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Designing Research Assignments to Encourage Critical Thinking and Creative Problem-Solving Skills

By Linda Kawaguchi

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Advanced legal research (ALR) courses are unique in that they provide continual and immediate feedback to both students and teachers over the course of the semester. Unlike traditional doctrinal courses, ALR typically employs a variety of teaching methods and students receive multiple forms of assessment. This level of interaction allows teachers to respond quickly when students are struggling with specific concepts or need clarification. The sheer volume of information flowing between students and teachers provides the basis to evaluate, revise, and improve teaching methods and content each semester.

At Gonzaga University School of Law, I co-teach ALR with the associate director of the law library. Like most ALR courses, we begin with a review of fundamental legal structure—the different types of primary authority and the process by which governmental bodies promulgate those laws.

During this initial review it became apparent that students also needed a review on how to approach a research problem, and at an equally remedial level. I was struck by how almost every student immediately began typing when we handed out assignments, as if unable to think without using a computer. Paradoxically, the computers impeded their ability to think.

The next semester I experimented with designing assignments to manipulate students' behavior—for their own good, of course. I wanted them to think creatively instead of being passively led on tangents by a series of clicks; to see legal research as a skill requiring constant active thought and judgment, not a mechanical, rote process; to understand how legal information is generated, gathered, organized, and accessed; to realize the importance of research in solving real-life problems. Lofty goals, I know, but I wanted to prepare students to be effective researchers before unleashing them on the public.

We spent the first two classes providing context on the structure of the legal system and the research process. After the second class we assigned an ungraded, open-ended, practice research project. Their answers were to be in three parts: a thorough preliminary analysis and research plan (to be completed without using a computer before beginning their research); a detailed research journal including specific information for each source consulted, exact searches, and evaluation of sources and results; and a brief analysis of the law advising their clients. This open-ended practice assignment was designed to:

- obtain a base measurement of students' research skills at the start of the semester.
- provide an opportunity to apply the research process without the pressure of being graded.
- observe how students approached a research problem not related to individual sources or type of law.
- use as a vehicle to demonstrate and discuss research techniques.

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- emphasize the importance of performing a thorough preliminary analysis and formulating a research strategy.
- encourage them to incorporate knowledge from other sources.
- clarify our expectations for the graded research projects.
- build confidence and demonstrate progress over the course of the semester.

We used three different fact patterns, but for purposes of this article I'll analyze lessons learned from two assignments:

- Your client wants to use images of “Woodsy Owl” and “Smokey Bear” on her website but doesn't want to violate any laws by doing so. What advice would you give her?
- Your client has small children and is concerned for their safety because his neighbor (a herpetologist) has a pet Komodo dragon, which she keeps in her backyard. They live in the city of Spokane in the state of Washington.

Students generally took one of two approaches—the “Google approach” (entering keywords in a search engine and clicking promising links), or a conceptual approach (identifying and researching the area of law they believed was applicable, such as intellectual property).¹

The Google approach worked best for the Woodsy Owl/Smokey Bear problem because the characters' names appear in the *United States Code* and the *Code of Federal Regulations*. Entering those terms in a search engine led to the citations, which defined and set forth guidelines for the use of the characters.² But the conceptual

approach was much less efficient. Researching the general topic of intellectual property often meant getting lost in the tangle of federal statutes and cases involving copyright law. Four of the eight students with that fact pattern never found the statutes and regulations that apply to the use of Woodsy Owl and Smokey Bear.

