Curricular Changes in Legal Research Instruction: An Empirical Study

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Forthcoming in the Legal Reference Services Quarterly

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Curricular Changes in Legal Research Instruction: An Empirical Study

This article examines components of curricular design of a legal research class as impacting student performance. Expertise of instructor and use of the inverted, or flipped, classroom are specifically explored. Eight years of exam performance on an oral legal research midterm is used to measure student performance and success of various components of curricular design.

Keywords: inverted classroom, flipped classroom, legal research curriculum, teaching assistant, dual-degree librarian, oral exam, Socratic method, PowerPoint, lecture, passive learning, active learning, curricular design, e-learning module, video module, podcast

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I. Introduction

This article examines variations on pedagogy as employed in the legal research curriculum at Washington and Lee University School of Law beginning in the 2010-2011 academic year through the 2017-2018 academic year. During this period the legal research curriculum was in a state of constant evolution moving from a research class taught by third-year law students with minimal supervision to an inverted classroom format with a common curriculum taught by dual-degreed librarian experts. This article examines the impact of curricular innovation using empirical evidence from the oral legal research competency exam administered in early November each year over an eight-year period.

II. Legal bibliography versus the alternative: Evolution of the legal research curriculum

A. Adoption of the Socratic method and the development of legal research instruction

The “modern” law school curriculum is derived from the work of Christopher Langdell at Harvard Law in the 1870s. Langdell is known for the adoption of the Socratic method in which students through the examination of appellate opinions discover the law. Also known as the case method, Langdell’s pedagogy focused on the skills of critical reading, analysis and application, and critical thinking. Ultimately the case method enjoyed universal acceptance by the legal education community. The case method focuses on an inductive theory of education where the teacher “is not a lecturer, but an inquisitor who helps guide his students in their

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3 Id at 105.
4 Id.
5 Id. at 106.
discussions of legal doctrine.” In contrast, traditional legal writing and legal research pedagogies tend to be classified as deductive in nature where students apply rather than discover and create. Legal research also tended to be taught as legal bibliography focusing on the sources of legal authority and how to research. The key advantage to the case method is its ability to “teach the higher-order skills of fact analysis and legal reasoning.”

With the move away from the apprenticeship model of legal education to the law school model and the adoption of the case method, came the initial debates over legal research instruction. Under the apprenticeship system, doing and assisting the “master” or mentor under whom the apprentice worked learned legal research. With the move of legal education to the formal university system, the personal instruction in research was lost, a substitute required, and the debate on the legal research class born. One key aspect of the early dialogue stands out as especially relevant today, save the choice of the word “book” and replace it with “legal sources”: “[the examination of authorities calls for concentrated and sustained thought but for the man untrained in the use of books that is almost unattainable.” As it remains, the concern then was random case selection, ability to locate a statutory provision, currency of the source, precedent, authority, validity, and how to educate the law student on these items. The culmination of this dialogue was the legal bibliography class albeit in a variety of forms and with a variety of differing pedagogies that ranged from instruction by publishing house such as West, to instruction by students, student clubs, to librarians.

B. Crampton, MacCrate, and Carnegie

The Crampton Report issued in 1979 by the American Bar Association’s Section on Legal Education and Admission to the Bar focused on lawyer competence. Of the three elements of lawyer competence identified, the fundamental skills of legal analysis and legal research were

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6 Id. at 115.
7 Id. at 107.
8 Id. at 128.
9 Id. at 128.
11 Id. “An endorsement of the giving of such instruction may be based upon three conditions: the lawyer of the past found difficulty in ascertain the law the lawyer of the present finds more, and the lawyer of the future can expect little relief from any other sources. The objections to such a course also number three: the subject has not been taught in the past; there is no place for it in the crowded curriculum because some present study would have to be eliminated, and also because the tie required would have to be taken from that now devoted to other studies.” Id. at 26.
12 Id. at 30.
13 Id.
15 ABA Section of Legal Education and Admissions to the Bar, Report and Recommendations of Task Force on: Lawyer Competency: The Role of the Law Schools (1979) (this is known as The Crampton Report) (“Lawyer competence, in most if not all areas of law practice demands a wide range of fundamental skills including the ability to: 1. analyze legal problems; 2. perform legal research”)

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clearly identified.\textsuperscript{16} Interestingly, the report also recommended multiple and more comprehensive methods of assessment decades before the single end-of-term exam began to see competition.\textsuperscript{17}

The MacCrate Report issued in 1992 similarly came with a recommendation that the legal academy improve education in the area of skills and values.\textsuperscript{18} Similar to Crampton, MacCrate also includes a list of fundamental lawyering skills that includes problem solving, legal analysis and legal research.\textsuperscript{19}

In 2007, The Carnegie Report from The Carnegie Foundation for Advancement of Teaching issued its seminal report on the effectiveness of legal education. Notable for not including a reference to legal research, the report does single out the value of teaching analytical thinking and the insufficient attention paid by legal educators to training in practical skills.

