ments because they know that locating proper legal authority is critical for a successful memorandum.

The second principle is practice: variety in research and multiple opportunities for research training. Each new research topic introduces new resources that produce the best results and provides new uses for old resources. The more research students conduct to solve clients' problems, the more practice in strategic and analytical skills they obtain. Placing research into the context of a client-based problem provides a practical focus and brings welcomed realism to the students' task. These benefits of problem-based assignments do not require a formal written product. Supplementing integrated research and writing assignments by adding discrete, problem-based, non-writing research assignments offers students variety in types of research and assures that they see and use sources beyond those they will use in their writing assignments.

The third principle is progression: sequencing assignments to help students reach independence. The art of teaching research is creating a planned, sequenced curriculum of assignments that offer students with varying abilities and self-discipline habits enough guidance so they enjoy success and avoid frustration at each stage. At the same time, assignments must provide enough responsibility to make students competent and confident.

Significant structure and guidance helps students in the beginning. Structured and directed assignments ensure that students have a solid foundation in individual research sources and techniques. A directed research assignment may be constructed so that students follow specific steps in identified sources to generate relevant and desired authority. Directed research assignments are an excellent introduction to sources and techniques. However, without more guidance, students are uncertain about using these sources and techniques to execute their own research processes.

Research assignments that do not define a research sequence or source require that students take ownership of their research. Taking ownership includes choosing sources, learning the organisation and indexing of sources, recognising relevant material and focusing on important authorities. Moving away from directed research also carries risks for students. One danger is that some research topics encompass an overwhelming amount of research material unless the professor limits the topics.

A professor can schedule a debriefing class when students finish their basic research for an integrated assignment. The debriefing class helps students develop time-management skills; students are forced into the library to complete at least as much of the research as is needed to hand in the research trail well in advance of the due date. Reviewing research results allows both students to determine how much more to do or how far they have advanced.

During debriefing class, the professor may ask students to name relevant cases and list them on the board. The professor then asks which cases must appear in their memoranda and why. This exercise allows the class to determine which cases are leading and which cases add authority on a sub-point. The exercise also shows students where they still lack authoritative sources. Professors then give detailed feedback about strengths or weaknesses of particular techniques for using sources.

The fourth principle is planning: developing assignments that allow students to plan and reflect on their research process.

The educational philosophy of LRW has shifted from product-oriented to process-oriented writing and research. The following techniques and assignments foster student awareness of an effective research process. First, pre-research brainstorming classes and strategy assignments enhance productivity, focus and interactivity of the class. Second, awareness of the process is critical even in a directed research assignment. Third, this set of theories to guide a planned research curriculum does not suggest that any one sequence or set of assignments is the way

to effectively help students learn legal research.

Employers place high priority on research skills for new attorneys. Employers want researchers who know basic print and on-line sources, know the techniques of legal research and can independently use these tools and learn to use new tools. Training to be an independent, competent researcher is not easy. An LRW curriculum that plans assignments to provide integration, practice, progression and planning gives students a good start.

## Escape to Alcatraz: what self-guided museum tours can show us about teaching legal research

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Teaching legal research is especially difficult. Many students do not think the law library is an exciting place, nor do they appreciate the vital importance of good research skills to the practice of law. Educators well recognise that meaningful learning cannot take place unless students are motivated to learn the material being taught. Motivation can arise either because the subject matter is inherently interesting to students or because it relates to the academic or professional goals they want to achieve.

Another fundamental problem faced by those teaching legal research is that law schools do not devote enough resources to provide students with the individual attention they need to learn the subject well. Learning to use the law library is a skill. The best way to teach it, like any other skill, is to provide students with classroom instruction followed immediately by closely supervised practice of that skill in order to reinforce the classroom lessons. However, student-teacher ratios at most law schools do not permit the kind of one-on-one supervision that sound pedagogy requires.

As a result, most instructors instead teach the subject by assigning readings from a textbook, holding class lectures, walking students through the library, and then giving them exercises designed to show them how to research. Despite our best efforts, the results are often less than satisfying. Understandably, students also feel frustrated and abandoned after being handed a research exercise following a class lecture and then turned loose in the law library to figure it out on their own.