The Komodo dragon problem was the exact opposite. Though “Komodo” is a unique search term, Google was not useful except to find the definition and images of Komodo dragons because they are not mentioned by name in any relevant laws. A more conceptual approach was necessary to locate and apply the relevant laws—considering why Komodo dragons might be prohibited under certain circumstances, which governmental body has the authority and jurisdiction to create provisions, whether Komodo dragons fit the definitions, etc. The *Revised Code of Washington* defines and prohibits owning “potentially dangerous wild animals.” The *Spokane Municipal Code* prohibits “inherently dangerous animals,” including “venomous” reptiles³ if they possess certain characteristics. One student found the

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¹ “The term ‘Smokey Bear’ means the name and character ‘Smokey Bear’ originated by the Forest Service of the United States Department of Agriculture in cooperation with the Association of State Foresters and the Advertising Council.” 16 U.S.C. § 580p(2). 36 C.F.R. Part 271 is entirely dedicated to the licensing and public use of the “Smokey Bear” symbol. 36 C.F.R. Part 272 is similarly dedicated to the licensing and public use of the “Woodsy Owl” symbol. 36 C.F.R. Part 261 contains a listing of the many prohibitions in federal parks, forests, and other public property. A prohibition on unauthorized use of the “Woodsy Owl” and “Smokey Bear” symbols is found in 36 C.F.R. § 261.22. The section prohibits the “[m]anufacture, importation, reproduction, or use” of the symbols beyond that which is allowed in Parts 271 and 272 respectively.

³ Wash. Rev. Code § 16.30.030 states that “A person shall not own, possess, keep, harbor, bring into the state, or have custody or control of a potentially dangerous wild animal,” except those animals in a person's possession prior to the statute. A person is also prohibited from breeding a “potentially dangerous wild animal” under this section. The definition for a “potentially dangerous wild animal” is found in Wash. Rev. Code § 16.30.010, which lists such animals by class, order, family, and species. [Spokane, Wash. Mun. Code § 10.24.100](#) provides a descriptive definition of “inherently dangerous reptiles” by dangerous characteristics and “including, but not limited to” several families of reptiles. The section also defines inherently dangerous animals as including inherently dangerous reptiles. The remainder of article II, chapter 10.24, describes the prohibitions, licensing requirements, and other regulations associated with inherently dangerous animals in Spokane.

¹ Out of 22 students, 19 began their research online (nine started with Google, seven with Westlaw), 14 performed all their research online (three used the Internet exclusively, two used Westlaw exclusively), and only eight consulted any paper sources.

² “[T]he term ‘Woodsy Owl’ means the name and representation of a fanciful owl, who wears slacks (forest green when colored), a belt (brown when colored), and a Robin Hood style hat (forest green when colored) with a feather (red when colored), and who furthers the slogan, ‘Give a Hoot, Don't Pollute’, originated by the Forest Service of the United States Department of Agriculture.” 16 U.S.C. § 580p(1).

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RCW provision but didn’t consult the *Spokane Municipal Code*. More disturbing, several students concluded that their client was without recourse because Komodo dragons were not specifically prohibited by name. The results illustrated the need to emphasize the importance of understanding the structure of legal concepts because problems don’t always come with unique terminology.

This exercise showed how legal research is an inseparable part of problem solving and legal analysis. It also provided invaluable insights about how our students approached research that shaped our teaching from that point forward. Most importantly, instead of lecturing, we used these assignments to frame the research process using concrete, familiar facts. Demonstrating and comparing successful and unsuccessful research methods illustrated how the same approach could be wildly successful in one instance but frustratingly futile in another. Students asked questions, pointed out particularly helpful sources and techniques, and learned from each other.

We also discussed issues as they arose organically, such as the importance of attention to detail and the danger of making assumptions. For example, several students referred to the herpetologist as “he” when the fact pattern clearly stated otherwise. Another student allowed us to foreshadow terms and connectors searching and the cost-effective use of subscription databases. She began her research on Westlaw by entering “woodsy owl” (with no quotation marks) in the databases ALLCASES, USCA, ST-ANN-ALL, CFR, FR, ADC-ACAD, ALR, AMJUR, WTH-IP, and WTH-ENV.⁴ The default Boolean operator in Westlaw is “or,” so searching without quotes returned documents that contained either word (woodsy OR owl).