Over the decades, one constant is the criticism of the research skills of new attorneys and law students.\textsuperscript{20} While there is common consensus regarding the absence of effective research skills, there was minimal research as to how lawyers actually researched.\textsuperscript{21} According to Richard A. Danner, of Duke University School of Law, Morris Cohen perfectly articulated the reasons for poor research skills as “poor education and training in legal bibliography and research; a lack of professional standards for research; the economics of law practice – too little time for research, difficulties in billing clients for research; and (possibly) shortcomings in the tools of legal research . . . computers may help, but are unlikely to be the whole solution.”\textsuperscript{22}

It was against this backdrop that the debate of Christopher and Jill Wren and Bob Berring and Kathleen Vanden Heuvel regarding the instructional methodology of legal process versus legal bibliography took place in the late 1980s. The debate is chronicled in the \textit{Law Library Journal} articles and was ultimately silenced with the wave of computer-assisted legal research or “CALR.”\textsuperscript{23}

\section*{C. Response and change}

\begin{thebibliography}{9}
\bibitem{16} Stephen Gerst & Gerald Hess, Professional Skills and Values in Legal Education: The GPS Model, 43 Val. U. L. Rev. 513, 514 (2008). The Crampton Report identified three elements of lawyer competence as: (1) knowledge about law and legal institutions; (2) fundamental skills; and (3) professional attributes and values. Id.
\bibitem{17} Id. at 515.
\bibitem{18} Id. at 516.
\bibitem{22} Id. at 185.
\end{thebibliography}
In the 2000s the legal academy began to see a serious discussion of the value of skills courses. Following Crampton, MacCrate, and Carnegie, the strengths and weaknesses of legal education seemed to be well known.\textsuperscript{24} The rise of experiential learning, inclusion of multiple forms of assessment, and student expectation for more than a passive learning environment began to occupy the discussion. Similarly, the academy began to recognize a need to address multiple learning styles and discuss the impact of active versus passive learning. This led to a robust conversation and the adoption of the inverted classroom, particularly in the area of the legal research curriculum. The inverted or flipped classroom, originally conceived by two Colorado high school science teachers, Jonathan Bergmann and Aaron Sims, uses class time for interactive work with lecture information pre-delivered by technology or some alternative means.\textsuperscript{25} The blended learning environment, a teaching theory that provides a combination of online learning with face-to-face-teaching according to a U.S. Department of Education report, indicated a beneficial learning environment with strong learning outcomes.\textsuperscript{26} By 2010 the inverted classroom for legal research instruction was in vogue.\textsuperscript{27} The legal research class is the perfect environment to invert the class as research is best learned by doing rather than by seeing or hearing.\textsuperscript{28} The inverted class was also responsive to the decades-long critique of legal bibliography as the preferred method of instruction and passive learning. The favored method of inverting the class involved some form of recorded lecture either by podcast, screencast, or animated PowerPoint sometimes with an interactive assessment tool, other times without. Still, and in whatever form it is presented, the recorded instruction is a form of passive learning.\textsuperscript{29} In one study on the impact of the inverted classroom, the researchers noted that students prefer in-person lectures to video lectures and interactive classroom activities over lectures.\textsuperscript{30} This begs the question: are we actually advancing curricular design with the inverted classroom? As Jane Bahnson and Lucie Olenjnikova argue, however, freeing up time in-class for interactive work is a benefit not to be overlooked.\textsuperscript{31}

The impact of the information explosion must also be considered in relationship to the pedagogy of the legal research curriculum. Crampton, MacCrate, and Carnegie all note legal analysis as a fundamental skill. It is common to overlook the importance of legal analysis in the legal

\textsuperscript{24} Id. at 514.
\textsuperscript{25} Lemmer at 464.
\textsuperscript{26} Catherine A. Lemmer, A View from the Flip Side: Using the “Inverted Classroom” to Enhance the Legal Information Literacy of the International LL.M. Student, 105 Law Libr. J. 461, 466 (2013).
\textsuperscript{27} The inverted class model flips the class and employs a model of active learning whereby the traditional class lecture is replaced with pre-class instructional materials and an in-class learning lab. See Lemmer, supra note 26, at 464.
\textsuperscript{28} The traditional manner of legal research instruction was that of a classroom lecture on a research topic followed by a research assignment to be completed outside of class time. Id.
\textsuperscript{31} Bahnson at 203.
research curriculum but it is even more important with the volume of information available to researchers today. As Yasmine Sokkar Harker notes, information is cheap but meaning is expensive and today’s lawyer suffers from an overwhelming array of information so much so that it is imperative to locate that information that is relevant to the legal problem and apply that information in a meaningful manner. The lacking skill is the ability to find and then apply the information relevant to the legal problem, especially when the needed information is abstract or conceptual in nature. Harker recommends the use of classroom time for exercises that require students to “reflect on their decision-making processes and to use metacognition to facilitate the recognition of concepts analogies, and the process of legal research.” Given that finding the law applicable to a particular problem makes up the majority of what attorneys do daily, analysis and application are of vital importance. In 2007, Thomson/West sponsored a study to determine how much time associates spent conducting legal research in a workday. The results indicated that forty-five percent of a new associate’s workday is spent conducting legal research and the percentage of second to fourth year associate time increases to seventy percent as he or she learns better research skills. When the theory and impact of precedent in the American legal system is given due weight, the value of research competency expands exponentially, yet the constant refrain is that research prowess of new attorneys is lacking despite much thought and a variety of differing approaches to teaching. Further acerbating the problem is the exclusive reliance on online legal research. As Chief Justice Roberts noted in a speech at Drake University Law School:

[B]lind reliance on research that focuses merely on words, and not on the concepts, poses the same hazards that lawyers encountered in the late nineteenth century. Lawyers run the risk that word searches will uncover reams of marginally relevant precedent superficially on point, thereby distracting them from engaging in critical analysis or structuring of the underlying legal principles.

