faculty, librarians, and practitioners—are skeptical of the real value or effectiveness of legal research instruction.

Completing the Learning Cycle by Asking "What If?"

¶21 In order to complete the cycle and achieve an effective learning experience, learners must move to the fourth quadrant, "active experimentation." Learning in this quadrant has two separate but related objectives. First, learners must apply the material learned to their own lives by solving "real" problems, thereby synthesizing their theoretical knowledge and answering the *what if* question. Second, learners and teachers must assess and evaluate the learning that has occurred.

¶22 Experimentation through application of knowledge and skills to new contexts provides the foundation for more advanced experiences. Using their new legal research skills to solve a hypothetical problem is the best way for students to complete the learning cycle and to solidify the new knowledge in their minds.

¶23 Failure to move through this final quadrant of the cycle leads to gaps in

9. KOLB, *supra* note 5, at 202.

knowledge and the inability to apply concepts to practical situations. For example, some students can quickly identify the legal issue presented by a hypothetical fact scenario but are unable to identify the resources most likely to contain the answer to the problem. Other students are very good at the mechanics of legal research—they can find anything in an index if they are given the topic to research—but they are unable to recognize the legal problem presented by a fact situation. Still others may be unable to transfer the skills learned in one problem setting to another problem setting—they are able to use an index to find statutes but are unable to use the descriptive word index to find topic and key numbers in a digest. And finally there are students who are able to use their new research skills to find solutions to problems when they are given specific guidance about where to look for information but flounder when they have less direction or have to make judgments about sources. To help students avoid these gaps, we must guide them around the entire learning cycle.[10]

¶24 Being able to apply new knowledge and skills to new contexts only fulfills one of the two objectives of the cycle's fourth quadrant. To complete the learning process, students must assess their learning and receive feedback about their performance. This requires teachers to change their role, becoming a judge—an evaluator—and, often, a remediator.

¶25 Evaluation and assessment are not only important for students who need an unbiased assessment of their progress and learning, they are critical for teachers as well. Effective, learner-centered assessment enables teachers to answer two key questions: What have my students learned and how well have they learned it? How successful have I been at accomplishing the goals and objectives I have set (for a single class period, a particular skills set, or an entire course)?[11]

¶26 It is in meeting the objectives of this final quadrant of the learning cycle that legal research teachers must invest their most focused thought and time. When

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10. For a description of the use of the Kolb learning style in an undergraduate research class, see Sonia Bodi, *Teaching Effectiveness and Bibliographic Instruction: The Relevance of Learning Styles,* C. & RES. LIBR., Mar. 1990, at 113. Richard Felder has offered a list of excellent ideas for "teaching all types," including:

    > [1] teach theoretical material by first presenting phenomena and problems that relate to the theory. Don't jump directly into the details—perhaps give the students an idea of the problems that can be solved with the theory and see how far they can go before they get all the tools to solve them; [2] balance conceptual information with concrete information; [3] make extensive use of visuals in addition to oral and written explanations and derivations in lectures and readings; [4] provide class time for students to think about the material being presented and for active student participation; [5] encourage or mandate cooperation on homework—hundreds of studies show that students who participate in cooperative learning experiences tend to earn better grades, display more enthusiasm, etc.; and [6] demonstrate the logical flow of individual course topics, but also point out connections between the current material and other relevant material in the same course, or other courses in the same discipline, in other disciplines, and in everyday experience. Richard M. Felder, *Matters of Style,* ASEE PRISM, Dec. 1996, at 18, 23.

11. *See* MARY HUBA & JANN E. FREED, LEARNER-CENTERED ASSESSMENT ON COLLEGE CAMPUSES: SHIFTING THE FOCUS FROM TEACHING TO LEARNING 8 (2000).

teachers understand why active experimentation, assessment, and feedback are critical to learning, and when they are equipped with tools to strengthen their individual assessment and feedback skills, they are better prepared to promote their students' learning. The following three sections more specifically address the objectives of "active experimentation" in the learning process.

Activating "Inert" Knowledge by Using Ill-Defined Problems

¶27 Nearly every research teacher has had the experience at least once in his or her career when a student who has performed at a high level on research quizzes or other class assignments seems to falter, if not fail completely, when given another seemingly similar task. When such a thing happens, both the teacher and the student often ask, "What happened? I thought you/I understood." The underlying problem is often found in "inert"[12] knowledge—the inability to apply skills and concepts in situations other than those in which they were originally learned.

¶28 The assumption, which many students and teachers hold, that learners will automatically be able to apply knowledge when needed is unfounded. Educational research indicates that while learners can master particular pieces of information or discrete skills, unless they have the opportunity to actively apply and use their new skills or knowledge to achieve a goal, they are able to apply them only in the context in which they were originally learned.[13] Because their knowledge is inert, many students are unable to transfer that knowledge to new, even substantially similar situations.

¶29 The concept of "inert" knowledge helps to explain why many law students succeed with legal research quizzes or even open-ended research in preparation for drafting a guided memorandum, but are unable to apply the same research skill set in a new setting—whether in the same course or later in a different course. It also helps to explain the extensive on-the-job learning and instruction students often need, both when they leave for their first summer experiences and for their first full-time positions following graduation. Inert knowledge is also likely the reason why some students are unable to see how the theories they are learning relate to the skills they are acquiring.[14]

¶30 In order to lead students from "inert" to "active" knowledge and skills, legal research teachers must consciously guide their students through the transition by using both well-defined and ill-defined[15] problems and assignments.

¶31 Well-defined problems, as their name suggests, are problems that are carefully designed to include only specifically selected elements of conflict so that

12. *Id.* at 44 (citation omitted).
13. *Id.* (citation omitted).
14. *Id.*
15. Educational literature often refers to ill-defined problems as "authentic" problems or assignments. *See infra* ¶ 44 for a discussion of "authenticity" in assessment tools.

there is a "correct" answer. The teacher constructing the problem removes some of the "'messiness' of real life" in order to guide the student through the application of specifically targeted resources and skills to achieve the correct answer.[16]

¶32 Many of the research exercises and assignments commonly used in legal research courses can be classified as well defined. For example, a question asking students to locate a specific statute in the state code is most likely well defined because the teacher usually knows in advance that the statutory provision exists and likely has ensured that there are at least reasonably accessible means of locating it. Another common example is an assignment to locate cases on a particular topic using a specified digest series which the teacher has already consulted to make sure results can be found.

¶33 Well-defined problems are key to the third quadrant of the learning cycle (answering *how?*) because students gain confidence in a safe environment in which they will not fail as they first attempt to apply their new abstract knowledge. Designing a well-defined problem in which the teacher knows students will have history and treatment codes to interpret and superior numbers to decipher is the best way to familiarize them with *Shepard's Citations* and to give them confidence in their ability to use this source. But it does not prepare them for the often messy realities of working with a citator. Hence, well-defined problems alone are insufficient. In order to overcome the "inert" knowledge block, students must be forced to move on to ill-defined problems—they must confront the *what if* question.