⁴ This search encompassed all state and federal cases beginning in 1658, *United States Code Annotated*, all annotated state codes, the *Code of Federal Regulations*, the *Federal Register* (beginning in 1981), the administrative codes of 44 states, the First, Second, Third, Fourth, Fifth, Sixth, Federal, and Federal Second series of *American Law Reports*, *American Jurisprudence*, Westlaw Topical Highlights–Intellectual Property (which hasn’t been updated since April 2004), and Westlaw Topical Highlights–Environmental Law.

Students also observed one of the difficulties of performing statutory research online. In the Woodsy Owl/Smokey Bear problem, a search for the citation “16 USC § 580” brought up a section titled “Use of Forest Service appropriations for repair, etc. of equipment; rental of fire control equipment to non-Federal agencies.” Most students reasonably concluded that it was either an incorrect or irrelevant citation, when in fact the applicable section was much further down, not visible on the initial result screen, in subsection 580p.

Both problems demonstrated the importance of carefully reading the facts, considering the jurisdiction and types of authority that might apply, identifying and defining search terms and legal concepts, formulating a research plan, and evaluating and choosing appropriate resources.

This “sink or swim” approach so early in the semester set the tone for the course and introduced the notion that legal research is a much more complicated, problem-solving activity than they may have assumed.

We assigned eight in-class exercises, seven take-home assignments, and two graded research projects before assigning the final project, which counted for 35 percent of their grade. We continued to emphasize issues such as creativity in thinking of search terms and using indexes,⁵ being aware that several types of primary authority might exist for one problem,⁶ carefully reading and correctly applying the facts and the law,⁷ and the importance of recognizing and incorporating information that differed from or contradicted their original analysis.

The final research project was designed as a bookend to the course, emphasizing the same problem-solving skills as the practice research problem. This time

⁵ One student could not find any relevant state statutes for a lemon law problem under “automobiles” in the index. I suggested trying other terms like “motor vehicles” and “lemon laws.”

⁶ Another student found relevant case law but neglected to search for statutes.

⁷ Several students misread the facts for the lemon law problem and incorrectly concluded that the plaintiff did not meet the statutory requirement to pursue the remedy.

though, they had the benefit of what they had learned (hopefully) in the intervening months. I chose the issue of medical marijuana because it is a complex, evolving area of law that can't be answered without a thorough legal analysis of state and federal law involving cases, statutes, regulations, and other administrative material. The sheer volume of information available (which varies widely in scope, authenticity, and reliability) and the ever-changing status in each jurisdiction made medical marijuana an inherently interesting research topic.

The medical marijuana fact pattern included the following narrative:

Nancy Botwin is your client. She would like to establish a business providing medical marijuana to patients who qualify under state law. She is aware that there are federal laws governing the cultivation, distribution, purchase, and sale of marijuana, and that some states have established programs allowing people with certain health problems to use marijuana for medicinal purposes, but she is unsure how federal law interacts with state law. She has given you the attached article from the *New York Times*⁸ regarding the enforcement of federal marijuana laws. She is considering locating her business in one of two states and would like to know which state is most favorable to such an enterprise.

Each student was assigned one of four states (Washington, New Jersey, New Mexico, or Rhode Island) to compare with California. The requirements for the research journal were as follows:

- Preliminary Analysis: Before beginning your research, identify the issues, jurisdictions, governmental bodies that may have authority, types of primary law that may apply, and search terms. Explain how the facts influence your research strategy. Be thoughtful and creative.

⁸ David Stout & Solomon Moore, *U.S. Won't Prosecute in States That Allow Medical Marijuana*, N.Y. Times, Oct. 19, 2009, at A1, <<http://www.nytimes.com/2009/10/20/us/20cannabis.html>>.

- Search for Secondary Sources: Begin your research in the Index to Legal Periodicals and Books or LegalTrac databases. Describe your exact searches and results.⁹ There are no other restrictions on your research.
- Refine Research Strategy: Evaluate your strategy, modify your search terms, reframe the issues if necessary, and discuss how you plan to alter your approach.¹⁰
- Analysis of Sources/Results: Evaluate sources for authenticity, scope, currency, and functionality. As always, detail successful and unsuccessful steps, and update your research.