The move to an environment in which research is principally conducted online complicates the process of researching whole concepts rather than simplifying it. By extension, teaching the theory and skill embedded in research instruction is complicated. It also makes the analysis of legal information as part of the research process increasingly more critical. Finding, analyzing,

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33 Id.
34 Id.
35 Thomson/West Research Skills for Lawyers and Law Students 3 (2007), available at http://west.thomson.com/pdf/librarian/Legal_Research_white_paper.pdf (“First year associates are ineffective [researchers] because they generally start with an online keyword search, racking up unnecessary billing and online charges, while not understanding the context of results they have retrieved.”)
36 Harker at 82. See also Barbara Bintliff, From Creativity to Computerese: Thinking Like a Lawyer in the Computer Age, 88 Law Libr. J. 338 (1996) (discussing the impact of the computer on “thinking like a lawyer” and suggesting that the most significant impact is on the reasoning paradigm a lawyer uses as the computer transitions inquiry away from legal rules and legal concepts to fact based analysis weakening the results).
38 In a purely print research environment the print sources provided structure and context for analysis. In an online environment, it is much like the unsettled frontier, context is limited by the absence of structure and contextual cues
and applying the law all coalesce together in the research context to researching and thinking like a practicing lawyer.\textsuperscript{39} In designing a curriculum for research instruction, it is key to remember that practicing attorneys are not librarians. The practicing attorney will find and evaluate the information on screen, accepting some of the information provided and rejecting other information, ultimately selecting specific pieces of information for later use.\textsuperscript{40} A good attorney will make informed decisions including the purpose of the research, facts, jurisdiction, and venue.\textsuperscript{41} Making informed decisions combined with the ability to analyze and synthesize information is one key part of the legal research curriculum. The ability to utilize analogies and concepts and then reflect on the process is the additional skills needed for today’s research instruction.\textsuperscript{42} Reflection on the decisions made is critical permitting a student to hone his or her critical analytical skills to those appropriate for the practice of law.\textsuperscript{43}

As Paul Callister suggests, the goal of legal research pedagogy is not to train students but to educate students in principles of legal research and give the student the ability to analyze the characteristics and nature of the problem and apply the most appropriate technique to solve the problem based on the strengths and weakness of the tools provided.\textsuperscript{44} The legal research foundational class is intended to provide law students with the tools needed to find and apply relevant legal authority to a client’s problem.\textsuperscript{45}

III. Evolution of the Legal Research Curriculum at Washington and Lee University School of Law

A. The Burks Scholar Program

Prior to the 2006-2007 academic year, third-year law students, selected by a faculty member through a competitive application process, provided legal research instruction to first-year law students. Paid a stipend for their work, the position of a Burks Scholar, as such third-year law students were known, also carried the distinction among students of excellence in research and writing in the first three semesters of law school. A Burks Scholar held dual roles: that of a teaching assistant within a small section writing class as support for the doctrinal professor, and that of research instructor. The Burks Scholars were minimally supervised in their role as research instructor. They held, or were expected to hold, an hour-long research class once a week for the majority of the academic term during which they taught the basics of legal research and citation. The research portion of the class was credited at the discretion of the small section professor. By the conclusion of the 2006-2007 academic year, the law school administration noted significant dissatisfaction by the students and the Burks Scholars with the quality of the legal research class experience. The criticisms focused on three key points: (1) disparity in

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\textsuperscript{39} Bintliff, From Creativity to Computerese at 338.
\textsuperscript{40} Harker at 88.
\textsuperscript{41} Id.
\textsuperscript{42} Harker at 88.
\textsuperscript{43} Id.
\textsuperscript{44} Paul Douglas Callister, Beyond Training; Law Librarianship’s Quest for the Pedagogy of Legal Research Education, 95 Law Libr. J. 7, 8 (2003).
\textsuperscript{45} Id. at 24.
\end{flushleft}
instruction among the sections; (2) citation skills favored over research skills; and (3) disenchanted with the training experience by the Burks Scholars. First-year students anecdotally noted their research skills as problematic.

B. The 2008 and 2009 Changes (“BS”)

In the fall of 2008 and 2009 changes were implemented to the program to address the criticisms raised with the legal research class experience. Key aspects of the program remained unchanged. Research instruction was still provided by third-year law students. Burks Scholars continued to be selected in the spring of the second year by a competitive application process and based on demonstrated excellence in research and writing. Burks Scholars continued to serve the dual roles of teaching assistant and research instructor. Changes instituted for the 2008-2009 academic year included: (1) a requirement that legal research assessment constitute ten percent of a student’s cumulative grade in the legal writing course; (2) creation of a common curriculum with classes focused on research basics and common assignments; and (3) greater oversight by the law library director for the purpose of addressing the criticisms of inequality of workload and disparity of instruction among Burks Scholars.

At the start of the 2009-2010 academic year additional changes were made to strengthen research instruction within the given framework of Burks Scholars as research instructors. The curriculum included a designated text with assigned readings, eighteen classes for the academic year on basic topics such as case research, legal citation, statutory research, secondary sources, legislative history, administrative law, research planning, and online research platforms. Class time was increased to seventy-five minutes from fifty-five and structured to be part lecture and part lab. Required assignments included: case law, statutes, secondary resources, legislative history, and administrative law. The fall semester included the oral practical legal research exam and the spring semester concluded with a comprehensive assignment structured around a legal research plan. Learning objectives were established for each class.

From 2009 through the 2012-2013 academic year, the basic structure of research instruction utilizing the Burks Scholars remained. Each academic year attempts were made to strengthen the program. For example, legal citation instruction remained uneven. Multiple improvements were attempted including requiring the CALI citation units, which were replaced with the Lexis Interactive Citation Exercises, use of the written book and the online system were utilized from year to year. Different legal research texts were selected including DeSanctis and Murray’s Legal Research Methods, Cohen and Olson’s Legal Research in a Nutshell, Sloan’s Basic Legal Research: Tools and Strategies, and Olson’s Principles of Legal Research. Instruction on Bloomberg Law was added as a legal research tool and Lois Law, originally included in instruction, was removed. While improvements in legal research proficiency were observed, the law library director who also served as the director of the Burks Scholar Program in Legal Research continued to express dissatisfaction with the success of the program in creating information literate first-year law students. Use of PowerPoint during class lectures was discouraged and active in-class exercises encouraged with implementation left up to the research instructor. All research classes were recorded for review of instruction, content, and exercises. The library director selectively reviewed class recordings.
C. The 2013 Changes; the Flipped Classroom (“BS/Flipped”)

The significant challenge to achieving legal information literacy for first-year law students revealed itself to be the expertise of the instructor. While the Burks Scholars are highly accomplished law students they remain law students with varying degrees of understanding of the sophisticated theory and skills that embody legal research, the ability to impart the nuances of research in an increasingly complicated and technology-driven world was challenging.