¶34 The shift to ill-defined problems requires teachers to prepare problems that simulate realistic situations in which attorneys and other legal researchers may find themselves. Such problems help students complete the learning process because they enable them to "experience the compelling challenges typically faced by professionals in their disciplines" and to address both enduring (issues that recur in practice) and emerging issues and problems—the kind that "are fraught with the complicating factors of real life."[17] After all, when was the last time an attorney did research that had been "sanitized" by a law librarian in advance to ensure that the desired resources and results were available?

¶35 The importance of challenging students with problems that mirror the "real world" was recognized by the American Association for Higher Education and its collaborators in principle two of their 1998 report on student learning: "Learning is enhanced by *taking place in* the context of *a compelling situation* that balances challenges and opportunity, stimulating and utilizing the brain's ability to conceptualize quickly and its capacity and need for contemplation and reflection upon experiences."[18] Completing open-ended, ill-defined problems helps students understand that in the "real world" they have to use the knowledge they have

16. HUBA & FREED, *supra* note 11, at 38.
17. *Id.* at 37.
18. POWERFUL PARTNERSHIPS, *supra* note 3, at 7.

developed from past experience to solve new problems. They need to transfer their skills and processes to a new context. In addition, working with ill-defined problems enables students to learn when and how to use their new skills.

¶36 By definition, such "real world" problems are rather amorphous; they rarely have a "correct" answer and their structure or methodology is not always readily apparent.[19] Although it can be a bit intimidating to send a group of first-year law students out into the library to research a topic that has not been exhaustingly pre-researched, the resulting understanding of both process and reality are well worth the butterflies (for both the teacher and the students).

¶37 Working with ill-defined problems also helps students internalize their new knowledge and skills, a process that is essential to complete learning.[20] Perhaps the reason so many students comment that the first time they really "understood" a principle of legal research was after they had left school for the summer and were conducting research for a job or externship is because when faced with a "real world" legal problem, they were forced to recall, synthesize, and implement the skills and strategies they had been taught about research. They actually had to do the work, not knowing what they would find and without the assurance that someone had been through it before to ensure the solution was available.

Effective, Learner-Centered Assessment

¶38 In addition to activating a student's inert knowledge, ill-defined problems create the opportunity for both the teacher and the student to assess learning and progress; however, in order to be effective, this assessment must be learner-centered. Learner-centered assessment "focuses on . . . observing and improving learning, rather than on observing and improving teaching."[21] In other words, the focus of the assessment must be on the students and what they have learned, and the goal of the assessment must be to further enhance that learning.

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19. Specific principles and advice about designing ill-defined legal research problems are beyond the scope of this article, but several excellent resources are available, including Lorraine Bannai et al., *Sailing through Designing Memo Assignments,* 5 J. LEGAL WRITING INST. 193 (1999); Brian Huddleston, *Trial by Fire . . . Creating a Practical Application Research Exam,* 7 PERSPECTIVES: TEACHING LEGAL RES. & WRITING 99 (1999); Jan M. Levine, *Designing Assignments for Teaching Legal Analysis, Research, and Writing,* 3 PERSPECTIVES: TEACHING LEGAL RES. & WRITING 58 (1995); James B. Levy, *Dead Bodies and Dueling: Be Creative in Developing Ideas for Open Universe Memoranda,* 7 PERSPECTIVES: TEACHING LEGAL RES. & WRITING 13 (1998); Michael J. Lynch, *An Impossible Task but Everybody has to do it—Teaching Legal Research in Law Schools,* 89 LAW LIBR. J. 415 (1997); Terry Jean Seligmann, *Beyond "Bingo!" Educating Legal Researchers as Problem Solvers,* 26 WM. MITCHELL L. REV. 179 (2000); Amy E. Sloan, *Creating Effective Legal Research Exercises,* 7 PERSPECTIVES: TEACHING LEGAL RES. & WRITING 8 (1998); Grace Tonner & Dianna Pratt, *Selecting and Designing Effective Legal Writing Problems,* 3 J. LEGAL WRITING INST. 163 (1997). Many of these articles focus on designing legal writing problems, but they are good sources for legal research assignments as well.

20. *See supra* text accompanying note 2.

21. THOMAS A. ANGELO & K. PATRICIA CROSS, CLASSROOM ASSESSMENT TECHNIQUES: A HANDBOOK FOR COLLEGE TEACHERS 4 (2d ed. 1993).

¶39 The word "assessment" is used interchangeably in educational circles to describe both a process and an instrument.[22] Both definitions are important to an understanding of effective, learner-centered assessment. As a process, assessment can be defined as the "gathering and discussing [of] information from multiple and diverse sources in order to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences; the process culminates when assessment results are used to improve subsequent learning."[23] As an instrument, an assessment is "an activity, assigned by the professor, that yields comprehensive information for analyzing, discussing, and judging a learner's performance of valued abilities and skills."[24] Thus, through the use of an assessment instrument, both teacher and student are able to evaluate a student's learning—what the student knows and what the student can do with the new knowledge and skills.

¶40 The answer to the question of why legal research teachers and students alike must assess student learning at first seems obvious—we need to determine whether students have accomplished the objectives we set for them. But assessment does more than merely monitor learning; it can also promote it. In their often-quoted *Seven Principles for Good Practice in Undergraduate Education,* Chickering and Gamson assert that good practice not only encourages but requires assessment:

> Knowing what you know and don't know focuses learning. Students need appropriate feedback on performance to benefit from courses. When getting started, students need help in assessing existing knowledge and competence. In classes, students need frequent opportunities to perform and receive suggestions for improvement. At various points . . . students need chances to reflect on what they have learned, and what they still need to know, and how to assess themselves.[25]

Inherent in Chickering and Gamson's explanation is the premise that learner-centered assessment should be an integral part of the entire teaching process.[26] It is not, as teachers too often think of it, something that is done "at the end." Evaluating student learning should be a part of every portion of teaching. Rather than viewing teaching and assessing as discrete events, the learner-centered teacher views them as "ongoing, interrelated activities focused on providing guidance for

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22. In higher education, assessment is often used to refer to a broader, institutional examination or a combination of student and institutional examination. *See, e.g.*, GREGORY S. MUNRO, OUTCOMES ASSESSMENT FOR LAW SCHOOLS 11 (2000) (footnote omitted) ("For law schools . . . assessment connotes a set of practices by which an educational institution adopts a mission, identifies desired student and institutional goals and objectives ('outcomes'), and measures its effectiveness in attaining those outcomes."). Institutional assessment, sometimes referred to as program assessment, is used to provide feedback about student and alumnae performance on an institution-wide basis.
23. HUBA & FREED, *supra* note 11, at 8.
24. *Id.* at 12.
25. CHICKERING & GAMSON, *supra* note 2, at 5.
26. *See also* MUNRO, *supra* note 22, at 11 ("Assessment is not only a means of determining what and how a student is learning, but is itself a learning tool.").

improvement."[27] With teaching and assessing intertwined, students are able to practice the skills they are learning and to receive ongoing feedback with which they evaluate and adjust their performance.[28] This integration of enhancing student performance, evaluation, and feedback should be the focus of law school assessment.[29] Integrating learning and assessment is important not only because it has a positive influence on student learning but also because "'[i]f assessment is viewed as a final judgment instead of a means of improvement, it can be a barrier to learning.' Students not only fail to receive direction for improvement, but they also come to expect that learning can take place without it."[30] Thus, it is essential that teachers and students view teaching as a continuous process of learning and assessing that learning.