The instructions for the memorandum, which was limited to four double-spaced pages, included the following:

- Briefly describe federal law regarding marijuana and how it relates to state law. Cite applicable statutes and other federal activity.
- Discuss the medical marijuana laws of both states. Cite relevant statutes, regulations, guidelines, case law, and any pending activity.
- Advise Ms. Botwin as to exactly what steps she must take to comply with the laws of each state. If one state is more favorable to her situation, explain why.

Conclusion

The contrast between the ungraded practice research project and the final project couldn't have been more striking; it was like they were completely different students. Where the results of the first project were somewhat disheartening in the lack of attention to detail and reading comprehension, lack of imagination, and passive acceptance of whatever information appeared before them, it was evident in the final project that the students

⁹ Students had developed favorite sources, but were not using legal periodical indexes. There were some particularly helpful articles on this topic, so this was a good opportunity for them to use those databases.

¹⁰ This requirement was for those who needed a reminder to take a moment to pause and reflect.

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were engaged and thinking expansively and creatively. They incorporated knowledge from other courses and personal experience.¹¹ They discussed the jurisdictional issues and types of authority that might apply and consulted a wide variety of print and online sources. They exercised good judgment in explaining their methods and choices, for example, why they preferred paper or online sources for certain research tasks. They moved between sources and formats with confidence—if they found an abstract of an article in a periodical index, they knew where to find the full text elsewhere. They evaluated their results with a critical eye toward authenticity and currency. They actually looked at the content and incorporated their findings to refine their research. Taken as a whole, the level of analysis was thorough and thoughtful. They didn't shy away from the complexities of the problem in addressing the

conflict between state and federal law and comparing the intricacies of state regulations and procedures.

The final research project was especially effective because of the direct relationship to the first practice research project. We clearly defined the goals and process at the outset, and students developed the skills they needed over the course of the semester. The contrast between the two projects demonstrated progress in their ability to integrate legal analysis, problem-solving skills, legal research, and application of the law into a coherent process. It was invaluable to us in assessing the degree to which the students learned the material, and provided the students with visible and dramatic evidence of how their research skills had improved and a well-deserved sense of accomplishment.

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¹¹ Examples included constitutional issues (e.g., the Commerce Clause and preemption), television episodes of *South Park* and *Entourage*, advertisements for medical marijuana in the local independent newspaper, a documentary on MSNBC, attendance at a NORML convention, and friends with medical conditions that qualified for medicinal marijuana prescriptions.

Another Perspective

“To navigate the oceans of information (legal and otherwise) currently swamping the legal system, law students must become information literate: able to identify reliable, authentic information from online clutter or misinformation, critically evaluate the information, and then use it effectively. The growth of computers, computerized legal research, and the Internet has increased the importance of teaching students to apply critical thinking skills to both web and fee-based research systems. Law students arrive at law school overly confident in their general research capabilities when in actuality their research skills are poor and they often fail to understand basic research methodologies and tools. Unfortunately, it is likely this situation will only continue to worsen in the next decade. Thus, it becomes incumbent on law school legal research programs to include information literacy skills in their curriculum until students arrive at law school with better general research skills.

Information literacy skills teach students to evaluate information, gauging its authenticity and reliability, and assessing its strengths and weaknesses. The research done by judges and practitioners is increasingly moving from the realm of relatively controlled fee-based legal databases to the wild and dangerous world of information on the Internet making information literacy necessary. In addition, the critical thinking and evaluative skills necessary for information literacy overlap considerably with the skills of expert problem solvers, thus designating legal research education as a problem-solving process.”

—Sarah Valentine, *Legal Research as a Fundamental Skill: A Lifeboat for Students and Law Schools*, 39 U. Balt. L. Rev. 173, 220–21 (2010).