First-year students completed a comprehensive legal research plan as their final cumulative assessment in the spring semester. The assignment required the student to demonstrate an understanding of the basic legal research techniques and sources. Graded by the library director, year after year, she observed common themes and deficiencies. For example, students demonstrated a lack of a comprehensive understanding of the concept of authority and the ability to apply the law found during the research process to a hypothetical. Students also failed to master the art of selecting the most appropriate source for the task, consistently verify the validity of a primary source, understand the importance of the currency of the source, and could not compose a complete issue statement. While research instruction was improving incrementally, satisfaction remained elusive.

In an effort to address the quality of the lecture component in the legal research class, the decision was made to “flip” the classroom. The fall 2013 syllabus included the following description:

The 2013-2014 Burks Scholar Program will employ the concept of a “flipped classroom.” This is a substantial change from prior years based, in part, on student feedback. The flipped classroom inverts the traditional classroom. In a traditional classroom, the instructor provides a lecture that reinforces the assigned reading. Homework consists of assigned readings and problems. The flipped model moves the lecture to class preparation leaving time for focused activities to reinforce the assigned lecture and readings.

The structure of the program emphasizes active learning, information literacy, problem solving, and the basics of legal research. Online modules covering the basic principles of legal research are available via the Burks Scholar TWEN page. The online modules range from three to ten minutes, subject to the pace of the viewer. Modules are structured to permit the viewer to proceed at his or her own pace and may be viewed as many times as the student desires. The assigned modules and readings must be viewed and read prior to attending class. Access is via the TWEN page to permit tracking of viewing.

Class time is structured as a workshop on a particular topic. Classroom instruction will focus on assignments. Discussion of problems designed to reinforce the topic of the lecture and readings. In-class assignments are ungraded but will influence the participation score.
The graded elements of the program include completion of the secondary resources, case law, and statutory assignments; Interactive Citation Workstation (ICW) exercises, the legal research competency exam, and the participation score. More detail is provided in II.H.1.

Unchanged from previous years, the legal research class remained a seventy-five-minute class period, the topics covered were generally the same as were the required assignments, the administration of the oral legal research competency exam at the conclusion of the fall semester, the legal research plan as the comprehensive final at the conclusion of the spring semester, and the use of the Interactive Citation Workshop on the Lexis platform. Learning objectives remained the same for each topic. The total number of classes was reduced to fourteen over the academic year.

Inverting the classroom was the significant change. Students were expected to view the modules prior to class. The modules were made available via a TWEN page and viewing was tracked. Students were given credit for each module viewed. Class time was devoted to workshop exercises created by the Burks Scholar in their capacity as the instructor. While the Burks Scholar remained the research instructor, dual-degreed librarians created the modules. The modules were intended to replace in-class lectures by the Burks Scholars, elevate the quality of the instruction, and introduce an element of consistency across legal research classes.

The modules were: Legal Authority, Introduction to Legal Citation, Researching with Secondary Resources, Using a Loose-Leaf Online (B-Law); Breaking Down Judicial Opinions; Judicial Opinions in Detail, Reporters and Publication of a Case, Conducting Case Research Using a Digest; Research with Citators; Case Research in WestlawNext; West Key Numbers; The Legislative Process; Conducting Statutory Research; Conducting Statutory Research Online (Lexis Advance); Introduction to Legislative History; Introduction to Administrative Law. Each module ran less than ten minutes with the exception of the Legislative History module, and included an interactive component to test the knowledge of the material presented in the module.

This model was used to some degree of success for the 2013-2014 and 2014-2015 academic years. Again, using the legal research plan assignment as a measure, improvement in mastery of basic research theory and skills was noted. Application of the law to a hypothetical to demonstrate legal information literacy remained uneven across the first-year class and satisfaction elusive.

D. The Dual-Degree Librarians – 2015 to the present (“Librarian/Flipped”)

In the spring of 2014, with the support of the Dean of the Law School, a proposal was made to the law faculty to create an independent one-credit year-long legal research course taught by dual-degreed librarians. This change represented a natural evolution of the curriculum and a recognition that the work required in the legal research component of the writing course far outweighed the ten percent credit that was awarded. The role of the Burks Scholars as research instructors imposed structural limitations that could not be overcome. The law faculty approved the new class.
The existing structure of the research course, including the online modules, workshops, assignments, and general subject made up the outline for the new class. The instructor, however, is a dual-degreed librarian and as such is an expert in legal research. The inverted classroom format was fully implemented across the program. The Burks Scholars continued to serve in an integral role as a teaching assistant for the small section doctrinal writing professor and as a teaching assistant for the legal research professor. They were assigned teaching roles in the area of legal citation and generally served as a teaching assistant for the research instructor. Class time, a seventy-five-minute period, was divided into fifteen minutes of review using the Socratic method to test basic understanding of the assigned out of class reading and modules. The remainder of class time was occupied by an interactive workshop requiring students to engage with research materials and methods and apply what they learned out of class. Workshops engaged both online and print materials with the print workshops held in the law library. For most workshops, students worked in small groups to gain the benefit of collaborative learning. The Burks Scholar and the research instructor were present in the classroom during the workshops, engaging with the small groups to provide individual guidance and answer questions. At the conclusion of the workshop, the instructors led a review of the materials and students submitted their written product for feedback. Research instructors provided feedback either to the class as a whole highlighting common errors or to individual groups with more detailed feedback. The style of feedback depended upon the instructor, the workshop, and the errors and might vary within a given year.