Characteristics of Exemplary Assessment Tasks

¶41 Once legal research teachers understand the focus and place of learner-centered assessment in their teaching, they often ask how to create effective assessment measures. The first step in designing assessment instruments is to recognize what makes an assessment tool effective and fair. In order to be fair, an assessment task must give students "equitable opportunities to demonstrate what they know."[31]

¶42 In their work on learner-centered assessment, Huba and Freed identify eight characteristics of an "exemplary assessment task."[32] First, an exemplary assessment task is *valid,* meaning that it "yields useful information to guide learning" and correlates closely with the specific knowledge and skills the teacher intended to teach.[33] In other words, the assessment task "match[es] important intended learning outcomes."[34] For example, if a legal research teacher spends the majority of time in a given class focusing on locating materials in the *Code of Federal Regulations,* a valid assessment task would ask students to locate a particular CFR section using the indexes discussed in class.

¶43 Second, an exemplary assessment task is *coherent,* meaning that it "is structured so that activities lead to desired performance or product."[35] Teachers must be wary of devoting considerable time and effort to designing interesting and engaging activities for students, only to realize later that the activity fails to lead

27. HUBA & FREED, *supra* note 11, at 55.
28. *Id.*
29. MUNRO, *supra* note 22, at 11.
30. J. Griffith et al., *Total Quality Management, Assessment, and Large Class Size,* ASSESSMENT UPDATE, 1995 no. 3, at 1, 1, *quoted in* HUBA & FREED, *supra* note 11, at 55.
31. Linda Suskie, *Fair Assessment Practices: Giving Students Equitable Opportunities to Demonstrate Learning,* AAHE BULL., May 2000, at 7, 7, *available at* http://www.aahe.org/bulletin/may2.htm.
32. HUBA & FREED, *supra* note 11, at 224–27.
33. *Id.* at 224. *See also* MUNRO, *supra* note 22, at 106–07 (addressing the meaning and implications of valid assessment in a law school context).
34. HUBA & FREED, *supra* note 11, at 225.
35. *Id.* at 224.

the students to the desired learning outcome.[36] This trap is particularly easy for legal research teachers to fall into because so many areas of the law are fascinating and pose intriguing questions that beg for exploration. However, an intriguing problem that does not lead to the identified learning outcome only causes angst—for both student and teacher.

¶44 Third, an exemplary assessment task is *authentic,* meaning that it involves an ill-defined problem that reflects the enduring or emerging issues in the discipline.[37] Enduring issues are problems that attorneys repeatedly confront in practice, for instance, determining the statute of limitations for a particular action. Examples of emerging issues upon which ill-defined problems could be based include copyright law in Cyberspace or custody rights to frozen embryos. Authenticity makes problems more challenging and more rewarding for students who recognize that the issues they are asked to research are similar to, if not the same as, issues they would confront in "real" practice.

¶45 Fourth, an exemplary assessment task is *rigorous,* meaning that it requires students to demonstrate not only that they understand the content but also that they can use it effectively and can explain and understand the methodology they used to reach their result.[38] A rigorous assessment task emphasizes "purposeful, sustained reasoning, rather than demonstration of discrete, isolated skills;" it also assesses students' "metacognitive strategies for planning, revision, and self-evaluation."[39]

¶46 One example of incorporating emphasis on process and thereby achieving rigor in assessment is a formal research report. After the students' research is completed, each student must prepare a process-oriented report of what he or she did. Such reporting measures are designed to make the students reflect upon their research—both the strategies they used and the results they achieved. Some legal research teachers find it useful to present their students with a set of questions to prompt specific responses. Some of the questions are result-oriented—for example, were they able to find an ALR annotation on their topic; others are process-oriented—where did they begin their legal research? Why did they choose to begin there? Writing the reports forces students to think through their answers, making them look at their research from different perspectives and concentrate on the research process.

¶47 A fifth criterion of an exemplary assessment task is that it be *engaging,* meaning that it "provokes student interest and persistence."[40] It seems obvious that the subject of an assessment must interest the students at some level. But the

36. *Id.* at 225.
37. *Id.* at 224.
38. *Id.* at 225 (citation omitted).
39. Edys S. Quellmalz & J. Hoskyn, *Classroom Assessment of Reasoning Strategies, in* HANDBOOK OF CLASSROOM ASSESSMENT: LEARNING, ACHIEVEMENT, AND ADJUSTMENT 103, 110 (Gary D. Phye ed., 1997), *quoted in* HUBA & FREED, *supra* note 11, at 225.
40. HUBA & FREED, *supra* note 11, at 224.

importance of that interest is more than a trivial nicety. Rather, "[w]hen their work is interesting, students are provoked to become involved and to persevere thoughtfully to completion. They are motivated to learn, and they find learning satisfying. This satisfaction leads them to become more interested in and committed to their discipline."[41]

¶48 Sixth, an exemplary assessment task is *challenging,* meaning that it "provokes, as well as evaluates, student learning."[42] The ill-defined nature of a challenging assessment task and the problem-solving skills required to accomplish the task successfully mean that students will be learning during the assessment process.[43] When several pieces of knowledge or several skills are evaluated simultaneously, a challenging assessment forces students to learn in more complex and effective ways than if each were assessed separately.[44] This is, in large part, why simulation assignments—assignments that place students in the role of a practicing attorney—are superior to traditional "quiz" assignments. Asking students to solve a legal problem through research is more challenging than asking them to provide answers for a series of sterile research questions.

¶49 Seventh, an exemplary assessment task is *respectful,* meaning that it "allows students to reveal their uniqueness as learners."[45] Because ill-defined problems do not have one "correct" answer, they are open to varying interpretations. This flexibility accommodates different learning styles by allowing students to approach the problem with skills that complement their preferred styles.[46]

¶50 In addition to being open to differing approaches, a respectful assessment is "fair and free of bias" because it has been carefully constructed so that it "does not favor students of a particular group or background."[47] While legal research teachers should be aware of this assessment criterion and apply it to the extent reasonable, the biases inherent in the law and in its application often present situations where such "fairness" is either not possible or not desirable. Legal research teachers should not unrealistically sanitize problems to avoid bias. Instead, they should accept the responsibility to articulate the set of biases and limitations on universal fairness that are being employed in a specific assessment instrument and use them as a source of learning and discussion for the students in the class. For example, some research and writing assignments involving business transactions tend to "favor" students with undergraduate backgrounds in business. However, because such problems often arise in practice, eliminating them from the curriculum simply to avoid disadvantaging students without a business background is undesirable, if not unwise.

