Illustration III – Recognizing Problem Types

A. Contexts & Objectives

What does instructor want them to learn?

To teach students to recognize problem types, construct and draw mental models to help them "work the problem" as they begin their research.

B. Why does instructor want them to learn it?

Building towards a specific, larger or higher-level skill

C. How will instructor know if they have learned it? (assessment)

Through discussion and questioning.

D. When will this be introduced?

As a review at the end of a beginning legal research course, or as an assignment in advanced or subject-specific legal research course. The research queries could also be modified and altered depending on the student's level of mastery and expertise.

E. How will the students learn it? (discussion, problem, etc.)

i. Context

The teacher presents a taxonomy of problem types: known item, subject, agency or institution, statistical, special interpretive skills (foreign, budget, etc.), reference, etc. Students are charged with identifying the type of problem before selecting a resource for which they would begin their research. Next, the students are to reflect on how problem typing affected the resources they selected.[1]
Possible problem types and materials the students will need to locate/develop the mental models they will need to draw upon. The students not actually need to locate the answer to the research queries; rather, identifying the resources follows from acquiring the preliminary skill of identifying the problem type:

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[1] This problem does not allow students to experience a practical apprentice.

   ii. **Resources/materials needed**

A group of problems.

   iii. **Student Activities (the process for arriving at the product):**

A lecture followed by tasking to students to model and reflect on various problem types.

   iv. **Legal Information Environment (where is student situated):**

Teachers can restrict or limit the exercise to just identifying the problem type, or the exercise can be expanded to include identifying appropriate resources and even solving the problem.

   v. **Student Work Product(s):**

The most critical student work product is the students' own reflection of mental model(s) that they used to start their research.[2] The students should reflect on whether this model did or did not work to effectively start the research query. The student should be encouraged to suggest problem types of her own making. Teachers can ask student to present their research trail or process only or charge student with locating the answer and providing a citation for the same.[3] However, it recommended that teachers focus on asking students to classify the problem type in a particular way and then follow-up by asking students what type of resources they think they might use. In this way, the skill of classifying the problem the problem type in particular way is reinforced as a skill distinct and separate in the research process. The creation and application of mental models as starting points for research is developed through an iterative process where students practice using several different starting point for different problem types.[4]

I. **The Activity:**

 a. **Planning and Preparation**

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[2] This is known as metacognition.
[3] Students are also learning to critically evaluate their own progress and results.
[4] Students should learn that this is an ongoing process and mental models are seldom static.

Develop a number of problems for student modeling. For example:

- Determining the validity of a holographic will written on a bar room wall. *Students rely on a mental model for locating statutes and cases using a know/unknown term of art or concept.*
- Locating the current regulations that govern federal prisons. *Students rely on a mental model for locating agency regulations using a subject and known item.*
- Finding current death penalty statistics. *Students rely on a mental model for locating current statistical information using a subject and known item. Students also rely on mental models for evaluating sources for information.*
- Advising a client on moving a child outside of the country during a pending custody dispute. *Students rely on a mental model for locating statues and cases using known terms/concepts.*

This exercise is designed is help students create and then practice through iterative processes, models for "working the problem" when starting their research. Therefore, students should be charged with not only classifying problems by type but also reflecting on the mental models used to respond to the research queries. Students need to do several problem typing exercises in order to be able to recognize patterns for the problems and then practice drawing on those mental models as well as adopting them for other problem types. Students should be warned not to neglect the two most important steps in the exercise: identifying the type of problem (initial step) and reflecting on how the problem type led them to use a particular type of mental model.

Depending on the level of students, and the resources you are teaching, the illustrations can be modified. Effort can be made to force the student to be reflective and develop metacognition by providing problems that do not seem to fit in the heuristic of types presented by the teacher. For instance, a problem requiring a form book may not quite fit any of the types.

b. **In-class procedures**

The teacher presents a taxonomy of problem types: known item, subject, agency or institution, statistical, special interpretive skills (foreign, budget, etc.), reference, etc.

Students are given problems to model, and then will be charged with identifying the type of problem before selecting a resource for which they would begin their

research. Next, the students are to reflect on how problem typing affected the resources they selected.[5]

This assignment can be done by students individually or in small groups. It can be an in-class or homework assignment to be completed out of class. Teachers can also orally quiz students and follow up with question in class. Individual students or groups of students present on the identification of the problem type, use of a specific mental model, and reflection on the process. This will allow the teacher to reinforce the important step of identifying problem types and constructing corresponding mental models.

c. **Assessment and Feedback**

Assessments should be done through reflection. Students' reflection should allow both the student and teacher to reflect on the identification of problem types and mental models.

II. Checklists

A. Checklist of Boulder Statement of Boulder Statement Pedagogical Principles Furthered:
1. Does this lesson provide an opportunity for:
    ☑   iterative and analytical process;
    ☑   identification of significant facts;
    ☑   determination of legal issues and problems;
        location, evaluation and manipulation of research authorities;
    ☑   understanding of legal system in which question arises;
        evaluation of available legal resources;
    ☑   synthesis of information about legal system and resources to identify research plan;
        continual re-evaluation of progress and results;
        application of professional and ethical norms implicated by research;
        ongoing examination of professional standards, including ethical responsibilities; and
        fulfillment of ethical duty to conduct adequate and thorough research?
2. Does this lesson:
    ☑   use a range of teaching methodologies;
    ☑   use a mix of realistic problem types;
    ☑   show relationship of legal structure to legal tools;

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[5] This problem does not allow students to experience a practical apprentice.

allow students to evaluate the appropriate use of the tools; and provide opportunity to model professional duties and obligations?