For the 2016-2017 academic year, the dual-degreed librarians reconstructed the online modules to update the substance of the lessons, split the longer legislative history module into multiple shorter parts, increase the interactivity, and take advantage of newer software to improve the aesthetics and sound quality. Legal research professors also migrated the online course materials to the Lexis Blackboard course management system. In comparison to Westlaw’s TWEN course management system, Blackboard provided more sophisticated tools for tracking student activity in the modules. In Blackboard, legal research professors could monitor the time each student spent watching and listening to the modules as well as how students performed on the interactive elements and quiz questions. Legal research professors adopted a custom textbook and created citation exercises rather than use materials published in the Lexis’s Interactive Citation Workshop. This academic year also saw the complete elimination of any lecture style review at the start of the class whether via PowerPoint, Prezi, or other presentation style in favor of the Socratic method or the “class quiz.” The sole exception to this format is the legislative history class which remains part lecture and part in-class exercise. Class time is dedicated to hands-on workshops in which students apply the principles discussed in the out of class reading and modules to a set of facts.

IV. The Oral Legal Research Competency Exam and the Data

A. The Oral Legal Research Competency Exam
The oral legal research competency exam at Washington and Lee was inspired by the work of Pamela Melton of the University of South Carolina School of Law and Joyce Janto of the University of Richmond School of Law. The concept of an oral research exam as a tool of assessing the ability of a student to apply legal research principles to solve a legal research question was intriguing. An oral exam seemed perfect for assessing a student’s ability to complete a legal research task by requiring them to demonstrate the task in real time, physically locating materials responsive to the legal question and articulating research concepts aloud. Others were successfully implementing this form of assessment, which was encouraging.

The exam was initially designed and used at Washington and Lee in the fall 2009 semester. Students randomly chose an exam packet containing three questions: One ten-point question focused on research principles and theory such as authority and type of source and two fifteen-point questions that focused on source selection and the ability to demonstrate use of the source to answer the question. In a timed environment, students were required to demonstrate their mastery of research skills and theory by orally answering a question such as:

*Use American Jurisprudence 2d to answer this question. Are rental houses not held for sale, subject to depreciation under federal taxation laws? What type of resource is American Jurisprudence 2d?*

The law library provided students with computers and access to the print collection for use during the exam. Given fifteen minutes, each student was observed by a Burks Scholar who had a model answer to each question. The Burks Scholar, using the model answer and rubric given as part of the model answer, recorded a written assessment of the student’s answers to all three of the questions in the exam packet. The written assessments were given to the library director who made the final assessment of the student’s performance based on the Burks Scholar assessment and the model answer with the associated rubric. This 2009 exam was genesis for what would become the oral exam administered in the fall of 2010 and each successive academic year to the present.

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48 Melton at 10.

49 See generally Steven R. Probst, They’re Practically Learning: Pointers on Practical Legal Research Exams, 15 Persp. 105 (2007) (discussing the benefits of a practical exam to ensure individual student comprehension of essential research concepts).

50 Depending upon the exam year, students received five minutes per question and were allowed to allocate that time as they saw fit. In 2017, students were permitted an additional five minutes to plan their approach to answering the questions. Students were provided with a legal pad and their question envelope. At the end of this planning period or the conclusion of the five minutes, notes were shredded. The noted benefit of the planning period was to reduce the anxiety level of students.
Beginning with the fall 2010 exam, the law library director created pools of questions designed to test research principles and theory and the ability to select and demonstrate use of the source to answer a question. The oral nature of the exam implicitly tested the student’s ability to communicate why and how they approach a research question. In each year, every exam packet included a required question on research principles and theory derived from the assigned readings. Beginning in 2013, these questions also tested material included in the modules. Likewise, each exam packet would contain a question requiring the student to identify and use a print source and a question requiring the student to identify and use an online source. The number of questions, three or four, and the time, fifteen or twenty minutes, has fluctuated depending upon the year. Each question is designed to be answered in five minutes although students were given the freedom to use the total allotted time as they saw fit. Given the limited time permitted to the student, questions were targeted to assess a specific skill or source.

Reading questions included:

Name four of the five “w” questions you should consider when analyzing a fact pattern.

Define the terms “primary authority” and “secondary authority”. Given an example of each.

Describe the utility of a student comment or note.

Define the following types of opinions:
   a. Majority opinion
   b. Plurality opinion
   c. Concurring opinion
   d. Dissenting opinion
   e. Per curiam opinion
   f. En banc opinion

Examples of online questions, questions requiring students to use an online platform to resolve the query, included:

The library subscribes to HeinOnline. Use this resource to answer this question. You wish to locate law journal articles on the topic of comparative negligence published since 2010. You are exclusively interested in the position Canada has taken on this topic. Compose and run a targeted search for such articles.

Use Westlaw to answer the following questions. You wish to locate Virginia judicial decision in which the phrase “assumption of risk” is judicially defined.
(a) Identify the best resource to use to answer this query. (b) Using the advanced search template on Westlaw, compose and run a search designed to locate relevant opinions.
You wish to locate a Virginia treatise on Wills and Administration for the purpose of educating yourself on the topic of testamentary intent. Describe the process you would use on Lexis to locate relevant information.

Examples of print questions, questions requiring students to use a print source in the law library are below. Students were permitted to use the online library catalog to locate the call number of the resource. Additionally, students were instructed to locate the print sources covered in class in the library reading room and be familiar with the location of such sources as part of the exam preparation.