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41. *Id.* at 226 (citation omitted).
42. *Id.* at 224.
43. *Id.* at 226.
44. *Id.*
45. *Id.* at 224.
46. *Id.* at 226.
47. *Id.*

¶51 Finally, an exemplary assessment task is *responsive,* meaning that it "provides feedback to students leading to improvement."[48] Responsive assessment tasks give students opportunities to assess their work themselves and to discuss their work with other students and the teacher.[49]

Developing Effective Assessment Tasks[50]

¶52 Even with an understanding of the characteristics of effective assessment tasks, many teachers, legal research teachers among them, are unsure how to actually create an effective assessment tool. Fortunately, the expertise of educational researchers is readily available.

¶53 There are four essential steps to developing and implementing effective assessment tasks. First, the teacher must formulate learning outcomes and performance standards and publicize them to the students.[51] Second, the teacher must design the assessment tool. Third, the teacher must design instruction and activities to enable the students to learn what they need to fulfill the assessment task. Fourth, the teacher and student must discuss and use the results of the assessment measure to further promote learning and teaching.

Formulate and Publicize Outcomes and Performance Standards

¶54 A learning outcome[52] is a statement describing the teacher's intentions about what students should know, understand, and be able to do with their knowledge. Learning outcomes can be as narrow as stating that a student will be able to complete the nine steps involved in updating a section of the *Code of Federal Regulations,* or as broad as stating that a student will be able to formulate a plan for conducting cost-effective, efficient legal research by incorporating print, human, and online resources. A performance standard is the qualitative expectation the teacher has for the assessment task—in other words, what the teacher is "looking for."

¶55 In order for students to be able to succeed in learning, they need to understand what the teacher's important goals are—what the teacher wants them to learn and what he or she feels is most important. Thus, legal research teachers must not only create learning outcomes but also *publicize* them by providing their students with a list of important concepts and skills that they will be responsible for and that

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48. *Id.* at 224.
49. *Id.* at 227.
50. The list of steps described in this section is a composite of two different lists of effective assessment design skills. *Id.* at 10–15; Suskie, *supra* note 31, at 8–9.
51. For a short discussion of the importance of articulated and publicized learning outcomes in a law school assessment context, see MUNRO, *supra* note 22, at 15.
52. While an in-depth discussion of the principles and processes involved in formulating learning outcomes is beyond the scope of this article, excellent resources are available. *See, e.g.,* HUBA & FREED, *supra* note 11, at 91–120 (chapter titled "Setting Direction with Intended Learning Outcomes"); PROF. DEV. COMM., AM. ASS'N OF LAW LIBRARIES, WRITING LEARNING OUTCOMES, *at* http://www.aallnet.org/prodev/outcomes (last visited Sept. 27, 2001) (while focusing on learning outcomes for short programs, the principles described are equally relevant for both single-class and semester-long learning outcomes).

will be measured in an assessment.[53] Presenting this information "up front" is key because "[l]earning increases, even in its serendipitous aspects, when learners have a sense of what they are setting out to learn, a statement of explicit standards they must meet, and a way of seeing what they have learned."[54]

¶56 Publicized learning outcomes and performance standards also help students understand what will be expected of them in order to succeed in an assessment task and in the course. Students need to see what constitutes excellent work.[55] Providing this information also focuses the teacher by forcing him or her to make "explicit and public statements of criteria of performance. By doing so, faculty refine their own understanding of expected abilities, clarify for their colleagues the basis of their judgment, and enable students to understand what performance is required."[56]

Develop Assessment Measures[57]

¶57 Once legal research teachers articulate and publicize their learning outcomes and performance standards, they are ready to select or design data-gathering measures to assess whether the outcomes have been achieved.[58]

¶58 Throughout the years, legal research teachers around the country have devised a number of effective assessment formats.[59] Such formats include paper or

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53. For example, in my first-year legal research classes I begin each class by disclosing the objectives for that class period. I also distribute "review" questions, often before the material is presented, that restate the objectives and identify the key information and skills I expect students to know. *See infra* Appendix A for an example of a "legal research review" handout. Another common method of highlighting information the teachers feels is important is a checklist. *See* Jo Anne Durako et al., *From Product to Process: Evolution of a Legal Writing Program,* 58 U. PITT. L. REV. 719, 727–28 (1997) (explaining the authors' use of a memorandum-editing checklist that is designed to "help students internalize the basic criteria of a high quality legal document").
54. Georgine Loacker et al., *Assessment in Higher Education: To Serve the Learner, in* ASSESSMENT IN AMERICAN HIGHER EDUCATION 47, 47 (Terry W. Hartle & Clifford Adelman eds., 1986), *quoted in* HUBA & FREED, *supra* note 11, at 151.
55. For an example of such a performance standard in a legal writing context, see Durako et al., *supra* note 53, at 729.
56. Loacker et al., *supra* note 54, at 51, *quoted in* HUBA & FREED, *supra* note 11, at 151.
57. *See* HUBA & FREED, *supra* note 11, at 228, for a series of questions teachers can ask themselves while developing assessment tasks:
    1. What declarative knowledge do I expect students to draw upon in this task?
    2. What procedural knowledge do I expect students to use?
    3. What metacognitive knowledge do I expect students to develop and reveal?
    4. In what real-life settings do individuals use the knowledge I identified and what ill-defined problems do they typically address?
    5. For each ill-defined problem, what task(s) could I sketch out for students to complete?
    6. Which task best exemplifies the characteristics of exemplary assessment?
    7. Which assessment format will work best for this task?
    8. How can I improve the task to more clearly reflect the characteristics of exemplary assessment?
    9. What criteria should my students and I use in shaping and critiquing student work?
58. Admittedly this is not a linear process. A teacher cannot define performance standards for an assessment measure that has not yet been designed.
59. Several articles have been written in recent years about different assessment tools and their advantages or disadvantages in a legal research setting. *See* Huddleston, *supra* note 19; Mary Brandt Jensen,

thesis projects, journals, "treasure hunts," "in-basket" problems (short, situational problems as would be found in a researcher's in basket), multiple-choice exams, performance of practice skills, case studies, pathfinders, oral exams, group projects, interviews, comprehensive exams, portfolios, in-class quizzes, practice exams, short papers, and oral exercises.

¶59 When designing assessment measures, it is important to focus on variety. Because students learn differently, they also demonstrate their learning differently. So, if a legal research teacher uses a multiple-choice exam for the first assessment task, the teacher may want to use a case study or oral exercise later in the course. Inherent in the quest for variety is the recognition that some assessment measures are more appropriate for some subjects or skills than they are for others. Choosing the measures that are best suited for a subject is as important as providing a variety of different measures throughout the course.

Provide Opportunities for Students to Learn

¶60 Before students' learning can be assessed, they must be given opportunities to learn the materials. Fulfilling this step in effective learner-centered assessment requires the teacher to cover the material; give clear, detailed instructions; provide examples of excellent work; and engage and encourage the students.

¶61 Initially, the teacher must present the material. This means providing students with the information they need and designing opportunities for them to learn it fully both inside and outside the classroom. Teachers who truly cover the material consciously consider how they are going to present the material in class to ensure that the students learn what they need to know to succeed. For example, a legal research teacher must assess whether the best way to teach students how to use *Shepard's Citations* is to lecture about it, use presentation software to show examples, bring copies of relevant volumes into the classroom, take the students into the library to work sample problems, or use a combination of these methods. Presenting the material effectively is not a "one-size-fits-all" formula. And what works for teaching *Shepard's* may not work for teaching case reporters or research strategy. Legal research teachers must not put their teaching on autopilot, but instead need to plan each teaching session thoughtfully.