To address these problems, law schools should try an 'Alcatraz' approach to teaching legal research. With the use of basic technology - readily available to every law school - the Golden Gate Park Association was able to turn even an old, abandoned prison into an exciting place to visit. They did it by providing each visitor with a portable cassette player, headphones, and pre-recorded tape that included a wonderful, self-guided, interactive tour. Undergraduate research libraries have successfully experimented with the use of self-guided, pre-recorded tours to meet increasing demands for individual library instruction that outpace staff and resources. Law schools facing similar problems can benefit from this technique as well and should develop their own pre-recorded tours as a way of making research instruction more fun and interesting for students.

Law school faculties, practising attorneys and judges generally agree that legal research and writing are among the most important skills taught in law school. Some have even suggested that these are among the most critical skills needed to practise law. Nevertheless, the ABA recently noted that practitioners are generally dissatisfied with the research skills of new law graduates.

One reason for the prevalence of poor student research skills not often mentioned in the commentaries, but well known anecdotally, is that students do not think the subject is interesting or important. If teachers can make the law library a more interesting, and at the same time less intimidating, place to visit, student attitudes will change, resulting in the students' acquisition of better research skills by graduation.

Adapting the use of tape-recorded tours to the law library would have another important pedagogical benefit. It would help law schools solve a fundamental problem with most research training today: the lack of one-on-one instruction that students really need to learn these skills well. Another reason these tours are a powerful teaching tool is because they encourage active learning. One of the most widely agreed upon principles of good skills pedagogy is that active participation in the lessons being taught is far better than the passive absorption of information. Aside from making a tour of the library more interesting, portable pre-recorded library tours could include interactive elements that help students learn how to use particular resources by having the narrator ask them.

Whether or not your law school has the resources to develop a pre-recorded Alcatraz-style library tour, legal writing instructors can create better research exercises by borrowing from the techniques that make these tours such good teaching tools. An example is providing students with a written script for finding and using the research tools they will need to complete their first semester writing project.

A fundamental problem with using most library exercises to teach legal research is that any instruction students receive in the use of those tools comes in the form of feedback from the teacher when the exercises are graded and returned. Because of the heavy workload of many legal writing teachers, such feedback might not be received for several days, or even weeks, after the students have finished the exercises. By then, the value of any feedback is greatly diminished.

The Alcatraz-style exercise attempts to address this temporal disconnect by providing students with written directions for using the major research tools that they can carry with them and refer to as they engage in their research. An ancillary benefit of an Alcatraz-style exercise is that it also incorporates the best aspects of traditional exercises — the 'bibli-

ographic' and 'process-oriented' approaches — into one exercise. These exercises are designed to familiarise students with the law library by asking them to locate a particular resource and then answer a series of questions about it. The advantage of such an exercise is that it shows students details about a resource they might not discover on their own. On the other hand, such exercises receive criticism because they only teach students how to move around within a discrete law book or within related sets of law books but do not show students how the books can be used to solve legal problems.

For these reasons, many instructors prefer to use a 'process oriented' research exercise. This approach teaches students how to use the law library in the context of solving a hypothetical legal problem, usually performed in connection with an 'open universe' writing assignment during the first semester of law school. Instructors often ask students to record the results of their open memo research in a log or diary that may be turned in with the final draft at the end of the semester. Readings and class lectures explaining how to use the law library usually accompany the research portion of the assignment.

An Alcatraz-style research exercise is an attempt to address the inadequacies of traditional exercises by incorporating the best aspects of both the bibliographic and process oriented approaches into one exercise. More importantly, it improves upon traditional research pedagogy by providing students with instructions for using the law library that they can carry with them as they work on their research projects.

Poor student attitudes about the law library and the inability of teachers to provide more personalised research instruction are two fundamental reasons why law school graduates have deficient research skills. Thus, it is incumbent on those who teach the subject to find ways to address these problems. Indeed, until we figure out how to make legal research more interesting and also provide students with the personal attention they need, research skills will not likely improve.