You wish to locate the most recent Virginia case that provides a definition of “animus.” Describe how you would locate this case using Words and Phrases. Why is Words and Phrases uniquely suited to this task?

Use a national legal encyclopedia in print to answer this question. Hurricane Matthew is responsible for flooding eighty miles inland in eastern North Carolina and significant damage from trees that fell due to the wind and flooding from Matthew. As a direct result of Matthew, your client, Caroline’s house was damaged by three trees that fell directly on her house. Caroline called you to inquire as to if this is considered an ‘act of god’ and thus excluded from insurance coverage. You wish to educate yourself broadly as to ‘act of god.’

Your client wishes to use cruelty as the basis or grounds for a divorce. Answer this question using the descriptive word index to the South Eastern Digest 2d. Use the Restatement 2d of Contracts in print to answer this question. James extended an offer to purchase Cameron’s vintage mustang at a party after consuming multiple beers. James claims he was drunk at the time he made the offer and thus lacked the capacity to enter into the contract. What section of the Restatement is relevant to James’ problem?

Prior to administration of the test, we provided the Burks Scholars with the questions and asked them to test the questions. Questions were revised or discarded based on feedback. The most common reason for excluding a question was the inability to perform the question in five minutes. More commonly, questions were revised to clarify the question when the Burks Scholar reported the question as confusing. Common revisions included the addition of a hint such as the clue that “infants” is a term for minor children.

B. The Data Set

While there was significant anecdotal evidence from multiple forms of assessment that student performance in legal research improved after each evolution of the curriculum, only two forms of assessment were constant. These were the oral legal research competency exam administered the fall semester and the cumulative written legal research plan in the spring semester.
Given the nature of the oral exam in which students were asked targeted questions to assess their understanding of specific legal research principles, theory, sources, and skills, this form of assessment is ripe for an empirical analysis. A data set was created from the exam results over the eight years between 2010 and 2017. The purpose of the study was to measure changes in student performance on the exam over time and to determine if and to what degree those changes are attributable to changes in the program’s curriculum. Since this study involves the secondary use of existing data (exam results), identifiers that were part of the source data, including student names, were removed from the data set completely so that the data could no longer be connected to the identity of any individual student in the aggregate data set. The institutional review board at Washington and Lee University approved the use of the data and method of anonymization.

The original data existed in the form of ten separate source documents, a separate document for each academic year. Data from the source documents was extracted, excluding any identifiers connecting an individual student to exam performance. The focus of this study is not overall student performance but performance on individual questions thus permitting a detailed analysis of performance based on type of question, subject matter of question and skill tested. Each exam generated multiple data points, which were coded to identify characteristics of each data point according to the following scheme:

1. A unique number was assigned to each data point.
2. Original exam number extracted from the source data.51
3. Original question number, extracted from the source data.
4. Text of the actual question.
5. Student success was recorded as “pass” or “fail”. The definition of “pass” was measured at four different points – 25%, 50%, 75%, and 100%.52
6. Type of question describes whether a question tested understanding of reading/module materials, online research skills or print research skills.
7. Subject matter tested describes the substance of the question included cases, statutes, secondary sources, foundation or other.
8. Online platform, if applicable, includes HeinOnline, Periodical Index, Bloomberg Law, Westlaw, Lexis, Library, and FDsys.
9. Source tested looks at the most granular level of the question. Options included legal periodical, legal encyclopedia, ALR, case and opinions, digest, Words and Phrases, treatise, citator, Restatement, dictionary, Statutes at Large, statutes, code, and secondary source.
10. Skill tested includes: research planning, Boolean search, authority, source selection, citation, parts of an opinion, digest searching, citator, type of opinion, creating an effective search, topic and key number, updating/currency, use of a

51 Some exam numbers were erroneously repeated or not recorded at all. In this instance we assigned a new exam number. The purpose of recording the exam number is to maintain an association between groups of questions administered together in an exam. Assigning a new number has no impact on analysis of performance.
52 In the fall 2010 and 2011 exams each question was worth 25 points meaning pass was measured as 12.5 points or greater. In 2012 and 2014 each question was worth 33.34 points meaning pass was measured as 16.67 points or greater.
tool, reporters, positive law, and publication process. To the extent the question tested a second skill the second skill was also coded.

11. Curricular design is Burks Scholar, Burks Scholar/Inverted, or Librarian/Inverted Classroom.

12. Year of administration of exam.

The end result was an anonymized data set of in excess of three thousand data points. The complete codebook, which defines these categories and describes the coding method is included as Appendix A.

V. Questions Explored and Implications from Data

The fundamental question asked in this analysis is: Do changes in the design of the legal research curriculum impact student performance on the oral legal research competency exam and if so, to what degree?

The curricular design of the legal research program has two basic components that evolve between 2010 and 2017: (1) the expertise of the instructor and (2) the format of the classroom instruction. The expertise of the instructor addresses the differences between third-year law students as instructors and dual-degree librarians. The Burks Scholars, as a group, are highly talented and motivated law students with a stated interest in research and teaching. Collectively, they possess a high level of understanding of research principles. Frequently, individual Burks Scholars also had a background in teaching either as a former teacher or through a variety of tutoring programs. Still, the Burks Scholars are law students with a surface knowledge of research when compared to a dual-degree librarian. Dual-degree librarians are experts in the field of legal research and expected to have a greater command of the material and the ability to convey the nuances of research as a subject matter.

The format of the classroom instruction and its various components are also at issue. Until 2013, at the time the flipped classroom model was adopted, the primary method of instruction was lecture via PowerPoint in conjunction with written assignments. First-year students noted that the PowerPoint materials varied in quality by instructor. Some were excellent and others were considered lacking. In 2013, the legal research program implemented the inverted classroom format utilizing interactive online modules prepared by dual-degree librarians and provided to the Burks Scholars for use in the class. In 2015, dual-degree librarians assumed responsibility for legal research instruction and continued using the inverted classroom format.