¶62 Then, when the assessment task is discussed or distributed, the teacher must give clear, detailed instructions. Clear criteria are essential to creating a

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"Breaking the Code" for a Timely Method of Grading Legal Research Essay Exams, 4 PERSPECTIVES: TEACHING LEGAL RES. & WRITING 119 (1996); Levine, *supra* note 19; Douglas Miller, *Using Examinations in First-Year Legal Research, Writing, and Reasoning Courses*, 3 J. LEGAL WRITING INST. 217 (1997); Seligmann, *supra* note 19; Helene Shapo & Christina L. Kunz, *Standardized Assignments in First-Year Legal Writing*, 3 PERSPECTIVES: TEACHING LEGAL RES. & WRITING 65 (1995); Sloan, *supra* note 19; Kory D. Staheli, *Evaluating Legal Research Skills: Giving Students the Motivation They Need*, 3 PERSPECTIVES: TEACHING LEGAL RES. & WRITING 74 (1995); Kory D. Staheli, *Motivating Law Students to Develop Competent Legal Research Skills: Combating the Negative Findings of the Howland and Lewis Survey*, LEGAL REFERENCE SERVICES Q., 1994, no. 1–2, at 195.

"responsive" assessment tool.[60] Effective, learner-centered teachers help their students learn how to do the assessment task. They do not attempt to "hide the ball," but instead show exactly what they expect. They take the "ball" out in class; they pass it around so the students can examine it. They provide detailed instructions and often distribute "good" results from previous assessments.

¶63 When working with law students, many legal research teachers may feel that such instructions are unnecessary because their student population is "above" such elementary details. However, "[n]o matter what kind of assessment you are planning, at least some of your students will need your help in learning the skills needed to succeed."[61]

¶64 In addition to clear, detailed instructions, the teacher must provide examples of excellent work. By revealing their standards of excellence, teachers remove barriers to learning that students face when they are uncertain about what the teacher wants or expects or when they cannot clearly envision the final product they are expected to create. Not all students will perform to the level of excellence, but revealing the standards for excellent work enhances their chance of success.[62] Legal research teachers may fear that giving students samples of past work will encourage plagiarism or other means of academic dishonesty; however, experience has shown that the opposite is true. When teachers get away from the "hide the ball" mentality, students are more inclined to work hard to achieve success.

¶65 Finally, the teacher must engage and encourage the students. Everyone needs a cheerleader. Expressions of confidence and positive contact from the teacher can help students be more successful.[63] Nowhere is this more true than when dealing with first-year law students. The limited feedback and faculty interaction inherent in the first year of law school, combined with the intense competition between students, is enough to create anxiety and fear of failure in even the most competent student. When this general anxiety is coupled with a large law library filled with seemingly uninviting sources written in unfamiliar language, legal research often becomes the straw that broke the proverbial camel's back, leaving many students with a fear of failure that is almost paralyzing. For others, it is certainly enough to create stress that can impede rather than compel learning. By remembering their role as cheerleader, legal research teachers can help relieve their students' suffering. This is not to suggest that legal research teachers should become the law school's social services or counseling department. But legal research teachers may be in a unique position among law faculty to assist in alleviating these concerns while simultaneously furthering learning within their own courses. Small class sizes often allow for personal interaction between legal research teachers and their students. This interaction lets the

60. HUBA & FREED, *supra* note 11, at 224.
61. Suskie, *supra* note 31, at 2.
62. HUBA & FREED, *supra* note 11, at 47.
63. Suskie, *supra* note 31, at 2 (citations omitted).

teachers provide the individualized encouragement needed to help students succeed. It is not unusual to hear students comment that their legal research teacher was "the most accessible," "the most helpful," or "the most caring" faculty member they encountered during their first-year experience.

Use Assessment Results to Improve Learning and Teaching

¶66 Once the assessment task has been completed, both the teacher and the student can use its results to improve. But before such results can be used effectively, they must be interpreted appropriately. Teachers must remember that while sometimes it is appropriate to judge students against each other, in other situations it is better to judge them against an objective standard. For example, standards-based legal research assessment would ask whether the student identified the important points and explained them accurately? Did the student present the material in an organized manner? Did the student summarize accurately and make justifiable inferences? Did the student find the key cases or statutes? Did the student demonstrate an understanding of the concepts of mandatory and persuasive authority and of the hierarchy within persuasive authority? Did the student document and explain the research process in a way that demonstrates an accurate understanding of the resources used, their relationships to one another, and their role within the research process? While this standards-based approach may not be appropriate for the ultimate assessment in many legal classes where the nature of grading is based on ranking because of mandatory means, it may be appropriate for interim assignments or in classes exempted from institutionally imposed curves. In particular, it is preferable to comparative grading when the assessment task involves "correct" answers, as is often the case with legal research assignments. In such situations, it is more important for students to know whether their answers were "right" or "wrong" than whether their presentation of those answers was "better" or "worse" than their colleagues. In addition, comparative grading in such situations often forces teachers to make superficial or even meaningless distinctions between student responses merely to assign grades.

¶67 After the assessment results are calculated, teachers must evaluate them on both a collective and an individual basis. If the class as a whole does not perform to the level expected, the teacher needs to ask why. The answer may be found in a problem with the assessment tool itself, or it may be found in a problem with the way the teacher taught a particular concept. For example, if a majority of the students in a legal research class are unable to locate cases using a digest when the teacher has pre-researched the assignment and knows that cases on point are available, the problem could lie in several places. First, the tool used to direct the student to the cases could be flawed—the wording of the hypothetical problem may not lead students to appropriate keywords that could be used in the descriptive word index. Or the teacher's explanation of the process of generating appropriate search terms or using the digest itself may have been unclear. Using assessment results to revise the assessment tool, the teacher's pedagogy, or both can lead to better and fairer assessments the next time.

¶68 Although revising the assessment tool itself and refining the way concepts are taught are valuable uses for assessment results, perhaps their most important use is as the catalyst for interactions between teachers and students that focus on using the results to improve individual student performance and learning.

Promoting Learning through Effective Feedback

¶69 The eighth criterion of learner-centered assessment is that it be responsive; in other words, it provides feedback to students that leads to improvement.[64] This feedback is often desperately sought—especially by first-year law students who are grasping for anything that will let them know how well they are learning new, and often intimidating, material. In the legal academy, legal research and legal writing courses are unique in the first-year curriculum because they are generally not "exam courses" but instead involve a series of assignments (be they graded or ungraded) throughout the course. This structure allows legal research and legal writing teachers to offer more feedback to their students than can their colleagues who teach more traditional doctrinal courses. Because feedback from their legal research teacher is often the first that new law students receive, it is important that legal research teachers understand the importance and the differing roles of feedback.