There are a number of external factors for which the data set is unable to account. The individuality of the instructor is chief among such external factors. Each instructor, be they a third-year law student or a dual-degree librarian, brings their own unique presence into the classroom. Even the most effective instructor has good days and bad and learns from class to class and year to year what works and what does not. Similarly, the make-up of a class is a variable for which this data does not control. Students, like instructors, have good days and bad
days. The class schedule, competing demands on student time within the first year program, and extracurricular activities all can have an impact on performance.

A. Overall Student Performance

The initial point of analysis looked at student performance on all questions by year, regardless of question type, subject matter, skill tested, or other characterization. The overall rate of success was measured at the 25%, 50%, 75% and 100% quartiles meaning that students earned 25, 50%, 75%, and 100% of the points available on an exam question, respectively. The 100% pass rate was excluded from further analysis as reflecting that rare and unique student who will excel regardless of design.

From 2010 to 2012, the curricular design employed the Burks Scholars as legal research instructors. From 2013 to 2014 the inverted classroom format was used with required online modules and Burks Scholars in the classroom. From 2015 forward the inverted classroom format was used with required online modules and dual-degree librarians in the classroom.

The results at each of the three quartiles reflect a decline in the 2013 and 2014 academic years with a recovery beginning in 2015. That recovery continues and exceeds the initial student performance on exam questions in all cases. The decline is intriguing as it occurs in the years when the curricular design employed the BS/Flipped design. The Burks Scholars were provided...
with the lecture component of the class in the form of the modules, created by dual-degree librarians, and asked to create their own interactive materials for classroom exercises. While the expectation was for an interactive experience in the classroom, lecture and PowerPoint presentations continued to dominate and activities skewed towards games styled after Jeopardy. In reality, the modules were combined with more lecture in class. This combination reinforces a passive style of learning rather than the intended active learning component traditionally emphasized in an inverted class approach. Simply providing students with multiple opportunities for passive learning does not appear to improve student performance. It may also be inferred that because the online modules were a required element of the course provided to the Burks Scholars by librarians rather than created by the Burks Scholars themselves that the Burks Scholars lacked a sense of ownership over the materials that may have impacted their full utility in class. This conclusion is reinforced with the improved student performance demonstrated from the 2015 year forward where the curricular design introduced the dual-degree librarian as the instructor and the inverted classroom model. The curricular design since 2015 focuses on robust interactive workshop experiences in the classroom and expert instructors and limited lecture. The combination of the e-learning modules and the robust interactive workshops ultimately proves to be the most effective.

B. Student Performance on Specific Questions over Time

To further explore the impact of curricular design, three specific questions asked identically in each year, were identified in the data set. In examining these three consistently asked questions the goal is to focus more granularly on the curricular design as it relates to testing knowledge of specific concepts and skills.

The first question examined was the opinion question styled as:

Define the following types of opinions: A. “majority opinion” B. “plurality opinion” C. “concurring opinion” D. “dissenting opinion” E. “per curiam opinion” F. “en banc opinion”.

This question examines whether the student mastered the concept of the types of judicial opinions independently and has the ability to recall the correct definitions and deliver them aloud succinctly and efficiently. Students were exposed to the material in the textbook and the concept was reinforced in class by any lecture and PowerPoint presentation, modules and/or Socratic questioning, depending upon the curricular design. In the Burks Scholars design, lecture via PowerPoint was the predominate method of reinforcing the concept. In the BS/Flipped design, PowerPoint, modules, and an undetermined variety of hands-on research activities reinforced the concept. In the Librarian/Flipped design, PowerPoint was eliminated in favor of a twenty-minute review in 2015 and then Socratic style questioning in the 2016 and 2017 academic years.
Analysis of this question over the sample years indicates that regardless of curricular design students were successful at achieving partial credit for the opinion question. In all years all students demonstrated an understanding sufficient to receive some credit. Most illuminating is success at the seventy-five percent quartile. At 75% a peak (92.9%) occurred in the 2014 year employing the BS/Flipped design. One reason for the success in this year may be the unique group of Burks Scholars for that year, an externality the study does not take into account.

Even more interesting is the suggestion that there is no apparent impact on the inverted portion of the class as it relates to this skill. Although there are peaks in 2012 (77.8%), 2014 (92.9%), and 2017 (87.5%), success remains in the 60% to 72% range for the other academic years. Given an average sample size of 10.75 questions this implies a consistent success across curricular design for this skill.

With regard to material that simply requires retention, adding a module to reinforce the assigned reading does not improve student performance. Therefore, it is not an effective use of time either for the student to watch and listen to the module or the instructor to create the module. This observation is important for an instructor who is designing a course and determining how to spend valuable time in a student’s schedule, emphasizing that which brings the greatest return.

The second consistent question examined is the citator question. The citator question consistently read as:

Use Lexis to answer this question. You locate City of Houston v. F.A.A., 679 F.2d 1184 (5th Cir. 1982). You wish to cite this case in a brief. What tool do you use to verify the law? Is the case good law?
Variations on this question were limited to changes in case citation and substitution of Westlaw for Lexis. Analysis of the trends associated with this question show every student receiving at least 50% partial credit and in the years beginning in 2013, with the adoption of the flipped classroom, all students receiving full credit for this question. Notable in the years with the BS curricular design success at the 75% rate fluctuated between 84.2% as a low and 97.7% as a high. Similarly, success at 100% fluctuated between 78.9% as a low and 84.1% as a high. With the introduction of the inverted classroom during both the BS/Flipped and the Librarian/Flipped designs success was 100% at each interval including the 100% quartile. This suggests that when the question requires a student to perform a research task, student performance improves with the addition of a module as reinforced with the reading and the classroom experience.