¶70 To be most effective, feedback needs to go in both directions—from teacher to student and from student to teacher—and students must be able to assess their own learning and give themselves feedback when needed. Two principles of learning identified by the American Association of Higher Education-sponsored report emphasize these points. Principle seven reads: "Learning requires *frequent feedback* if it is to be sustained, *practice* if it is to be nourished, and *opportunities to use* what has been learned."[65] Principle ten reads: "Learning involves *the ability of individuals to monitor their own learning,* to understand how knowledge is acquired, to develop strategies for learning based on discerning their capacities and limitations, and to be aware of their own ways of knowing in approaching new bodies of knowledge and disciplinary frameworks."[66] Commentary accompanying this principle stresses that in order "[t]o improve the ability of individuals to *monitor* their *own learning* . . . faculty [must] . . . ask students to observe and record their own *progress in learning* . . . [and] cultivate students' *desire to know what they do not know.*"[67]

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64. HUBA & FREED, *supra* note 11, at 227.
65. POWERFUL PARTNERSHIPS, *supra* note 3, at 15. The Institute for Law School Teaching has developed a three-part inventory (covering students, faculty, and the institution) to assess progress in this area. *Principle 4: Good Practice Gives Prompt Feedback, in* INST. FOR LAW SCH. TEACHING, SEVEN PRINCIPLES FOR GOOD PRACTICE IN LEGAL EDUCATION, *at* http://law.gonzaga.edu/ilst/P4.htm (last visited Sept. 27, 2001).
66. POWERFUL PARTNERSHIPS, *supra* note 3, at 20.
67. *Id* at 21.

¶71 In learning theory, feedback serves two distinct functions, both of which are implied by these two principles: mirroring and improvement.[68] In fulfilling its mirroring function, feedback reflects the student's understanding of the substance of the material. In its mirroring role, feedback from the teacher identifies areas where the student has succeeded in meeting the assessment tool's objectives and areas where the student has made mistakes or has deficiencies. With such feedback to show students the "reality" of their performances, the students are able to adjust their perceptions of the state of their understanding.[69] By examining the feedback mirror, students are able to recognize the strengths and weaknesses in their performance.

¶72 In fulfilling its improvement function, feedback reflects the students' progress through the learning process itself. Feedback from the teacher provides an opportunity for students to identify areas or skills that require improvement.

¶73 The improvement function of feedback should promote learning, but to do so the feedback must provide students with direction about where to redirect their efforts to fill the gaps in their existing knowledge.[70] When students are shown what they do not know—the material they have not yet mastered—they begin to understand whether they are learning the material, and they become aware of areas where they may need help. Awareness of the learning process—and how one is moving through it—motivates learning. To truly promote learning, a teacher's feedback must identify three things. First, students must be able to see how their work compares to the expected performance standard. Second, students must be shown the consequences of remaining at their current level of skill or knowledge. Finally, students must be shown how to improve, if improvement is needed.[71]

¶74 While it is often possible for the teacher to provide feedback in all three areas—essentially handing the student the blueprint for improvement—learning is enhanced by a more multidirectional feedback approach. Such an approach incorporates feedback to the student from the teacher and feedback to the teacher from the student. Through both avenues, students receive feedback from themselves and develop the skills necessary to assess their own progress and learning. A variety of techniques can be used by the legal research teacher to provide a multidirectional approach to feedback.[72]

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68. GERALD F. HESS & STEVEN FRIEDLAND, TECHNIQUES FOR TEACHING LAW 286 (1999). These feedback and assessment functions are also referred to as "formative" and "summative" assessment. For a discussion of formative and summative assessment and their specific application in legal education, see MUNRO, *supra* note 22, at 72–74.
69. HESS & FRIEDLAND, *supra* note 68, at 286.
70. HUBA & FREED, *supra* note 11, at 154.
71. *Id.*
72. For excellent examples and instruction on a variety of feedback techniques, see Terri LeClercq, *Principle 4: Good Practice Gives Prompt Feedback*, 49 J. LEGAL EDUC. 418 (1999); BARBARA GROSS DAVIS, TOOLS FOR TEACHING (1993).

Feedback to the Student

¶75 Feedback to the student primarily serves to fulfill the mirroring function by showing students the substantive merits of their work. However, such feedback, particularly when given with suggestions for improvement, can also serve an important motivating function. Feedback to the student can be either informal or formal.

¶76 Perhaps the most important informal mechanisms are the routine and often overlooked interactions with students. Legal research teachers have the unique opportunity to associate with their students on a regular basis outside of the classroom. For reference librarians who teach legal research, some of the best feedback can be given when the student comes to the reference desk or otherwise interacts with the teacher in the library. All legal research teachers can benefit from formally scheduled library time and office hours during which they can give students feedback and solicit feedback from them.

¶77 More formal feedback can be given for individual course assignments or tasks. While writing individual critiques can be a daunting task, particularly for legal research teachers with very large or multiple course sections, every teacher should make it a goal to provide individual feedback on at least one assessment tool each semester. For other tasks, important information can be effectively conveyed through a classwide feedback memo that includes the common, recurring problems rather than individual memos for each student.[73] Such a group feedback memo is useful not only for individuals who had particular problems but also for students who did not have the problems because it identifies areas where they were successful and helps them avoid the problems should they arise in the future.

¶78 Another effective method for providing feedback to the student is by way of peer critiques.[74] Although students must receive guidelines and instruction before embarking on a peer critique, such critiques can be useful for both the student receiving the critique and the student performing it.[75] Students who critique

73. *See infra* Appendix B, which includes the text of a classwide feedback memo I prepared for my first-year legal research and writing students after they submitted their first research assignments—a group research report—during the second week of fall semester.

74. *See* LeClercq, *supra* note 72, at 419; Durako et al., *supra* note 53, at 731–32. In the competitive law school environment some wonder whether peer critique can ever be truly effective. Not only can such collaboration be effective, it can help law students learn to work with other lawyers—a skill they will be required to hone throughout their professional careers. *See* MUNRO, supra note 22, at 148–51. In fact, "on graduation, newly licensed lawyers are thrust into teams with other lawyers, secretaries, legal assistants, and clients. Some make the transition to team playing; some do not. Law schools seldom provide training in effective team behavior, and legal education may actually disable team skills (and ensure marital discord) by reinforcing only competitive behavior." John Mixon & Gordon Otto, *Continuous Quality Improvement, Law, and Legal Education,* 43 EMORY L.J. 393, 440–41 (1994), *quoted in* MUNRO, *supra* note 22, at 149.

75. Some law students will be wary of peer critique because they are afraid they will not receive "good" feedback. I try to overcome this fear by instructing students to respond as informed readers, to pose questions, to identify areas of ambiguity, to share alternative approaches, etc. It also helps to remind the students of the "Golden Rule" in peer review—give to the author the type of critique you would like to have given to you.

another's work are able to identify the strengths and weaknesses in their own work. Peer critiques also have the benefit of providing a different perspective which the student may be able to grasp better than the explanation or critique offered by the teacher.

Feedback from Student to Teacher

¶79 Unlike feedback from teacher to student which usually serves a mirroring function, feedback from student to teacher often fulfills a motivating function by helping students identify their progress in the learning process.[76] Three particularly effective techniques are the initial questionnaire, the in-class evaluation, and the private memorandum.

¶80 While it is often used to pique interest and supply motivation for students, a questionnaire given at the outset of a course, or a unit within a course, can also provide important information for both the student and the teacher about the student's learning. A general questionnaire can ask students such things as: "What is your short-term goal in this class? Your semester goal? How does this class fit into the others you are taking this semester? That you have already taken? How might this course relate to your future?"[77] A more specific questionnaire can ask students to respond to subject-related queries in an attempt to check their knowledge before moving on to more advanced topics. Such questionnaires work particularly well for advanced legal research courses where teachers must often assess where the students are at the beginning of the course to determine what remedial work and review will be required. The answers to the questions can help teachers organize or emphasize material with a view to what students in the particular class need or want.

¶81 A second type of student-to-teacher feedback technique that can be used to assess student learning is an in-class evaluation.[78] These evaluations do not have to be graded to have value to both students and teachers. The greatest strength of the in-class evaluation is that the feedback is immediate and it precedes permanent assessment measures. Most importantly, if structured correctly, such exercises give students instant feedback about their own analytical processes.

¶82 One example of an in-class evaluation technique is a one-question, multiple-choice quiz. The subject may be a particularly important or difficult point that the teacher wants to make sure the students understood—perhaps it could be something like the meaning of the superior number in a *Shepard's* citing reference. The quiz serves to highlight and emphasize the importance of the point and gives the

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76. Although some of the most important feedback students can provide teachers deals with classroom teaching, for purposes of this article, I am only considering feedback about the student's learning processes.
77. LeClercq, *supra* note 72, at 419.
78. *See generally* ANGELO & CROSS, *supra* note 21 (containing chapters on types of classroom assessment techniques, choosing appropriate techniques, and planning and implementing classroom assessment strategies).

students an instant assessment of their understanding of that point. Students who get the wrong answer have immediate motivation to learn the information.

¶83 Another in-class evaluation technique involves using daily note cards.[79] Students receive blank note cards as they enter the classroom. At the end of the class each student is instructed to write down the major concept covered in class and a question if they have one. The teacher collects the cards at the end of the class and is able to review them quickly. Any incorrect ideas can be addressed and common questions answered during the next class.

¶84 A final example is the minute paper.[80] At the end of a class period, students are told to write for a minute or two on this question: "If you had to explain the most important concepts you learned today to a class member who was absent—and you are her only source of information—what would you tell her?" The papers, which are submitted anonymously, allow the teacher to assess how much the students have learned and to identify any misunderstandings or common questions.

¶85 Finally, a private memorandum—a short memo written to the teacher expressing the student's evaluation of his or her own work[81]—gives students an opportunity to assess how they have done and to alert the teacher about areas of concern.[82] The private memorandum is particularly effective because it forces students to think about the assignment after it has been completed and to make a personal evaluation of their work. Students are told that the purpose of the private memo is twofold. First, the memo is meant to help them learn to recognize and articulate the strengths and weaknesses of their writing and, as such, to help them to become better editors of their own work. Second, the memo is to help the teacher respond directly to their concerns through comments on their research and writing.

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79. LeClercq, *supra* note 72, at 419.
80. DAVIS, *supra* note 72, at 349–50.
81. For a different version of a private memorandum that is used in combination with a "focused draft," see LeClercq, *supra* note 72, at 419.
82. The idea and form of the private memorandum was shared with me by Professor Kathy Stanchi at Temple University Beasley School of Law. The memorandum and the pedagogy and methodology behind it are discussed in Durako et al., *supra* note 53, at 730–31. I have used the tool for two years and have been pleased with the insights that it provides both for me and for the individual student authors as they ponder and evaluate their performance. The text of my private memorandum instructions is taken primarily from Stanchi's document:

> Goal: This private memorandum has two primary purposes: (1) to help you learn to recognize and articulate the strengths and weaknesses of your writing (help you learn to be a better editor of your own work) and (2) to help me respond directly to your concerns when I comment on your writing. The more thoughtful and substantive your responses, the more help I can give you with your paper. You should answer the following questions after rereading the paper you handed in. (1) What do you think are the strengths of your paper? (In the alternative, what did you work hardest on?) Please be specific. (2) What do you think are the weaknesses of your paper? (Or what did you struggle with the most?) Please be specific and candid—remember that your memo is not graded, so it can *only help* you to direct my attention to things you struggled with so we can work on them. (3) List at least one thing that you learned from writing this memo that will help you with future memos. (4) What else can you tell me about your paper that will help me as I review it?

¶86 In addition to commenting on the strengths and weaknesses of their current efforts, students are asked to list at least one thing they learned in completing the current assignment that will help them in the future. This forward thinking helps to solidify and motivate learning because students have to identify at least one area where they have learned something useful and that they plan to replicate.[83]

Conclusion

¶87 Simply recognizing the importance of learner-centered assessment will help legal research teachers better understand their roles as teacher, coach, cheerleader, and judge, will enable them to better serve their students, and will facilitate their students' movement around the complete learning cycle until each student is able to do so independently.

¶88 Legal research teachers must have the complete learning cycle in mind as they plan and implement their course curriculum. They must understand that the learning cycle applies to single skills as well as to the total skill and knowledge set the course encompasses. They must recognize that their students travel around the cycle and that, without assistance, some students will fail to complete the cycle, thus leaving gaps in their knowledge and understanding. Most important because it is the most difficult to accomplish, legal research teachers must use active experimentation and evaluation to ensure that each student reaches the what if question.

¶89 While incorporating all of the principles and techniques of learner-centered assessment into a single course is a huge task for even the most talented teacher, it should be encouraging to realize that the addition of even one ill-defined problem, the implementation of one assessment technique, or the application of a single learner-centered feedback tool will go a long way toward enhancing a learner's experience. Legal research teachers should focus on what they can do with the

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83. Student responses have included such things as: (1) "Make sure you read all cases carefully before deciding which to copy. I only copied three, and I took them home to read only to realize that one was not appropriate." (2) "I learned that it is tremendously important to have copies of all of the relevant documents available when writing a memorandum. I do not know how many times I went back and consulted them in regards to the discussion section of the memo. When writing future memos I will always have copies of the relevant documents available." (3) "I should have read the cases and made notes a few days before sitting down to write the memo so I'd have my ideas better formulated. As it was, I didn't read my research until the day I wrote the memo and I think it prolonged the actual writing process because I was simultaneously constructing my analysis as I wrote it, which is not a method that works very well for me." (4) "Have more cases at my fingertips than I need, should further readings of my primary cases require additional support." (5) "I think, overall, writing the memo showed me what I should focus on as far as research. I have a better understanding of what I want to look up and where, so that next time I won't be sitting at my apartment writing a memo wishing that I had looked something else up." (6) "Reading judicial opinions thoroughly prior to writing the memo helped me to better understand the way the courts were using the language of the statute to support their findings." (7) "I learned from this memo that research is the heart and soul. If you do a great job in collecting your information, so that you do not have to go back and look for more or get better copies, you will be saved valuable time and be in better shape to complete the task of writing the memo better."

time and resources they have. Perhaps the research course could include an additional opportunity for feedback or an existing assignment could be revised to add a new, ill-defined component. Over time, both the teacher and the course will become increasingly learner-centered until the goal of integrated assessment is met and each learner is given the tools and opportunities necessary to complete the learning cycle independently as they encounter new information.