The third question analyzed was that focusing on the ability to use a print source to answer a question. In this instance, the question routinely required students to perform a research task using a legal encyclopedia in print. The question was styled as:

Use a print source to answer this question. You are researching the question of what is considered an “Act of God”. You are advised to use a source that contains entries on a broad number of topics at a general level and is usually used to educate the researcher. (a) Identify, generally, the type of source. (b) Specifically, name the source used and the entry that answers the hypothetical.

Variations on this question focused on the subject matter the student was expected to locate. Analysis of this question suggests that the flipped classroom alone does not translate into the ability to use print resources. Most notable is the pass rate at the 50% and 75% quartiles in the 2015 academic year. At the 50% quartile all students received partial credit and at the 75% quartile 71.4% passed. This was the initial year of the Librarian/Flipped design and the most robust workshops on using print sources. Significant is the steep decline in the successive years when the print workshops were de-emphasized due to other factors including an emphasis on online materials, number of students, and time pressures within the class.53 The results clearly show that mastery of print research is best served with a hands-on focus and a robust workshop. Notable is that the greatest success with this question was in the 2014 academic year under the BS/Flipped design in a year that included a robust assignment requiring use of print materials and utilized the modules to reinforce readings and class time.

53 In the 2016 and 2017 academic years, print research was consolidated into a single workshop of less than thirty minutes.
C. Student Performance by Question Type over Time

In examining student performance for all print questions the results remain flat over the variations in curricular design with slight peaks in the BS/Flipped and Librarian/Flipped design. Again this suggests that the most important part of the curricular design in teaching print research is the hands on, in-class workshop. The more robust the interactive component of the instruction is, the better the comprehension and ability to apply the skill.
When the overall pass rate for all reading and module questions is examined, there is a consistent and steady increase over time with an unexplained slight dip in 2013, the initial year the flipped classroom was adopted and the initial year of the BS/Flipped design. As previously noted, this result is likely attributed to the disconnect of the prepackaged modules provided to the Burks Scholars. This same dip is noted in the overall pass rate when looking at all questions.

The final question examined was the overall pass rate for all online questions. The online questions require students to perform a research task such as Boolean searching, application of filters – pre and post – such as jurisdiction, source type, and judge across a variety of platforms including: Westlaw, Lexis, Bloomberg, Hein, Index to Legal Periodicals, and LegalTrac.
The ability of a student to receive partial credit is relatively easy but the ability to obtain sufficient points to place a student in the 75% or 100% quartile of success requires demonstration of precision searching and advanced search skills rather than random searching. In the early years of the exam, 2010-2013, the classic versions of Westlaw and Lexis were taught in the legal research class and tested on the oral legal research competency exam. The classic versions of these systems required students to use precision searching techniques. In the later years of the exam and to the present time, WestlawNext (now Westlaw) and Lexis Advance are the dominant systems. By the design of the newer platforms, Google-style searching is encouraged and often the familiar and preferred method of first-year students. By that method, the ability to surface some information is easy but requires sophisticated filtering and analysis on the later end of the search process.

There are two explanations to consider. The first is that the design of legal research instruction has not sufficiently evolved and adapted to address the significant change in the major research platforms. Simply put, the instructional components of the legal research class, i.e., modules and workshops, are trying to teach students to research as if they were searching on classic platforms. Legal research instruction has yet to adapt to the preferred search methods of students while the research platforms themselves have done so already.

The second possible explanation is that teaching students to employ more sophisticated search strategies that work against the habit of “Googling” is difficult. If precision searching is, in fact, the most efficient and accurate way to retrieve relevant results in a legal research platform, then legal research instruction must do more to contrast this search strategy with what comes naturally to current students.
VI. Conclusion

Curricular design is key in creating a successful legal research class that results in information literate students. Both components of curricular design, expertise of the instructor and the format of the classroom instruction, must be addressed. The inverted classroom currently in vogue has the ability to significantly improve the course experience and outcome. However, merely adding another passive learning component to the instruction is not effective. The materials that the students are required to master in preparation for class should be tailored to the specific legal research principle, theory, or skill taught. Not every concept is best served by audio or video delivered online.

In designing the legal research class experience to create information literate students, a deconstructed inverted classroom experience holds the greatest promise. Instead of simply creating and assigning online modules, consider the skill intended to be taught and what might be the best introduction to understanding that skill. A deconstructed inverted classroom continues with the inverted classroom experience reserving the class time for hands-on interactive workshops. However, a meaningful examination of the pre-class experience may reveal new and varied methods of delivering instruction outside of class. For example, requiring students to physically examine a print source for tools such as a table of contents, index, tables or other features before completing a workshop with print sources may have a greater impact than watching a module.

Similarly, the value of the in-class activity is crucial to learning certain concepts and skills. Print research, specifically, directly benefits from a robust interactive experience where students directly work with the print materials to practice the research task. Use of the Socratic method of questioning is another component highly encouraged. Research classes should not avoid the Socratic method simply because it is a research class. Using highly targeted questions to explore nuances and differences in research strategies and concepts is as effective in a research class as it is in any other law school class. Socratic questioning plays an especially effective role in the inverted classroom format. If instructors expect that students have retained certain information from the pre-class materials, then use of the Socratic method to measure that understanding is more valuable than a period of review at the start of class.

The constant evaluation and evolution of the legal research curriculum requires expert level knowledge of the subject matter, the class materials, and the motivation to create information literate students. To address the challenges identified through this analysis, legal research instruction is best led by dual-degree librarians.