Appendix A
Sample Research Review[84]

Be sure that you are able:

1. To review the three branches of the federal government and the law-making functions of each branch
2. To understand the makeup of the federal court system
3. To explain the six phases of a civil lawsuit and apply that understanding by creating a flowchart of the process
4. To recognize the difference between primary/secondary and official/unofficial sources of law
5. To identify various sources as primary sources, secondary sources, or finding tools
6. To recognize the three purposes citations serve in legal documents
7. To understand the advantage of a universal citation system
8. To recognize the difference between law review and practitioners' formats
9. To demonstrate general familiarity with the organization of the *Bluebook*
10. To apply knowledge of statutory and case citation by creating citations for example cases and statutes
11. To understand the hierarchical structure of the federal court system and the general structures of state systems
12. To define the composition and function of the three levels of the federal court system
13. To distinguish between mandatory and persuasive authority of primary legal sources
14. To introduce judicial opinions and define the differing types of opinions
15. To define the elements of a judicial opinion and the categories of pronouncement included therein
16. To identify case reporters and recognize the specific reporters containing opinions of each federal court
17. To demonstrate understanding of a case digest and the three methods of accessing cases through digests
18. To define secondary sources and how they differ from primary sources
19. To appreciate at least four benefits of using secondary sources in legal research
20. To identify major legal dictionaries, explain their different approaches, and create a correct citation
21. To identify major legal encyclopedias, articulate their organization, access entries in them, and create a correct citation

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84. *See supra* note 53 and ¶ 55 for a discussion of using such a "research review" as a way of publicizing learning outcomes and identifying the concepts and skills on which students will be measured in an assessment.

22. To use legal directories, particularly the *Martindale-Hubbell Law Directory*
23. To understand the ALR system, its approach to legal reporting, and how it differs from the West National Reporter System
24. To identify the different ALR sets and their organization
25. To distinguish between a principal case and an annotation
26. To list and define the primary elements of an annotation
27. To understand the accessing and updating of ALR annotations
28. To correctly cite ALR
29. To understand the legislative process, specifically, how a federal bill becomes a law
30. To analyze and compare the different sources of legislative law
31. To explain the various access points to legislative law
32. To introduce the concept of legislative history and its basic sources
33. To describe the methods of statutory updating
34. To introduce basic statutory citation format
35. To apply this knowledge by finding a federal and a state statute, a federal session law, and some legislative history references
36. To identify the four major types of legal periodicals and describe their characteristics
37. To distinguish between the four general categories of law review writings
38. To identify the three major legal periodical indexes and describe their coverage
39. To locate periodical articles by subject, author, title, case, or statute
40. To properly cite periodical articles according to *Bluebook* standards.

Appendix B
Sample Group Feedback Memorandum[85]

To: LRW § 8
From: Prof. Gerdy
RE: Team Research Reports

I was generally impressed with your team research reports. You seem to be grasping the legal research process quickly and exhibit a good working knowledge of many of the primary and secondary sources we discussed in class. Because this is only the first of many research projects you will complete through the course of your careers, I thought a few comments on the reports might be useful.

You all did a good job of identifying the potential parties to the lawsuit and the primary legal issue involved. However, when answering the question "where did the critical events take place?" many of you neglected to include the jurisdiction, Illinois. You may have felt this was unnecessary to include, but when keeping a research log you should err on the side of overinclusion. Noting the jurisdiction for the case is critical because it sets the parameters for your research.

Several groups reported that they were unable to find any useful material in the legal encyclopedias. Remember that the primary purpose for using a legal encyclopedia is to find background information on the legal topic. For example, in our problem the legal encyclopedia could tell you that many states have abrogated the "one free bite" rule and enacted statutes governing liability for injuries caused by dogs and other animals. In the footnotes of the section about statutes there is a citation to an Illinois case.

Many of your reports had incomplete answers. This was particularly true when a question had multiple parts or called for a description of the process you went through to answer the question. Make sure that you pay attention to what is asked, and make sure that you give all requested information. This will be particularly important when it comes time for exams.

When you are deciding which digest set to use, you want to remember a few things. First, you want to use the most specific digest available (for our problem that would be the Illinois digest that all of the groups used). Second, if you are dealing with a state statutory issue, cases from other states will not be relevant, even as persuasive authority, unless the statutes in those states are substantially similar to the statute in your state.

Many groups said they read the cases as they found them during the research process. This is the perfect time to read the cases. As you noticed, if you read the cases as you found them, reading a case can be helpful in two ways. First, it can assist to further clarify and define the legal issues involved in the case. Second, it can lead you to additional relevant authority.

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85. *See supra* note 73 and ¶ 77 for a discussion of the use of a group feedback memorandum.

Several groups mentioned frustration with themselves because they had to go back to sources a second or even third time to get information necessary for the complete ALWD citation. This emphasizes the importance of accurate and complete note taking during the research process. The next time you research, make sure you find out ahead of time what information is necessary for the citation and write it all down in your notes. Then you won't have to face the frustration of trying to find the materials again when, inevitably, they will be missing.

Whenever you refer to a case name, it needs to be underlined or italicized, even if you're not giving a full citation or even the full name.

Many of your groups failed to find an applicable ALR annotation. There is a very good annotation on point; in fact, the principal case for the annotation is from Illinois. You would have found it by going to the ALR index and looking under "dogs," then skimming down to the subsection "bites." Carefully browsing the annotation titles under that topic, you would have found an annotation titled "Who 'Keeps' or 'Harbors' Dog Under Animal Liability Statute." The ALR is an excellent resource, but you have to be patient and read through the often numerous titles under your topic and subtopic.

Just to refresh your memory on the method of the One Good Case Approach, first, you begin with your "one good case" and locate it in a West reporter. Second, you read through the headnotes of that case and note which ones are relevant to the issue you want to research. Third, you note the topic and key numbers of the relevant headnotes. Fourth, you take the topic and key numbers to the West digest that includes the jurisdiction you are interested in researching. Fifth, you look up the topic and key numbers in that digest, read the case summaries listed, and write down the citations to cases that look like they may be useful. Finally, you look up the new cases in the appropriate reporter.

Many of you neglected to include the results of your Shepardizing—the answer to the question, Is your case still good law? Even though I knew that you hadn't found anything negative, you still want to include the finding in your notes. When you are working on several different cases at the same time and come back to one after being away from it for a few days, you won't remember the results of your Shepardizing unless you write them down.

When you are working with topic and key numbers, you need to remember there are two pieces of information involved—the "topic" and the "key number." One without the other is useless.

The groups had several good answers to the question asking when you knew you could stop researching. Among the best answers are (1) you found the answer to the legal question presented by your fact pattern; and (2) every source you consulted directed you to a source you already had—in other words, you kept coming up with the same material again and again.